UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended September 30, 2018

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

COMMISSION FILE NUMBER 000-52008

LUNA INNOVATIONS INCORPORATED
(Exact name of registrant as specified in its charter)

Delaware	**54-1560050**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification Number)**

301 First Street SW, Suite 200
Roanoke, VA 24011
(Address of Principal Executive Offices)

(540) 769-8400
(Registrant's Telephone Number, Including Area Code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). ☒ Yes ☐ No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer o Accelerated filer o

Non-accelerated filer o Smaller reporting company ☒

Emerging growth company o

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). ☐ Yes ☒ No

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date: As of November 7, 2018, there were 27,936,401 shares of the registrant's common stock outstanding.

LUNA INNOVATIONS INCORPORATED
QUARTERLY REPORT ON FORM 10-Q
FOR THE QUARTER ENDED SEPTEMBER 30, 2018

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PART I. FINANCIAL INFORMATION

ITEM 1. ***FINANCIAL STATEMENTS***

Luna Innovations Incorporated
Consolidated Balance Sheets

	September 30, 2018 (unaudited)	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	$ 47,144,719	$ 36,981,533
Accounts receivable, net	9,110,713	5,929,042
Receivable from sale of HSOR business	4,002,342	4,000,976
Contract assets	2,611,122	1,778,142
Inventory	5,462,414	4,634,781
Prepaid expenses and other current assets	730,368	1,140,999
Current assets held for sale	—	4,336,105
Total current assets	69,061,678	58,801,578
Long-term contract assets	343,492	209,699
Property and equipment, net	2,678,411	2,854,641
Intangible assets, net	1,709,003	1,727,390
Other assets	1,995	1,995
Non-current assets held for sale	—	2,627,333
Total assets	$ 73,794,579	$ 66,222,636
Liabilities and stockholders' equity		
Liabilities:		
Current liabilities:		
Current portion of long-term debt obligations	$ 1,073,571	$ 1,833,333
Current portion of capital lease obligations	39,748	43,665
Accounts payable	2,297,457	2,111,077
Accrued liabilities	6,589,310	6,547,230
Contract liabilities	1,548,371	3,318,379
Current liabilities held for sale	—	972,451
Total current liabilities	11,548,457	14,826,135
Long-term deferred rent	1,072,696	1,184,438
Long-term debt obligations	—	603,007
Long-term capital lease obligations	83,405	71,275
Total liabilities	12,704,558	16,684,855
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, par value $0.001, 1,321,514 shares authorized, issued and outstanding at September 30, 2018 and December 31, 2017, respectively	1,322	1,322
Common stock, par value $0.001, 100,000,000 shares authorized, 29,189,506 and 28,354,822 shares issued, 27,936,401 and 27,283,918 shares outstanding at September 30, 2018 and December 31, 2017, respectively	30,081	29,186
Treasury stock at cost, 1,253,105 and 1,070,904 shares at September 30, 2018 and December 31, 2017, respectively	(2,116,640)	(1,649,746)
Additional paid-in capital	85,353,909	83,563,208
Accumulated deficit	(22,178,651)	(32,406,189)
Total stockholders' equity	61,090,021	49,537,781
Total liabilities and stockholders' equity	$ 73,794,579	$ 66,222,636

The accompanying notes are an integral part of these consolidated financial statements.

Luna Innovations Incorporated
Consolidated Statements of Operations

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
	(unaudited)		(unaudited)	
Revenues:				
Technology development	$ 5,315,861	$ 4,590,054	$ 15,418,919	$ 13,428,428
Products and licensing	5,371,165	3,712,657	13,960,003	9,791,213
Total revenues	10,687,026	8,302,711	29,378,922	23,219,641
Cost of revenues:				
Technology development	3,918,666	3,491,840	11,131,965	10,045,261
Products and licensing	2,079,749	1,469,961	5,381,333	3,994,044
Total cost of revenues	5,998,415	4,961,801	16,513,298	14,039,305
Gross profit	4,688,611	3,340,910	12,865,624	9,180,336
Operating expense:				
Selling, general and administrative	3,233,485	2,831,493	9,898,064	8,983,016
Research, development and engineering	873,629	662,142	2,513,497	1,961,770
Total operating expense	4,107,114	3,493,635	12,411,561	10,944,786
Operating income/(loss)	581,497	(152,725)	454,063	(1,764,450)
Other income/(expense):				
Investment income	171,896	—	350,976	—
Other income/(expense)	8,319	13,733	(16,001)	26,286
Interest expense	(28,029)	(54,847)	(103,208)	(178,879)
Total other income/(expense)	152,186	(41,114)	231,767	(152,593)
Income/(loss) from continuing operations before income taxes	733,683	(193,839)	685,830	(1,917,043)
Income tax benefit	(559,093)	(388,787)	(674,329)	(662,049)
Net income/(loss) from continuing operations	1,292,776	194,948	1,360,159	(1,254,994)
(Loss)/income from discontinued operations, net of income tax of $216,813, $(91,705), $235,312, and $249,184	(56,418)	465,710	1,132,436	337,904
Gain on sale, net of income taxes of $1,866,232 and $1,508,373	7,612,044	15,096,666	7,571,810	15,096,666
Net income from discontinued operations	7,555,626	15,562,376	8,704,246	15,434,570
Net income	8,848,402	15,757,324	10,064,405	14,179,576
Preferred stock dividend	63,235	33,699	190,895	97,331
Net income attributable to common stockholders	$ 8,785,167	$ 15,723,625	$ 9,873,510	$ 14,082,245
Net income/(loss) per share from continuing operations:				
Basic	$ 0.05	$ 0.01	$ 0.05	$ (0.05)
Diluted	$ 0.04	$ 0.01	$ 0.04	$ (0.05)
Net income per share from discontinued operations:				
Basic	$ 0.27	$ 0.56	$ 0.32	$ 0.56
Diluted	$ 0.23	$ 0.48	$ 0.27	$ 0.56
Net income per share attributable to common stockholders:				
Basic	$ 0.31	$ 0.57	$ 0.36	$ 0.51
Diluted	$ 0.27	$ 0.48	$ 0.30	$ 0.51
Weighted average common shares and common equivalent shares outstanding:				

Basic	27,901,631	27,692,539	27,547,955	27,611,905
Diluted	33,055,881	32,714,389	32,721,860	27,611,905

The accompanying notes are an integral part of these consolidated financial statements.

Luna Innovations Incorporated
Consolidated Statements of Cash Flows

	Nine Months Ended September 30,	
	2018	2017
	(unaudited)	
Cash flows (used in)/provided by operating activities		
Net income	$ 10,064,405	$ 14,179,576
Adjustments to reconcile net income to net cash (used in)/provided by operating activities		
Depreciation and amortization	898,215	2,241,867
Share-based compensation	345,582	476,428
Bad debt expense	6,000	40,753
(Gain)/loss on disposal of fixed assets	(1,000)	3,640
Gain on sale of discontinued operations	(7,571,810)	(15,096,666)
Change in assets and liabilities		
Accounts receivable	(4,056,716)	2,127,794
Contract assets	(957,012)	—
Inventory	(992,075)	(2,251,236)
Other current assets	482,155	380,858
Accounts payable and accrued expenses	243,965	(1,581,608)
Contract liabilities	(1,906,117)	—
Deferred revenue	—	59,980
Net cash (used in)/provided by operating activities	(3,444,408)	581,386
Cash flows provided by investing activities		
Acquisition of property and equipment	(272,039)	(893,698)
Intangible property costs	(277,068)	(392,485)
Proceeds from sale of property and equipment	1,000	3,000
Proceeds from sales of discontinued operations	14,775,541	28,026,528
Net cash provided by investing activities	14,227,434	26,743,345
Cash flows used in financing activities		
Payments on capital lease obligations	(33,064)	(38,753)
Payments of debt obligations	(1,375,000)	(1,374,999)
Repurchase of common stock	(466,894)	(228,020)
Proceeds from the exercise of options and warrants	1,255,118	29,020
Net cash used in financing activities	(619,840)	(1,612,752)
Net increase in cash and cash equivalents	10,163,186	25,711,979
Cash and cash equivalents—beginning of period	36,981,533	12,802,458
Cash and cash equivalents—end of period	$ 47,144,719	$ 38,514,437
Supplemental disclosure of cash flow information		
Cash paid for interest	$ 97,867	$ 173,275
Cash paid for income taxes	$ 7,686	$ 41,131
Non-cash investing and financing activities		
Dividend on preferred stock, 59,469 shares of common stock issuable	$ 190,895	$ 97,331

The accompanying notes are an integral part of these consolidated financial statements.

Luna Innovations Incorporated
Notes to Unaudited Consolidated Financial Statements

1. Basis of Presentation and Significant Accounting Policies

Nature of Operations

Luna Innovations Incorporated ("we," "Luna Innovations" or the "Company"), headquartered in Roanoke, Virginia, was incorporated in the Commonwealth of Virginia in 1990 and reincorporated in the State of Delaware in April 2003. We are a leader in advanced optical technology, providing unique capabilities in high performance fiber optic test products for the telecommunications industry and distributed fiber optic sensing for the aerospace and automotive industries. Prior to the sale of our optoelectronics business in July 2018 (See Note 2), we also developed and manufactured custom optoelectronic components and sub-assemblies for various industrial applications. We are organized into two reportable segments, which work closely together to turn ideas into products: our Technology Development segment and our Products and Licensing segment. Our business model is designed to accelerate the process of bringing new and innovative technologies to market.

Unaudited Interim Financial Information

The accompanying unaudited consolidated interim financial statements have been prepared in accordance with accounting principles generally accepted in the United Stated of America ("U.S. GAAP") for interim financial statements and Article 10 of Regulation S-X of the Securities Exchange Act of 1934, as amended. Accordingly, they do not include all of the information and footnotes required by U.S. GAAP for annual financial statements. The unaudited consolidated interim financial statements have been prepared on the same basis as the annual financial statements and in the opinion of management reflect all adjustments, consisting of only normal recurring accruals considered necessary to present fairly our financial position at September 30, 2018, results of operations for the three and nine months ended September 30, 2018 and 2017, and cash flows for the nine months ended September 30, 2018 and 2017. The results of operations for the three and nine months ended September 30, 2018, are not necessarily indicative of the results that may be expected for the year ending December 31, 2018. The consolidated balance sheet as of December 31, 2017 was derived from our audited consolidated financial statements.

The consolidated interim financial statements, including our significant accounting policies, should be read in conjunction with the audited Consolidated Financial Statements and the notes thereto for the year ended December 31, 2017, included in our Annual Report on Form 10-K as filed with the Securities and Exchange Commission ("SEC") on March 21, 2018.

Reclassifications

Certain amounts in the prior period have been reclassified to conform to current presentation. As a result of the adoption of Accounting Standards Codification ("ASC") 2014-09, *Revenue from Contracts with Customers* (Topic 606), we presented balances entitled contract assets and contract liabilities within the consolidated balance sheet as well as the impact of the changes in these balances within the consolidated statement of cash flows. We reclassified comparable balances within the December 31, 2017 consolidated balance sheet as well as the impact of changes in those balances within the consolidated statement of cash flows in order to enhance comparability. These reclassifications had no effect on our reported financial condition, results of operations, or cash flows. Any other reclassifications were immaterial to the consolidated interim financial statements taken as a whole.

Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market in an orderly transaction between marketplace participants. Various valuation approaches can be used to determine fair value, each requiring different valuation inputs. The following hierarchy classifies the inputs used to determine fair value into three levels:

- Level 1—Quoted prices for identical instruments in active markets
- Level 2—Quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-derived valuations in which all significant inputs and significant value drivers are observable in active markets
- Level 3—Valuations derived from valuation techniques in which one or more significant inputs or significant value drivers are unobservable

The carrying values of cash and cash equivalents, accounts receivable and accounts payable approximate fair value because of the short-term nature of these instruments. The carrying value of our debt approximates fair value, as we consider the floating interest

rate on our credit facilities with Silicon Valley Bank ("SVB") to be at market for similar instruments. Certain non-financial assets and liabilities are measured at fair value on a nonrecurring basis in accordance with U.S. GAAP. This includes items such as non-financial assets and liabilities initially measured at fair value in a business combination and non-financial long-lived asset groups measured at fair value for an impairment assessment. In general, non-financial assets including intangible assets and property and equipment are measured at fair value when there is an indication of impairment and are recorded at fair value only when any impairment is recognized.

Net Income/(Loss) Per Share

Basic per share data is computed by dividing our net income/(loss) by the weighted average number of shares outstanding during the period. Diluted per share data is computed by dividing net income/(loss), if applicable, by the weighted average shares outstanding during the period increased to include, if dilutive, the number of additional common share equivalents that would have been outstanding if potential shares of common stock had been issued using the treasury stock method. Diluted per share data would also include the potential common share equivalents relating to convertible securities by application of the if-converted method.

The effects of 5.2 million and 5.0 million common stock equivalents (which include outstanding warrants, preferred stock and stock options) are included for the diluted per share data for the three months ended September 30, 2018 and 2017, respectively. The effect of 5.2 million common stock equivalents are included for the diluted per share data for the nine months ended September 30, 2018. The effect of 4.9 million common stock equivalents are not included for the nine months ended September 30, 2017, as they are anti-dilutive to earnings per share due to our net loss from continuing operations.

Recently Issued Accounting Pronouncements

Effective January 1, 2018, we adopted *Revenue from Contracts with Customers* (Topic 606), using the modified retrospective transition method. Under the modified retrospective approach, we apply the standards to new contracts and those that were not completed as of January 1, 2018. For those contracts not completed as of January 1, 2018, this method resulted in a cumulative adjustment to decrease the accumulated deficit in the net amount of $0.4 million. Prior periods will not be retrospectively adjusted, but we will maintain dual reporting for the year of initial application in order to maintain comparability of the periods presented. The cumulative effect of the changes made to our January 1, 2018 unaudited consolidated balance sheet for the adoption of Topic 606 was as follows:

	Balance at December 31, 2017	Adjustment for Topic 606	Adjusted balance at January 1, 2018
Assets:			
Current assets held for sale	$ 4,336,105	$ 379,891	$ 4,715,996
Liabilities:			
Contract liabilities	$ 3,318,379	$ 2,250	$ 3,320,629
Current liabilities held for sale	$ 862,205	$ 23,613	$ 885,818
Stockholders' equity:			
Accumulated deficit	$ (32,406,189)	$ 354,028	$ (32,052,161)

Contract assets were formerly reported as unbilled accounts receivable. Contract liabilities were formerly reported as accrued liabilities or deferred revenue. Inventory was also impacted by the adoption of the new guidance. The titles have been changed in the table below to be consistent with accounts currently used under the new standard.

	December 31, 2017	
	As Reported	As Adopted
Accounts receivables, net	$ 9,857,009	$ 5,929,042
Contract assets	—	1,778,142
Current assets held for sale	—	1,940,126
Long-term contract assets	—	209,699
Accrued liabilities	8,959,935	6,547,230
Contract liabilities	—	3,318,379
Current liabilities held for sale	—	120,665
Deferred revenue	1,026,339	—

Under the new standard, contracts in our Technology Development segment, which primarily provide research services, are not materially impacted upon the adoption of Topic 606 as revenue will continue to be recognized over time using an input model. Contracts in our Products and Licensing segment generally provide for the following revenue sources: standard product sales, custom product development and sales, product rental, extended warranties, training/service, and certain royalties. Revenues for this segment are recognized using either the “point in time” or “over time” methods of Topic 606, depending upon the revenue source. The major change in revenue recognition for the Products and Licensing segment related to custom optoelectronic products which changed from “point in time” to “over time” upon the adoption of Topic 606. This change results in the acceleration of revenue when compared to existing standards with the cumulative adjustment relating to contracts that are not complete as of December 31, 2017 recognized as an adjustment to opening accumulated deficit on January 1, 2018. The revenue received from our custom optoelectronic products segment is included as part of our discontinued operations section (Note 2) and shown above in the current assets and liabilities held for sale as of December 31, 2017. Our revenue for our standard products will continue to be recognized using the "point in time" model of Topic 606, and the timing of such revenue recognition is not expected to differ materially from our historical revenue recognition. Other immaterial adjustments related to the Products and Licensing segment that are sometimes offered to customers include discounts on future purchases related to rental agreements, customer rights of return, and volume discounts.

Technology Development Revenues

We perform research and development for U.S. Federal government agencies, educational institutions and commercial organizations. We account for a research contract when a contract has been executed, the rights of the parties are identified, payment terms are identified, the contract has commercial substance, and collectability of the contract price is considered probable. Revenue is earned under cost reimbursable, time and materials and fixed price contracts. Direct contract costs are expensed as incurred.

Our contracts with agencies of the U.S. government are subject to periodic funding by the respective contracting agency. Funding for a contract may be provided in full at inception of the contract or ratably throughout the contract as the services are provided. In evaluating the probability of funding for purposes of assessing collectability of the contract price, we consider our previous experience with our customers, communication with our customers regarding funding status and our knowledge of available funding for the contract or program. If funding is not assessed as probable, revenue recognition is deferred until realization is reasonably assured.

Under the typical payment terms of our U.S. government contracts, the customer pays us either performance-based payments ("PBPs") or progress payments. PBPs, which are typically used in the firm fixed price contracts, are interim payments based on quantifiable measures of performance or on the achievement of specified events or milestones. Progress payments, which are typically used in our cost type contracts, are interim payments based on costs incurred as the work progresses. For our U.S. government cost-type contracts, the customer generally pays us during the performance period for 80%-90% of our actual costs incurred. Because the customer retains a small portion of the contract price until completion of the contract and audit of allowable costs, cost type contracts generally result in revenue recognized in excess of billings which we present as contract assets on the balance sheet. Amounts billed and due from our customers are classified as receivables on the balance sheet. For non-U.S. government contracts, we typically receive interim payments as work progresses, although for some contracts, we may be entitled to receive an advance payment. We recognize a liability for these advance payments and PBPs paid in advance which are in excess of the revenue recognized and present these amounts as contract liabilities on the balance sheet.

To determine the proper revenue recognition method for research and development contracts, we evaluate whether two or more contracts should be combined and accounted for as one single modified contract and whether the combined or single contract should

be accounted for as more than one performance obligation. For instances where a contract has options that were bid with the initial contract and awarded at a later date, we combine the options with the original contract when options are awarded. For most of our contracts, the customer contracts for research with multiple milestones that are interdependent. Consequently, the entire contract is accounted for as one performance obligation. The effect of the combined or modified contract on the transaction price and measure of progress for the performance obligation to which it relates, is recognized as an adjustment to revenue (either as an increase in or a reduction of revenue) on a cumulative catch-up basis.

Contract revenue recognition is measured over time as we perform because of continuous transfer of control to the customer. For U.S. government contracts which are typically subject to the Federal Acquisition Regulation ("FAR"), this continuous transfer of control to the customer is supported by clauses in the contract that allow the customer to unilaterally terminate the contract for convenience, pay us for cost incurred plus a reasonable profit and take control of any work in process. From time to time, as part of normal management processes, facts may change, causing revisions to estimated total costs or revenues expected. The cumulative impact of any revisions to estimates and the full impact of anticipated losses on any type of contract are recognized in the period in which they become known.

Because of control transferring over time, revenue is recognized based on the extent of progress towards completion of the performance obligation. The selection of the method to measure progress towards completion requires judgment and is based on the nature of the services to be provided. We generally use the input method, more specifically the cost-to-cost measure of progress for our contracts because it best depicts the transfer of control to the customer which occurs as we incur costs on our contracts. Under the cost-to-cost measure of progress, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. The underlying bases for estimating our contract research revenues are measurable expenses, such as labor, subcontractor costs and materials, and data that are updated on a regular basis for purposes of preparing our cost estimates. Our research contracts generally have a period of performance of six months to three years, and our estimates of contract costs have historically been consistent with actual results. Revisions in these estimates between accounting periods to reflect changing facts and circumstances have not had a material impact on our operating results, and we do not expect future changes in these estimates to be material. The cumulative impact of any revisions to estimates and the full impact of anticipated losses on any type of contract are recognized in the period in which they become known.

Under cost reimbursable contracts, we are reimbursed for costs that are determined to be reasonable, allowable and allocable to the contract and paid a fixed fee representing the profit negotiated between us and the contracting agency. Revenue from cost reimbursable contracts is recognized as costs are incurred plus an estimate of applicable fees earned. We consider fixed fees under cost reimbursable contracts to be earned in proportion to the allowable costs incurred in performance of the contract.

Revenue from time and materials contracts is recognized based on direct labor hours expended at contract billing rates plus other billable direct costs.

Fixed price contracts may include either a product delivery or specific service performance throughout a period. For fixed price contracts that are based on the proportional performance method and involve a specified number of deliverables, we recognize revenue based on the proportion of the cost of the deliverables compared to the cost of all deliverables included in the contract as this method more accurately measures performance under these arrangements. For fixed price contracts that provide for the development and delivery of a specific prototype or product, revenue is recognized based upon the percentage of completion method.

Whether certain costs under government contracts are allowable is subject to audit by the government. Certain indirect costs are charged to contracts using provisional or estimated indirect rates, which are subject to later revision based on government audits of those costs. Management is of the opinion that costs subsequently disallowed, if any, would not likely have a significant impact on revenues recognized for those contracts.

Products and Licensing Revenues

We produce standard and customized products for commercial organizations, educational institutions, and U.S. Federal government agencies. In addition we will also offer extended warranties, product rentals, and services which include testing, training, or repairs for specific products. Customers also pay royalties as agreed based on sales or usage. We account for product and related items when a contract has been executed, the rights of the parties are identified, payment terms are identified, the contract has commercial substance, and collectability of the contract price is considered probable.

To determine the proper revenue recognition method for Products and Licensing contracts, we evaluate whether two or more contracts should be combined and accounted for as one single contract and whether the combined or single contract should be accounted for as more than one performance obligation. We recognize revenue when the performance obligation has been satisfied by

transferring the control of the product or service to the customer. For tangible products that contain software that is essential to the tangible product's functionality, we consider the product and software to be a single performance obligation and recognize revenue accordingly. For contracts with multiple performance obligations, we allocate the contract's transaction price to each performance obligation based on their relative stand-alone selling prices. In such circumstances, we use the observable price of goods or services which are sold separately in similar circumstances to similar customers. If these prices are not observable, then we will estimate the stand-alone selling price using information that is reasonably available. For the majority of our standard products and services, price list and discount structures related to customer type are available. For products and services that do not have price list and discount structures, we may use one or more of the following: (i) adjusted market assessment approach, (ii) expected cost plus a margin approach, and (iii) residual approach. The adjusted market approach requires us to evaluate the market in which we sell goods or services and estimate the price that a customer in that market would be willing to pay for those goods or services. The expected cost plus margin approach requires us to forecast our expected costs of satisfying the performance obligation and then add a reasonable margin for that good or service. The residual approach decreases the total transaction price by the sum of the observable standalone selling prices if either the company sells the same good or services to different customers for a broad range of amounts or the company has not established a price for the good or service and that good or service has not been sold on a standalone basis. Shipping and handling activities primarily occur after a customer obtains control and are considered fulfillment cost rather than separate performance obligations. Similarly, sales and similar taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction and collected by the entity from a customer are excluded from the measurement of the transaction price.

For standard products, we recognize revenue at a point in time when control passes to the customer. Absent substantial product acceptance clauses, this is based on the shipping terms. For custom products that require engineering and development based on customer requirements, we will recognize revenue over time using the output method for any items shipped and any finished goods or work in process that is produced for balances of open sales orders. For any finished goods or work in process that has been produced for the balance of open sales orders we recognize revenue by applying the average selling price for such open order to the lesser of the on hand balance in finished goods or open sales order quantity which we present as a contract asset on the balance sheet. Cost of sales is recognized based on the standard cost of the finished goods and work in process associated with this revenue and inventory balances are reduced accordingly. For extended warranties and product rentals, revenue is recognized over time using the output method based on the time elapsed for the warranty or service period. In the case of warranties, we record a contract liability for amounts billed but that are not recognized until subsequent period. A separate contract liability is recorded for the cost associated with warranty repairs based on our estimate of future expense. For testing services where we are performing testing on an asset the customer controls, revenue is recognized over time by the output method using the performance to date. For training where the customer is receiving the benefit of training as it is occurring and for repairs to a customer controlled asset, revenue is recognized over time by the output method using the performance to date. For royalty revenue, we apply the practical expedient "royalty exception" recognizing revenue based on the royalty agreement which specifies an amount based on sales or minimum amount, whichever is greater.

In some product rental contracts, a customer may be offered a discount on the purchase of an item that would provide for a material right. When a material right has been provided to a customer, a separate performance obligation is established and a portion of the rental revenue will be deferred until the future product is purchased or the option expires. This deferred revenue is recognized as a contract liability on the balance sheet. In certain circumstances we may offer a "right of return" to a distributor of our products, in which case a contract liability is calculated based on the terms of the agreement and recorded as a reduction to revenue. In addition, a contract asset for the rights to recover products from customers and a reduction of cost of sales is also calculated and recorded.

Unfulfilled performance obligations represent amounts expected to be earned on executed contracts. Indefinite delivery and quantity contracts and unexercised options are not reported in total unfulfilled performance obligations. Unfulfilled performance obligations include funded obligations, which is the amount for which money has been directly authorized by the U.S. government and for which a purchase order has been received by a commercial customer, and unfunded obligations, representing firm orders for which funding has not yet been appropriated. The approximate value of our Technology Development segment unfulfilled performance obligations was $28.8 million at September 30, 2018. We expect to satisfy 25% of the performance obligations in 2018, 54% in 2019 and the remaining by 2022. The approximate value of our Products and Licensing segment unfulfilled performance obligations was $1.8 million at September 30, 2018. We expect to satisfy 84% of the performance obligations in 2018, 8% in 2019 and the remaining by 2023.

We disaggregate our revenue from contracts with customers by geographic locations, customer-type, contract type, timing of recognition, and major categories for each of our segments, as we believe it best depicts how the nature, amount, timing and uncertainty of our revenue and cash flows are affected by economic factors. See details in the tables below.

	Three Months Ended September 30, 2018 (unaudited)			Nine Months Ended September 30, 2018 (unaudited)		
	Technology Development	Products and Licensing	Total	Technology Development	Products and Licensing	Total
Total Revenue by Geographic Location						
United States	$ 5,315,861	$ 3,251,602	$ 8,567,463	$ 15,418,919	$ 7,961,048	$ 23,379,967
Asia	—	1,143,767	1,143,767	—	3,280,348	3,280,348
Europe	—	899,683	899,683	—	2,542,017	2,542,017
Canada, Central and South America	—	1,330	1,330	—	99,807	99,807
All Others	—	74,783	74,783	—	76,783	76,783
Total	$ 5,315,861	$ 5,371,165	$ 10,687,026	$ 15,418,919	$ 13,960,003	$ 29,378,922
Total Revenue by Major Customer Type						
Sales to the U.S. government	$ 5,216,389	$ 977,076	$ 6,193,465	$ 15,284,661	$ 1,364,755	$ 16,649,416
U.S. direct commercial sales and other	99,472	2,250,656	2,350,128	134,258	6,583,006	6,717,264
Foreign commercial sales & other	—	2,143,433	2,143,433	—	6,012,242	6,012,242
Total	$ 5,315,861	$ 5,371,165	$ 10,687,026	$ 15,418,919	$ 13,960,003	$ 29,378,922
Total Revenue by Contract Type						
Fixed-price contracts	$ 2,004,166	$ 5,371,165	$ 7,375,331	$ 6,611,758	$ 13,960,003	$ 20,571,761
Cost-type contracts	3,311,695	—	3,311,695	8,807,161	—	8,807,161
Total	$ 5,315,861	$ 5,371,165	$ 10,687,026	$ 15,418,919	$ 13,960,003	$ 29,378,922
Total Revenue by Timing of Recognition						
Goods transferred at a point in time	$ —	$ 5,190,830	$ 5,190,830	$ —	$ 13,505,897	$ 13,505,897
Goods/services transferred over time	5,315,861	180,335	5,496,196	15,418,919	454,106	15,873,025
Total	$ 5,315,861	$ 5,371,165	$ 10,687,026	$ 15,418,919	$ 13,960,003	$ 29,378,922
Total Revenue by Major Products/Services						
Technology development	$ 5,315,861	$ —	$ 5,315,861	$ 15,418,919	$ —	$ 15,418,919
Optical test and measurement systems	—	4,469,677	4,469,677	—	12,129,197	12,129,197
Other	—	901,488	901,488	—	1,830,806	1,830,806
Total	$ 5,315,861	$ 5,371,165	$ 10,687,026	$ 15,418,919	$ 13,960,003	$ 29,378,922

The following tables summarize the impacts of adopting Topic 606 on our consolidated financial statements as of and for the three and nine months ended September 30, 2018.

	Impact of changes in accounting policies		
	As Reported	Adjustments	Balances without adoption of Topic 606
	(unaudited)	(unaudited)	(unaudited)
Assets			
Current assets:			
Cash and cash equivalents	$ 47,144,719	$ —	$ 47,144,719
Accounts receivable, net	9,110,713	—	9,110,713
Receivable from sale of HSOR business	4,002,342	—	4,002,342
Contract assets	2,611,122	—	2,611,122
Inventory	5,462,414	—	5,462,414
Prepaid expenses and other current assets	730,368	—	730,368
Total current assets	69,061,678	—	69,061,678
Long-term contract assets	343,492	—	343,492
Property and equipment, net	2,678,411	—	2,678,411
Intangible assets, net	1,709,003	—	1,709,003
Other assets	1,995	—	1,995
Total assets	$ 73,794,579	$ —	$ 73,794,579
Liabilities and stockholders' equity			
Liabilities:			
Current liabilities:			
Current portion of long-term debt obligations	$ 1,073,571	$ —	$ 1,073,571
Current portion of capital lease obligations	39,748	—	39,748
Accounts payable	2,297,457	—	2,297,457
Accrued liabilities	6,589,310	—	6,589,310
Contract liabilities	1,548,371	(3,880)	1,544,491
Total current liabilities	11,548,457	(3,880)	11,544,577
Long-term deferred rent	1,072,696	—	1,072,696
Long-term capital lease obligations	83,405	—	83,405
Total liabilities	12,704,558	(3,880)	12,700,678
Commitments and contingencies			
Stockholders' equity:			
Preferred stock, par value $0.001, 1,321,514 shares authorized, issued and outstanding at September 30, 2018 and December 31, 2017, respectively	1,322	—	1,322
Common stock, par value $0.001, 100,000,000 shares authorized, 29,189,506 and 28,354,822 shares issued, 27,936,401 and 27,283,918 shares outstanding at September 30, 2018 and December 31, 2017, respectively	30,081	—	30,081
Treasury stock at cost, 1,253,105 and 1,070,904 shares at September 30, 2018 and December 31, 2017, respectively	(2,116,640)	—	(2,116,640)
Additional paid-in capital	85,353,909	—	85,353,909
Accumulated deficit	(22,178,651)	3,880	(22,174,771)
Total stockholders' equity	61,090,021	3,880	61,093,901
Total liabilities and stockholders' equity	$ 73,794,579	$ —	$ 73,794,579

	Impact of changes in accounting policies					
	Three Months Ended September 30, 2018			Nine Months Ended September 30, 2018		
	As reported	Adjustments	Balances without adoption of Topic 606	As reported	Adjustments	Balances without adoption of Topic 606
	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)	(unaudited)
Revenues:						
Technology development	$ 5,315,861	$ —	$ 5,315,861	$ 15,418,919	$ —	$ 15,418,919
Products and licensing	5,371,165	(2,790)	5,368,375	13,960,003	1,630	13,961,633
Total revenues	10,687,026	(2,790)	10,684,236	29,378,922	1,630	29,380,552
Cost of revenues:						
Technology development	3,918,666	—	3,918,666	11,131,965	—	11,131,965
Products and licensing	2,079,749	—	2,079,749	5,381,333	—	5,381,333
Total cost of revenues	5,998,415	—	5,998,415	16,513,298	—	16,513,298
Gross profit	4,688,611	(2,790)	4,685,821	12,865,624	1,630	12,867,254
Operating expense:						
Selling, general and administrative	3,233,485	—	3,233,485	9,898,064	—	9,898,064
Research, development and engineering	873,629	—	873,629	2,513,497	—	2,513,497
Total operating expense	4,107,114	—	4,107,114	12,411,561	—	12,411,561
Operating income	581,497	(2,790)	578,707	454,063	1,630	455,693
Other income:						
Investment income	171,896	—	171,896	350,976	—	350,976
Other income/(expense)	8,319	—	8,319	(16,001)	—	(16,001)
Interest expense	(28,029)	—	(28,029)	(103,208)	—	(103,208)
Total other income	152,186	—	152,186	231,767	—	231,767
Income from continuing operations before income taxes	733,683	(2,790)	730,893	685,830	1,630	687,460
Income tax benefit	(559,093)	—	(559,093)	(674,329)	—	(674,329)
Net income from continuing operations	$ 1,292,776	$ (2,790)	$ 1,289,986	$ 1,360,159	$ 1,630	$ 1,361,789

Effective January 1, 2018, we adopted Accounting Standards Update ("ASU") No. 2016-15, *Statement of Cash Flows (Topic 230)*, which addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice in how cash receipts and cash payments are presented in the statement of cash flows. The adoption of ASU No. 2016-15 did not have a significant impact on our consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*, which requires a lessee to recognize in its statement of financial position an asset and liability for most leases with a term greater than 12 months. Lessees should recognize a liability to make lease payments and a right-of-use asset representing the lessee's right to use the underlying asset for the lease term. This guidance is effective for us in our first quarter of fiscal 2019. In July 2018, the FASB issued ASU 2018-11, *Leases (Topic 842): Targeted Improvements*, which provides lessees an additional, and optional, transition method to apply the new leasing standard to all open leases at the adoption date and recognize a cumulative effect adjustment to the opening balance of retained earnings in the period of adoption. We currently plan to elect this transition method, and as a result, we will not adjust our comparative period financial information or make the required lease disclosures for periods before the effective date. We are currently evaluating the impact the adoption of ASU 2016-02 and ASU 2018-11 will have on our consolidated financial statements and expect to have increases in the assets and liabilities of our consolidated balance sheet.

In February 2018, the FASB issued ASU 2018-02: *Income Statement – Reporting Comprehensive Income (Topic 220)*. Under current accounting guidance, the income tax effects for changes in income tax rates and certain other transactions are recognized in income from continuing operations resulting in income tax effects recognized in AOCI that do not reflect the current tax rate of the

entity (“stranded tax effects”). The new guidance allows us the option to reclassify these stranded tax effects to accumulated deficit that relate to the change in the federal tax rate resulting from the passage of the Tax Cuts and Jobs Act. This update is effective for fiscal years beginning after December 15, 2018, including interim periods therein, and early adoption is permitted. We do not expect the adoption of this standard will have a significant impact on our consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-04, *Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment.* This update simplifies the subsequent measurement of goodwill. The guidance removes Step 2 of the goodwill impairment test, which requires a hypothetical purchase price allocation. A goodwill impairment will now be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. The accounting standard will be effective for reporting periods beginning after December 15, 2019. We do not expect ASU 2017-04 will have a material impact on our financial statements.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820): Changes to the Disclosure Requirements for Fair Value Measurement.* which amends the disclosure requirements in ASC 820 by adding, changing, or removing certain disclosures. The ASU applies to all entities that are required under this guidance to provide disclosures about recurring or nonrecurring fair value measurements. These amendments are effective for all entities for fiscal years beginning after December 15, 2019 including interim periods within those fiscal years. We do not expect ASU 2018-13 will have a material impact on our financial statements.

2. Discontinued Operations

On August 9, 2017, we completed the sale of our high speed optical receivers ("HSOR") business, which was part of our Products and Licensing segment, to an unaffiliated third party for an initial purchase price of $33.5 million, of which $29.5 million in cash has been received, and $4.0 million was placed into escrow until December 15, 2018 for potential satisfaction of certain post-closing indemnification obligations (the "Transaction"). The HSOR business was a component of the operations of Advanced Photonix, Inc., which we acquired in May 2015. The HSOR business accounted for 34.5% of revenues and 37.2% of our cost of revenues for the three months ended September 30, 2017 and 35.5% of revenues and 39.6% of our cost of revenues for the nine months ended September 30, 2017.

On July 31, 2018 , we sold the assets and operations related to our optoelectronic components and subassemblies ("Opto") business, which was part of our Products and Licensing segment, to an unaffiliated third party for an initial purchase price up to $18.5 million, of which $17.5 million was received at closing and has been properly recorded in the financial statements with the remaining purchase price adjustment up to $1.0 million which is contingent upon the attainment of specified revenue targets during the eighteen months following the closing of the sale. The purchase price is subject to adjustment in the future based upon a determination of final working capital, as defined in the asset purchase agreement. The Opto business was a component of the operations of Advanced Photonix, Inc., which we acquired in May 2015, and represented all of our operations in our Camarillo, California and Montreal, Quebec facilities.

We have reported the results of operations of both our HSOR and Opto businesses as discontinued operations in our consolidated interim financial statements. We allocated a portion of the consolidated tax expense to discontinued operations based on the ratio of the discontinued business's loss before allocations.

The following table presents a summary of the transactions related to the sales of HSOR in the nine months ended September 30, 2017 and Opto in the nine months ended September 30, 2018:

	Nine Months Ended September 30,	
	2018	2017
	(unaudited)	(unaudited)
Sale price	$ 17,500,000	$ 33,500,000
Less: transition services payments	—	(1,500,000)
	17,500,000	32,000,000
Assets held for sale	(8,193,184)	(16,851,540)
Liabilities held for sale	989,453	2,330,052
Transaction costs	(858,227)	(873,473)
Income tax expense	(1,866,232)	(1,508,373)
Gain on sale of discontinued operations	$ 7,571,810	$ 15,096,666

Assets and liabilities held for sale associated with our Opto business as of December 31, 2017 were as follows:

	December 31, 2017
Assets	
Current assets:	
Accounts receivable, net	$ 1,940,125
Inventory	2,316,329
Prepaid expenses and other assets	79,651
Total current assets	4,336,105
Property and equipment, net	599,102
Intangible assets, net	1,510,203
Goodwill	502,000
Other assets	16,028
Total non-current assets	2,627,333
Total assets held for sale	$ 6,963,438
Liabilities	
Current liabilities:	
Accounts payable	$ 851,785
Accrued liabilities	120,666
Total current liabilities	972,451
Total liabilities held for sale	$ 972,451

The key components of net income from discontinued operations were as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
	(unaudited)		(unaudited)	
Net revenues	$ 1,089,681	$ 4,380,747	$ 8,363,606	$ 16,158,672
Cost of revenues	648,652	2,945,264	5,294,268	10,806,456
Operating expenses	271,262	1,044,104	1,714,920	4,733,603
Other (expenses)/income	(9,372)	(17,374)	13,330	(31,525)
Income before income taxes	160,395	374,005	1,367,748	587,088
Allocated tax expense/(benefit)	216,813	(91,705)	235,312	249,184
Operating (loss)/income from discontinued operations	(56,418)	465,710	1,132,436	337,904
Gain on sale, net of related income taxes	7,612,044	15,096,666	7,571,810	15,096,666
Net income from discontinued operations	$ 7,555,626	$ 15,562,376	$ 8,704,246	$ 15,434,570

For the nine months ended September 30, 2018 and 2017, cash flows provided by/(used in) operating activities for discontinued operations were $0.1 million and $(0.3) million, respectively. For the nine months ended September 30, 2018 and 2017 cash flows provided by investing activities for discontinued operations were $16.6 million and $26.6 million, respectively.

3. Contract Balances

Our contract assets consist of unbilled amounts for technology development contracts as well as custom product contracts. Also included in contract assets are royalty revenue and carrying amounts of right of returned inventory. Long-term contract assets include the fee withholding on cost reimbursable contracts that will not be billed within a year. Contract liabilities include excess billings, subcontractor accruals, warranty expense, extended warranty revenue, right of return refund, and customer deposits.

The following table shows the significant changes in contract balances for the nine month period ending September 30, 2018:

	Contract Assets	Contract Liabilities
Opening Balance as of January 1, 2018	$ 1,987,841	$ 3,320,629
Revenue recognized that was included in the contract liabilities balance at the beginning of the period	—	(808,977)
Transferred to payables from contract liabilities recognized at the beginning of the period	—	(2,052,955)
Increases due to cash received or adjustment of estimates, excluding amounts recognized as revenue during the period	—	1,089,674
Transferred to receivables from contract assets recognized at the beginning of the period	(1,543,925)	—
Increases as a result of cumulative catch-up adjustment arising from changes in the estimate of the stage of completion	2,510,698	—
Balance as of September 30, 2018	$ 2,954,614	$ 1,548,371

4. Inventory

Inventory consists of finished goods, work-in-process and raw materials valued at the lower of cost (determined on the first-in, first-out basis) or market. We write down inventory for estimated obsolescence or unmarketable inventory in an amount

equal to the difference between the cost of the inventory and the estimated market value based upon assumptions about future demand and market conditions.

Components of inventory were as follows:

	September 30, 2018	December 31, 2017
	(unaudited)	
Finished goods	$ 1,036,581	$ 762,394
Work-in-process	389,801	288,165
Raw materials	4,036,032	3,584,222
Total inventory	$ 5,462,414	$ 4,634,781

5. Accrued Liabilities

Accrued liabilities at September 30, 2018 and December 31, 2017 consisted of the following:

	September 30, 2018	December 31, 2017
	(unaudited)	
Accrued compensation	$ 4,164,573	$ 5,274,005
Income tax payable	1,676,503	403,548
Accrued professional fees	104,742	117,445
Deferred rent	143,933	144,741
Royalties	231,122	290,235
Accrued interest	6,439	—
Accrued liabilities - other	261,998	317,256
Total accrued liabilities	$ 6,589,310	$ 6,547,230

6. Debt

Silicon Valley Bank Facility

We currently have a Loan and Security Agreement with SVB (the "Credit Facility") under which, as amended on May 8, 2015, we have a term loan with an original borrowing amount of $6.0 million (the “Original Term Loan”). The Original Term Loan is repayable in 48 monthly installments of $125,000, plus accrued interest payable monthly in arrears, and unless earlier terminated, is scheduled to mature in May 2020. The Original Term Loan carries a floating annual interest rate equal to SVB’s prime rate then in effect plus 2%. We may prepay amounts due under the Original Term Loan at any time, subject to an early termination fee of up to 2% of the amount of prepayment.

In September 2015, we entered into the Waiver and Seventh Loan Modification Agreement, which provided an additional $1.0 million of available financing for purchases of equipment through December 31, 2015, which we fully borrowed in December 2015 (the "Second Term Loan" and, together with the Original Term Loan, the "Term Loans"). The Second Term Loan also bears interest at a floating prime rate plus 2% and is to be repaid in 35 monthly installments of $27,778 plus accrued interest.

The Credit Facility requires us to maintain a minimum cash balance of $4.0 million and to maintain at each month end a ratio of cash plus 60% of accounts receivable greater than or equal to 1.5 times the outstanding principal of the Term Loans. The Credit Facility also requires us to observe a number of additional operational covenants, including protection and registration of intellectual property rights, and certain customary negative covenants. As of September 30, 2018, we were in compliance with all covenants under the Credit Facility.

Amounts due under the Credit Facility are secured by substantially all of our assets, including intellectual property, personal property and bank accounts. In addition, the Credit Facility contains customary events of default, including nonpayment of principal, interest or other amounts, violation of covenants, material adverse change, an event of default under any subordinated debt documents, incorrectness of representations and warranties in any material respect, bankruptcy,

judgments in excess of a threshold amount, and violations of other agreements in excess of a threshold amount. If any event of default occurs SVB may declare due immediately all borrowings under the Credit Facility and foreclose on the collateral. Furthermore, an event of default under the Credit Facility would result in an increase in the interest rate on any amounts outstanding. As of September 30, 2018, there were no events of default on the Credit Facility.

The aggregate balance under the Term Loans at September 30, 2018 and December 31, 2017, was $1.1 million and $2.5 million, respectively. One term loan, with a balance of $0.1 million and $0.3 million as of September 30, 2018 and December 31, 2017, respectively, matures on December 1, 2018. The other term loan, with a balance of $1.0 million and $2.1 million as of September 30, 2018 and December 31, 2017, respectively, matures on May 1, 2019. The effective rate of our Term Loan at September 30, 2018 was 7%.

The following table presents a summary of debt outstanding as of September 30, 2018 and December 31, 2017:

	September 30, 2018	December 31, 2017
	(unaudited)	
Silicon Valley Bank Term Loan	$ 1,083,333	$ 2,458,333
Less: unamortized debt issuance costs	9,762	21,993
Less: current portion	1,073,571	1,833,333
Total long-term debt	$ —	$ 603,007

The schedule of remaining principal payments under our Term Loans as of September 30, 2018 was as follows:

2018 (remaining three months)	458,333
2019	625,000
	$ 1,083,333

7. Capital Stock and Share-Based Compensation

We recognize share-based compensation expense based upon the fair value of the underlying equity award on the date of the grant. For restricted stock awards and restricted stock units, we recognize expense based upon the price of our underlying stock at the date of the grant. We have elected to use the Black-Scholes-Merton option pricing model to value any option or warrant awards granted. We recognize share-based compensation for such awards on a straight-line basis over the requisite service period of the awards. The risk-free interest rate is based on U.S. Treasury interest rates, the terms of which are consistent with the expected life of the stock options. The expected life is based upon historical experience of homogeneous groups within our company. We also assume an expected dividend yield of zero for all periods, as we have never paid a dividend on our common stock and do not have any plans to do so in the future.

Stock Options

A summary of the stock option activity for the nine months ended September 30, 2018 is presented below:

	Options Outstanding				Options Exercisable		
	Number of Shares	Price per Share Range	Weighted Average Exercise Price	Aggregate Intrinsic Value (1)	Number of Shares	Weighted Average Exercise Price	Aggregate Intrinsic Value (1)
Balance, January 1, 2018	2,714,561	$0.61 - $6.55	$ 1.88	$ 2,098,195	2,590,030	$ 1.89	$ 2,013,034
Granted	273,212	$2.46 - $3.27	$ 3.24				
Exercised	(76,425)	$0.65 - $2.46	$ 2.07				
Canceled	(645,421)	$1.21 - $6.55	$ 2.11				
Balance, September 30, 2018	2,265,927	$0.61 - $6.23	$ 1.83	$ 3,239,122	1,979,179	$ 1.81	$ 3,149,186

(1) The intrinsic value of an option represents the amount by which the market value of the stock exceeds the exercise price of the option of in-the-money options only. The aggregate intrinsic value is based on the closing price of our common stock on the Nasdaq Capital Market, as applicable, on the respective dates.

At September 30, 2018, the outstanding stock options to purchase an aggregate of 2.3 million shares had a weighted-average remaining contractual term of 4.3 years, and the exercisable stock options to purchase an aggregate of 2.0 million shares had a weighted-average remaining contractual term of 3.5 years. The fair value of shares underlying vested options was $6.4 million at September 30, 2018. The fair value of shares underlying options exercised during the nine months ended September 30, 2018 was $255,102.

For the nine months ended September 30, 2018 and 2017 we recognized $0.3 million and $0.5 million in share-based compensation expense, respectively, which is included in our selling, general and administrative expense in the accompanying consolidated interim financial statements. We expect to recognize $0.6 million in share-based compensation expense over the weighted-average remaining service period of 3.8 years for stock options outstanding as of September 30, 2018.

Restricted Stock and Stock Units

For the nine months ended September 30, 2018, we issued 280,000 shares of restricted stock to certain employees. Shares of restricted stock issued to employees vest in three equal annual installments on the anniversary dates of their grant. For the nine months ended September 30, 2018, 182,500 shares of restricted stock vested.

For the nine months ended September 30, 2018, we issued 16,287 restricted stock units to certain non-employee members of our Board of Directors in respect of the annual equity grants pursuant to our non-employee director compensation policy. This amount represents the equity compensation to those non-employee directors who did not elect to defer the receipt of their equity compensation pursuant to our non-employee director deferred compensation plan described below. Restricted stock units issued to our directors vest at the earlier of the one year anniversary of their grant or the next annual stockholders' meeting. During the nine months ended September 30, 2018, 129,865 restricted stock units vested.

The following table summarizes the value of our unvested restricted stock awards and restricted stock units:

	Number of Unvested Shares	Weighted Average Grant Date Fair Value	Aggregate Value of Unvested Shares
Balance, January 1, 2018	489,698	$ 1.51	$ 738,345
Granted	296,287	$ 3.07	909,600
Vested	(312,365)	$ 2.75	(454,339)
Forfeitures	(15,000)	$ 1.41	(21,150)
Balance, September 30, 2018	458,620	$ 2.56	$ 1,172,456

Non-employee Director Deferred Compensation Plan

We maintain a non-employee director deferred compensation plan (the “Deferred Compensation Plan”) that permits our non-employee directors to defer receipt of certain of the compensation that they receive for serving on our board and board committees. The Deferred Compensation Plan has historically permitted the participants to elect to defer cash fees to which they were entitled for board and committee service. For participating directors, in lieu of payment of cash fees, we credit their accounts under the Deferred Compensation Plan with a number of stock units based on the trading price of our common stock as of the date of the deferral. These stock units vest immediately, although the participating directors do not receive the shares represented by such units until a future qualifying event.

In December 2017, we amended and restated our Deferred Compensation Plan to also permit participating non-employee directors to elect, beginning in 2018, to defer the receipt of some or all of the equity compensation that they receive for board and committee service. Stock units representing this equity compensation vest at the earlier of the one year anniversary of their grant or the next annual stockholders' meeting.

The following is a summary of our stock unit activity under the Deferred Compensation Plan for the nine months ended September 30, 2018:

	Number of Stock Units	Weighted Average Grant Date Fair Value per Share	Intrinsic Value Outstanding
Balance, January 1, 2018	466,702	$1.40	$ 1,134,086
Granted	80,006	$3.00	
Forfeitures	—	—	
Converted	—	—	
Balance, September 30, 2018	546,708	$1.64	$ 1,765,867

As of September 30, 2018, 48,859 of the outstanding stock units had not yet vested.

The following table details our equity transactions during the nine months ended September 30, 2018:

	Preferred Stock		Common Stock		Treasury Stock		Additional Paid-in Capital	Accumulated Deficit	Total
	Shares	$	Shares	$	Shares	$	$		
Balance at January 1, 2018, as previously reported	1,321,514	1,322	27,283,918	29,186	1,070,904	(1,649,746)	83,563,208	(32,406,189)	49,537,781
Impact of change in accounting policy	—	—	—	—	—	—	—	354,028	354,028
As adjusted balance at January 1, 2018	1,321,514	1,322	27,283,918	29,186	1,070,904	(1,649,746)	83,563,208	(32,052,161)	49,891,809
Exercise of stock options	—	—	442,425	442	—	—	1,054,412	—	1,054,854
Share-based compensation	—	—	262,394	262	—	—	345,582	—	345,844
Non-cash compensation	—	—	129,865	131	—	—	199,872	—	200,003
Stock dividends to Carilion Clinic[(1)]	—	—	—	60	—	—	190,835	(190,895)	—
Net Income	—	—	—	—	—	—	—	10,064,405	10,064,405
Purchase of treasury stock	—	—	(182,201)	—	182,201	(466,894)	—	—	(466,894)
Balance, September 30, 2018	1,321,514	1,322	27,936,401	30,081	1,253,105	(2,116,640)	85,353,909	(22,178,651)	61,090,021

(1) The stock dividends payable in connection with Carilion Clinic's Series A Preferred Stock will be issued subsequent to September 30, 2018. For the period from January 12, 2010, the original issue date of the Series A Preferred Stock, through September 30, 2018, the Series A Preferred Stock issued to Carilion has accrued $1,351,226 in dividends. The accrued and unpaid dividends as of September 30, 2018 will be paid by the issuance of 691,162 shares of our common stock upon Carilion's written request.

Stock Repurchase Program

In May 2016, our board of directors authorized us to repurchase up to $2.0 million of our common stock through May 31, 2017. As of May 31, 2017, we had repurchased a total of 205,500 shares for an aggregate purchase price of $0.2 million under this stock repurchase program, after which this stock repurchase program expired.

In September 2017, our board of directors re-instituted the stock repurchase program and authorized us to repurchase up to $2.0 million of our common stock through September 19, 2018. Our stock repurchase program does not obligate us to acquire any specific number of shares. Under the program, shares may be repurchased in privately negotiated or open market transactions, including under plans complying with Rule 10b5-1 under the Securities Exchange Act of 1934, as amended. As of September 19, 2018, we had repurchased a total of 565,629 shares for an aggregate purchase price of $1.1 million under this stock repurchase program, after which this stock repurchase program expired. We currently maintain all repurchased shares under these stock repurchase programs as treasury stock.

8. Income Taxes

We and our subsidiaries file U.S. Federal income tax returns and income tax returns in various state, local and foreign jurisdictions.

Our quarterly tax provision, and our quarterly estimate of our annual effective tax rate, is subject to significant variation due to several factors, including the variability in accurately predicting our pre-tax and taxable income and the mix of jurisdictions to which they relate, changes in how we do business, changes in our stock price, tax law developments (including changes in statues, regulations, case law, and administrative practices), and relative changes of expenses or losses for which tax benefits are not recognized. Additionally, our effective tax rate can be more or less volatile based on the amount if pre-tax income or loss. For example, the impact of discrete items and non-deductible expenses on our effective tax rate is greater when our pre-tax income is lower.

For 2018, the anticipated effective income tax rate is expected to continue to differ from the Federal statutory rate of 21% primarily because of the release of valuation allowance related to net operating loss carryfowards expected to be used to offset taxable income in the period and certain discrete items.

We consider both positive and negative evidence when evaluating the recoverability of our deferred tax assets ("DTAs"). The assessment is required to determine whether based on all available evidence, it is more likely than not (i.e. greater than a 50% probability) that all or some portion of the DTAs will be realized in the future. As of September 30, 2018 management has concluded a full valuation allowance of the DTAs is necessary because of sufficient uncertainty in our ability to realize the benefit associated with such DTAs in the future.

9. Operating Segments

Our operations are divided into two operating segments—“Technology Development” and “Products and Licensing”.

The Technology Development segment provides applied research to customers in our areas of focus. Our engineers and scientists collaborate with our network of government, academic and industry experts to identify technologies and ideas with promising market potential. We then compete to win fee-for-service contracts from government agencies and industrial customers who seek innovative solutions to practical problems that require new technology. The Technology Development segment derives its revenues primarily from services.

The Products and Licensing segment derives its revenues from product sales, funded product development and technology licenses.

Through September 30, 2018, our Chief Executive Officer and his direct reports collectively represented our chief operating decision makers, and they evaluated segment performance based primarily on revenues and operating income or loss. The accounting policies of our segments are the same as those described in the summary of significant accounting policies (see Note 1 to our Financial Statements, “Organization and Summary of Significant Accounting Policies,” presented in our Annual Report on Form 10-K as filed with the SEC on March 21, 2018).

The table below presents revenues and operating income/(loss) for reportable segments:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
	(unaudited)		(unaudited)	
Revenues:				
Technology development	$ 4,590,054	$ 5,315,861	$ 13,428,428	$ 15,418,919
Products and licensing	3,712,657	5,371,165	9,791,213	13,960,003
Total revenues	$ 10,687,026	$ 8,302,711	$ 29,378,922	$ 23,219,641
Technology development operating income/(loss)	$ 340,852	$ 182,776	$ 864,540	$ (77,323)
Products and licensing operating income/(loss)	240,645	(335,501)	(410,477)	(1,687,127)
Total operating income/(loss)	$ 581,497	$ (152,725)	$ 454,063	$ (1,764,450)
Depreciation, technology development	$ 95,673	$ 87,389	$ 283,550	$ 267,282
Depreciation, products and licensing	$ 42,559	$ 117,219	$ 127,796	$ 688,700
Amortization, technology development	$ 43,708	$ 28,935	$ 121,770	$ 95,540
Amortization, products and licensing	$ 56,062	$ 247,522	$ 178,028	$ 1,178,113

Products and licensing depreciation includes amounts from discontinued operations of $0.6 million for the nine months ended September 30, 2017. Products and licensing amortization includes amounts from discontinued operations of $1.0 million for the nine months ended September 30, 2017.

The table below presents assets for reportable segments:

	September 30, 2018	December 31, 2017
	(unaudited)	
Total segment assets:		
Technology development	$ 42,536,930	$ 32,011,084
Products and licensing	31,257,649	34,211,552
Total assets	$ 73,794,579	$ 66,222,636
Property plant and equipment, and intangible assets, technology development	$ 2,194,466	$ 1,762,561
Property plant and equipment, and intangible assets, products and licensing	$ 2,192,948	$ 2,819,470

The U.S. government accounted for 58% and 45% of total consolidated revenues for the three months ended September 30, 2018 and 2017, respectively and for 57% and 45% of total consolidated revenues for the nine months ended September 30, 2018 and 2017, respectively.

International revenues (customers outside the United States) accounted for 20% and 19% of total consolidated revenues for the three months ended September 30, 2018 and 2017, respectively, and 20% of the total consolidated revenues for each of the nine months ended September 30, 2018 and 2017. No single country, outside of the United States, represented more than 10% of total revenues in the three and nine months ended September 30, 2018 and 2017.

10. Contingencies and Guarantees

We are from time to time involved in certain legal proceedings in the ordinary course of conducting our business. While the ultimate liability pursuant to these actions cannot currently be determined, we believe it is not reasonably possible that these legal proceedings will have a material adverse effect on our financial position or results of operations.

In March 2018, we received a notice of claim (the "Claim") from Macom Technology Solutions, Inc. ("Macom"), who acquired our HSOR business in August 2017 pursuant to an asset purchase agreement. Under the asset purchase agreement, we agreed to indemnify Macom for certain matters, including, among other things, the collection of accounts receivable from certain major customers, and placed $4.0 million of the purchase price into an escrow account for the potential settlement of any valid indemnity claims. The notice of claim received from Macom totaled $2.0 million under various indemnity

provisions. We have disputed Macom's assertion of right to payment for the matters described in the Claim. It is uncertain what amount, if any, will be owed in settlement of the Claim.

On July 31, 2018, we sold the assets associated with our Opto components business to an unaffiliated third party. The asset purchase agreement provides for additional consideration of up to $1.0 million contingent upon the achievement of a specified revenue level by the sold business during the 18 months following the sale. In addition, the asset purchase agreement provides for a potential adjustment to the consideration paid, either positive or negative, to the extent that working capital transferred to the buyer is greater or less than a specified target amount. There have been no amounts recorded in reference to the above matter in the financial statements as of September 30, 2018. It is uncertain what amount, if any, will be received or paid with respect to each of these potential adjustments.

We executed a non-cancelable purchase order totaling $0.5 million in the fourth quarter of 2017 and a non-cancelable purchase order totaling $1.1 million in the first quarter of 2018 for multiple shipments of tunable lasers to be delivered over an 18-month period. At September 30, 2018, approximately $0.4 million of these commitments remained and is expected to be delivered by July 30, 2019.

We have entered into indemnification agreements with our officers and directors, to the extent permitted by law, pursuant to which we have agreed to reimburse the officers and directors for legal expenses in the event of litigation and regulatory matters. The terms of these indemnification agreements provide for no limitation to the maximum potential future payments. We have a directors and officers insurance policy that may, in certain instances, mitigate the potential liability and payments.

11. Subsequent Event

On October 15, 2018, we acquired substantially all of the assets, other than cash, as well as specified liabilities of Micron Optics, Inc. ("Micron"), a leading provider of innovative optical components and laser-based measurement technology, whose sensing and measurement solutions are deployed in multiple industries, for total cash consideration of $5.0 million, including $4.0 million paid at closing and $1.0 million placed in escrow until the later of October 1, 2019 or the date that specified matters are resolved as agreed by us and Micron. The purchase price is subject to positive or negative adjustment based upon the final determination of working capital of Micron compared to a target working capital amount specified in the asset purchase agreement. Due to the timing of the acquisition, the initial accounting has not been finalized as we were drafting Micron's opening balance sheet and related preliminary purchase price allocation as of the date the financial statements were available for issuance.

ITEM 2. *MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS*

CAUTIONARY NOTE REGARDING FORWARD LOOKING STATEMENTS

This Quarterly Report on Form 10-Q, including the sections entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Quantitative and Qualitative Disclosures About Market Risk" under Items 2 and 3, respectively, of Part I of this report, and the section entitled "Risk Factors" under Item 1A of Part II of this report, may contain forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended. All statements other than statements of historical fact are "forward-looking statements" for purposes of these statutes, including those relating to future events or our future financial performance. In some cases, you can identify these forward looking statements by words such as "intends," "will," "plans," "anticipates," "expects," "may," "might," "estimates," "believes," "should," "projects," "predicts," "potential" or "continue," or the negative of those words and other comparable words, and other words or terms of similar meaning in connection with any discussion of future operating or financial performance. Similarly, statements that describe our business strategy, goals, prospects, opportunities, outlook, objectives, plans or intentions are also forward-looking statements. These statements are only predictions and may relate to, but are not limited to, expectations of future operating results or financial performance, capital expenditures, introduction of new products, regulatory compliance and plans for growth and future operations, as well as assumptions relating to the foregoing.

These statements are based on current expectations and assumptions regarding future events and business performance and involve known and unknown risks, uncertainties and other factors that may cause actual events or results to be materially different from any future events or results expressed or implied by these statements. These factors include those set forth in the

following discussion and within Item 1A "Risk Factors" of this Quarterly Report on Form 10-Q and elsewhere within this report.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and the related notes to those statements included elsewhere in this report. In addition to historical financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results and timing of selected events may differ materially from those anticipated in these forward-looking statements as a result of many factors, including those discussed under "Risk Factors" and elsewhere in this report.

Overview of Our Business

We are a leader in advanced optical technology, providing unique capabilities in high performance fiber optic test products for the telecommunications industry and distributed fiber optic sensing for the aerospace and automotive industries. Our distributed fiber optic sensing products provide critical stress, strain and temperature information to designers and manufacturers working with advanced materials. Prior to the sale of our optoelectronics business in July 2018, we also developed and manufactured custom optoelectronic products for various applications such as metrology, missile guidance, flame monitoring, and temperature sensing. In addition, we provide applied research services, typically under research programs funded by the U.S. government, in areas of advanced materials, sensing, and healthcare applications. Our business model is designed to accelerate the process of bringing new and innovative products to market. We use our in-house technical expertise across a range of technologies to perform applied research services for companies and for government funded projects. We continue to invest in product development and commercialization, which we anticipate will lead to increased product sales growth.

We are organized into two main business segments, the Products and Licensing segment and the Technology Development segment. Our Products and Licensing segment develops, manufactures and markets fiber optic sensing products, as well as test and measurement products, and also conducts applied research in the fiber optic sensing area for both corporate and government customers. Our Products and Licensing segment revenues represented 50% and 45% of our total revenues for the three months ended September 30, 2018 and 2017, respectively, and 48% and 42% of our total revenues for the nine months ended September 30, 2018 and 2017, respectively. The approximate value of our Products and Licensing segment backlog was $1.8 million at September 30, 2018 and $6.9 million at December 31, 2017. The backlog at September 30, 2018 is expected to be recognized as revenue in the future as follows:

	2018	2019	2020	2021	2022 and beyond	Total
Products and Licensing	$ 1,547,440	$ 151,681	$ 62,324	$ 23,126	$ 64,869	$ 1,849,440

The Technology Development segment performs applied research principally in the areas of sensing and instrumentation, advanced materials and health sciences. This segment comprised 50% and 55% of our total revenues for the three months ended September 30, 2018 and 2017, respectively, and 52% and 58% of our total revenues for the nine months ended September 30, 2018 and 2017, respectively. Most of the government funding for our Technology Development segment is derived from the Small Business Innovation Research ("SBIR") program coordinated by the U.S. Small Business Administration ("SBA"). The Technology Development segment revenues have historically accounted for a large portion of our total revenues, and we expect that they will continue to represent a significant portion of our total revenues for the foreseeable future. The Technology Development segment revenues were $5.3 million and $4.6 million for the three months ended September 30, 2018 and 2017, respectively, and $15.4 million and $13.4 million for the nine months ended September 30, 2018 and 2017. Within the Technology Development segment, we have historically had a backlog of contracts for which work has been scheduled, but for which a specified portion of work has not yet been completed. We define backlog as the dollar amount of obligations payable to us under negotiated contracts upon completion of a specified portion of work that has not yet been completed, exclusive of revenues previously recognized for work already performed under these contracts, if any. Total backlog includes funded backlog, which is the amount for which money has been directly authorized by the U.S. government and for which a purchase order has been received by a commercial customer, and unfunded backlog, representing firm orders for which funding has not yet been appropriated. Indefinite delivery and quantity contracts and unexercised options are not reported in total backlog. The approximate value of our Technology Development segment backlog was $28.8 million at September 30, 2018 and $23.5 million at December 31, 2017. The backlog at September 30, 2018 is expected to be recognized as revenue in the future as follows:

Technology Development	2018	2019	2020	2021	2022 and beyond	Total
Funded	$ 6,582,679	$ 13,238,423	$ 3,745,951	$ 99,658	$ 754	$ 23,667,465
Unfunded	$ 720,238	$ 2,286,629	$ 1,371,922	$ 500,921	$ 250,460	$ 5,130,170

Revenues from product sales are mostly derived from the sales of our, sensing and test and measurement products that make use of light-transmitting optical fibers, or fiber optics. We continue to invest in product development and commercialization, which we anticipate will lead to increased product sales growth. Prior to the sale of our optoelectronics business in July 2018, revenues from product sales also included custom optoelectronic components and sub-assemblies sold to scientific instrumentation manufacturers. Although we have been successful in licensing certain technology in past years, we do not expect license revenues to represent a significant portion of future revenues. Over time, however, we do intend to gradually increase such revenues. In the near term, we expect revenues from product to continue to be primarily in areas associated with our fiber optic-based test and measurement and sensing platforms. In the long term, we expect that revenues from product sales will represent a larger portion of our total revenues and that as we develop and commercialize new products, these revenues will reflect a broader and more diversified mix of products.

On October 15, 2018, we acquired substantially all of the assets, other than cash, as well as specified liabilities of Micron Optics, Inc. ("Micron"), a leading provider of innovative optical components and laser-based measurement technology, whose sensing and measurement solutions are deployed in multiple industries, for total cash consideration of $5.0 million, including $4.0 million paid at closing and $1.0 million placed in escrow until the later of October 1, 2019 or the date that specified matters are resolved as agreed by us and Micron. The purchase price is subject to positive or negative adjustment based upon the final determination of working capital of Micron compared to a target working capital amount specified in the asset purchase agreement. We may also grow our business in part through acquisitions of additional companies and complementary technologies, which could cause us to incur transaction expenses, amortization or write-offs of intangible assets and other acquisition-related expenses.

Description of Revenues, Costs and Expenses

Revenues

We generate revenues from technology development, product sales and commercial product development and licensing activities. We derive Technology Development segment revenues from providing research and development services to third parties, including government entities, academic institutions and corporations, and from achieving milestones established by some of these contracts and in collaboration agreements. In general, we complete contracted research over periods ranging from six months to three years, and recognize these revenues over the life of the contract as costs are incurred. The Technology Development segment revenues represented 50% and 55% of total revenues for the three months ended September 30, 2018 and 2017, respectively and 52% and 58% of our total revenues for the nine months ended September 30, 2018 and 2017, respectively.

The Products and Licensing segment revenues reflect amounts that we receive from sales of our products or development of products for third parties and, to a lesser extent, fees paid to us in connection with licenses or sub-licenses of certain patents and other intellectual property, and represented 50% and 45% of our total revenues for the three months ended September 30, 2018 and 2017, respectively, and 48% and 42% of our total revenues for nine months ended September 30, 2018 and 2017, respectively.

Cost of Revenues

Cost of revenues associated with our Technology Development segment revenues consists of costs associated with performing the related research activities including direct labor, amounts paid to subcontractors and overhead allocated to Technology Development segment activities.

Cost of revenues associated with our Products and Licensing segment revenues consists of license fees for use of certain technologies, product manufacturing costs including all direct material and direct labor costs, amounts paid to our contract manufacturers, manufacturing, shipping and handling, provisions for product warranties, and inventory obsolescence as well as overhead allocated to each of these activities.

Operating Expense

Operating expense consists of selling, general and administrative expenses, as well as expenses related to research, development and engineering, depreciation of fixed assets and amortization of intangible assets. These expenses also include compensation for employees in executive and operational functions including certain non-cash charges related to expenses from option grants, facilities costs, professional fees, salaries, commissions, travel expense and related benefits of personnel engaged in sales, product management and marketing activities, costs of marketing programs and promotional materials, salaries, bonuses and related benefits of personnel engaged in our own research and development beyond the scope and activities of our Technology Development segment, product development activities not provided under contracts with third parties, and overhead costs related to these activities.

Investment Income

Investment income consists of amounts earned on our cash equivalents. We sweep on a daily basis a portion of our cash on hand into a fund invested in U.S. government obligations.

Interest Expense

Interest expense is composed of interest paid under our term loans as well as interest accrued on our capital lease obligations.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires us to make estimates, assumptions and judgments that affect the amounts reported in our financial statements and the accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or judgments.

Our critical accounting policies are described in the Management's Discussion and Analysis section and the notes to our audited consolidated financial statements previously included in our Annual Report on Form 10-K for the year ended December 31, 2017, as filed with the Securities and Exchange Commission ("SEC") on March 21, 2018. Changes to our critical accounting estimates as a result of adopting Topic 606 are discussed in Note 1 of our unaudited consolidated financial statements included in this Quarterly Report on Form 10-Q. Changes to our accounting estimates as a result of Topic 606 did not have a significant impact to the financial statements.

Results of Operations

Three Months Ended September 30, 2018 Compared to Three Months Ended September 30, 2017

Revenues

	Three Months Ended September 30,			
	2018	2017	$ Difference	% Difference
Revenues:				
Technology development	$ 5,315,861	$ 4,590,054	$ 725,807	16%
Products and licensing	5,371,165	3,712,657	1,658,508	45%
Total revenues	$ 10,687,026	$ 8,302,711	$ 2,384,315	29%

Revenues from our Technology Development segment for the three months ended September 30, 2018, increased $0.7 million, or 16%, to $5.3 million compared to $4.6 million for the three months ended September 30, 2017. The increase in Technology Development segment revenues continues a growth trend experienced over the past two years largely driven by successes in Phase 2 SBIR awards. The increase for the three months ended September 30, 2018, compared to the three months ended September 30, 2017, was realized primarily in our optical systems research and biomedical groups. As Phase 2 contracts generally have a performance period of a year or more, we currently expect revenues to remain at a similar level for the near term.

Our Products and Licensing segment included revenues from sales of test and measurement systems, primarily representing sales of our ODiSI, Optical Vector Analyzer, and Optical Backscatter Reflectometer platforms, optical components

and sub-assemblies and sales of Terahertz sensing systems. Products and Licensing segment revenues for the three months ended September 30, 2018 increased $1.7 million, or 45%, to $5.4 million compared to $3.7 million for the three months ended September 30, 2017. The increase for the three months ended September 30, 2018, compared to the three months ended September 30, 2017, was realized primarily in our ODiSI products directed toward the expanding use of composite materials and the need for improved means of testing their structural integrity and our Terahertz products for industrial process control and the measurement of discrete layers in manufactured products.

Cost of Revenues and Gross Profit

	Three Months Ended September 30,			
	2018	2017	$ Difference	% Difference
Cost of revenues:				
Technology development	$ 3,918,666	$ 3,491,840	$ 426,826	12%
Products and licensing	2,079,749	1,469,961	609,788	41%
Total cost of revenues	5,998,415	4,961,801	1,036,614	21%
Gross profit	$ 4,688,611	$ 3,340,910	$ 1,347,701	40%

The cost of Technology Development segment revenues for the three months ended September 30, 2018, increased $0.4 million, or 12%, to $3.9 million compared to $3.5 million for the three months ended September 30, 2017. The increase in cost of Technology Development segment revenues was attributable to additional headcount and the increased utilization of third-party analytical services to support the growth in our research contracts.

The cost of revenues associated with our Products and Licensing segment increased by $0.6 million, or 41%, to $2.1 million for the three months ended September 30, 2018, compared to $1.5 million for the three months ended September 30, 2017. This increase in cost of revenues resulted from an increase in sales volume. Cost of revenues increased at a lower rate than our revenues increased due to the product mix. Our overall gross margin increased to 44% for the three months ended September 30, 2018, compared to 40% for the three months ended September 30, 2017 primarily as a result of our revenue mix, with Technology Development segment sales representing a larger portion of our revenues during the three months ended September 30, 2018.

Operating Expense

	Three Months Ended September 30,			
	2018	2017	$ Difference	% Difference
Operating expense:				
Selling, general and administrative	$ 3,233,485	$ 2,831,493	$ 401,992	14%
Research, development and engineering	873,629	662,142	211,487	32%
Total operating expense	$ 4,107,114	$ 3,493,635	$ 613,479	18%

Our selling, general and administrative expense increased $0.4 million, or 14%, to $3.2 million for the three months ended September 30, 2018 compared to $2.8 million for the three months ended September 30, 2017. Selling, general and administrative expense increased primarily due to the addition of sales personnel to market our fiber optic test and measurement products.

Research, development and engineering expense increased $0.2 million, or 32%, to $0.9 million for the three months ended September 30, 2018, compared to $0.7 million for the three months ended September 30, 2017 due to increased engineering personnel and development costs associated with our fiber optic test and measurement products.

Investment Income

Investment income was $0.2 million for the three months ended September 30, 2018. During the three months ended September 30, 2018, we invested a portion of our cash in funds holding U.S. treasury instruments. We did not have any investment income for the three months ended September 30, 2017.

Income Tax Benefit

For the three months ended September 30, 2018 and 2017, we recognized an income tax benefit from continuing operations of $0.6 million, representing an effective tax rate of (76%), and $0.4 million, representing an effective tax rate of 200%, respectively. The decrease in our effective tax rate for continuing operations in 2018 as compared to 2017 was primarily due to an increase in the intraperiod allocation of tax benefit from discontinued operations. In addition, as a result of the Tax Cuts and Jobs Act of 2017, the corporate federal statutory tax rate decreased to 21% in 2018 from 35% in 2017.

Net Income/(Loss) From Continuing Operations

During the three months ended September 30, 2018, we recognized income from continuing operations before income taxes of $0.7 million compared to a loss from continuing operations before income taxes of $0.2 million for the three months ended September 30, 2017. After tax, our net income from continuing operations was $1.3 million and $0.2 million for the three months ended September 30, 2018 and 2017, respectively.

Net Income From Discontinued Operations

For the three months ended September 30, 2018, our net income from discontinued operations of $7.6 million represented the operating results of our optoelectronic components business for the period prior to the sale of that business and the after-tax gain associated with the sale of that business in July 2018. For the three months ended September 30, 2017, our net income from discontinued operations of $15.6 million represented the operating results of our high speed optical receivers business for the period prior to the sale of that business, and the after-tax gain associated with the sale of that business in August 2017.

Nine Months Ended September 30, 2018 Compared to Nine Months Ended September 30, 2017

Revenues

	Nine Months Ended September 30,			
	2018	2017	$ Difference	% Difference
Revenues:				
Technology development	$ 15,418,919	$ 13,428,428	$ 1,990,491	15%
Products and licensing	13,960,003	9,791,213	4,168,790	43%
Total revenues	$ 29,378,922	$ 23,219,641	$ 6,159,281	27%

Technology Development segment revenues increased $2.0 million, or 15%, to $15.4 million for the nine months ended September 30, 2018 compared to $13.4 million for the nine months ended September 30, 2017. The increase for the nine months ended September 30, 2018 compared to the nine months ended September 30, 2017 continues a growth trend experienced over the past two years largely driven by successes in Phase 2 SBIR awards. The increase was realized primarily in our optical systems and biomedical research groups. As Phase 2 contracts generally have a performance period of a year or more, we currently expect revenues to remain at a similar level for the near term.

Our Products and Licensing segment included revenues from sales of test and measurement systems, primarily representing sales of our ODiSI, Optical Vector Analyzer, and Optical Backscatter Reflectometer platforms, optical components and sub-assemblies and sales of Terahertz sensing systems. Products and Licensing segment revenues increased $4.2 million, or 43%, to $14.0 million for the nine months ended September 30, 2018 compared to $9.8 million for the nine months ended September 30, 2017. The increase in revenues was realized primarily in our ODiSI systems supporting the expanding use of composite materials and the need for improved means of testing their structural integrity and in sales of our Terahertz instruments.

Cost of Revenues and Gross Profit

	Nine Months Ended September 30,			
	2018	2017	$ Difference	% Difference
Cost of revenues:				
Technology development	11,131,965	$ 10,045,261	$ 1,086,704	11%
Products and licensing	5,381,333	3,994,044	1,387,289	35%
Total cost of revenues	16,513,298	14,039,305	2,473,993	18%
Gross profit	$ 12,865,624	$ 9,180,336	$ 3,685,288	40%

Costs of Technology Development segment revenues increased $1.1 million, or 11%, to $11.1 million for the nine months ended September 30, 2018, compared to $10.0 million the nine months ended September 30, 2017. This increase was primarily driven by the increase in Technology Development segment revenues in addition to increased headcount and the utilization of third-party subcontractors and other analytical services to support the growth in our research contracts over the same period

Costs of Products and Licensing segment revenues increased $1.4 million, or 35%, to $5.4 million for the nine months ended September 30, 2018 compared to $4.0 million for the nine months ended September 30, 2017. This increase in cost of revenues resulted from an increase in sales volume. Our overall gross margin for the nine months ended September 30, 2018 increased to 44% compared to 40% for the nine months ended September 30, 2017 primarily as a result of our revenue mix, with technology development segment sales representing a larger portion of our revenues during the nine months ended September 30, 2018.

Operating Expense

	Nine Months Ended September 30,			
	2018	2017	$ Difference	% Difference
Operating expense:				
Selling, general and administrative	$ 9,898,064	$ 8,983,016	$ 915,048	10%
Research, development and engineering	2,513,497	1,961,770	551,727	28%
Total operating expense	$ 12,411,561	$ 10,944,786	$ 1,466,775	13%

Selling, general and administrative expense increased $0.9 million, or 10%, to $9.9 million for the nine months ended September 30, 2018, compared to $9.0 million for the nine months ended September 30, 2017. The increase in selling, general and administrative expense resulted primarily from the addition of sales personnel associated with our fiber optic test and measurement products and the commission costs associated with the growth in product revenues.

Research, development and engineering expense increased $0.6 million, or 28%, to $2.5 million for the nine months ended September 30, 2018, compared to $2.0 million for the nine months ended September 30, 2017. The increase in research, development, and engineering expense resulted primarily from increased engineering personnel and development costs associated with our fiber optic test and measurement products.

Investment Income

Investment income was $0.4 million for the nine months ended September 30, 2018. During the nine months ended September 30, 2018, we invested a portion of our cash in funds holding U.S. treasury securities. We did not have any investment income for the nine months ended September 30, 2017.

Income Tax Benefit

For each of the nine months ended September 30, 2018 and 2017, we recognized an income tax benefit from continuing operations of $0.7 million, representing an effective tax rate of (98%) and 35%, respectively. The decrease in our effective tax rate for continuing operations in 2018 as compared to 2017 was primarily due to an increase in the intraperiod allocation of tax benefit from discontinued operations. In addition, as a result of the Tax Cuts and Jobs Act of 2017, the corporate federal statutory tax rate decreased to 21% in 2018 from 35% in 2017.

Net Income/(Loss) From Continuing Operations

During the nine months ended September 30, 2018, we recognized income from continuing operations before income taxes of $0.7 million compared to a loss from continuing operations before income taxes of $1.9 million for the nine months ended September 30, 2017. After tax, our net income from continuing operations was $1.4 million for the nine months ended September 30, 2018, compared to a net loss from continuing operations of $1.3 million for the nine months ended September 30, 2017.

Net Income From Discontinued Operations

For the nine months ended September 30, 2018, our net income from discontinued operations of $8.7 million represented the operating results of our optoelectronic components business for the period prior to the sale of that business and the after-tax gain realized upon the sale of that business in July 2018. For the nine months ended September 30, 2017, our net income from discontinued operations of $15.4 million represented the operating results of our high speed optical receivers business for the period prior to the sale of that business in addition to the after-tax gain realized upon the sale of the business in August 2017.

Liquidity and Capital Resources

At September 30, 2018, our total cash and cash equivalents were $47.1 million.

We currently have a Loan and Security Agreement with Silicon Valley Bank ("SVB") under which we have two term loans with an aggregate original borrowing amount of $7.0 million. As of September 30, 2018, these term loans had an aggregate outstanding principal balance of $1.1 million. One term loan, with a balance of $0.1 million as of September 30, 2018, matures on December 1, 2018. The other term loan, with a balance of $1.0 million as of September 30, 2018, matures on May 1, 2019. The term loans bear interest at a floating rate of prime plus 2%. We may prepay amounts due under the term loans at any time, subject to prepayment penalties of up to 2% of the amount of prepayment. Amounts due under the term loans are secured by substantially all of our assets, including intellectual property, personal property and bank accounts. The term loans contain customary events of default, including nonpayment of principal, interest or other amounts, violation of covenants, material adverse change, an event of default under any subordinated debt documents, incorrectness of representations and warranties in any material respect, bankruptcy, judgments in excess of a threshold amount, and violations of other agreements in excess of a threshold amount. If any event of default occurs, SVB may declare due immediately all borrowings under the credit facility and foreclose on the collateral. Furthermore, an event of default under the credit facility would result in an increase in the interest rate on any amounts outstanding. As of September 30, 2018, we were in compliance with all covenants under the Loan and Security Agreement.

We believe that our cash balance as of September 30, 2018 will provide adequate liquidity for us to meet our working capital needs over the next twelve months. Additionally, we believe that should we have the need for increased capital spending to support our planned growth, we will be able to fund such growth through either third-party financing on competitive market terms or through our available cash.

Discussion of Cash Flows

Recent Activity

	Nine Months Ended September 30,		
	2018	2017	$ Difference
Net cash (used in)/provided by operating activities	$ (3,444,408)	$ 581,386	$ (4,025,794)
Net cash provided by investing activities	14,227,434	26,743,345	(12,515,911)
Net cash used in financing activities	(619,840)	(1,612,752)	992,912
Net increase in cash and cash equivalents	$ 10,163,186	$ 25,711,979	$ (15,548,793)

During the first nine months of 2018, operations used $3.4 million of cash, as compared to the same period in 2017 in which operations provided $0.6 million of cash. During the first nine months of 2018, net cash used in operating activities consisted of our net income of $10.1 million, which included a gain recognized on the sale of our optoelectronic components

business of $7.6 million in addition to non-cash charges for depreciation and amortization of $0.9 million and share-based compensation of $0.3 million, offset by a net cash outflow of $7.2 million from changes in working capital. The changes in working capital included a reduction in contract liabilities of $1.9 million primarily as a result of the payment of $1.6 million in outstanding claims for excess billed amounts on government research contracts. The changes in working capital also included an increase in accounts receivable of $4.1 million, an increase in contract assets of $1.0 million, an increase in inventory of $1.0 million, all partially offset by a reduction in other current assets of $0.5 million and increase in accounts payable and accrued expenses of $0.3 million.

During the first nine months of 2017, the $0.6 million of net cash provided by operating activities consisted of our net income of $14.2 million which included a gain recognized on the sale of our high speed optical receivers business of $15.1 million in addition to non-cash charges for depreciation and amortization of $2.2 million and share-based compensation of $0.5 million. Additionally, changes in working capital resulted in a net cash outflow of $1.3 million, principally driven by a reduction in accounts receivable of $2.1 million, a reduction in other current assets of $0.5 million, an increase in accounts payable and accrued expenses of $1.6 million, and an increase in inventory of $2.3 million.

Cash provided by investing activities for the nine months ended September 30, 2018 included $14.8 million in proceeds from the sale of our optoelectronic components business, partially offset by $0.3 million of fixed asset additions and $0.3 million of capitalized intellectual property costs. Cash provided by investing activities for the nine months ended September 30, 2017 included $28.0 million in proceeds from the sale of our high speed optical receivers business partially offset by fixed asset additions of $0.9 million and capitalized intellectual property costs of $0.4 million.

Net cash used in financing activities during the nine months ended September 30, 2018 and 2017 included long term debt repayments of $1.4 million. During the nine months ended September 30, 2018 and 2017 we also repurchased $0.5 million and $0.2 million, respectively of our common stock on the open market. During the nine months ended September 30, 2018 we received proceeds from the exercise of options and warrants of $1.3 million.

Off-Balance Sheet Arrangements

We have no material off-balance sheet arrangements as defined in Regulation S-K Item 303(a)(4)(ii).

ITEM 3. *QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK*

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. We do not hold or issue financial instruments for trading purposes or have any derivative financial instruments. Our exposure to market risk is limited to interest rate fluctuations due to changes in the general level of U.S. interest rates.

Interest Rate Risk

We do not use derivative financial instruments as a hedge against interest rate fluctuations, and, as a result, interest income earned on our cash and cash equivalents and short-term investments is subject to changes in interest rates. However, we believe that the impact of these fluctuations does not have a material effect on our financial position due to the immediately available liquidity or short-term nature of these financial instruments.

We are exposed to interest rate fluctuations as a result of our term loans with SVB having a variable interest rate. We do not currently use derivative instruments to alter the interest rate characteristics of our debt. For the principal amount of 1.1 million outstanding under the term loans as of September 30, 2018, a change in the interest rate by one percentage point for one year would result in a change in our annual interest expense of $6,000.

Although we believe that this measure is indicative of our sensitivity to interest rate changes, it does not adjust for potential changes in our credit quality, composition of our balance sheet and other business developments that could affect our interest rate exposure. Accordingly, no assurances can be given that actual results would not differ materially from the potential outcome simulated by this estimate.

Foreign Currency Exchange Rate Risk

As of September 30, 2018, all payments made under our research contracts have been denominated in U.S. dollars. Our product sales to foreign customers are also generally denominated in U.S. dollars, and we generally do not receive payments in foreign currency. As such, we are not directly exposed to significant currency gains or losses resulting from fluctuations in foreign exchange rates.

ITEM 4. *CONTROLS AND PROCEDURES*

Evaluation of Disclosure Controls and Procedures

We maintain “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), which are controls and other procedures that are designed to provide reasonable assurance that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures also include, without limitation, controls and procedures designed to provide reasonable assurance that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company’s management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. In addition, the design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a control system, misstatements due to error or fraud may occur and not be detected.

Under the supervision and with the participation of our management, including our principal executive officer and our principal financial officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this Quarterly Report. Based on this evaluation, our principal executive officer and our principal financial officer have concluded that, as of September 30, 2018, our disclosure controls and procedures were effective.

Changes in Internal Control over Financial Reporting

No change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) occurred during the three months ended September 30, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. *LEGAL PROCEEDINGS*

None.

ITEM 1A. *RISK FACTORS*

You should carefully consider the risks described below before deciding whether to invest in our common stock. The risks described below are not the only ones we face. Additional risks not presently known to us or that we currently believe are immaterial may also impair our business operations and financial results. If any of the following risks actually occurs, our business, financial condition or results of operations could be adversely affected. In such case, the trading price of our common stock could decline and you could lose all or part of your investment. Our filings with the SEC also contain forward-looking statements that involve risks or uncertainties. Our actual results could differ materially from those anticipated or contemplated by these forward-looking statements as a result of a number of factors, including the risks we face described below, as well as other variables that could affect our operating results. Past financial performance should not be considered to be a reliable indicator of future performance, and investors should not use historical trends to anticipate results or trends in future periods.

RISKS RELATING TO OUR BUSINESS GENERALLY

Our technology is subject to a license from Intuitive Surgical, Inc., which is revocable in certain circumstances. Without this license, we cannot continue to market, manufacture or sell our fiber-optic products.

As a part of the sale of certain assets to Intuitive Surgical, Inc. ("Intuitive") in 2014, we entered into a license agreement with Intuitive pursuant to which we received rights to use all of our transferred technology outside the field of medicine and in respect of our existing non-shape sensing products in certain non-robotic medical fields. This license back to us is revocable if after notice and certain time periods, we were to (i) challenge the validity or enforceability of the transferred patents and patent applications, (ii) commercialize our fiber optical shape sensing and localization technology in the field of medicine (except to perform on a development and supply project for Hansen Medical, Inc.), (iii) violate our obligations related to our ability to sublicense in the field of medicine or (iv) violate our confidentiality obligations in a manner that advantages a competitor in the field of medicine and not cure such violation. Maintaining this license is necessary for us to conduct our fiber-optic products business, both for our telecom products and our ODiSI sensing products. If this license were to be revoked by Intuitive, we would no longer be able to market, manufacture or sell these products which could have a material adverse effect on our operations.

We depend on third-party vendors for specialized components in our manufacturing operations, making us vulnerable to supply shortages and price fluctuations that could harm our business.

We primarily rely on third-party vendors for the manufacture of the specialized components used in our products. The highly specialized nature of our supply requirements poses risks that we may not be able to locate additional sources of the specialized components required in our business. For example, there are few manufacturers who produce the special lasers used in our optical test equipment. Our reliance on these vendors subjects us to a number of risks that could negatively affect our ability to manufacture our products and harm our business, including interruption of supply. Although we are now manufacturing tunable lasers in low-rate initial production, we expect our overall reliance on third-party vendors to continue. Any significant delay or interruption in the supply of components, or our inability to obtain substitute components or materials from alternate sources at acceptable prices and in a timely manner could impair our ability to meet the demand of our customers and could harm our business.

We depend upon outside contract manufacturers for a portion of the manufacturing process for some of our products. Our operations and revenue related to these products could be adversely affected if we encounter problems with these contract manufacturers.

Many of our products are manufactured internally. However, we also rely upon contract manufacturers to produce the finished portion of certain lasers. Our reliance on contract manufacturers for these products makes us vulnerable to possible

capacity constraints and reduced control over delivery schedules, manufacturing yields, manufacturing quality control and costs. If the contract manufacturer for our products were unable or unwilling to manufacture our products in required volumes and at high quality levels or to continue our existing supply arrangement, we would have to identify, qualify and select an acceptable alternative contract manufacturer or move these manufacturing operations to internal manufacturing facilities. An alternative contract manufacturer may not be available to us when needed or may not be in a position to satisfy our quality or production requirements on commercially reasonable terms, including price. Any significant interruption in manufacturing our products would require us to reduce the supply of products to our customers, which in turn would reduce our revenue, harm our relationships with the customers of these products and cause us to forego potential revenue opportunities.

As a provider of contract research to the U.S. government, we are subject to federal rules, regulations, audits and investigations, the violation or failure of which could adversely affect our business.

We must comply with and are affected by laws and regulations relating to the award, administration and performance of U.S. government contracts. Government contract laws and regulations affect how we do business with our government customers and, in some instances, impose added costs on our business. A violation of a specific law or regulation could result in the imposition of fines and penalties, termination of our contracts or debarment from bidding on contracts. In some instances, these laws and regulations impose terms or rights that are more favorable to the government than those typically available to commercial parties in negotiated transactions. For example, the U.S. government may terminate any of our government contracts and, in general, subcontracts, at their convenience, as well as for default based on performance.

In addition, U.S. government agencies, including the Defense Contract Audit Agency and the Department of Labor, routinely audit and investigate government contractors. These agencies review a contractor’s performance under its contracts, cost structure and compliance with applicable laws, regulations and standards. The U.S. government also may review the adequacy of, and a contractor’s compliance with, its internal control systems and policies, including the contractor’s purchasing, property, estimating, compensation and management information systems. Any costs found to be improperly allocated to a specific contract will not be reimbursed, while such costs already reimbursed must be refunded. If an audit uncovers the inclusion of certain claimed costs deemed to be expressly unallowable, or improper or illegal activities, we may be subject to civil and criminal penalties and administrative sanctions, including termination of contracts, forfeiture of profits, suspension of payments, fines and suspension or prohibition from doing business with the U.S. government. In addition, our reputation could suffer serious harm if allegations of impropriety were made against us.

In addition to the risk of government audits and investigations, U.S. government contracts and grants impose requirements on contractors and grantees relating to ethics and business practices, which carry civil and criminal penalties including monetary fines, assessments, loss of the ability to do business with the U.S. government and certain other criminal penalties.

We may also be prohibited from commercially selling certain products that we develop under our Technology Development segment or related products based on the same core technologies if the U.S. government determines that the commercial availability of those products could pose a risk to national security. For example, certain of our wireless technologies have been classified as secret by the U.S. government and as a result we cannot sell them commercially. Any of these determinations would limit our ability to generate product sales and license revenues.

We rely and will continue to rely on contracts and grants awarded under the SBIR program for a significant portion of our revenues. A finding by the SBA that we no longer qualify to receive SBIR awards could adversely affect our business.

We compete as a small business for some of our government contracts. Our revenues derived from the SBIR program account for a significant portion of our consolidated total revenues, and contract research, including SBIR contracts, will remain a significant portion of our consolidated total revenues for the foreseeable future. For the nine months ended September 30, 2018 and 2017, revenues generated under the SBIR program represented 37% and 32%, respectively, of our total revenues.

We may not continue to qualify to participate in the SBIR program or to receive new SBIR awards from federal agencies. In order to qualify for SBIR contracts and grants, we must meet certain size and ownership eligibility criteria. These eligibility criteria are applied as of the time of the award of a contract or grant. A company can be declared ineligible for a contract award as a result of a size challenge filed with the SBA by a competitor or a federal agency.

In order to be eligible for SBIR contracts and grants, under current SBA rules we must be more than 50% owned and controlled by individuals who are U.S. citizens or permanent resident aliens, and/or other small business concerns (each of which is more than 50% owned and controlled by individuals who are U.S. citizens or permanent resident aliens) or certain qualified investment companies. In the event our institutional ownership significantly increases, either because of increased buying by institutions or selling by individuals, we could lose eligibility for new SBIR contracts and grants.

Also, in order to be eligible for SBIR contracts and grants, the number of our employees, including those of any entities that are considered to be affiliated with us, cannot exceed 500. As of September 30, 2018, we had approximately 166 full-time employees. In determining whether we are affiliated with any other entity, the SBA may analyze whether another entity controls or has the power to control us. Carilion Clinic is our largest institutional stockholder. Since early 2011, a formal size determination by the SBA that focused on whether or not Carilion is or was our affiliate has been outstanding. Although we do not believe that Carilion has or had the power to control our company, we cannot assure you that the SBA will interpret its regulations in our favor on this question. If the SBA were to make a determination that we are or were affiliated with Carilion, we would exceed the size limitations, as Carilion has over 500 employees. In that case, we would lose eligibility for new SBIR contracts and grants and other awards that are set aside for small businesses based on the criterion of number of employees, and the relevant government agency would have the discretion to suspend performance on existing SBIR grants. The loss of our eligibility to receive SBIR awards would have a material adverse impact on our revenues, cash flows and our ability to fund our growth.

Moreover, as our business grows, it is foreseeable that we will eventually exceed the SBIR size limitations, in which case we may be required to seek alternative sources of revenues or capital.

A decline in government research contract awards or government funding for existing or future government research contracts, including SBIR contracts, could adversely affect our revenues, cash flows and ability to fund our growth.

Technology Development segment revenues, which consist primarily of government-funded research, accounted for 52% and 58% of our consolidated total revenues for the nine months ended September 30, 2018 and 2017, respectively. As a result, we are vulnerable to adverse changes in our revenues and cash flows if a significant number of our research contracts and subcontracts were to be simultaneously delayed or canceled for budgetary, performance or other reasons. For example, the U.S. government may cancel these contracts at any time without cause and without penalty or may change its requirements, programs or contract budget, any of which could reduce our revenues and cash flows from U.S. government research contracts. Our revenues and cash flows from U.S. government research contracts and subcontracts could also be reduced by declines or other changes in U.S. defense, homeland security and other federal agency budgets. In addition, we compete as a small business for some of these contracts, and in order to maintain our eligibility to compete as a small business, we, together with any affiliates, must continue to meet size and revenue limitations established by the U.S. government.

Our contract research customer base includes government agencies, corporations and academic institutions. Our customers are not obligated to extend their agreements with us and may elect not to do so. Also, our customers' priorities regarding funding for certain projects may change and funding resources may no longer be available at previous levels.

In addition to contract cancellations and changes in agency budgets, our future financial results may be adversely affected by curtailment of or restrictions on the U.S. government's use of contract research providers, including curtailment due to government budget reductions and related fiscal matters or any legislation or resolution limiting the number or amount of awards we may receive. These or other factors could cause U.S. defense and other federal agencies to conduct research internally rather than through commercial research organizations or direct awards to other organizations, to reduce their overall contract research requirements or to exercise their rights to terminate contracts. Alternatively, the U.S. government may discontinue the SBIR program or its funding altogether. Also, SBIR regulations permit increased competition for SBIR awards from companies that may not have previously been eligible, such as those backed by venture capital operating companies, hedge funds and private equity firms. Any of these developments could limit our ability to obtain new contract awards and adversely affect our revenues, cash flows and ability to fund our growth.

Our failure to attract, train and retain skilled employees or members of our senior management and to obtain necessary security clearances for such persons or maintain a facility security clearance would adversely affect our business and operating results.

The availability of highly trained and skilled technical and professional personnel is critical to our future growth and profitability. Competition for scientists, engineers, technicians and professional personnel is intense and our competitors aggressively recruit key employees. In the past, we have experienced difficulties in recruiting and hiring these personnel as a result of the tight labor market in certain fields. Any difficulty in hiring or retaining qualified employees, combined with our growth strategy and future needs for additional experienced personnel, particularly in highly specialized areas such as nanomaterial manufacturing and fiber optic sensing technologies, may make it more difficult to meet all of our needs for these employees in a timely manner. Although we intend to continue to devote significant resources to recruit, train and retain qualified employees, we may not be able to attract and retain these employees, especially in technical fields in which the supply of experienced qualified candidates is limited, or at the senior management level. Any failure to do so would have an adverse effect on our business. Any loss of key personnel could have a material adverse effect on our ability to meet key operational

objectives, such as timely and effective project milestones and product introductions, which in turn could adversely affect our business, results of operations and financial condition.

We provide certain services to the U.S. government that require us to maintain a facility security clearance and for certain of our employees and our board chairman to hold security clearances. In general, the failure for necessary persons to obtain or retain sufficient security clearances, any loss by us of a facility security clearance or any public reprimand related to security matters could result in a U.S. government customer terminating an existing contract or choosing not to renew a contract or prevent us from bidding on or winning certain new government contracts.

In addition, our future success depends in a large part upon the continued service of key members of our senior management team. We do not maintain any key-person life insurance policies on our officers. The loss of any members of our management team or other key personnel could seriously harm our business.

Our business is subject to the cyclical nature of the markets in which we compete and any future downturn may reduce demand for our products and revenue.

Many factors beyond our control affect our business, including consumer confidence in the economy, interest rates, fuel prices and the general availability of credit. The overall economic climate and changes in Gross National Product growth have a direct impact on some of our customers and the demand for our products. We cannot be sure that our business will not be adversely affected as a result of an industry or general economic downturn.

Our customers may reduce capital expenditures and have difficulty satisfying liquidity needs because of continued turbulence in the U.S. and global economies, resulting in reduced sales of our products and harm to our financial condition and results of operations.

In particular, our historical results of operations have been subject to substantial fluctuations, and we may experience substantial period-to-period fluctuations in future results of operations. Any future downturn in the markets in which we compete could significantly reduce the demand for our products and therefore may result in a significant reduction in revenue or increase the volatility of the price of our common stock. Our revenue and results of operations may be adversely affected in the future due to changes in demand from customers or cyclical changes in the markets utilizing our products.

In addition, the telecommunications industry has, from time to time, experienced, and may again experience, a pronounced downturn. To respond to a downturn, many service providers may slow their capital expenditures, cancel or delay new developments, reduce their workforces and inventories and take a cautious approach to acquiring new equipment and technologies from original equipment manufacturers, which would have a negative impact on our business. Weakness in the global economy or a future downturn in the telecommunications industry may cause our results of operations to fluctuate from quarter-to-quarter and year-to-year, harm our business, and may increase the volatility of the price of our common stock.

Customer acceptance of our products is dependent on our ability to meet changing requirements, and any decrease in acceptance could adversely affect our revenue.

Customer acceptance of our products is significantly dependent on our ability to offer products that meet the changing requirements of our customers, including telecommunication, military, medical and industrial corporations, as well as government agencies. Any decrease in the level of customer acceptance of our products could harm our business.

Our products must meet exacting specifications, and defects and failures may occur, which may cause customers to return or stop buying our products.

Our customers generally establish demanding specifications for quality, performance and reliability that our products must meet. However, our products are highly complex and may contain defects and failures when they are first introduced or as new versions are released. Our products are also subject to rough environments as they are integrated into our customer products for use by the end customers. If defects and failures occur in our products, we could experience lost revenue, increased costs, including warranty expense and costs associated with customer support, delays in or cancellations or rescheduling of orders or shipments, product returns or discounts, diversion of management resources or damage to our reputation and brand equity, and in some cases consequential damages, any of which would harm our operating results. In addition, delays in our ability to fill product orders as a result of quality control issues may negatively impact our relationship with our customers. We cannot assure you that we will have sufficient resources, including any available insurance, to satisfy any asserted claims.

Rapidly changing standards and regulations could make our products obsolete, which would cause our revenue and results of operations to suffer.

We design products to conform to our customers' requirements and our customers' systems may be subject to regulations established by governments or industry standards bodies worldwide. Because some of our products are designed to conform to current specific industry standards, if competing or new standards emerge that are preferred by our customers, we would have to make significant expenditures to develop new products. If our customers adopt new or competing industry standards with which our products are not compatible, or the industry groups adopt standards or governments issue regulations with which our products are not compatible, our existing products would become less desirable to our customers and our revenue and results of operations would suffer.

The markets for many of our products are characterized by changing technology which could cause obsolescence of our products, and we may incur substantial costs in delivering new products.

The markets for many of our products are characterized by changing technology, new product introductions and product enhancements, and evolving industry standards. The introduction or enhancement of products embodying new technology or the emergence of new industry standards could render existing products obsolete, and result in a write down to the value of our inventory, or result in shortened product life cycles. Accordingly, our ability to compete is in part dependent on our ability to continually offer enhanced and improved products.

The success of our new product offerings will depend upon several factors, including our ability to:

- accurately anticipate customer needs;
- innovate and develop new technologies and applications;
- successfully commercialize new technologies in a timely manner;
- price products competitively and manufacture and deliver products in sufficient volumes and on time; and
- differentiate our product offerings from those of our competitors.

Our inability to find new customers or retain existing customers could harm our business.

Our business is reliant on our ability to find new customers and retain existing customers. In particular, customers normally purchase certain of our products and incorporate them into products that they, in turn, sell in their own markets on an ongoing basis. As a result, the historical sales or these products have been dependent upon the success of our customers' products and our future performance is dependent upon our success in finding new customers and receiving new orders from existing customers.

In several markets, the quality and reliability of our products are a major concern for our customers, not only upon the initial manufacture of the product, but for the life of the product. Many of our products are used in remote locations for higher value assembly, making servicing of our products unfeasible. Any failure of the quality or reliability of our products could harm our business.

If our customers do not qualify our products or if their customers do not qualify their products, our results of operations may suffer.

Most of our customers do not purchase our products prior to qualification of the products and satisfactory completion of factory audits and vendor evaluation. Our existing products, as well as each new product, must pass through varying levels of qualification with our customers. In addition, because of the rapid technological changes in some markets, a customer may cancel or modify a design project before we begin large-scale manufacturing and receiving revenues from the customer. It is difficult to predict with any certainty whether our customers will delay or terminate product qualification or the frequency with which customers will cancel or modify their projects. Any such delay, cancellation or modification could have a negative effect on our results of operations.

In addition, once a customer qualifies a particular supplier's product or component, these potential customers design the product into their system, which is known as a design-in win. Suppliers whose products or components are not designed in are unlikely to make sales to that customer until at least the adoption of a future redesigned system. Even then, many customers may be reluctant to incorporate entirely new products into their new systems, as doing so could involve significant additional redesign efforts and increased costs. If we fail to achieve design-in wins in potential customers' qualification processes, we will likely lose the opportunity for significant sales to those customers for a lengthy period of time.

If the end user customers that purchase systems from our customers fail to qualify or delay qualifications of any products sold by our customers that contain our products, our business could be harmed. The qualification and field testing of our customers' systems by end user customers is long and unpredictable. This process is not under our control or that of our customers and, as a result, the timing of our sales may be unpredictable. Any unanticipated delay in qualification of one of our

customers' products could result in the delay or cancellation of orders from our customers for products included in their equipment, which could harm our results of operations.

Customer demand for our products is difficult to accurately forecast and, as a result, we may be unable to optimally match production with customer demand, which could adversely affect our business and financial results.

We make planning and spending decisions, including determining the levels of business that we will seek and accept, production schedules, inventory levels, component procurement commitments, personnel needs and other resource requirements, based on our estimates of customer requirements. The short-term nature of commitments by many of our customers and the possibility of unexpected changes in demand for their products reduce our ability to accurately estimate future customer requirements. On occasion, customers may require rapid increases in production, which can strain our resources, cause our manufacturing to be negatively impacted by materials shortages, necessitate higher or more restrictive procurement commitments, increase our manufacturing yield loss and scrapping of excess materials, and reduce our gross margin. We may not have sufficient capacity at any given time to meet the volume demands of our customers, or one or more of our suppliers may not have sufficient capacity at any given time to meet our volume demands. Conversely, a downturn in the markets in which our customers compete can cause, and in the past have caused, our customers to significantly reduce or delay the amount of products ordered or to cancel existing orders, leading to lower utilization of our facilities. Because many of our costs and operating expenses are relatively fixed, reduction in customer demand due to market downturns or other reasons would have a negative effect on our gross margin, operating income and cash flow.

Customer orders and forecasts are subject to cancellation or modification at any time which could result in higher manufacturing costs.

Our sales are made primarily pursuant to standard purchase orders for delivery of products. However, by industry practice, some orders may be canceled or modified at any time. When a customer cancels an order, they may responsible for all finished goods, all costs, direct and indirect, incurred by us, as well as a reasonable allowance for anticipated profits. No assurance can be given that we will receive these amounts after cancellation. Furthermore, uncertainty in customer forecasts of their demands and other factors may lead to delays and disruptions in manufacturing, which could result in delays in product shipments to customers and could adversely affect our business.

Fluctuations and changes in customer demand are common in our business. Such fluctuations, as well as quality control problems experienced in manufacturing operations, may cause delays and disruptions in our manufacturing process and overall operations and reduce output capacity. As a result, product shipments could be delayed beyond the shipment schedules requested by our customers or could be canceled, which would negatively affect our sales, operating income, strategic position at customers, market share and reputation. In addition, disruptions, delays or cancellations could cause inefficient production which in turn could result in higher manufacturing costs, lower yields and potential excess and obsolete inventory or manufacturing equipment. In the past, we have experienced such delays, disruptions and cancellations.

The results of our operations could be adversely affected by economic and political conditions and the effects of these conditions on our customers' businesses and levels of business activity.

Global economic and political conditions affect our customers' businesses and the markets they serve. A severe or prolonged economic downturn or a negative or uncertain political climate could adversely affect our customers' financial conditions and the timing or levels of business activity of our customers and the industries we serve. This may reduce the demand for our products or depress pricing for our products and have a material adverse effect on our results of operations. Changes in global economic conditions could also shift demand to products or services for which we do not have competitive advantages, and this could negatively affect the amount of business we are able to obtain. In addition, if we are unable to successfully anticipate changing economic and political conditions, we may be unable to effectively plan for and respond to those changes, and our business could be negatively affected as a result.

We have a history of losses, and because our strategy for expansion may be costly to implement, we may experience losses and may not maintain profitability or positive cash flow.

We have a history of net losses, including a net loss from continuing operations during the year ended December 31, 2017. We expect to continue to incur significant expenses as we pursue our strategic initiatives, including increased expenses for research and development, sales and marketing and manufacturing. We may also grow our business in part through acquisitions of additional companies and complementary technologies which could cause us to incur greater than anticipated transaction expenses, amortization or write-offs of intangible assets and other acquisition-related expenses. As a result, we may

incur net losses in the future, and these losses could be substantial. At a certain level, continued net losses could impair our ability to comply with Nasdaq continued listing standards, as described further below.

Our ability to generate additional revenues and to become profitable will depend on our ability to execute our key growth initiative regarding the development, marketing and sale of sensing products, develop and commercialize innovative technologies, expand our contract research capabilities and sell the products that result from those development initiatives. We may not be able to sustain or increase our profitability on a quarterly or annual basis.

We have obtained capital by borrowing money under term loans and we might require additional capital to support and expand our business; our term loan has various loan covenants with which we must comply.

We intend to continue to make investments to support our business growth, including developing new products, enhancing our existing products, obtaining important regulatory approvals, enhancing our operating infrastructure, completing our development activities and building our commercial scale manufacturing facilities. To the extent that we are unable to become or remain profitable and to finance our activities from continuing operations, we may require additional funds to support these initiatives and to grow our business.

If we are successful in raising additional funds through issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution, including as the result of the issuance of warrants in connection with the financing, and any new equity securities we issue could have rights, preferences and privileges superior to those of our existing common stock. Furthermore, such financings may jeopardize our ability to apply for SBIR grants or qualify for SBIR contracts or grants, and our dependence on SBIR grants may restrict our ability to raise additional outside capital. If we raise additional funds through debt financings, these financings may involve significant cash payment obligations and covenants that restrict our ability to operate our business and make distributions to our stockholders.

We have term loans with Silicon Valley Bank ("SVB"), which requires us to observe certain financial and operational covenants, including maintenance of a minimum cash balance of $4.0 million, protection and registration of intellectual property rights, and certain customary negative covenants, as well as other customary events of default. If any event of default occurs SVB may declare due immediately all borrowings under our term loans and foreclose on the collateral. Furthermore, an event of default would result in an increase in the interest rate on any amounts outstanding.

If we are unable to obtain adequate financing or financing terms satisfactory to us when we require it, our ability to continue to support our business growth and to respond to business challenges could be significantly limited.

We face and will face substantial competition in several different markets that may adversely affect our results of operations.

We face and will face substantial competition from a variety of companies in several different markets. As we focus on developing marketing and selling fiber optic sensing products, we may also face substantial and entrenched competition in that market.

Many of our competitors have longer operating histories, greater name recognition, larger customer bases and significantly greater financial, sales and marketing, manufacturing, distribution, technical and other resources than we do. These competitors may be able to adapt more quickly to new or emerging technologies and changes in customer requirements. In addition, current and potential competitors have established or may establish financial or strategic relationships among themselves or with existing or potential customers or other third parties. Accordingly, new competitors or alliances among competitors could emerge and rapidly acquire significant market share. We cannot assure you that we will be able to compete successfully against current or new competitors, in which case our revenues may fail to increase or may decline.

Intense competition in our markets could result in aggressive business tactics by our competitors, including aggressively pricing their products or selling older inventory at a discount. If our current or future competitors utilize aggressive business tactics, including those described above, demand for our products could decline, we could experience delays or cancellations of customer orders, or we could be required to reduce our sales prices.

Decreases in average selling prices of our products may increase operating losses and net losses, particularly if we are not able to reduce expenses commensurately.

The market for optical components and subsystems continues to be characterized by declining average selling prices resulting from factors such as increased price competition among optical component and subsystem manufacturers, excess capacity, the introduction of new products and increased unit volumes as manufacturers continue to deploy network and storage systems. In recent years, we have observed a significant decline of average selling prices, primarily in the telecommunications market. We anticipate that average selling prices will continue to decrease in the future in response to product introductions by

competitors or by us, or in response to other factors, including price pressures from significant customers. In order to sustain profitable operations, we must, therefore, reduce the cost of our current designs or continue to develop and introduce new products on a timely basis that incorporate features that can be sold at higher average selling prices. Failure to do so could cause our sales to decline and operating losses to increase.

Our cost reduction efforts may not keep pace with competitive pricing pressures. To remain competitive, we must continually reduce the cost of manufacturing our products through design and engineering changes. We may not be successful in redesigning our products or delivering our products to market in a timely manner. We cannot assure you that any redesign will result in sufficient cost reductions enabling us to reduce the price of our products to remain competitive or positively contribute to operating results.

Shifts in product mix may result in declines in gross profit.

Our gross profit margins vary among our product platforms, and are generally highest on our test and measurement instruments. Our overall gross profit may fluctuate from period to period as a result of a variety of factors including shifts in product mix, the introduction of new products, and decreases in average selling prices for older products. If our customers decide to buy more of our products with low gross profit margins or fewer of our products with high gross profit margins, our total gross profits could be harmed.

Risks Relating to our Operations and Business Strategy

We may dispose of or discontinue existing product lines and technology developments, which may adversely impact our future results.

On an ongoing basis, we evaluate our various product offerings and technology developments in order to determine whether any should be discontinued or, to the extent possible, divested. For example, in July 2018, we sold the assets and operations related to our optoelectronic components and subassemblies business. In addition, if we are unable to generate the amount of cash needed to fund the future operations of our business, we may be forced to sell one or more of our product lines or technology developments.

We cannot guarantee that we have correctly forecasted, or that we will correctly forecast in the future, the right product lines and technology developments to dispose or discontinue or that our decision to dispose of or discontinue various investments, products lines and technology developments is prudent if market conditions change. In addition, there are no assurances that the discontinuance of various product lines will reduce operating expenses or will not cause us to incur material charges associated with such decision. Furthermore, the discontinuance of existing product lines entails various risks, including the risk that we will not be able to find a purchaser for a product line or the purchase price obtained will not be equal to at least the book value of the net assets for the product line. Other risks include managing the expectations of, and maintaining good relations with, our historical customers who previously purchased products from a disposed or discontinued product line, which could prevent us from selling other products to them in the future. We may also incur other significant liabilities and costs associated with disposal or discontinuance of product lines, including employee severance costs and excess facilities costs.

If we cannot successfully transition our revenue mix from contract research revenues to product sales and license revenues, we may not be able to fully execute our business model or grow our business.

Our business model and future growth depend on our ability to transition to a revenue mix that contains significantly larger product sales and revenues from the provision of services or from licensing. Product sales and these revenues potentially offer greater scalability than contract research revenues. Our current plan is to increase our sales of commercial products, our licensing revenues and our provision of non-research services to customers so as to represent a larger percentage of our total revenues. If we are unable to develop and grow our product sales and revenues from the provision of services or from licensing to augment our contract research revenues, however, our ability to execute our business model or grow our business could suffer. There can be no assurance that we will be able to achieve increased revenues in this manner.

Failure to develop, introduce and sell new products or failure to develop and implement new technologies, could adversely impact our financial results.

Our success will depend on our ability to develop and introduce new products that customers choose to buy. The new products the market requires tend to be increasingly complex, incorporating more functions and operating at faster speeds than old products. If we fail to introduce new product designs or technologies in a timely manner or if customers do not successfully

introduce new systems or products incorporating our products , our business, financial condition and results of operations could be materially harmed.

We may not realize the anticipated benefits of our acquisition of Micron.

In October 2018, we acquired Micron. Acquisitions are inherently risky, and we may not realize the anticipated benefits of the acquisition of Micron. Specifically, we are subject to the risks that:

- we fail to successfully develop or integrate Micron's employees and historical business in order to achieve our strategic objectives; and
- our due diligence processes in connection with the acquisition fail to identify significant problems, liabilities or other shortcomings or challenges or Micron.

If we are unable to successfully integrate Micron's business and employees, it could have an adverse effect on our future results and the market price of our common stock.

The success of our acquisition of Micron will depend, in large part, on our ability to integrate the Micron operations into our existing Lightwave division. This integration may be complex and time-consuming.

The failure to successfully integrate and manage the challenges presented by the integration process may result in our failure to achieve some or all of the anticipated benefits of the acquisition. Potential difficulties that may be encountered in the integration process include the following:

- complexities associated with managing the larger combined company with distant business locations;
- integrating personnel from the two companies;
- current and prospective employees may experience uncertainty regarding their future roles with our company, which might adversely affect our ability to retrain, recruit and motivate key personnel;
- lost sales and customers as a result of Micron's customers deciding not to do business with the combined company;
- potential unknown liabilities and unforeseen expenses associated with the acquisition; and
- performance shortfalls at one or both of the companies as a result of the diversion of management's attention caused by integrating the companies' operations.

If any of these events were to occur, the ability of the combined company to maintain relationships with customers, suppliers and employees or our ability to achieve the anticipated benefits of the acquisition could be adversely affected or could reduce our future earnings or otherwise adversely affect our business and financial results and, as a result, adversely affect the market price of our common stock.

If we are unable to manage growth effectively, our revenues and net loss could be adversely affected.

We may need to expand our personnel resources to grow our business effectively. We believe that sustained growth at a higher rate will place a strain on our management as well as on our other human resources. To manage this growth, we must continue to attract and retain qualified management, professional, scientific and technical and operating personnel. If we are unable to recruit a sufficient number of qualified personnel, we may be unable to staff and manage projects adequately, which in turn may slow the rate of growth of our contract research revenues or our product development efforts.

We may not be successful in identifying market needs for new technologies or in developing new products.

Part of our business model depends on our ability to correctly identify market needs for new technologies. We intend to identify new market needs, but we may not always have success in doing so in part because our contract research largely centers on identification and development of unproven technologies, often for new or emerging markets. Furthermore, we must identify the most promising technologies from a sizable pool of projects. If our commercialization strategy process fails to identify projects with commercial potential or if management does not ensure that such projects advance to the commercialization stage, we may not successfully commercialize new products and grow our revenues.

Our growth strategy requires that we also develop successful commercial products to address market needs. We face several challenges in developing successful new products. Many of our existing products and those currently under development are technologically innovative and require significant and lengthy product development efforts. These efforts include planning, designing, developing and testing at the technological, product and manufacturing-process levels. These

activities require us to make significant investments. Although there are many potential applications for our technologies, our resource constraints require us to focus on specific products and to forgo other opportunities. We expect that one or more of the potential products we choose to develop will not be technologically feasible or will not achieve commercial acceptance, and we cannot predict which, if any, of our products we will successfully develop or commercialize. The technologies we research and develop are new and steadily changing and advancing. The products that are derived from these technologies may not be applicable or compatible with the state of technology or demands in existing markets. Our existing products and technologies may become uncompetitive or obsolete if our competitors adapt more quickly than we do to new technologies and changes in customers' requirements. Furthermore, we may not be able to identify if and when new markets will open for our products given that future applications of any given product may not be readily determinable, and we cannot reasonably estimate the size of any markets that may develop. If we are not able to successfully develop new products, we may be unable to increase our product revenues.

We face risks associated with our international business.

We currently conduct business internationally and we might considerably expand our international activities in the future. Our international business operations are subject to a variety of risks associated with conducting business internationally, including:

- having to comply with U.S. export control regulations and policies that restrict our ability to communicate with non-U.S. employees and supply foreign affiliates and customers;
- changes in or interpretations of foreign regulations that may adversely affect our ability to sell our products, perform services or repatriate profits to the United States;
- the imposition of tariffs;
- hyperinflation or economic or political instability in foreign countries;
- imposition of limitations on, or increase of withholding and other taxes on remittances and other payments by foreign subsidiaries or joint ventures;
- conducting business in places where business practices and customs are unfamiliar and unknown;
- the imposition of restrictive trade policies;
- the imposition of inconsistent laws or regulations;
- the imposition or increase of investment and other restrictions or requirements by foreign governments;
- uncertainties relating to foreign laws and legal proceedings;
- having to comply with a variety of U.S. laws, including the Foreign Corrupt Practices Act ("FCPA"); and
- having to comply with licensing requirements.

We do not know the impact that these regulatory, geopolitical and other factors may have on our international business in the future.

We may be liable for damages based on product liability claims relating to defects in our products, which might be brought against us directly, or against our customers in their end-use markets. Such claims could result in a loss of customers in addition to substantial liability in damages.

Our products are complex and undergo quality testing as well as formal qualification, both by our customers and by us. However, defects may occur from time to time. Our customers' testing procedures may be limited to evaluating our products under likely and foreseeable failure scenarios and over varying amounts of time. For various reasons, such as the occurrence of performance problems that are unforeseeable in testing or that are detected only when products age or are operated under peak stress conditions, our products may fail to perform as expected long after customer acceptance. Failures could result from faulty components or design, problems in manufacturing or other unforeseen reasons. As a result, we could incur significant costs to repair or replace defective products under warranty, particularly when such failures occur in installed systems. In addition, we may in certain circumstances honor warranty claims after the warranty has expired or for problems not covered by warranty in order to maintain customer relationships. Any significant product failure could result in lost future sales of the affected product and other products, as well as customer relations problems, litigation and damage to our reputation.

In addition, many of our products are embedded in, or deployed in conjunction with, our customers' products, which incorporate a variety of components, modules and subsystems and may be expected to interoperate with modules produced by third parties. As a result, not all defects are immediately detectable, and, when problems occur, it may be difficult to identify the source of the problem. These problems may cause us to incur significant damages or warranty and repair costs, divert the attention of our engineering personnel from internal product development efforts and cause significant customer relations problems or loss of customers, all of which would harm our business.

Furthermore, many of our products may provide critical performance attributes to our customers' products that will be sold to end users who could potentially bring product liability suits in which we could be named as a defendant. The sale of these products involves the risk of product liability claims. If a person were to bring a product liability suit against one of our customers, this customer may attempt to seek contribution from us. A person may also bring a product liability claim directly against us. A successful product liability claim or series of claims against us in excess of our insurance coverage for payments, for which we are not otherwise indemnified, could have a material adverse effect on our financial condition or results of operations.

We could be negatively affected by a security breach, either through cyber-attack, cyber-intrusion or other significant disruption of our IT networks and related systems.

We face the risk, as does any company, of a security breach, whether through cyber-attack or cyber-intrusion over the internet, malware, computer viruses, attachments to e-mails, persons inside our organization or persons with access to systems inside our organization, or other significant disruption of our IT networks and related systems. The risk of a security breach or disruption, particularly through cyber-attack or cyber-intrusion, including by computer hackers, foreign governments and cyber terrorists, has increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased.

As a technology company, and particularly as a government contractor, we may face a heightened risk of a security breach or disruption from threats to gain unauthorized access to our proprietary, confidential or classified information on our IT networks and related systems. These types of information and IT networks and related systems are critical to the operation of our business and essential to our ability to perform day-to-day operations, and, in some cases, are critical to the operations of certain of our customers. In addition, as certain of our technological capabilities become widely known, it is possible that we may be subjected to cyber-attack or cyber-intrusion as third parties seek to gain improper access to information regarding these capabilities and cyber-attacks or cyber-intrusion could compromise our confidential information or our IT networks and systems generally, as it is not practical as a business matter to isolate all of our confidential information and trade secrets from email and internet access. To date, we have not experienced a significant cyber-intrusion or cyber-attack. There can be no assurance that our security efforts and measures will be effective or that attempted security breaches or disruptions would not be successful or damaging.

A security breach or other significant disruption involving these types of information and IT networks and related systems could disrupt the proper functioning of these networks and systems and therefore our operations, compromise our confidential information and trade secrets, or damage our reputation among our customers and the public generally. Any of these developments could have a negative impact on our results of operations, financial condition and cash flows.

Risks Relating to our Regulatory Environment

Our operations are subject to domestic and foreign laws, regulations and restrictions, and noncompliance with these laws, regulations and restrictions could expose us to fines, penalties, suspension or debarment, which could have a material adverse effect on our profitability and overall financial position.

Our operations, particularly our international sales, subject us to numerous U.S. and foreign laws and regulations, including, without limitation, regulations relating to imports, exports (including the Export Administration Regulations and the International Traffic in Arms Regulations), technology transfer restrictions, anti-boycott provisions, economic sanctions and the FCPA. The number of our various emerging technologies, the development of many of which has been funded by the Department of Defense, presents us with many regulatory challenges. Failure by us or our sales representatives or consultants to comply with these laws and regulations could result in administrative, civil, or criminal liabilities and could result in suspension of our export privileges, which could have a material adverse effect on our business. Changes in regulation or political environment may affect our ability to conduct business in foreign markets including investment, procurement and repatriation of earnings.

Environmental regulations could increase operating costs and additional capital expenditures and delay or interrupt operations.

The photonics industry, as well as the semiconductor industry, are subject to governmental regulations for the protection of the environment, including those relating to air and water quality, solid and hazardous waste handling, and the promotion of occupational safety. Various federal, state and local laws and regulations require that we maintain certain environmental permits. While we believe that we have obtained all necessary environmental permits required to conduct our manufacturing

processes, if we are found to be in violation of these laws, we could be subject to governmental fines and liability for damages resulting from such violations.

Changes in the aforementioned laws and regulations or the enactment of new laws, regulations or policies could require increases in operating costs and additional capital expenditures and could possibly entail delays or interruptions of our operations.

If our manufacturing facilities do not meet Federal, state or foreign country manufacturing standards, we may be required to temporarily cease all or part of our manufacturing operations, which would result in product delivery delays and negatively impact revenues.

Our manufacturing facilities are subject to periodic inspection by regulatory authorities and our operations will continue to be regulated by the FDA for compliance with Good Manufacturing Practice requirements contained in the quality systems regulations. We are also required to comply with International Organization for Standardization ("ISO"), quality system standards in order to produce certain of our products for sale in Europe. If we fail to continue to comply with Good Manufacturing Practice requirements or ISO standards, we may be required to cease all or part of our operations until we comply with these regulations. Obtaining and maintaining such compliance is difficult and costly. We cannot be certain that our facilities will be found to comply with Good Manufacturing Practice requirements or ISO standards in future inspections and audits by regulatory authorities. In addition, if we cannot maintain or establish manufacturing facilities or operations that comply with such standards or do not meet the expectations of our customers, we may not be able to realize certain economic opportunities in our current or future supply arrangements.

Medical products are subject to various international regulatory processes and approval requirements. If we do not obtain and maintain the necessary international regulatory approvals for any such potential products, we may not be able to market and sell our medical products in foreign countries.

To be able to market and sell medical products in other countries, we must obtain regulatory approvals and comply with the regulations of those countries. These regulations, including the requirements for approvals and the time required for regulatory review, vary from country to country. Obtaining and maintaining foreign regulatory approvals are expensive, and we cannot be certain that we will have the resources to be able to pursue such approvals or whether we would receive regulatory approvals in any foreign country in which we plan to market our products. For example, the European Union requires that manufacturers of medical products obtain the right to affix the CE mark to their products before selling them in member countries of the European Union, which we have not yet obtained and may never obtain. If we fail to obtain regulatory approval in any foreign country in which we plan to market our products, our ability to generate revenues will be harmed.

We are subject to additional significant foreign and domestic government regulations, including environmental and health and safety regulations, and failure to comply with these regulations could harm our business.

Our facilities and current and proposed activities involve the use of a broad range of materials that are considered hazardous under applicable laws and regulations. Accordingly, we are subject to a number of foreign, federal, state and local laws and regulations relating to health and safety, protection of the environment and the storage, use, disposal of, and exposure to, hazardous materials and wastes. We could incur costs, fines and civil and criminal penalties, personal injury and third party property damage claims, or could be required to incur substantial investigation or remediation costs, if we were to violate or become liable under environmental, health and safety laws. Moreover, a failure to comply with environmental laws could result in fines and the revocation of environmental permits, which could prevent us from conducting our business. Liability under environmental laws can be joint and several and without regard to fault. There can be no assurance that violations of environmental and health and safety laws will not occur in the future as a result of the inability to obtain permits, human error, equipment failure or other causes. Environmental laws could become more stringent over time, imposing greater compliance costs and increasing risks and penalties associated with violations, which could harm our business. Accordingly, violations of present and future environmental laws could restrict our ability to expand facilities, pursue certain technologies, and could require us to acquire costly equipment or incur potentially significant costs to comply with environmental regulations.

Compliance with foreign, federal, state and local environmental laws and regulations represents a small part of our present budget. If we fail to comply with any such laws or regulations, however, a government entity may levy a fine on us or require us to take costly measures to ensure compliance. Any such fine or expenditure may adversely affect our development. We cannot predict the extent to which future legislation and regulation could cause us to incur additional operating expenses, capital expenditures or restrictions and delays in the development of our products and properties.

Risks Relating to our Intellectual Property

Our proprietary rights may not adequately protect our technologies.

Our commercial success will depend in part on our obtaining and maintaining patent, trade secret, copyright and trademark protection of our technologies in the United States and other jurisdictions as well as successfully enforcing this intellectual property and defending it against third-party challenges. We will only be able to protect our technologies from unauthorized use by third parties to the extent that valid and enforceable intellectual property protections, such as patents or trade secrets, cover them. In particular, we place considerable emphasis on obtaining patent and trade secret protection for significant new technologies, products and processes. The degree of future protection of our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. The degree of future protection of our proprietary rights is also uncertain for products that are currently in the early stages of development because we cannot predict which of these products will ultimately reach the commercial market or whether the commercial versions of these products will incorporate proprietary technologies.

Our patent position is highly uncertain and involves complex legal and factual questions. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents. For example:

- we or our licensors might not have been the first to make the inventions covered by each of our pending patent applications and issued patents;
- we or our licensors might not have been the first to file patent applications for these inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies;
- it is possible that none of our pending patent applications or the pending patent applications of our licensors will result in issued patents;
- patents may issue to third parties that cover how we might practice our technology;
- our issued patents and issued patents of our licensors may not provide a basis for commercially viable technologies, may not provide us with any competitive advantages, or may be challenged and invalidated by third parties; and
- we may not develop additional proprietary technologies that are patentable.

Patents may not be issued for any pending or future pending patent applications owned by or licensed to us, and claims allowed under any issued patent or future issued patent owned or licensed by us may not be valid or sufficiently broad to protect our technologies. Moreover, protection of certain of our intellectual property may be unavailable or limited in the United States or in foreign countries, and we have not sought to obtain foreign patent protection for certain of our products or technologies due to cost, concerns about enforceability or other reasons. Any issued patents owned by or licensed to us now or in the future may be challenged, invalidated, or circumvented, and the rights under such patents may not provide us with competitive advantages. In addition, competitors may design around our technology or develop competing technologies. Intellectual property rights may also be unavailable or limited in some foreign countries, and in the case of certain products no foreign patents were filed or can be filed. This could make it easier for competitors to capture or increase their market share with respect to related technologies. We could incur substantial costs to bring suits in which we may assert our patent rights against others or defend ourselves in suits brought against us. An unfavorable outcome of any litigation could have a material adverse effect on our business and results of operations.

We also rely on trade secrets to protect our technology, especially where we believe patent protection is not appropriate or obtainable. However, trade secrets are difficult to protect. We regularly attempt to obtain confidentiality agreements and contractual provisions with our collaborators, employees and consultants to protect our trade secrets and proprietary know-how. These agreements may be breached or may not have adequate remedies for such breach. While we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors or scientific and other advisors, or those of our strategic partners, may unintentionally or willfully disclose our information to competitors. If we were to enforce a claim that a third party had illegally obtained and was using our trade secrets, our enforcement efforts would be expensive and time consuming, and the outcome would be unpredictable. In addition, courts outside the United States are sometimes unwilling to protect trade secrets. Moreover, if our competitors independently develop equivalent knowledge, methods and know-how, it will be more difficult for us to enforce our rights and our business could be harmed.

If we are not able to defend the patent or trade secret protection position of our technologies, then we will not be able to exclude competitors from developing or marketing competing technologies and we may not generate enough revenues from product sales to justify the cost of developing our technologies and to achieve or maintain profitability.

We also rely on trademarks to establish a market identity for our company and our products. To maintain the value of our trademarks, we might have to file lawsuits against third parties to prevent them from using trademarks confusingly similar to or dilutive of our registered or unregistered trademarks. Also, we might not obtain registrations for our pending trademark applications, and we might have to defend our registered trademark and pending trademark applications from challenge by third parties. Enforcing or defending our registered and unregistered trademarks might result in significant litigation costs and damages, including the inability to continue using certain trademarks.

Third parties may claim that we infringe their intellectual property, and we could suffer significant litigation or licensing expense as a result.

Various U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in our technology areas. Such third parties may claim that we infringe their patents. Because patent applications can take several years to result in a patent issuance, there may be currently pending applications, unknown to us, which may later result in issued patents that our technologies may infringe. For example, we are aware of competitors with patents in technology areas applicable to our optical test equipment products. Such competitors may allege that we infringe these patents. There could also be existing patents of which we are not aware that our technologies may inadvertently infringe. We have from time to time been, and may in the future be, contacted by third parties, including patent assertion entities or intellectual property advisors, about licensing opportunities that also contain claims that we are infringing on third party patent rights. If third parties assert these claims against us, we could incur extremely substantial costs and diversion of management resources in defending these claims, and the defense of these claims could have a material adverse effect on our business, financial condition and results of operations. Even if we believe we have not infringed on a third party's patent rights, we may have to settle a claim on unfavorable terms because we cannot afford to litigate the claim. In addition, if third parties assert claims against us and we are unsuccessful in defending against these claims, these third parties may be awarded substantial damages as well as injunctive or other equitable relief against us, which could effectively block our ability to make, use, sell, distribute or market our products and services in the United States or abroad.

Commercial application of nanotechnologies in particular, or technologies involving nanomaterials, is new and the scope and breadth of patent protection is uncertain. Consequently, the patent positions of companies involved in nanotechnologies have not been tested, and there are complex legal and factual questions for which important legal principles will be developed or may remain unresolved. In addition, it is not clear whether such patents will be subject to interpretations or legal doctrines that differ from conventional patent law principles. Changes in either the patent laws or in interpretations of patent laws in the United States and other countries may diminish the value of our nanotechnology-related intellectual property. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our nanotechnology-related patents or in third party patents. In the event that a claim relating to intellectual property is asserted against us, or third parties not affiliated with us hold pending or issued patents that relate to our products or technology, we may seek licenses to such intellectual property or challenge those patents. However, we may be unable to obtain these licenses on commercially reasonable terms, if at all, and our challenge of the patents may be unsuccessful. Our failure to obtain the necessary licenses or other rights could prevent the sale, manufacture or distribution of our products and, therefore, could have a material adverse effect on our business, financial condition and results of operations.

A substantial portion of our technology is subject to retained rights of our licensors, and we may not be able to prevent the loss of those rights or the grant of similar rights to third parties.

A substantial portion of our technology is licensed from academic institutions, corporations and government agencies. Under these licensing arrangements, a licensor may obtain rights over the technology, including the right to require us to grant a license to one or more third parties selected by the licensor or that we provide licensed technology or material to third parties for non-commercial research. The grant of a license for any of our core technologies to a third party could have a material and adverse effect on our business. In addition, some of our licensors retain certain rights under the licenses, including the right to grant additional licenses to a substantial portion of our core technology to third parties for non-commercial academic and research use. It is difficult to monitor and enforce such non-commercial academic and research uses, and we cannot predict whether the third-party licensees would comply with the use restrictions of such licenses. We have incurred and could incur substantial expenses to enforce our rights against them. We also may not fully control the ability to assert or defend those patents or other intellectual property which we have licensed from other entities, or which we have licensed to other entities.

In addition, some of our licenses with academic institutions give us the right to use certain technology previously developed by researchers at these institutions. In certain cases, we also have the right to practice improvements on the licensed technology to the extent they are encompassed by the licensed patents and are within our field of use. Our licensors may currently own and may in the future obtain additional patents and patent applications that are necessary for the development, manufacture and commercial sale of our anticipated products. We may be unable to agree with one or more academic institutions from which we have obtained licenses whether certain intellectual property developed by researchers at these academic institutions is covered by our existing licenses. In the event that the new intellectual property is not covered by our existing licenses, we would be required to negotiate a new license agreement. We may not be able to reach agreement with current or future licensors on commercially reasonable terms, if at all, or the terms may not permit us to sell our products at a profit after payment of royalties, which could harm our business.

Some of our patents may cover inventions that were conceived or first reduced to practice under, or in connection with, U.S. government contracts or other federal funding agreements. With respect to inventions conceived or first reduced to practice under a federal funding agreement, the U.S. government may retain a non-exclusive, non-transferable, irrevocable,

paid-up license to practice or have practiced for or on behalf of the United States the invention throughout the world. We may not succeed in our efforts to retain title in patents, maintain ownership of intellectual property or in limiting the U.S. government's rights in our proprietary technologies and intellectual property when an issue exists as to whether such intellectual property was developed in the performance of a federal funding agreement or developed at private expense.

If we fail to obtain the right to use the intellectual property rights of others which are necessary to operate our business, and to protect their intellectual property, our business and results of operations will be adversely affected.

In the past, we have licensed certain technologies for use in our products. In the future, we may choose, or be required, to license technology or intellectual property from third parties in connection with the development of our products. We cannot assure you that third-party licenses will be available on commercially reasonable terms, if at all. Our competitors may be able to obtain licenses, or cross-license their technology, on better terms than we can, which could put us at a competitive disadvantage. Also, we often enter into confidentiality agreements with such third parties in which we agree to protect and maintain their proprietary and confidential information, including at times requiring our employees to enter into agreements protecting such information. There can be no assurance that the confidentiality agreements will not be breached by any of our employees or that such third parties will not make claims that their proprietary information has been disclosed.

RISKS RELATING TO OUR COMMON STOCK

The United States Tax Cuts and Jobs Act of 2017 could adversely affect our business and financial condition.

The U.S. Tax Cuts and Jobs Act (the "TCJA") significantly reforms the US Internal Revenue Code. The TCJA, among other things, contains significant changes to U.S. federal corporate income taxation, including reduction of the U.S. federal corporate income tax rate from a top marginal rate of 35% to a flat rate of 21%, limitation of the tax deduction for interest expense to 30% of adjusted earnings (except for certain small businesses), limitation of the deduction for net operating losses to 80% of current year taxable income and elimination of net operating loss carrybacks, immediate deductions for certain new investments instead of deductions for depreciation expense over time, and modifying or repealing many business deductions and credits. Federal net operating losses arising in taxable year ending after December 31, 2017, will be carried forward indefinitely pursuant to the TCJA. We continue to examine the impact this tax reform legislation may have on our business. Notwithstanding the reduction in the corporate income tax rate, the overall impact of the TCJA is uncertain and our business and financial condition could be adversely affected. The impact of this tax reform on holders of our common stock is also uncertain and could be adverse. We urge our stockholders to consult with their legal and tax advisors with respect to such legislation and the potential tax consequences of investing in our common stock.

If there are substantial sales of our common stock, or the perception that such sales may occur, our stock price could decline.

If any of our stockholders were to sell substantial amounts of our common stock, the market price of our common stock may decline, which might make it more difficult for us to sell equity or equity-related securities in the future at a time and price that we deem appropriate. Substantial sales of our common stock, or the perception that such sales may occur, may have a material adverse effect on the prevailing market price of our common stock.

Carilion Clinic holds approximately 3.4 million shares of our common stock (including approximately 1.3 million shares issuable to Carilion upon conversion of shares of Series A Convertible Preferred Stock that Carilion holds). All of these shares have been registered for sale on a Form S-3 registration statement and, accordingly, may generally be freely sold by Carilion at any time. Any sales of these shares, or the perception that future sales of shares may occur by Carilion or any of our other significant stockholders, may have a material adverse effect on the market price of our stock. Any such continuing material adverse effect on the market price of our stock could impair our ability to comply with Nasdaq's continuing listing standards in respect of our minimum stock price, as further described below.

We may become involved in securities class action litigation that could divert management's attention and harm our business and our insurance coverage may not be sufficient to cover all costs and damages.

The stock market has from time to time experienced significant price and volume fluctuations that have affected the market prices for the common stock of technology companies. These broad market fluctuations may cause the market price of our common stock to decline. In the past, following periods of volatility in the market price of a particular company's securities, securities class action litigation has often been brought against that company. Securities class litigation also often follows certain significant business transactions, such as the sale of a business division or a change in control transaction. We

may become involved in this type of litigation in the future. Litigation often is expensive and diverts management's attention and resources, which could adversely affect our business.

We may not be able to comply with all applicable listing requirements or standards of The Nasdaq Capital Market and Nasdaq could delist our common stock.

Our common stock is listed on The Nasdaq Capital Market. In order to maintain that listing, we must satisfy minimum financial and other continued listing requirements and standards. One such requirement is that we maintain a minimum bid price of at least $1.00 per share for our common stock. Although we currently comply with the minimum bid requirement, in the recent past, our minimum bid price has fallen below $1.00 per share, and it could again do so in the future. If our bid price falls below $1.00 per share for 30 consecutive business days, we will receive a deficiency notice from Nasdaq advising us that we have 180 days to regain compliance by maintaining a minimum bid price of at least $1.00 for a minimum of ten consecutive business days. Under certain circumstances, Nasdaq could require that the minimum bid price exceed $1.00 for more than ten consecutive days before determining that a company complies.

In the event that our common stock is not eligible for continued listing on Nasdaq or another national securities exchange, trading of our common stock could be conducted in the over-the-counter market or on an electronic bulletin board established for unlisted securities such as the Pink Sheets or the OTC Bulletin Board. In such event, it could become more difficult to dispose of, or obtain accurate price quotations for, our common stock, and there would likely also be a reduction in our coverage by security analysts and the news media, which could cause the price of our common stock to decline further. Also, it may be difficult for us to raise additional capital if we are not listed on a major exchange.

Our common stock price has been volatile and we expect that the price of our common stock will fluctuate substantially in the future, which could cause you to lose all or a substantial part of your investment.

The public trading price for our common stock is volatile and may fluctuate significantly. Since January 1, 2009, our common stock has traded between a high of $5.00 per share and a low of $0.26 per share. Among the factors, many of which we cannot control, that could cause material fluctuations in the market price for our common stock are:

- sales of our common stock by our significant stockholders, or the perception that such sales may occur;
- changes in earnings estimates, investors' perceptions, recommendations by securities analysts or our failure to achieve analysts' earnings estimates;
- changes in our status as an entity eligible to receive SBIR contracts and grants;
- quarterly variations in our or our competitors' results of operations;
- general market conditions and other factors unrelated to our operating performance or the operating performance of our competitors;
- announcements by us, or by our competitors, of acquisitions, new products, significant contracts, commercial relationships or capital commitments;
- pending or threatened litigation;
- any major change in our board of directors or management or any competing proxy solicitations for director nominees;
- changes in governmental regulations or in the status of our regulatory approvals;
- announcements related to patents issued to us or our competitors;
- a lack of, limited or negative industry or securities analyst coverage;
- discussions of our company or our stock price by the financial and scientific press and online investor communities; and
- general developments in our industry.

In addition, the stock prices of many technology companies have experienced wide fluctuations that have often been unrelated to the operating performance of those companies. These factors may materially and adversely affect the market price of our common stock.

If our internal control over financial reporting is found not to be effective or if we make disclosure of existing or potential material weaknesses in those controls, investors could lose confidence in our financial reports, and our stock price may be adversely affected.

Section 404 of the Sarbanes-Oxley Act of 2002 requires us to include an internal control report with our Annual Report on Form 10-K. That report must include management's assessment of the effectiveness of our internal control over financial reporting as of the end of the fiscal year.

We evaluate our existing internal control over financial reporting based on the framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. During the course of our ongoing evaluation of the internal controls, we may identify areas requiring improvement, and may have to design enhanced processes and controls to address issues identified through this review. Remedying any deficiencies, significant deficiencies or material weaknesses that we identify may require us to incur significant costs and expend significant time and management resources. We cannot assure you that any of the measures we implement to remedy any such deficiencies will effectively mitigate or remedy such deficiencies. Investors could lose confidence in our financial reports, and our stock price may be adversely affected, if our internal controls over financial reporting are found not to be effective by management or if we make disclosure of existing or potential significant deficiencies or material weaknesses in those controls.

If our estimates relating to our critical accounting policies are based on assumptions or judgments that change or prove to be incorrect, our operating results could fall below expectations of financial analysts and investors, resulting in a decline in our stock price.

The preparation of financial statements in conformity with U.S. GAAP requires our management to make estimates, assumptions and judgments that affect the amounts reported in the consolidated financial statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue and expenses that are not readily apparent from other sources. Our operating results may be adversely affected if our assumptions change or if actual circumstances differ from those in our assumptions, which could cause our operating results to fall below the expectations of financial analysts and investors, resulting in a decline in our stock price. Significant assumptions and estimates used in preparing our consolidated financial statements include those related to revenue recognition, stock-based compensation and income taxes. Moreover, the new revenue recognition guidance, ASC Topic 606, *Revenue from Contracts with Customers*, requires more judgment than did the prior guidance.

Our financial results may be adversely affected by changes in accounting principles applicable to us.

U.S. GAAP are subject to interpretation by the FASB, the SEC, and other bodies formed to promulgate and interpret appropriate accounting principles. For example, in May 2014, the FASB issued ASC Topic 606, *Revenue from Contracts with Customers*, which supersedes nearly all existing revenue recognition guidance under U.S. GAAP. We adopted this guidance as of January 1, 2018. The most significant impact relates to changing the revenue recognition for custom optoelectronics to an over time method. Before the adoption of this standard, we deferred the recognition of revenue until products were shipped to the customer. Any difficulties in implementing these pronouncements or adequately accounting after adoption could cause us to fail to meet our financial reporting obligations, which could result in regulatory discipline and harm investors' confidence in us.

Anti-takeover provisions in our amended and restated certificate of incorporation and bylaws and Delaware law could discourage or prevent a change in control, even if an acquisition would be beneficial to our stockholders, which could affect our stock price adversely and prevent attempts by our stockholders to replace or remove our current management.

Our amended and restated certificate of incorporation and bylaws and Delaware law contain provisions that might delay or prevent a change in control, discourage bids at a premium over the market price of our common stock and adversely affect the market price of our common stock and the voting and other rights of the holders of our common stock. These provisions include:

- a classified board of directors serving staggered terms;
- advance notice requirements to stockholders for matters to be brought at stockholder meetings;
- a supermajority stockholder vote requirement for amending certain provisions of our amended and restated certificate of incorporation and bylaws; and
- the right to issue preferred stock without stockholder approval, which could be used to dilute the stock ownership of a potential hostile acquirer.

We are also subject to provisions of the Delaware General Corporation law that, in general, prohibit any business combination with a beneficial owner of 15% or more of our common stock for three years unless the holder's acquisition of our stock was approved in advance by our board of directors or certain other conditions are satisfied.

The existence of these provisions could adversely affect the voting power of holders of common stock and limit the price that investors might be willing to pay in the future for shares of our common stock.

ITEM 2. *UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS*

(a) Unregistered Sales of Equity Securities during the Three Months Ended September 30, 2018

Common Stock Dividend Payable to Carilion

We issued 1,321,514 shares of Series A Preferred Stock, par value $0.001 per share, to Carilion Clinic in January 2010, which shares were issued in reliance on the exemptions from registration under the Securities Act provided by Sections 3(a)(9) and 4 (a)(2) thereof. The Series A Preferred Stock accrues dividends at the rate of $0.2815 per share per annum, payable quarterly in arrears. Accrued dividends are payable in shares of our common stock, with the number of shares being equal to the quotient of (i) the cumulative aggregate balance of accrued but unpaid dividends on each share of Series A Preferred Stock divided by (ii) the conversion price of the Series A Preferred Stock, which is currently $4.69159 per share. For the period from January 12, 2010, the original issue date of the Series A Preferred Stock, through September 30, 2018, the Series A Preferred Stock issued to Carilion has accrued $1,351,226 in dividends. The accrued dividend as of September 30, 2018 will be paid by the issuance of 691,162 shares of our common stock, which we will issue at Carilion's written request. As the Series A Preferred Stock was issued in reliance on the exemption provided by Section 3(a)(9), the shares of common stock payable as dividends will also be exempt from registration in reliance on Section 3(a)(9) of the Securities Act.

Warrant Exercises

During the three months ended September 30, 2018, Carilion Clinic exercised warrants to purchase an aggregate of 159,097 shares of common stock at an exercise price of $2.50 per share, resulting in aggregate proceeds to us of $397,743. The exercises were exempt from registration under the Securities Act pursuant to the exemption under Section 4(a)(2) as an offering to one accredited investor in an offering that did not involve a public offering.

(b) Use of Proceeds from Sale of Registered Equity Securities

Not applicable.

(c) Purchases of Equity Securities by the Registrant

Not applicable.

ITEM 3. *DEFAULTS UPON SENIOR SECURITIES*

None.

ITEM 4. *MINE SAFETY DISCLOSURES*

Not applicable.

ITEM 5. *OTHER INFORMATION*

Not applicable.

ITEM 6. *EXHIBITS*

Exhibit Number	Description
2.1(1)+	Asset Purchase Agreement, by and between the Registrant and OSI Optoelectronics, Inc., dated as of July 31, 2018 (Exhibit 2.1)
2.2(2)+	Asset Purchase Agreement, by and among Luna Technologies, Inc., the Registrant and Micron Optics, Inc., dated as of October 15, 2018 (Exhibit 2.1)
31.1	Certification of the Principal Executive Officer pursuant to Rule 13a-14(a) and Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of the Principal Financial Officer pursuant to Rule 13a-14(a) and Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	The following materials from the Registrant’s Quarterly Report on Form 10-Q for the three and nine months ended September 30, 2018, formatted in XBRL (eXtensible Business Reporting Language): (i) Consolidated Balance Sheets at September 30, 2018 and December 31, 2017, (ii) Consolidated Statements of Operations for the three and nine months ended September 30, 2018 and 2017, (iii) Consolidated Statements of Cash Flows for the nine months ended September 30, 2018 and 2017 and (iv) Notes to Unaudited Consolidated Financial Statements.

(1) Incorporated by reference to the exhibit to the Registrant's Current Report on Form 8-K, Commission File No. 000-52008, filed on August 1, 2018. The number given in parentheses indicates the corresponding exhibit number in such Form 8-K.

(2) Incorporated by reference to the exhibit to the Registrant's Current Report on Form 8-K, Commission File No. 000-52008, filed on October 16, 2018. The number given in parentheses indicates the corresponding exhibit number in such Form 8-K.

(3) Incorporated by reference to the exhibit to the Registrant's Quarterly Report on Form 10-Q, Commission File No. 000-52008, filed on August 1, 2018. The number given in parentheses indicates the corresponding exhibit number in such Form 10-Q.

+ Pursuant to Item 601 (b)(2) of Regulation S-K promulgated by the SEC, certain exhibits and schedules to this agreement have been omitted. The Registrant hereby agrees to furnish supplementally to the SEC, upon its request, any or all of such omitted exhibits or schedules.

† Indicates management contract or compensatory plan.

* These certifications are being furnished solely to accompany this quarterly report pursuant to 18 U.S.C. Section 1350 and are not being filed for purposes of Section 18 of the Securities Exchange Act of 1934 and are not to be incorporated by reference into any filing of the registrant, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Luna Innovations Incorporated

Date: November 13, 2018

By: /s/ Dale Messick

Dale Messick

Chief Financial Officer
(principal financial and accounting officer and duly authorized officer)

Exhibit 2.1

ASSET PURCHASE AGREEMENT

among

ADVANCED PHOTONIX, INC.

ADVANCED PHOTONIX CANADA, INC.

LUNA INNOVATIONS INCORPORATED

and

OSI OPTOELECTRONICS, INC.

dated as of

July 31, 2018

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ASSET PURCHASE AGREEMENT

This Asset Purchase Agreement (this "**Agreement**"), dated as of July 31, 2018, is entered into between Advanced Photonix, Inc., a Delaware corporation ("**API**"), and Advanced Photonix Canada, Inc., a corporation incorporated pursuant to the Canada Business Corporations Act ("**API Canada**") (and collectively with API, "**Sellers**" and each a "**Seller**") and Luna Innovations Incorporated, a Delaware corporation ("**Luna**" and collectively with Sellers, the "**Seller Group**"), and OSI Optoelectronics, Inc., a California corporation ("**Buyer**").

RECITALS

WHEREAS, Sellers are engaged through their Luna Optoelectronics division in the business of designing, engineering, and manufacturing photodiode-based optoelectronic components, assemblies and sub-systems for light detection covering the ultraviolet (200nm) to near infrared (1700 nm) optical spectrum where the photodiode is the primary functional element of the assembly/system, including emitters, detectors, and optocouplers and related semiconductor materials, packaging, enclosures, housing, optics, filters, films, electronics (e.g. amplifiers), and scintillation crystals (the "**Business**"); provided, for purpose of clarity and Section 6.7 below and not implying that Sellers have ever been engaged in conducting the following activities, that the "Business" shall not include (a) the development, design, manufacture or sale of system-level solutions providing signal generation or detection functionality at frequencies ranging from 0.1 to 10 Terahertz and wavelengths ranging from 0.03 to 3 Millimeters, for use in test and measurement, sensing, imaging, security, spectroscopic analysis and material characterization applications or (b) development, design, engineering, manufacture or sale of assemblies, modules, subsystems and instrumentation, including lasers or other emitters, detectors, optics, packaging, enclosures, and electronics, operating in the near- infrared and infrared portions of the spectrum (850nm – 2500 nm), for use in test, measurement or sensing applications, where the photodiode is third-party sourced and is not the primary functional element of the assemblies, modules, subsystems and instrumentation but rather one of numerous functional elements of a system with a higher-level design purpose.

WHEREAS, Sellers wish to sell and assign to Buyer, and Buyer wishes to purchase and assume from Sellers, substantially all the assets, and certain specified liabilities, of the Business, subject to the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

ARTICLE I
DEFINITIONS

The following terms have the meanings specified or referred to in this Article I:

"**Accounts Receivable**" has the meaning set forth in Section 2.1(a).

"**Acquisition Proposal**" has the meaning set forth in Section 6.3(a).

"**Action**" means any claim, action, cause of action, demand, lawsuit, arbitration, inquiry (by a Governmental Authority), audit (by a Governmental Authority), notice of violation, proceeding, litigation, citation, summons, subpoena or investigation (by a Governmental Authority) of any nature, civil, criminal, administrative, regulatory or otherwise, whether at law or in equity.

"**Affiliate**" of a Person means any other Person that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such Person. The term "control" (including the terms "controlled by" and "under common control with") means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

"**Agreement**" has the meaning set forth in the preamble.

"**Allocation Schedule**" has the meaning set forth in Section 2.8.

"**Annual Financial Statements**" has the meaning set forth in Section 4.4.

"**API**" has the meaning set forth in the preamble.

"**API Canada**" has the meaning set forth in the preamble.

"**Apportioned Taxes**" has the meaning set forth in Section 6.15.

"**Assigned Contracts**" has the meaning set forth in Section 2.1(c).

"**Assignment and Assumption Agreement**" has the meaning set forth in Section 3.2(a)(ii).

"**Assignment and Assumption of Lease**" has the meaning set forth in Section 3.2(a)(iv).

"**Assumed Liabilities**" has the meaning set forth in Section 2.3.

"**Balance Sheet**" has the meaning set forth in Section 4.4.

"**Balance Sheet Date**" has the meaning set forth in Section 4.4.

"**Benefit Plan**" has the meaning set forth in Section 4.20(a).

"**Bill of Sale**" has the meaning set forth in Section 3.2(a)(i).

"**Books and Records**" has the meaning set forth in Section 2.1(l).

"**Business**" has the meaning set forth in the recitals.

"**Business Day**" means any day except Saturday, Sunday or any other day on which commercial banks located in Los Angeles, California are authorized or required by Law to be closed for business.

"**Buyer**" has the meaning set forth in the preamble.

"**Buyer Closing Certificate**" has the meaning set forth in Section 7.3(e).

"**Buyer Indemnitees**" has the meaning set forth in Section 8.2.

"**Cap**" has the meaning set forth in Section 8.4(c) .

"**CERCLA**" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. §§ 9601 et seq.

"**Closing**" has the meaning set forth in Section 3.1.

"**Closing Date**" has the meaning set forth in Section 3.1.

"**Closing Working Capital**" means: (a) Current Assets, less (b) Current Liabilities, determined as of the open of business on the Closing Date.

"**Closing Working Capital Statement**" has the meaning set forth in Section 2.6(a)(i).

"**Closing Working Capital Statement Review Period**" has the meaning set forth in Section 2.6(b)(i).

"**Code**" means the Internal Revenue Code of 1986, as amended.

"**Contracts**" means all contracts, leases, deeds, mortgages, licenses, instruments, notes, commitments, undertakings, indentures, joint ventures, purchase orders and all other agreements, commitments and legally binding arrangements, whether written or oral.

"**Current Assets**" means the current assets of the Business in the line items set forth on Section 2.6(a)(i) of the Disclosure Schedules which are marked to be "included" and only to the extent acquired pursuant to the terms of this Agreement; provided, however, that such items shall exclude (i) the impact of Topic 606, Revenue from Contracts with Customers, and (ii) any receivables which have been outstanding for at least 120 days.

"**Current Liabilities**" means the current liabilities of the Business included in the line items set forth on Section 2.6(a)(i) of the Disclosure Schedules which are marked to be "included" and only to the extent assumed pursuant to the terms of this Agreement; provided, however, that such items shall exclude the impact of Topic 606, Revenue from Contracts with Customers.

"**Direct Claim**" has the meaning set forth in Section 8.5(c).

"**Disclosure Schedules**" means the Disclosure Schedules delivered by Seller concurrently with the execution and delivery of this Agreement.

"**Disputed Amounts**" has the meaning set forth in Section 2.6(b)(iii).

"**Dollars**" or "**$**" means the lawful currency of the United States.

"**Earn-Out Event**" has the meaning set forth in Section 2.7(a).

"**Earn-Out Payment**" has the meaning set forth in Section 2.7(a).

"**Earn-Out Review Period**" has the meaning set forth in Section 2.7(b)(ii).

"**Encumbrance**" means any charge, claim, community property interest, pledge, condition, equitable interest, lien (statutory or other), option, security interest, mortgage, easement, encroachment, right of way, right of first refusal, or restriction of any kind, including any restriction on use, voting, transfer, receipt of income or exercise of any other attribute of ownership.

"**Environmental Claim**" means any Action, Governmental Order, lien, fine, penalty, or, as to each, any settlement or judgment arising therefrom, by or from any Person alleging liability of whatever kind or nature (including liability or responsibility for the costs of enforcement proceedings, investigations, cleanup, governmental response, removal or remediation, natural resources damages, property damages, personal injuries, medical monitoring, penalties, contribution, indemnification and injunctive relief) arising out of, based on or resulting from: (a) the presence, Release of, or exposure to, any Hazardous Materials; or (b) any actual or alleged non-compliance with any Environmental Law or term or condition of any Environmental Permit.

"**Environmental Law**" means any applicable Law, and any Governmental Order or binding agreement with any Governmental Authority: (a) relating to pollution (or the cleanup thereof) or the protection of natural resources, endangered or threatened species, human health or safety, or the environment (including ambient air, soil, surface water or groundwater, or subsurface strata); or (b) concerning the presence of, exposure to, or the management, manufacture, use, containment, storage, recycling, reclamation, reuse, treatment, generation, discharge, transportation, processing, production, disposal or remediation of any Hazardous Materials. The term "Environmental Law" includes, without limitation, the following (including their implementing regulations and any state analogs): CERCLA; the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §§ 6901 et seq.; the Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act of 1977, 33 U.S.C. §§ 1251 et seq.; the Toxic Substances Control Act of 1976, as amended, 15 U.S.C. §§ 2601 et seq.; the Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. §§ 11001 et seq.; and the Clean Air Act of 1966, as amended by the Clean Air Act Amendments of 1990, 42 U.S.C. §§ 7401 et seq.

"**Environmental Notice**" means any written directive, notice of violation or infraction, or notice respecting any Environmental Claim relating to actual or alleged non-compliance with any Environmental Law or any term or condition of any Environmental Permit.

"**Environmental Permit**" means any Permit, letter, clearance, consent, waiver, closure, exemption, decision or other action required under or issued, granted, given, authorized by or made pursuant to Environmental Law.

"**Equity Interests**" means (a) any capital stock, share, partnership or membership interest, unit of participation or other similar interest (however designated) in any Person and (b) any option, warrant, purchase right, conversion right, exchange right or other contract or agreement which would entitle any Person to acquire any such interest in such Person or otherwise entitle any Person to share in the equity, profit, earnings, losses or gains of such Person (including stock appreciation, phantom stock, profit participation and other similar rights).

"**ERISA**" means the Employee Retirement Income Security Act of 1974, as amended, and the regulations promulgated thereunder.

"**ERISA Affiliate**" means all employers (whether or not incorporated) that would be treated together with the Seller or any of its Affiliates as a "single employer" within the meaning of Section 414 of the Code or Section 4001 of ERISA.

"**Excluded Assets**" has the meaning set forth in Section 2.2.

"**Excluded Contracts**" has the meaning set forth in Section 2.2(b).

"**Excluded Liabilities**" has the meaning set forth in Section 2.4.

"**Export Authorizations**" means all licenses, Permits, certifications, or other approvals relating to export controls issued by a Governmental Authority authorizing the export, reexport, or transfer of items, software, technology, technical data or services.

"**Export Authorization Applications**" means all requests for Export Authorizations currently in process with a Governmental Authority.

"**Financial Statements**" has the meaning set forth in Section 4.4.

"**FIRPTA Certificate**" has the meaning set forth in Section 7.2(j).

"**GAAP**" means United States generally accepted accounting principles in effect from time to time.

"**Government Contracts**" means any Contract with, and all outstanding quotations, bids, offers or proposals made by a Seller which, if accepted or awarded, would result in a Contract with, any United States Governmental Authority, contractor or higher-tier subcontractor where a United States Governmental Authority is the end customer for such Contract.

"**Governmental Authority**" means any federal, state, provincial, local or foreign government or political subdivision thereof, or any agency or instrumentality of such government or political subdivision, or any self-regulated organization or other non-governmental regulatory authority or quasi-governmental authority (to the extent that the rules, regulations or orders of such organization or authority have the force of Law), or any arbitrator, court or tribunal of competent jurisdiction.

"**Governmental Order**" means any order, writ, judgment, injunction, decree, stipulation, determination or award entered by or with any Governmental Authority.

"**Hazardous Materials**" means: (a) any material, substance, chemical, waste, product, derivative, compound, mixture, solid, liquid, mineral or gas, in each case, whether naturally occurring or manmade, that is hazardous, acutely hazardous, toxic, or words of similar import or regulatory effect under Environmental Laws; and (b) any petroleum or petroleum-derived products, radon, radioactive materials or wastes, asbestos in any form, lead or lead-containing materials, urea formaldehyde foam insulation and polychlorinated biphenyls.

"**Indebtedness**" means (a) the outstanding principal amount and other payment obligations (including any premiums, penalties, make-whole payments, termination fees, breakage costs and other fees and expenses that are due upon prepayment of such obligations), under any obligations (i) for borrowed money; or (ii) evidenced by notes, bonds, debentures or similar instruments; (b) all payment obligations under any interest rate, currency, swap, caps, collars or other hedging agreements; (c) all capital lease obligations; (d) all obligations to pay the deferred purchase price of property or services, except trade accounts payable and other current liabilities arising in the ordinary course of business; (e) all "earn-out", contingent purchase price, deferred purchase price or similar contingent payment obligations under any Contract that relates to the acquisition of any business of Sellers; (f) all indebtedness created or arising under any conditional sale or other title retention agreement with respect to acquired property; (g) all obligations in respect of accrued or declared but unpaid dividends or other distributions; (h) all obligations (contingent or otherwise), under any letters of credit, performance bonds, surety bonds, corporate guarantees or similar instruments under which advances or other amounts have been drawn; and (i) the amount of any guaranty of each of the foregoing and all accrued interest in respect of each of the foregoing entered into or incurred after the date of this Agreement.

"**Indemnified Party**" has the meaning set forth in Section 8.5.

"**Indemnifying Party**" has the meaning set forth in Section 8.5.

"**Independent Accountant**" has the meaning set forth in Section 2.6(b)(iii).

"**Insurance Policies**" has the meaning set forth in Section 4.16.

"**Intellectual Property**" means any and all of the following in any jurisdiction throughout the world and all rights in, arising out of, or associated therewith: (a) issued patents and patent applications (whether provisional or non-provisional), including divisionals, continuations, continuations-in-part, substitutions, reissues, reexaminations, renewals, extensions, nationalizations, validations, counterparts (domestic or foreign), or restorations of any of the foregoing (regardless of lapse, expiration or abandonment status), and other Governmental Authority-issued indicia of invention ownership (including certificates of invention, petty patents, and patent utility models) together with industrial designs, registrations, applications for registration, and renewals thereof ("**Patents**"); (b) trademarks, service marks, brands, certification marks, logos, trade dress, trade names, and other similar indicia of source or origin, together with the goodwill connected with the use of and symbolized by, and all registrations, applications for registration, and renewals of, any of the foregoing ("**Trademarks**"); (c) copyrights and works of authorship, whether or not copyrightable, and all registrations, applications for registration, and renewals of any of the foregoing ("**Copyrights**"); (d) internet domain names and social media account or user names (including "handles"), whether or not Trademarks, all associated web addresses, URLs, websites and web pages, social media accounts and pages, and all content and data thereon or relating thereto, whether or not Copyrights; (e) mask works, and all registrations, applications for registration, and renewals thereof; (f) trade secrets, know-how, inventions (whether or not patentable), discoveries, improvements, technology, business and technical information, databases, data compilations and collections, tools, methods, processes, techniques, and other confidential and proprietary information and all rights therein ("**Trade Secrets**"); (g) computer programs, operating systems,

applications, firmware and other code, including all source code, object code, application programming interfaces, data files, databases, protocols, specifications, and other documentation thereof ("**Software**"); and (h) all other intellectual or industrial property.

"**Intellectual Property Agreements**" means all licenses, sublicenses, consent to use agreements, settlements, coexistence agreements, covenants not to sue, waivers, releases, permissions and other Contracts, whether written or oral, relating to any Intellectual Property that relates to or is used or held for use in the conduct of the Business to which a Seller is a party, beneficiary or otherwise bound, excluding for this purpose (i) Standard Product Terms and (ii) commercially available Software that constitutes Open Source Materials or off-the-shelf or shrinkwrap Software licenses or licenses of Software supplied with equipment or office computers, in each case with annual fees of less than $5,000 per year ("**Standard Licenses**").

"**Intellectual Property Assets**" means all Intellectual Property that is owned by a Seller or Seller Affiliate and relates to or is used or held for use in the conduct of the Business, together with all (i) royalties, fees, income, payments, and other proceeds now or hereafter due or payable to such Seller with respect to such Intellectual Property; and (ii) claims and causes of action, whether known or unknown, with respect to such Intellectual Property, whether accruing before, on, or after the date hereof, including all rights to and claims for damages (including attorneys' fees), restitution, and injunctive and other legal or equitable relief for past, present, or future infringement, misappropriation, or other violation thereof.

"**Intellectual Property Assignments**" has the meaning set forth in Section 3.2(a)(iii).

"**Intellectual Property Registrations**" means all Intellectual Property Assets that are subject to any issuance, registration, or application by or with any Governmental Authority or authorized private registrar in any jurisdiction, including issued Patents, registered Trademarks, domain names and Copyrights, and pending applications for any of the foregoing.

"**Interim Balance Sheet**" has the meaning set forth in Section 4.4.

"**Interim Balance Sheet Date**" has the meaning set forth in Section 4.4.

"**Interim Financial Statements**" has the meaning set forth in Section 4.4.

"**International Trade Applicable Laws and Regulations**" means all applicable Laws concerning the importation of merchandise, export controls, economic or financial sanctions, and anti-bribery, including: (i) regulations issued or enforced by and programs administered by the United States Customs and Border Protection, (ii) the International Emergency Economic Powers Act, as amended, (iii) the Arms Export Control Act of 1976, as amended, (iv) the International Traffic in Arms Regulations ("**ITAR**"), (v) any other export controls administered by an agency of the United States government, Executive Orders of the President regarding embargoes and restrictions on trade with designated countries and Persons, (vi) the embargoes and restrictions administered by the United States Department of Treasury Office of Foreign Sellers Control ("**OFAC**"), (vii) the Foreign Corrupt Practices Act ("**FCPA**") or any other applicable anti-bribery or anti-corruption applicable Law, (viii) the anti-boycott regulations administered by the United States Department of Commerce and the anti-boycott regulations administered by the United States

Department of Treasury, (ix) North American Free Trade Agreement legislation and regulations of the United States, Canada, and Mexico, (x) U.S. antidumping and countervailing duty laws, and (xi) other applicable Laws adopted by the governments or agencies of other countries relating to the same subject matter as the laws described above that apply to the Sellers (to the extent related to the Business).

"**Inventory**" has the meaning set forth in Section 2.1(b).

"**Knowledge of Sellers**" or "**Sellers' Knowledge**" or any other similar knowledge qualification, means the actual knowledge, after due inquiry, of Jean-Pierre Maufras, Scott A. Graeff and Dale E. Messick.

"**Law**" means any statute, law, ordinance, regulation, rule, code, order, constitution, treaty, common law, judgment, decree, other requirement or rule of law of any Governmental Authority.

"**Leased Real Property**" has the meaning set forth in Section 4.10(b).

"**Leases**" has the meaning set forth in Section 4.10(b).

"**Liabilities**" means liabilities, obligations or commitments of any nature whatsoever, asserted or unasserted, known or unknown, absolute or contingent, accrued or unaccrued, matured or unmatured or otherwise.

"**Losses**" means losses, damages, liabilities, deficiencies, Actions, judgments, interest, awards, penalties, fines, costs or expenses of whatever kind, including reasonable attorneys' fees and the cost of enforcing any right to indemnification hereunder and the cost of pursuing any insurance providers; provided, however, that "Losses" shall not include indirect, consequential, special or punitive damages, except to the extent actually awarded to a Governmental Authority or other third party.

"**Luna**" has the meaning set forth in the preamble.

"**Material Adverse Effect**" means any event, occurrence, fact, condition or change that is, or could reasonably be expected to become, individually or in the aggregate, materially adverse to (a) the business, results of operations, condition (financial or otherwise) or assets of the Business, (b) the value of the Purchased Assets, or (c) the ability of Sellers to consummate the transactions contemplated hereby on a timely basis; provided, however, that "Material Adverse Effect" shall not include any event, occurrence, fact, condition or change, directly or indirectly, arising out of or attributable to: (i) general economic or political conditions; (ii) conditions generally affecting the industries in which the Business operates; (iii) any changes in financial or securities markets in general; (iv) acts of war (whether or not declared), armed hostilities or terrorism, or the escalation or worsening thereof; or (v) any changes in applicable Laws or accounting rules, including GAAP; provided further, however, that any event, occurrence, fact, condition or change referred to in clause (ii) immediately above shall be taken into account in determining whether a Material Adverse Effect has occurred or could reasonably be expected to occur to the extent that such event, occurrence, fact, condition or change has a disproportionate effect on the Business compared to other participants in the industries in which the Business operates.

"**Material Contracts**" has the meaning set forth in Section 4.7(a).

"**Material Customers**" has the meaning set forth in Section 4.15(a).

"**Material Suppliers**" has the meaning set forth in Section 4.15(b).

"**Multiemployer Plan**" has the meaning set forth in Section 4.20(b).

"**Net Revenues**" means (a) the gross invoiced price for each sale of Seller Products in an arm's length transaction made by Buyer or its Affiliates, minus (b) the sum of (i) credits or refunds for Seller Products, (ii) rebates, discounts or allowances to customers with respect to such sale, (iii) any sales, excise or output value added taxes which are included in such invoice price, and (iv) any freight, insurance and other charges which are included in such invoice price. For purposes of this Agreement, a sale of Seller Products made by Buyer or its Affiliates shall be deemed to occur at such time as Buyer or its Affiliates recognizes revenue from the sale of comparable products in accordance with GAAP; provided, however, that a sale shall not be deemed to have occurred, and shall not be included in the Net Revenues if Buyer or its Affiliates wrote off as uncollectible the receivable arising from such sale.

"**Net Revenues Calculation Statement**" has the meaning set forth in Section 2.7(b)(i).

"**Net Revenues Calculation Objection Notice**" has the meaning set forth in Section 2.7(b)(ii).

"**Open Source Materials**" means any material (including Software) that contains, or is derived in any manner (in whole or in part) from, any Software or other material that is distributed as free or open source (e.g., under a license now or in the future approved by the Open Source Initiative and listed at http://www.opensource.org/licenses, which licenses include all versions of the GNU GPL, the GNU LGPL, the GNU Affero GPL, the MIT license, the Eclipse Public License, the Common Public License, the CDDL, the Mozilla Public License, the Academic Free License, the BSD license and the Apache License), or pursuant to similar licensing and distribution models (as presently conducted and as proposed to be conducted).

"**Ordinary Warranty Obligations**" has the meaning set forth in Section 2.2(c).

"**Permits**" means all permits, licenses, franchises, approvals, authorizations, registrations, certificates, variances and similar rights obtained, or required to be obtained, from Governmental Authorities.

"**Permitted Encumbrances**" has the meaning set forth in Section 4.8.

"**Person**" means an individual, corporation, partnership, joint venture, limited liability company, Governmental Authority, unincorporated organization, trust, association or other entity.

"**Personally Identifiable Information**" means, with respect to any natural Person, such person's name, street address, telephone number, e-mail address, photograph, social security number, tax identification number, driver's license number, passport number, credit card number, bank account number and other financial information, customer or account numbers, account access

codes or passwords, or other information that allows the identification of or could be used to identify such Person or enables access to or could be used to enable access to such Person's financial information.

"**Post-Closing Adjustment**" has the meaning set forth in Section 2.6(a)(ii).

"**Pre-Closing Tax Period**" means any taxable period ending on or before the Closing Date and, with respect to any taxable period beginning before and ending after the Closing Date, the portion of such taxable period ending on and including the Closing Date.

"**Purchase Price**" has the meaning set forth in Section 2.5.

"**Purchased Assets**" has the meaning set forth in Section 2.1.

"**Qualified Benefit Plan**" has the meaning set forth in Section 4.20(c).

"**Quebec Employees**" means those three employees listed in Section 4.21(a) of the Disclosure Schedules as being located in Canada.

"**Release**" means any actual or threatened release, spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, abandonment, disposing or allowing to escape or migrate into or through the environment (including, without limitation, ambient air (indoor or outdoor), surface water, groundwater, land surface or subsurface strata or within any building, structure, facility or fixture).

"**Representative**" means, with respect to any Person, any and all directors, officers, employees, consultants, financial advisors, counsel, accountants and other agents of such Person.

"**Resolution Period**" has the meaning set forth in Section 2.6(b)(ii).

"**Restricted Period**" has the meaning set forth in Section 6.7(a).

"**Seller**" and "**Sellers**" have the meaning set forth in the preamble.

"**Seller Closing Certificate**" has the meaning set forth in Section 7.2(h).

"**Seller Indemnitees**" has the meaning set forth in Section 8.3.

"**Seller Products**" has the meaning set forth in Section 4.13.

"**Standard Product Terms**" has the meaning set forth in Section 4.13.

"**Standards Agreements**" has the meaning set forth in Section 4.11(i).

"**Standards Body**" has the meaning set forth in Section 4.11(i).

"**Statement of Objections**" has the meaning set forth in Section 2.6(b)(ii).

"**Tangible Personal Property**" has the meaning set forth in Section 2.1(e).

"**Target Working Capital**" means $3,380,000.

"**Taxes**" means all federal, state, local, foreign and other income, gross receipts, sales, use, production, ad valorem, transfer, documentary, franchise, registration, profits, license, lease, service, service use, withholding, payroll, employment, unemployment, estimated, excise, severance, environmental, stamp, occupation, premium, property (real or personal), real property gains, windfall profits, customs, duties or other taxes, fees, assessments or charges of any kind whatsoever, including any liability therefor as a transferee (including under Section 6901 of the Code), as a result of Treasury Regulation Section 1.1502-6, or in each case, any similar provision under applicable Law, or as a result of any Tax sharing or similar agreement, together with any interest, additions or penalties with respect thereto and any interest in respect of such additions or penalties.

"**Tax Return**" means any return, declaration, report, claim for refund, information return or credit or statement or other document relating to Taxes, including any schedule or attachment thereto, and including any amendment thereof.

"**TeraMetrix**" means TeraMetrix, LLC, a Delaware limited liability company.

"**Territory**" means the entire world.

"**Third Party Claim**" has the meaning set forth in Section 8.5(a).

"**Transaction Documents**" means the Bill of Sale, the Assignment and Assumption Agreement, Intellectual Property Assignments, Assignment and Assumption of Lease, the Transition Services Agreement, and the other agreements, instruments and documents required to be delivered at the Closing.

"**Transition Services Agreement**" has the meaning set forth in Section 3.2(a)(v).

"**Undisputed Amounts**" has the meaning set forth in Section 2.6(b)(iii).

"**Union**" has the meaning set forth in Section 4.21(b).

"**WARN Act**" means the federal Worker Adjustment and Retraining Notification Act of 1988, and similar state, local and foreign laws related to plant closings, relocations, mass layoffs and employment losses.

ARTICLE II
PURCHASE AND SALE

2.1 **Purchase and Sale of Assets**. Subject to the terms and conditions set forth herein, at the Closing, Sellers shall sell, assign, transfer, convey and deliver to Buyer, and Buyer shall purchase from Sellers, free and clear of any Encumbrances other than Permitted Encumbrances, all of Sellers' right, title and interest in, to and under all of the assets, properties and rights of every kind and nature, whether real, personal or mixed, tangible or intangible (including goodwill), wherever located and whether now existing or hereafter acquired (other than the Excluded Assets), which relate to, or are used or held for use in connection with, the Business (collectively, the "**Purchased Assets**"), including, without limitation, the following:

(a) all accounts or notes receivable held by Sellers, and any security, claim, remedy or other right related to any of the foregoing ("**Accounts Receivable**");

(b) all inventory, finished goods, raw materials, work in progress, packaging, supplies, parts and other inventories ("**Inventory**");

(c) all Contracts, including Intellectual Property Agreements, including without limitation, the Contracts set forth on Section 2.1(c) of the Disclosure Schedules (the "**Assigned Contracts**");

(d) all Intellectual Property Assets and all tangible embodiments thereof (including media with Software thereon that is within the Intellectual Property Assets);

(e) all furniture, fixtures, equipment, machinery, tools, vehicles, office equipment, supplies, computers, telephones and other tangible personal property (the "**Tangible Personal Property**");

(f) the Leased Real Property;

(g) all Permits, including Environmental Permits, which are held by Sellers and required for the conduct of the Business or for the ownership and use of the Purchased Assets, including, without limitation, those listed on Section 4.18(b) and Section 4.19(b) of the Disclosure Schedules;

(h) all rights to any Actions of any nature available to or being pursued by Sellers to the extent related to the Business, the Purchased Assets or the Assumed Liabilities, whether arising by way of counterclaim or otherwise;

(i) all prepaid expenses, credits, advance payments, claims, security, refunds, rights of recovery, rights of set-off, rights of recoupment, deposits, charges, sums and fees (including any such item relating to the payment of Taxes covering any post-Closing period);

(j) all of Sellers' rights under warranties, indemnities and all similar rights against third parties to the extent related to any Purchased Assets;

(k) all insurance proceeds, if any, which may be recoverable pursuant to Section 6.18;

(l) originals, or where not available, copies, of all books and records, including, but not limited to, books of account, ledgers and general, financial and accounting records, machinery and equipment maintenance files, customer lists, customer purchasing histories, price lists, distribution lists, supplier lists, production data, quality control records and procedures, customer complaints and inquiry files, research and development files, records and data (including all correspondence with any Governmental Authority), sales material and records (including pricing history, total sales, terms and conditions of sale, sales and pricing policies and practices), strategic plans, budgets, projections, internal financial statements, marketing and promotional surveys, material and research and files relating to the Intellectual Property Assets and the Intellectual

Property Agreements, and copies of personnel records and other records that any Seller is required by law to retain in its possession ("**Books and Records**"); and

(m) all goodwill and the going concern value of the Business.

In addition, subject to the terms and conditions set forth herein, at the Closing, Luna shall, on behalf of itself and its Affiliates, sell, assign, transfer, convey and deliver to Buyer, and Buyer shall purchase from Luna, free and clear of any Encumbrances, the Patents and internet domain names identified in Section 4.11 of the Disclosure Schedules and all other Intellectual Property Assets that it owns by virtue of employing Seller personnel, or on account of any confidentiality and/or Intellectual Property invention assignment agreements with employees of a Seller, or Intellectual Property agreements with contractors of a Seller.

2.2 **Excluded Assets**. Notwithstanding the foregoing, the Purchased Assets shall not include the following assets (collectively, the "**Excluded Assets**"):

(a) cash and cash equivalents;

(b) Contracts, including Intellectual Property Agreements, that are listed on Section 2.2(b) of the Disclosure Schedules (the "**Excluded Contracts**");

(c) all Equity Interests of Sellers and their Subsidiaries;

(d) the corporate seals, organizational documents, minute books, stock books, Tax Returns, books of account or other records having to do with the corporate organization of any Seller and, subject to providing true and correct copies to Buyer, all personnel records and other records that any Seller is required by law to retain in its possession;

(e) all Benefit Plans and assets attributable thereto;

(f) the assets, properties and rights specifically set forth on Section 2(f) of the Disclosure Schedules;

(g) the rights which accrue or will accrue to Sellers under this Agreement and the Transaction Documents;

(h) all insurance policies and benefits and rights thereunder except as specified in Section 2.1(k);

(i) all rights and control of its attorney-client privilege and any other related rights vis a vis its legal counsel;

(j) all claims for refund of Taxes or prepaid Taxes for a Pre-Closing Tax Period and other governmental charges of whatever nature;

(k) intercompany balances and accounts between any Seller and its Affiliates;

(l) Vantage (ERP) business system; and

(m) The assets of TeraMetrix.

2.3 **Assumed Liabilities**. Subject to the terms and conditions set forth herein, Buyer shall assume and agree to pay, perform and discharge only the following Liabilities of Sellers relating to the Business (collectively, the "**Assumed Liabilities**"), and no other Liabilities:

(a) all trade accounts payable of Sellers to third parties in connection with the Business that remain unpaid and are not delinquent as of the Closing Date and that either are reflected on the Interim Balance Sheet Date or arose in the ordinary course of business consistent with past practice since the Interim Balance Sheet Date;

(b) all Liabilities in respect of the Assigned Contracts but only to the extent that such Liabilities thereunder are required to be performed after the Closing Date, were incurred in the ordinary course of business and do not relate to any failure to perform, improper performance, warranty or other breach, default or violation by Sellers on or prior to the Closing;

(c) all warranty obligations for Seller Products sold pursuant to Standard Product Terms ("**Ordinary Warranty Obligations**"); and

(d) any other Current Liabilities which are in line items set forth on Schedules 2.6(a)(i) of the Disclosure Schedules which are marked to be "included."

No assumption by Buyer of any of the Assumed Liabilities shall relieve or be deemed to relieve Sellers from any Liability under this Agreement with respect to any representations, warranties, covenants or other agreements made by Sellers to Buyer in this Agreement.

2.4 **Excluded Liabilities**. Buyer shall not assume and shall not be responsible to pay, perform or discharge any Liabilities of Sellers or any of their Affiliates of any kind or nature whatsoever other than the Assumed Liabilities (the "**Excluded Liabilities**"). Sellers shall, and shall cause each of their Affiliates to, pay and satisfy in due course all Excluded Liabilities which they are obligated to pay and satisfy. Without limiting the generality of the foregoing, the Excluded Liabilities shall include, but not be limited to, the following:

(a) any Liabilities of Sellers arising or incurred in connection with the negotiation, preparation, investigation and performance of this Agreement, the Transaction Document and the transactions contemplated hereby and thereby, including, without limitation, fees and expenses of counsel, accountants, consultants, advisers and others;

(b) any Liability for (i) Taxes of Sellers (or any stockholder or Affiliate of Sellers) or relating to the Business, the Purchased Assets or the Assumed Liabilities for any Pre-Closing Tax Period; (ii) Taxes that arise out of the consummation of the transactions contemplated hereby or that are the responsibility of Sellers pursuant to Section 6.14; or (iii) other Taxes of a Seller (or any stockholder or Affiliate of a Seller) of any kind or description (including any Liability for Taxes of a Seller (or any stockholder or Affiliate of a Seller) that becomes a Liability of Buyer under any common law doctrine of de facto merger or transferee or successor liability or otherwise by operation of contract or Law);

(c) any Liabilities relating to or arising out of the Excluded Assets;

(d) any Liabilities in respect of any pending or threatened Action arising out of, relating to or otherwise in respect of the operation of the Business or the Purchased Assets to the extent such Action relates to such operation on or prior to the Closing Date;

(e) other than Ordinary Warranty Obligations, any product Liability or similar claim for injury to a Person or property which arises out of or is based upon any express or implied representation, warranty, agreement or guaranty made by a Seller, or by reason of the improper performance or malfunctioning of a product, improper design or manufacture, failure to adequately package, label or warn of hazards or other related product defects of any products at any time manufactured or sold or any service performed by Sellers;

(f) other than Ordinary Warranty Obligations, any recall, design defect or similar claims of any products manufactured or sold or any service performed by Sellers;

(g) any Liabilities of a Seller arising under or in connection with any Benefit Plan providing benefits to any present or former employee of a Seller;

(h) any Liabilities of a Seller, whether arising prior to, on or following the Closing Date, for any present or former employees, officers, directors, retirees, independent contractors or consultants of a Seller, including, without limitation, any Liabilities associated with any claims for wages or other benefits, bonuses, accrued vacation, paid time off, workers' compensation, severance, retention, termination, change of control or other payments and benefits;

(i) any Environmental Claims, or Liabilities under Environmental Laws, to the extent arising out of or relating to facts, circumstances or conditions existing on or prior to the Closing or otherwise to the extent arising out of any actions or omissions of a Seller prior to Closing;

(j) any trade accounts payable of a Seller (i) to the extent not accounted for on the Interim Balance Sheet, other than those that arose after the Interim Balance Sheet Date in the ordinary course of business consistent with past practice; (ii) which constitute intercompany payables owing to Affiliates of a Seller; (iii) which constitute Indebtedness; or (iv) which did not arise in the ordinary course of business;

(k) any Liabilities of the Business relating or arising from unfulfilled commitments, quotations, purchase orders, customer orders or work orders that (i) do not constitute part of the Purchased Assets issued by the Business' customers to a Seller on or before the Closing; (ii) did not arise in the ordinary course of business; or (iii) are not validly and effectively assigned to Buyer pursuant to this Agreement;

(l) any Liabilities to indemnify, reimburse or advance amounts to any present or former officer, director, employee or agent of a Seller (including with respect to any breach of fiduciary obligations by same), except for indemnification of same pursuant to Section 8.3 as Seller Indemnitees;

(m) any Liabilities under the Excluded Contracts or any other Contracts, including Intellectual Property Agreements, (i) which are not validly and effectively assigned to Buyer pursuant to this Agreement (subject to Section 2.10); or (ii) to the extent such Liabilities arise out of or relate to a breach by a Seller of such Contracts prior to Closing;

(n) any Liabilities associated with Indebtedness of a Seller and/or the Business; and

(o) any Liabilities arising out of, in respect of or in connection with the failure by a Seller or any of its Affiliates to comply with any Law or Governmental Order.

In furtherance of the foregoing, Sellers shall repay any Indebtedness at or prior to the Closing as may be necessary to release or remove any Encumbrances (other than Permitted Encumbrances) with respect thereto on the Purchased Assets.

2.5 **Purchase Price**. The aggregate purchase price for the Purchased Assets shall be $17,500,000, subject to adjustment pursuant to Section 2.6 and Section 2.7 (the "**Purchase Price**"), plus the assumption of the Assumed Liabilities. The Purchase Price shall be paid as provided in Sections 2.7 and 3.2.

2.6 **Purchase Price Adjustment**.

(a) Post-Closing Adjustment.

(i) Within 75 Business Days after the Closing Date, Buyer shall prepare and deliver to Sellers a statement setting forth its calculation of Closing Working Capital, which statement and calculation shall be substantially in the form of Section 2.6(a)(i) of the Disclosure Schedules and in accordance with the accounting principles and any methods of adjustments reflected therein (the "**Closing Working Capital Statement**") and otherwise in accordance with GAAP.

(ii) The "**Post-Closing Adjustment**" shall be an amount equal to the Closing Working Capital minus the Target Working Capital, but only if the difference is $100,000 or greater. If the Post-Closing Adjustment is a positive number of $100,000 or greater, Buyer shall pay to Sellers an amount equal to the Post-Closing Adjustment. If the Post-Closing Adjustment is a negative number of $100,000 or greater, Sellers and Luna shall jointly and severally pay to Buyer an amount equal to the absolute value of the Post-Closing Adjustment. For purpose of clarity, if the difference is $100,000 or greater, the full amount of the difference is payable, not just the amount in excess of $100,000.

(b) Examination and Review.

(i) Examination. After receipt of the Closing Working Capital Statement, Luna, on behalf of Sellers, shall have 45 days (the "**Closing Working Capital Statement Review Period**") to review the Closing Working Capital Statement; provided, however, that prior to the expiration of the Closing Working Capital Statement Review Period, Buyer shall have the right to submit a revised Closing Working Capital Statement, in which event, such revised Closing Working Capital Statement Review Period shall constitute the Closing Working Capital Statement Review Period and the Closing Working Capital Statement Review Period shall commence upon the delivery of such revised Closing Working Capital Statement Review Period. During the Closing Working Capital Statement Review Period, Luna and its accounting representatives shall have reasonable access to the relevant books and records of Buyer, the personnel of, and work papers prepared by, Buyer and/or its accountants to the extent that they relate to the Closing Working Capital Statement and to such historical financial information (to the extent in Buyer's possession) relating to the Closing Working Capital Statement as Luna may reasonably request for the purpose of reviewing the Closing Working Capital Statement and to prepare a Statement of Objections (defined below), provided, that such access shall be in a manner that does not interfere with the normal business operations of Buyer. If Buyer conducts a physical count of Inventory contemporaneously with Closing for purpose of preparing the Closing Working Capital Statement, Buyer will coordinate with Sellers to allow their Representative(s) to observe and participate.

(ii) Objection. On or prior to the last day of the Closing Working Capital Statement Review Period, Luna, on behalf of Sellers, may object to the Closing Working Capital Statement by delivering to Buyer a written statement setting forth Sellers' objections in reasonable detail, indicating each disputed item or amount and the basis for Seller's disagreement therewith (the "**Statement of Objections**"). If Luna fails to deliver the Statement of Objections before the expiration of the Closing Working Capital Statement Review Period, the Closing Working Capital Statement and the Post-Closing Adjustment, as the case may be, reflected in the Closing Working Capital Statement shall be deemed to have been accepted by Sellers. If Luna delivers the Statement of Objections before the expiration of the Closing Working Capital Statement Review Period, Buyer and Luna shall negotiate in good faith to resolve such objections within 30 days after the delivery of the Statement of Objections (the "**Resolution Period**"), and, if the same are so resolved within the Resolution Period, the Post-Closing Adjustment and the Closing Working Capital Statement with such changes as may have been previously agreed in writing by Buyer and Luna, shall be final and binding on the parties.

(iii) Resolution of Disputes. If Luna and Buyer fail to reach an agreement with respect to all of the matters set forth in the Statement of Objections before expiration of the Resolution Period, then any amounts remaining in dispute ("**Disputed Amounts**" and any amounts not so disputed, the "**Undisputed Amounts**") shall be submitted for resolution to the office of an impartial nationally recognized firm of independent certified public accountants other than Sellers' accountants or Buyers' accountants jointly selected by Buyer and Luna (the "**Independent Accountant**") who, acting as experts and not arbitrators, shall resolve the Disputed Amounts only and make any adjustments to the Post-Closing Adjustment, as the case may be, and the Closing Working Capital Statement. The parties hereto agree that all adjustments shall be made without regard to materiality. The Independent Accountant shall only decide the specific items under dispute

by the parties and their decision for each Disputed Amount must be within the range of values assigned to each such item in the Closing Working Capital Statement and the Statement of Objections, respectively.

(iv) Fees of the Independent Accountant. The fees and expenses of the Independent Accountant shall be paid by Sellers, on the one hand, and Buyer, on the other hand, based upon the percentage of the Disputed Amounts not awarded to Sellers or Buyer, respectively, bears to the aggregate Disputed Amounts.

(v) Determination by Independent Accountant. The Independent Accountant shall make a determination as soon as practicable within 30 days (or such other time as the parties hereto shall agree in writing) after their engagement, and their resolution of the Disputed Amounts and their adjustments to the Closing Working Capital Statement and/or the Post-Closing Adjustment shall be conclusive and binding upon the parties hereto.

(vi) Payments of Post-Closing Adjustment. Except as otherwise provided herein, any payment of the Post-Closing Adjustment shall (A) be due (x) within five Business Days of acceptance of the applicable Closing Working Capital Statement or (y) if there are Disputed Amounts, then within five Business Days of the resolution described in clause (v) above; and (B) be paid by wire transfer of immediately available funds to such account as is directed by Buyer or Luna, as the case may be.

(c) Adjustments for Tax Purposes. Any payments made pursuant to Section 2.6 shall be treated as an adjustment to the Purchase Price by the parties for Tax purposes, unless otherwise required by Law.

2.7 **Earn-Out**.

(a) Earn-Out Event. As additional consideration for the Purchased Assets, if and only if, within 18 months of the Closing Date, the Net Revenues from the sale of Seller Products by Buyer and its Affiliates are:

(i) at least $22,080,000 (the "**Earn-Out Event**") but less than $22,310,000, Buyer shall pay to Sellers the sum of $200,000;

(ii) if such Net Revenues are at least $22,310,000, but less than $22,540,000, Buyer shall pay to Sellers the sum of $400,000;

(iii) if such Net Revenues are at least $22,540,000, but less than $22,770,000, Buyer shall pay to Sellers the sum of $600,000;

(iv) if such Net Revenues are at least $22,770,000, but less than $23,000,000, Buyer shall pay to Sellers the sum of $800,000; or

(v) if such Net Revenues are at least $23,000,000, then Buyer shall pay to Sellers the sum of $1,000,000 (such payment or any of the payments under clauses (i) – (iv), the "**Earn-Out Payment**").

(b) Procedures Applicable to Determination of the Earn-Out Event.

(i) On or before the last day of the 21st calendar month following the Closing Date, Buyer shall prepare and deliver to Luna a written statement (the "**Net Revenues Calculation Statement**") setting forth in reasonable detail its determination of Net Revenues for the 18 month period immediately following the Closing Date.

(ii) If the Net Revenues Calculation Statement reflects Net Revenues for such 18 month period of less than $23,000,000, Luna shall have 30 days after receipt of the Net Revenues Calculation Statement (in each case, the "**Earn-Out Review Period**") to review the Net Revenues Calculation Statement. During the Earn-Out Review Period, Luna and its Representatives shall have the right to inspect Buyer's books and records relating to the sale of Seller Products during normal business hours at Buyer's offices, upon reasonable prior notice and solely for purposes reasonably related to the determination of Net Revenues; provided, that (A) such access shall be in a manner that does not interfere with the normal business operations of Buyer and (B) the Persons conducting such inspection execute a confidentiality agreement in form reasonably satisfactory to Buyer. Prior to the expiration of the Earn-Out Review Period, Luna may object to the calculation of Net Revenues set forth in the Net Revenues Calculation Statement by delivering a written notice of objection (a "**Net Revenues Calculation Objection Notice**") to Buyer. Any Net Revenues Calculation Objection Notice shall specify the items in the applicable Net Revenues Calculation disputed by Luna and shall describe in reasonable detail the basis for such objection, as well as the amount in dispute. If Luna fails to deliver a Net Revenues Calculation Objection Notice to Buyer prior to the expiration of the Earn-Out Review Period, then the Net Revenues Calculation set forth in the Net Revenues Calculation Statement shall be final and binding on the parties hereto. If Luna timely delivers a Net Revenues Calculation Objection Notice, Buyer and Luna shall negotiate in good faith to resolve the disputed items and agree upon the resulting amount of the Net Revenues for such period. If Buyer and Luna are unable to reach agreement within 60 days after such an Net Revenues Calculation Objection Notice has been given, all unresolved disputed items shall be promptly referred to the Independent Accountant. The Independent Accountant shall be directed to render a written report on the unresolved disputed items with respect to the applicable Net Revenues Calculation as promptly as practicable, but in no event greater than 60 days after such submission to the Independent Accountant, and to resolve only those unresolved disputed items set forth in the Net Revenues Calculation Objection Notice. If unresolved disputed items are submitted to the Independent Accountant, Buyer and Luna shall each furnish to the Independent Accountant such work papers, schedules and other documents and information relating to the unresolved disputed items as the Independent Accountant may reasonably request. The Independent Accountant shall resolve the disputed items based solely on the applicable definitions and other terms in this Agreement and the presentations by Buyer and Luna, and not by independent review. The resolution of the dispute and the calculation of Net Revenues that is the subject of the applicable Net Revenues Calculation Objection Notice by the Independent Accountant shall be final and binding on the parties hereto. If Net Revenues for such period as determined by the Independent Accountant are (i) either less than $22,080,000 or the determination by the Independent Accountant does not result in Sellers receiving an Earn-Out Payment amount that is greater than the Earn-Out Payment amount payable under the Net Revenues Calculation Statement, Luna shall bear all of the fees and expenses of the Independent Accountant; (ii) $22,080,000 to $22,999,999 and the determination by the Independent

Accountant does result in Sellers receiving an Earn-Out Payment amount that is greater than the Earn-Out Payment amount payable under the Net Revenues Calculation Statement, the fees and expenses of the Independent Accountant shall be borne by Luna and Buyer in proportion to the amounts by which their respective calculations of Net Revenues differ from Net Revenues as finally determined by the Independent Accountant; and (iii) $23,000,000 or greater, Buyer shall bear all of the fees and expenses of the Independent Accountant.

(iii) Earn-Out Payment. If a determination has been made by Buyer or, pursuant to Section 2.7(b), by the Independent Accountant, that the Earn-Out Event has occurred, then subject to Section 2.7(d), the Earn-Out Payment shall be paid no later than ten Business Days following the date of either the Net Revenues Calculation Statement if it reflects that the Earn-Out Event has occurred or the date the Independent Accountant notifies the parties that it has determined that the Earn-Out Event has occurred. If payable hereunder, Buyer shall pay to Sellers the Earn-Out Payment in cash by wire transfer of immediately available funds to such bank account for Sellers as is directed by Luna in writing. If the Earn-Out Event has not occurred (i.e. Net Revenues for the 18 month period following the Closing Date is less than $23,000,000), no Earn-Out Payment shall be due or payable.

(c) Post-Closing Operation. Subsequent to the Closing, Buyer shall have sole discretion with regard to all matters relating to the operation of the Business, including, but not limited to, determining which of the Seller Products to continue to make available, the pricing of the Seller Products and decisions regarding manufacturing of Seller Products, acceptance of orders, sales policies and credit terms, and the ability to discontinue operations; provided, that Buyer shall not, directly or indirectly, take any actions in bad faith that would have the intended effect of avoiding the Earn-out Payment. Notwithstanding the foregoing, Buyer has no obligation to operate the Business in order to achieve the Earn-out Payment.

(d) Right of Set-Off. Buyer shall have the right to withhold and set off against any amount otherwise due to be paid pursuant to this Section 2.7 the amount of any Losses to which any Buyer Indemnified Party may be entitled under Section 8.6 of this Agreement.

(e) No Security. The parties hereto understand and agree that (i) the contingent right to receive the Earn-out Payment shall not be represented by any form of certificate or other instrument, is not transferable, and does not constitute an equity or ownership interest in Buyer, (ii) Sellers shall not have any rights as a security holder of Buyer as a result of Sellers' contingent right to receive the Earn-Out Payment hereunder, and (iii) no interest is payable with respect to the Earn-Out Payment.

(f) Adjustments for Tax Purposes. Any payments made pursuant to Section 2.7 shall be treated as an adjustment to the Purchase Price by the parties for Tax purposes, unless otherwise required by Law.

2.8 **Allocation of Purchase Price**. Sellers and Buyer agree that the Purchase Price and the Assumed Liabilities (plus other relevant items) shall be allocated among the Purchased Assets for all purposes (including Tax and financial accounting) as shown on the allocation schedule (the "**Allocation Schedule**"). A draft of the Allocation Schedule shall be prepared by Buyer and delivered to Seller within 180 days following the Closing Date. If Sellers notify Buyer in writing that Sellers

object to one or more items reflected in the Allocation Schedule, Sellers and Buyer shall negotiate in good faith to resolve such dispute; provided, however, that if Sellers and Buyer are unable to resolve any dispute with respect to the Allocation Schedule within 45 days following the delivery of the Allocation Schedule, such dispute shall be resolved by the Independent Accountant. The fees and expenses of such accounting firm shall be borne equally by Sellers and Buyer. Buyer and Sellers shall file all Tax Returns (including amended returns and claims for refund) and information reports in a manner consistent with the Allocation Schedule. Any adjustments to the Purchase Price pursuant to Section 2.6 or Section 2.7 shall be allocated in a manner consistent with the Allocation Schedule.

2.9 **Withholding Tax**. Buyer shall be entitled to deduct and withhold from the Purchase Price all Taxes that Buyer may be required to deduct and withhold under any provision of Tax Law. All such withheld amounts shall be treated as delivered to Sellers hereunder.

2.10 **Third Party Consents**. To the extent that a Seller's rights under any Material Contract or Permit constituting a Purchased Asset, or any other Purchased Asset, may not be assigned to Buyer without the consent of another Person which has not been obtained, this Agreement shall not constitute an agreement to assign the same if an attempted assignment would constitute a breach thereof or be unlawful, and upon the request of Buyer, such Seller, at its expense, shall use its commercially reasonable best efforts to obtain any such required consent(s) as promptly as possible. If any such consent shall not be obtained or if any attempted assignment would be ineffective or would impair Buyer's rights under the Purchased Asset in question so that Buyer would not in effect acquire the benefit of all such rights, such Seller, to the maximum extent permitted by law and in respect of the Purchased Asset, shall act after the Closing as Buyer's agent in order to obtain for it the benefits thereunder, shall enforce, at the request of and for the account of the Buyer at Buyer's expense, any rights of Sellers or their Affiliates arising thereunder against any Person, including the right to elect to terminate in accordance with the terms thereof upon the direction of the Buyer and shall cooperate, to the maximum extent permitted by Law and in respect of the Purchased Asset, with Buyer in any other reasonable arrangement designed to provide such benefits to Buyer. To the extent Buyer is provided with the benefits of any such Purchased Asset, Buyer shall perform, at the direction of Sellers, the obligations of Sellers or their Affiliates thereunder. To the extent that any Assumed Liability relates to any such Purchased Asset, Sellers shall bear all of the costs arising from such Assumed Liability until such Purchased Asset is transferred and assigned to Buyer or Buyer obtains all the benefits of such Purchased Asset under this Section 2.10; provided, that to the extent Buyer obtains a portion of the benefits of such Purchased Asset, Buyer shall bear a pro rata portion of the costs arising from the related Assumed Liability. To the extent that any Intellectual Property Registration owned by a Seller cannot be assigned and transferred by Sellers, then Sellers hereby grant Buyer an irrevocable, perpetual, worldwide, fully-paid up, royalty-free, exclusive license, with the right to sublicense through multiple tiers and to enforce, to make, have made, use, sell, offer to sell, import, export, improve, reproduce, distribute, perform, display, transmit, manipulate in any manner, create derivative works based upon, and otherwise practice, exploit or utilize in any manner such Intellectual Property Asset. If and when such consents are obtained, the applicable Seller shall promptly assign, transfer, convey and deliver the applicable Purchased Asset to Buyer and execute such transfer document as may be reasonably requested by Buyer. Notwithstanding any provision in this Section 2.10 to the contrary, Buyer shall not be deemed to have waived its rights under Section 7.2(d) unless and until Buyer either provides written waivers

thereof or elects to proceed to consummate the transactions contemplated by this Agreement at Closing. For ease of reference, this Section 2.10 does not apply to Standard Licenses.

ARTICLE III
CLOSING

3.1 **Closing**. Subject to the terms and conditions of this Agreement, the consummation of the transactions contemplated by this Agreement (the "**Closing**") shall take place at the offices of Loeb & Loeb LLP, 10100 Santa Monica Blvd., Suite 2200, Los Angeles, California 90067 at 10:00 a.m., Pacific time, on the third Business Day after all of the conditions to Closing set forth in Article VII are either satisfied or waived (other than conditions which, by their nature, are to be satisfied on the Closing Date), or at such other time, date or place as Sellers and Buyer may mutually agree upon in writing. The date on which the Closing is to occur is herein referred to as the "**Closing Date**".

3.2 **Closing Deliverables**.

(a) At the Closing, Sellers shall deliver to Buyer the following:

(i) a bill of sale in the form of Exhibit A hereto (the "**Bill of Sale**") and duly executed by Sellers, transferring the Tangible Personal Property included in the Purchased Assets to Buyer;

(ii) an assignment and assumption agreement in the form of Exhibit B hereto (the "**Assignment and Assumption Agreement**") and duly executed by Sellers, effecting the assignment to and assumption by Buyer of the Purchased Assets and the Assumed Liabilities;

(iii) assignments in the form of Exhibit C hereto (the "**Intellectual Property Assignments**") and duly executed by Sellers, transferring all of Sellers' right, title and interest in and to the Intellectual Property Assets to Buyer;

(iv) with respect to the Lease of Real Property, an Assignment and Assumption of Lease in the form of Exhibit D hereto (the "**Assignment and Assumption of Lease**") and duly executed by Sellers;

(v) the Transition Services Agreement in the form of Exhibit E hereto (the "**Transition Services Agreement**") and duly executed by Sellers;

(vi) the Seller Closing Certificate;

(vii) the FIRPTA Certificate;

(viii) the certificates of the Secretary or Assistant Secretary of Sellers required by Section 7.2(i);

(ix) such other customary instruments of transfer, assumption, filings or documents, in form and substance reasonably satisfactory to Buyer, as may be required to give effect to this Agreement; and

(x) an assignment for the Patents identified in Section 4.11 of the Disclosure Schedules in the form of Exhibit F hereto and duly executed by Luna.

(b) At the Closing, Buyer shall deliver to Sellers the following:

(i) $17,500,000 by wire transfer of immediately available funds to the account designated in a consent letter to be executed by Silicon Valley Bank, Seller Group and Terametrix in form satisfactory to Buyer; provided, however, that Buyer shall have no obligation to initiate such wire until its receipt of such fully executed consent letter;

(ii) the Assignment and Assumption Agreement duly executed by Buyer;

(iii) the Assignment and Assumption of Lease duly executed by Buyer;

(iv) the Transition Services Agreement duly executed by Buyer;

(v) the Buyer Closing Certificate; and

(vi) the certificates of the Secretary or Assistant Secretary of Buyer required by Section 7.3(f).

ARTICLE IV
REPRESENTATIONS AND WARRANTIES OF SELLERS

Except as set forth in the correspondingly numbered Section of the Disclosure Schedules, Sellers jointly and severally represent and warrant to Buyer that the statements contained in this Article IV are true and correct as of the date hereof.

4.1 **Organization and Qualification of Seller**.

(a) Each of the Sellers is a corporation or other business organization duly organized, validly existing and in good standing under the Laws of the jurisdiction of its incorporation or formation and has full corporate power and authority to own, operate or lease the properties and assets now owned, operated or leased by it and to carry on the Business.

(b) Section 4.1(b) of the Disclosure Schedules sets forth each jurisdiction in which each Seller is licensed or qualified to do business, and each Seller is duly licensed or qualified to do business and is in good standing in each jurisdiction in which the ownership of the Purchased Assets or the operation of the Business makes such licensing or qualification necessary.

4.2 **Authority of Seller**.

Each Seller has full corporate power and authority to enter into this Agreement and the Transaction Documents to which such Seller is a party, to carry out its obligations hereunder and thereunder and to consummate the transactions contemplated hereby and thereby. The execution and delivery by each Seller of this Agreement and any Transaction Documents to which such Seller is a party, the performance by such Seller of its obligations hereunder and thereunder and the consummation by such Seller of the transactions contemplated hereby and thereby have been duly authorized by all requisite corporate action on the part of such Seller. This Agreement has been duly

executed and delivered by each Seller, and (assuming due authorization, execution and delivery by Buyer) this Agreement constitutes a legal, valid and binding obligation of such Seller enforceable against such Seller in accordance with its terms, except to the extent that enforcement of the rights and remedies created thereby is subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws of general application affecting the rights and remedies of creditors and to general principles of equity (regardless of whether enforceability is considered in a proceeding in equity or at law). When each Transaction Document to which a Seller is or will be a party has been duly executed and delivered by such Seller (assuming due authorization, execution and delivery by each other party thereto), such Transaction Document will constitute a legal and binding obligation of such Seller enforceable against it in accordance with its terms, except to the extent that enforcement of the rights and remedies created thereby is subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws of general application affecting the rights and remedies of creditors and to general principles of equity (regardless of whether enforceability is considered in a proceeding in equity or at law).

4.3 **No Conflicts; Consents**. The execution, delivery and performance by each Seller of this Agreement and the Transaction Documents to which it is a party, and the consummation of the transactions contemplated hereby and thereby, do not and will not: (a) conflict with or result in a violation or breach of, or default under, any provision of the certificate of incorporation, by-laws or other organizational documents of such Seller; (b) conflict with or result in a violation or breach of any provision of any Law or Governmental Order applicable to Seller, the Business or the Purchased Assets; (c) except with respect to Standard Licenses and as set forth in Section 4.3 of the Disclosure Schedules, conflict with or require the consent, notice or other action by any Person under, result in a violation or breach of, constitute a default or an event that, with or without, notice or lapse of time or any cure period or the like, or both, would constitute a default under, result in the acceleration of or create in any party the right to accelerate, terminate, modify or cancel any Material Contract or Permit to which a Seller is a party or by which a Seller or the Business is bound or to which any of the Purchased Assets are subject; or (d) result in the creation or imposition of any Encumbrance other than Permitted Encumbrances on the Purchased Assets. No consent, approval, Permit, Governmental Order, declaration or filing with, or notice to, any Governmental Authority is required by or with respect to a Seller in connection with the execution and delivery of this Agreement or any of the Transaction Documents and the consummation of the transactions contemplated hereby and thereby.

4.4 **Financial Statements**. Complete copies of the unaudited combined financial statements consisting of the balance sheet of the Business as at December 31 in each of the years 2014, 2015, 2016 and 2017 and the related statements of income and retained earnings for the years then ended (the "**Annual Financial Statements**"), and unaudited financial statements consisting of the balance sheet of the Business as at June 30__, 2018 and the related statements of income and retained earnings for the six (6) month period then ended (the "**Interim Financial Statements**" and together with the Annual Financial Statements, the "**Financial Statements**") are set forth in Section 4.4 of the Disclosure Schedules. The Financial Statements have been prepared in accordance with GAAP applied on a consistent basis throughout the period involved, subject, in the case of the Interim Financial Statements, to normal and recurring year-end adjustments (the effect of which will not be materially adverse) and the absence of notes (that, if presented, would not differ materially

from those presented in the Annual Financial Statements). The Financial Statements are (a) complete and correct in all material respects, (b) were prepared in accordance with the books and records of the Sellers, and (c) fairly present in all material respects the financial condition of the Business as of the respective dates they were prepared and the results of the operations of the Business for the periods indicated. The balance sheet of the Business as of December 31, 2017 is referred to herein as the "**Balance Sheet**" and the date thereof as the "**Balance Sheet Date**" and the balance sheet of the Business as of June 30, 2018 is referred to herein as the "**Interim Balance Sheet**" and the date thereof as the "**Interim Balance Sheet Date**". Sellers maintain a standard system of accounting for the Business established and administered in accordance with GAAP.

4.5 **Undisclosed Liabilities**. Sellers have no Liabilities with respect to the Business, except (a) those which are adequately reflected or reserved against in the Balance Sheet as of the Balance Sheet Date, (b) those which have been incurred in the ordinary course of business consistent with past practice since the Balance Sheet Date and which are not, individually or in the aggregate, material in amount, (c) those that are Excluded Liabilities, and (d) those that are disclosed as Current Liabilities in the Closing Working Capital Statement.

4.6 **Absence of Certain Changes, Events and Conditions**. Except as set forth in Section 4.6 of the Disclosure Schedules, since the Balance Sheet Date, and other than in the ordinary course of business consistent with past practice, there has not been any:

(a) event, occurrence or development that has had, or could reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect;

(b) material change in any method of accounting or accounting practice for the Business, except as required by GAAP or as disclosed in the notes to the Financial Statements;

(c) Sellers have not written up or written down any Purchased Asset or revalued their Inventory;

(d) material change in cash management practices and policies, practices and procedures with respect to collection of Accounts Receivable, establishment of reserves for uncollectible Accounts Receivable, accrual of Accounts Receivable, inventory control, prepayment of expenses, payment of trade accounts payable, accrual of other expenses, deferral of revenue and acceptance of customer deposits;

(e) entry into any Contract that would constitute a Material Contract;

(f) incurrence, assumption or guarantee of any Indebtedness in connection with the Business except unsecured current obligations and Liabilities incurred in the ordinary course of business consistent with past practice;

(g) transfer, assignment, sale or other disposition of any of the Purchased Assets shown or reflected in the Balance Sheet, except for the sale of Inventory in the ordinary course of business;

(h) cancellation of any debts or claims or amendment, termination or waiver of any rights constituting Purchased Assets;

(i) transfer or assignment of or grant of any license or sublicense under or with respect to any Intellectual Property Assets or Intellectual Property Agreements (except non-exclusive licenses or sublicenses granted in the ordinary course of business consistent with past practice);

(j) abandonment or lapse of or failure to maintain in full force and effect any Intellectual Property Registration, or failure to take or maintain reasonable measures to protect the confidentiality of any Trade Secrets included in the Intellectual Property Assets;

(k) material damage, destruction or loss, or any material interruption in use, of any Purchased Assets, whether or not covered by insurance;

(l) acceleration, termination, material modification to or cancellation of any Assigned Contract or Permit;

(m) material capital expenditures which would constitute an Assumed Liability;

(n) imposition of any Encumbrance upon any of the Purchased Assets;

(o) (i) grant of any bonuses, whether monetary or otherwise, or increase in any wages, salary, severance, termination, pension or other compensation or benefits in respect of any current or former employees, officers, directors, independent contractors or consultants of the Business, other than as provided for in any written agreements that have been provided to the Buyer or required by applicable Law, (ii) change in the terms of employment for any employee of the Business or any termination of any employees for which the aggregate costs and expenses exceed $25,000, or (iii) action to accelerate the vesting or payment of any compensation or benefit for any current or former employee, officer, director, consultant or independent contractor of the Business;

(p) hiring or promoting any person as or to (as the case may be) an officer or hiring or promoting any employee below officer except to fill a vacancy in the ordinary course of business;

(q) adoption, modification or termination of any: (i) employment, severance, termination, retention or other agreement with any current or former employee, officer, director, independent contractor or consultant of the Business, (ii) Benefit Plan, or (iii) collective bargaining or other agreement with a Union, in each case whether written or oral;

(r) any loan to (or forgiveness of any loan to), or entry into any other transaction with, any current or former directors, officers or employees of the Business;

(s) adoption of any plan of merger, consolidation, reorganization, liquidation or dissolution or filing of a petition in bankruptcy under any provisions of federal or state bankruptcy Law or consent to the filing of any bankruptcy petition against it under any similar Law;

(t) purchase, lease or other acquisition of the right to own, use or lease any property or assets in connection with the Business for an amount in excess of $100,000, individually (in the case of a lease, per annum) or $250,000 in the aggregate (in the case of a lease, for the entire

term of the lease, not including any option term), except for purchases of Inventory or supplies in the ordinary course of business consistent with past practice; and

(u) any Contract to do any of the foregoing, or any action or omission that would result in any of the foregoing.

4.7 **Material Contracts**.

(a) Section 4.7(a) of the Disclosure Schedules lists each of the following Contracts of any Seller (x) by which any of the Purchased Assets are bound or affected or (y) to which a Seller is a party or by which it is bound in connection with the Business or the Purchased Assets (such Contracts, together with all Contracts concerning the occupancy, management or operation of the leased Real Property listed or otherwise disclosed in Section 4.10(b) of the Disclosure Schedules and all Intellectual Property Agreements set forth in Section 4.11(b) of the Disclosure Schedules, being "**Material Contracts**"):

(i) all Contracts involving aggregate consideration in excess of $50,000 and which, in each case, cannot be cancelled without penalty or without more than 30 days' notice;

(ii) all Contracts that require Seller to purchase or sell a stated portion of the requirements or outputs of the Business or that contain "take or pay" provisions;

(iii) all Contracts that provide for the indemnification of any Person or the assumption of any Tax, environmental or other Liability of any Person;

(iv) all Contracts that relate to the acquisition or disposition of any business, a material amount of stock or assets of any other Person or any real property (whether by merger, sale of stock, sale of assets or otherwise);

(v) all broker, distributor, dealer, manufacturer's representative, franchise, agency, sales promotion, market research, marketing consulting and advertising Contracts;

(vi) all employment agreements and Contracts with independent contractors or consultants (or similar arrangements) and which are not cancellable without material penalty or without more than 30 days' notice;

(vii) except for Contracts relating to trade receivables, all Contracts relating to Indebtedness (including, without limitation, guarantees);

(viii) all Government Contracts;

(ix) all Contracts that limit or purport to limit the ability of Seller to compete in any line of business or with any Person or in any geographic area or during any period of time;

(x) all joint venture, partnership or similar Contracts;

(xi) all Contracts for the sale of any of the Purchased Assets or for the grant to any Person of any option, right of first refusal or preferential or similar right to purchase any of the Purchased Assets;

(xii) all powers of attorney with respect to the Business or any Purchased Asset (other than those provided in the ordinary course of business for shipping and freight purposes);

(xiii) all collective bargaining agreements or Contracts with any Union;

(xiv) all outstanding Contracts with any customer or supplier that involves the payment by or to a Seller (to the extent related to the Business) of more than $50,000; and

(xv) all other Contracts that are material to the Purchased Assets or the operation of the Business and not previously disclosed pursuant to this Section 4.7.

(b) Each Material Contract is valid and binding on a Seller in accordance with its terms and is in full force and effect, except to the extent that enforcement of the rights and remedies created thereby is subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws of general application affecting the rights and remedies of creditors and to general principles of equity (regardless of whether enforceability is considered in a proceeding in equity or at law). None of Sellers or, to Sellers' Knowledge, any other party thereto is in breach of or default under (or is alleged in writing to be in breach of or default under) in any material respect, or has provided or received any notice of any intention to terminate, any Material Contract. No event or circumstance has occurred that, with or without, notice or lapse of time or any cure period or the like, or both, would constitute an event of default under any Material Contract or result in a termination thereof or would cause or permit the acceleration or other changes of any right or obligation or the loss of any benefit thereunder. Complete and correct copies of each Material Contract (including all modifications, amendments and supplements thereto and waivers thereunder) have been made available to Buyer. There are no material disputes pending or threatened under any Contract included in the Purchased Assets.

(c) Sellers have delivered to Buyer a correct and complete description, as of June 30, 2018, of all of the open customer orders (whether verbal or written) relating to the Business, including identification of the customer, the dollar amount of such order and the payment terms.

(d) Sellers have delivered to Buyer a correct and complete description, as of June 30, 2018, of all of the open production orders (whether verbal or written) relating to the Business placed with suppliers, including identification of the supplier, the dollar amount of such order and the payment terms.

(e) Sellers have delivered to Buyer a correct and complete description, as of June 30, 2018, of all outstanding quotations, bids or proposals (whether verbal or written) relating to the Business that, if accepted or awarded, would lead to a Material Contract.

(f) Sellers have no further obligations under that certain Technical Assistance Agreement defined by the International Traffic in Arms Regulation in respect of Luna Optoelectronics and Elbit Systems.

4.8 **Title to Purchased Assets**.

(a) Sellers and Luna have good and valid title to all Intellectual Property Assets, and Sellers have good and valid title, or a valid leasehold interest in, all of the other Purchased Assets. TeraMetrix has not engaged in the Business and does not own any assets used in the Business.

(b) Except as set forth in Section 4.8(b) of the Disclosure Schedules, all such Purchased Assets (including leasehold interests) are free and clear of Encumbrances except for the following (collectively referred to as "**Permitted Encumbrances**"):

(i) liens for Taxes not yet due and payable;

(ii) mechanics', carriers', workmen's, repairmen's or other like liens arising or incurred in the ordinary course of business consistent with past practice or amounts that are not delinquent and which are not, individually or in the aggregate, material to the Business or the Purchased Assets; or

(iii) easements, rights of way, zoning ordinances and other similar encumbrances affecting the Leased Real Property which are not, individually or in the aggregate, material to the Business or the Purchased Assets, which do not prohibit or interfere with the current operation of the Leased Real Property and which do not render title to any Real Property unmarketable.

(c) Other than with respect to the Excluded Assets and the services and support of the nature to be provided pursuant to the Transition Services Agreement, the Purchased Assets are sufficient for the continued conduct of the Business after the Closing in substantially the same manner as conducted for the twelve months prior to the Closing and constitute all of the rights, property and assets necessary to conduct the Business. Except as set forth in Section 4.8(c) of the Disclosure Schedules, to the Sellers' Knowledge, there are no facts or conditions that, individually or in the aggregate, materially interfere with the current use and operation of the Purchased Assets. Except as set forth in Section 4.8(c) of the Disclosure Schedules, none of the Excluded Assets are material to the Business. The geographic area in which Sellers have conducted the Business is the Territory.

4.9 **Condition and Sufficiency of Assets**. The furniture, fixtures, machinery, equipment, vehicles and other items of tangible personal property and, to Sellers' Knowledge, except as set forth in Section 4.9 of the Disclosure Schedules, the buildings, plants and structures, included in the Purchased Assets are in adequate operating condition and repair for the uses to which they are being put, subject to normal wear and tear, and none of such furniture, fixtures, machinery, equipment, vehicles and other items of tangible personal property and, to Sellers' Knowledge, the buildings, plants and structures, is in need of maintenance or repairs except for ordinary, routine maintenance and repairs that are not material in nature or cost.

4.10 **Real Property**.

(a) Sellers do not own any of the real property used in or necessary for the conduct of the Business.

(b) Section 4.10(b) of the Disclosure Schedules sets forth each parcel of real property leased by Sellers and used in or necessary for the conduct of the Business (together with all rights, title and interest of Sellers in and to leasehold improvements relating thereto, including, but not limited to, security deposits, reserves or prepaid rents paid in connection therewith, collectively, the "**Leased Real Property**"), and a true and complete list of all leases, subleases, licenses, concessions and other agreements (whether written or oral), including all amendments, extensions renewals, guaranties and other agreements with respect thereto, pursuant to which Sellers holds any Leased Real Property (collectively, the "**Leases**"). Sellers have delivered to Buyer a true and complete copy of each Lease. With respect to each Lease:

(i) such Lease is valid, binding, enforceable and in full force and effect, except to the extent that enforcement of the rights and remedies created thereby is subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws of general application affecting the rights and remedies of creditors and to general principles of equity (regardless of whether enforceability is considered in a proceeding in equity or at law), and Seller enjoys peaceful and undisturbed possession of the Leased Real Property;

(ii) the applicable Seller is not in breach or default under such Lease, and no event has occurred or circumstance exists which, with the delivery of required notice and the expiration of any applicable cure period or the like, passage of time or both, would constitute such a breach or default, and such Seller has paid all rent due and payable under such Lease;

(iii) the applicable Seller has not received nor given any notice of any default or event that with, if applicable, notice and lapse of any cure period or the like, passage of time or both, would constitute a default by such Seller under any of the Leases and, to the Knowledge of Sellers, no other party is in default thereof, and no party to any Lease has exercised any termination rights with respect thereto;

(iv) the applicable Seller has not subleased, assigned or otherwise granted to any Person the right to use or occupy such Leased Real Property or any portion thereof; and

(v) the applicable Seller has not pledged, mortgaged or otherwise granted an Encumbrance on its leasehold interest in any Leased Real Property.

(c) Sellers have not received any written notice of (i) violations of building codes and/or zoning ordinances or other governmental or regulatory Laws affecting the Leased Real Property, (ii) existing, pending or threatened condemnation proceedings affecting the Leased Real Property, or (iii) existing, pending or threatened zoning, building code or other moratorium proceedings, or similar matters which could reasonably be expected to adversely affect the ability to operate the Leased Real Property as currently operated. Neither the whole nor any material portion of any Real Property has been damaged or destroyed by fire or other casualty.

(d) The Leased Real Property is sufficient for the continued conduct of the Business after the Closing in substantially the same manner as conducted prior to the Closing and constitutes all of the real property necessary to conduct the Business.

4.11 **Intellectual Property**.

(a) Section 4.11(a) of the Disclosure Schedules contains a correct, current and complete list of: (i) all Intellectual Property Registrations, specifying as to each, as applicable: the title, mark, or design; the Seller Group member who owns the underlying Intellectual Property Asset; the jurisdiction by or in which it has been issued, registered or filed; the patent, registration or application serial number; the issue or registration date, the filing date; and the current status (e.g., abandoned, expired, in use, etc.); (ii) all material unregistered Trademarks included in the Intellectual Property Assets; (iii) all proprietary Software included in the Intellectual Property Assets; and (iv) all other Intellectual Property Assets other than Trade Secrets. For each of (ii)-(iv), Section 4.11(a) of the Disclosure Schedule identifies for each such item the Seller Group member who owns the underlying Intellectual Property Asset. All required filings and fees related to the Intellectual Property Registrations have been timely filed with and paid to the relevant Governmental Authorities and authorized registrars, and all Intellectual Property Registrations are otherwise in good standing. Sellers have provided Buyer with true and complete copies of file histories related to all Intellectual Property Registrations that are within the possession or control of the Seller Group. Except as set forth in Section 4.11(a) of the Disclosure Schedules, there are no actions that must be taken within 90 days after the Closing Date for the purposes of prosecuting, maintaining, or preserving or renewing any Intellectual Property Registrations, including the payment of any filing, registration, maintenance or renewal fees or the filing of any responses to or with any Governmental Authority, including office actions, documents, applications or certificates.

(b) Section 4.11(b) of the Disclosure Schedules contains a correct, current and complete list of all Intellectual Property Agreements, specifying for each the date, title and parties thereto. Sellers have provided Buyer with true and complete copies (or in the case of any oral agreements, a complete and correct written description) of all such Intellectual Property Agreements, including all modifications, amendments and supplements thereto and waivers thereunder. Each Intellectual Property Agreement is valid and binding on a Seller Group member in accordance with its terms and is in full force and effect except to the extent that enforcement of the rights and remedies created thereby is subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws of general application affecting the rights and remedies of creditors and to general principles of equity (regardless of whether enforceability is considered in a proceeding in equity or at law). Neither a Seller nor, to Sellers' Knowledge, any other party thereto is, or is alleged to be, in breach of or default under, or has provided or received any notice of breach of, default under, or intention to terminate (including by non-renewal), any Intellectual Property Agreement. No Seller or Seller Affiliate has transferred ownership of any Intellectual Property to a third Person in the prior three years that was material to the Business at the time it was transferred.

(c) The Seller Group member named on Section 4.11(a) of the Disclosure Schedules is the sole and exclusive legal and beneficial owner of all right, title, and interest in and to the Intellectual Property Registrations and Intellectual Property Assets, free and clear of Encumbrances (it being understood and acknowledged that the foregoing representation and warranty does not constitute a representation and warranty of enforceability of any such Intellectual Property Registrations and Intellectual Property Assets). Except as set forth in Section 4.11(c) of the Disclosure Schedules, none of the Intellectual Property Assets will be subject to any Encumbrance as a result of any written agreement or, to the Knowledge of Sellers, other facts or

circumstances existing before the date hereof. No Seller or Seller Affiliate (nor any of their predecessors-in-interest) has granted or agreed to grant, in each case in writing, any option or right to any Person to purchase any subsisting Intellectual Property Asset (in whole or in part) and none of the Intellectual Property Assets is subject to any reversionary interest or other interest created under any written Contract. No Seller or Seller Affiliate (or to the Knowledge of Sellers, any predecessor-in-interest) has received any written notice or written claim within the preceding three years challenging the exclusive ownership of any Intellectual Property Assets or suggesting that any Person other than a Seller, Seller Affiliate, or predecessor-in-interest has any claim of legal or beneficial ownership with respect thereto. Each Seller Group Member has the exclusive, unrestricted right to sue for past, present, and future infringement of the Intellectual Property Assets owned by such Seller Group member. Seller Group members (and their predecessor-in-interest) have entered into Contracts with each current and former employee in the form attached to Section 4.11(c) of the Disclosure Schedules and has entered into Contracts with each current and former independent contractor who is or was involved in or has contributed to the invention, creation, or development of any Intellectual Property during the course of engagement with or for the benefit of Sellers whereby such independent contractor (i) acknowledges Seller's exclusive ownership of all Intellectual Property Assets invented, created or developed by such independent contractor within the scope of his or her engagement with such Seller; (ii) grants to such Seller a present, irrevocable assignment of any ownership interest such independent contractor may have in or to such Intellectual Property; and (iii) irrevocably waives any right or interest, including any moral rights, regarding such Intellectual Property, to the extent permitted by applicable Law. Sellers have provided Buyer with true and complete copies of all such Contracts.

(d) Neither the execution, delivery or performance of this Agreement, nor the consummation of the transactions contemplated hereunder, will result in the loss or impairment of or payment of any additional amounts with respect to, nor require the consent of any other Person in respect of, Buyer's right to own or use any Intellectual Property Assets or any Intellectual Property subject to any Intellectual Property Agreement. Immediately after the Closing, Buyer will own all right, title, and interest in and to all Intellectual Property Assets on identical terms and conditions as Seller Group members enjoyed immediately prior to the Closing.

(e) To Seller's Knowledge, the Intellectual Property Registrations and Intellectual Property Assets are valid and enforceable. All Intellectual Property Registrations are subsisting and in full force and effect. Seller Group members have taken commercially reasonable steps to maintain and enforce the Intellectual Property Assets and to preserve the confidentiality of all Trade Secrets included in the Intellectual Property Assets, including by requiring all Persons having access thereto to execute binding, written non-disclosure agreements, except such Persons who have served as outside counsel to Sellers and who are under a similar duty of confidentiality under applicable law. No Seller or Seller Affiliate has received any written notice or written claim within the preceding three years challenging the validity or enforceability of any Intellectual Property Asset or alleging any misuse of any Intellectual Property Asset. To Sellers' Knowledge, there has been no unauthorized use, access by, or disclosure to a third Person of Trade Secrets within the Intellectual Property Asserts. No source code of any Software within the Intellectual Property Rights has been licensed to a third Person or provided to a third Person other than to consultants and contractors performing work on behalf of a Seller who are bound by confidentiality obligations

of customary scope with respect to such source code. No other Person has the right under a written agreement, contingent or otherwise, to obtain access to or use any source code associated with Software within the Intellectual Property Assets.

(f) The conduct of the Business as currently and formerly conducted, including the use of the Intellectual Property Assets and the Intellectual Property licensed to or for the benefit of Sellers under the Intellectual Property Agreements in connection therewith, and the products, processes, and services of the Business have not infringed, misappropriated, or otherwise violated the Intellectual Property or other rights of any Person. To the Knowledge of Sellers, the products, processes and services of the Business that are under development or that have not yet been sold or otherwise commercialized as of the Closing Date will not, in the form that they exist as of the Closing Date, infringe, misappropriate or otherwise violate the Intellectual Property or other rights of any Person. To the Knowledge of Sellers, no Person has infringed, misappropriated, or otherwise violated any Intellectual Property Assets or the Intellectual Property licensed to or for the benefit of any Seller under the Intellectual Property Agreements.

(g) There are no Actions (including any opposition, cancellation, revocation, review, or other post-grant proceeding) settled, pending or, threatened in writing (including in the form of offers to obtain a license), or, to Sellers' Knowledge, otherwise threatened (including in the form of offers to obtain a license): (i) alleging any infringement, misappropriation, or other violation of the Intellectual Property of any Person by a Seller in the conduct of the Business; (ii) challenging the validity, enforceability, registrability, patentability, or ownership of any Intellectual Property Assets; or (iii) by a Seller Group member alleging any infringement, misappropriation, or violation by any Person of any Intellectual Property Assets. Seller Group members are not aware of any facts or circumstances that give rise to any such Action. No Seller is subject to, no Intellectual Property Assets are subject to, and to the Knowledge of Sellers no Intellectual Property licensed to or for the benefit of any Seller under any Intellectual Property Agreements is subject to, any outstanding or prospective Governmental Order (including any motion or petition therefor) that does or could reasonably be expected to restrict or impair the use, licensing or other exploitation of any Intellectual Property Assets or Intellectual Property licensed to or for the benefit of a Seller under any Intellectual Property Agreement. Except as set forth in Section 4.11(g) of the Disclosure Schedules, no Seller Group member has, in the past three years, received any written notice, written claim, or written indemnification request asserting that any infringement, misappropriation, or violation of any Intellectual Property of a third Person is or was occurring, including in the form of written offers to a Seller Group member to take a license under any Patent owned by a third Person, in each case with respect to the conduct of the Business. Section 4.11(g) of the Disclosure Schedules includes a list of all written notices by or on behalf of any Seller Group member to a third Person in the past six years asserting that the third Person is or was infringing, misappropriating, or violating, or has infringed, misappropriated, or violated any Intellectual Property Asset or Intellectual Property licensed to or for the benefit of any Seller under the Intellectual Property Agreements, including in the form of written offers to take a license to any Intellectual Property.

(h) No Open Source Materials have been incorporated into, linked, or used or distributed with any of the Software within the Intellectual Property Assets or any of the Software licensed by or for the benefit of any Seller in a manner that requires or conditions the licensing, sale, or distribution of such Software or derivative works thereof on: (i) publication or distribution

of source code for such Software or derivative works thereof; (ii) permitting third Persons to make derivative works thereof; (iii) permitting third Persons to reverse engineer or replace portions of such Software or derivative works thereof; (iv) the granting of any licenses or covenants not to sue on any Patents with the Intellectual Property Assets; (v) limiting in any manner the ability to charge fees or otherwise seek compensation in connection with marketing, licensing or distribution of such Software or derivative works thereof or (vi) granting the right to decompile, disassemble, reverse engineer, or otherwise derive the source code or underlying structure of such Software or derivative works thereof.

(i) Section 4.11(i) of the Disclosure Schedules: (i) identifies each standards-setting organization (including but not limited to ETSI, 3GPP, 3GPP2, TIA, IEEE, IETF, and ITU-R), university or industry body, consortium, other multi-party special interest group and any other collaborative or other group in which Sellers or any of their Affiliates is currently participating, or in which Sellers or any of their Affiliates have participated in the past or applied for future participation in, including any of the foregoing that may be organized, funded, sponsored, formed or operated, in whole or in part, by any Governmental Authority, in all cases, to the extent related to any Intellectual Property Asset (each a "**Standards Body**"); and (ii) sets forth a listing and description of the membership agreements and other Contracts, bylaws, policies, rules and similar materials relating to such Standards Bodies, to which Sellers or any of their Affiliates is bound (collectively, "**Standards Agreements**"). True, complete and correct copies of all Standards Agreements have been delivered to the Buyer. Neither Sellers nor any of their Affiliates is bound by, or has agreed to be bound by, any Contract (including any written licensing commitment), bylaw, policy, or rule of any Person that requires or purports to require Sellers or any of their Affiliates (or, following the Closing Date, Buyer or any of its Affiliates) to contribute, disclose or license any Intellectual Property to such Person or its other members. No Seller Group member has made any written Patent disclosures to any Standards Body. Sellers are in material compliance with all Standards Agreements that relate to the Intellectual Property Assets. No Seller Group member is engaged in any material dispute with any Standards Body with respect to any Intellectual Property Asset or with any third Persons with respect to such Seller's conduct with respect to any Standards Body.

(j) Sellers have (a) complied with all Laws relating to data privacy, data protection and data security, including with respect to the collection, storage, transmission, transfer (including cross-border transfers), disclosure, destruction and use of Personally Identifiable Information; and (b) taken commercially reasonable measures to ensure that all data and information owned or held by Sellers (including any Personally Identifiable Information) (collectively "**Seller Data**") is protected against loss, damage and unauthorized access, use, modification or other misuse. To Sellers' Knowledge, there has been no loss, damage or unauthorized access, use, modification or other misuse of any Seller Data. No Person has provided any notice, made any claim or commenced any Action with respect to loss, damage or unauthorized access, use, modification or other misuse of any Seller Data and, to Sellers' Knowledge, there is no reasonable basis for any such notice, claim or Action.

(k) All Software that constitutes Intellectual Property Assets is substantially free of any material defects, bugs and errors, and does not contain any disabling software, code or instructions, spyware, Trojan horses, worms, viruses or other software routines that permit or cause

unauthorized access to, or disruption, impairment, disablement or destruction of, Software, data, computer systems, networks, or other or other devices or materials.

(l) Except as set forth on Section 4.11(l) of the Disclosure Schedules: (i) the Intellectual Property Assets constitute all of the material Intellectual Property owned by any Seller Group member that relates to, is used or held for use in or necessary for the Business as of the Closing Date and as planned to be conducted as of the Closing Date; and (ii) the Intellectual Property Assets, together with the Intellectual Property licensed to or for the benefit of Sellers under any Intellectual Property Agreements and Standard Licenses, constitute all of the Intellectual Property in which any Seller has any rights or interest that relates to, is used or held for use in or necessary for the Business as of the Closing Date and as planned to be conducted as of the Closing Date. No Seller Affiliate (other than as identified on Section 4.11(a) of the Disclosure Schedules) owns, directly or indirectly, or has any interest (including but not limited to license-based interests) in any Intellectual Property Asset or other Intellectual Property that relates to, is used or held for use in, or is necessary for the Business.

(m) No funding or facilities of any Governmental Authority, or funding or facilities of a university, college, other educational institution or research center, was used in the development of any of the Intellectual Property Assets.

4.12 **Inventory**. All Inventory, whether or not reflected in the Balance Sheet, consists of a quality and quantity usable and salable in the ordinary course of business consistent with past practice, except for obsolete, damaged, defective or slow-moving items that have been written off or written down to fair market value or for which adequate reserves have been established. All Inventory is owned by a Seller free and clear of all Encumbrances, and no Inventory is held on a consignment basis. The quantities of each item of Inventory (whether raw materials, work-in-process or finished goods) are not excessive, but are reasonable in the present circumstances of Sellers. Sellers have not received written notice that they will experience, in the foreseeable future, any difficulty in obtaining, in the desired quantity and quality, at a reasonable price and upon reasonable terms and conditions, the raw materials, supplies or component products required for the manufacture, assembly or production of the Products. A correct and complete description of the Inventory as of June 30, 2018, has been provided to Buyer.

4.13 **Products**. Section 4.13(a) of the Disclosure Schedules sets forth each product previously or currently marketed and sold and each service marketed and sold by Sellers in connection with the Business since January 1, 2015 ("**Seller Products**"). All Seller Products have conformed in all material respects with all applicable Contracts and all applicable express and implied warranties, the published product specifications of the Business and all regulations, certification standards and other requirements of any applicable Governmental Authority or any other agency, association, body or Person that provides certifications of such products, and, except for Ordinary Warranty Obligations, Sellers have no Liability for replacement or repair thereof or other damages in connection therewith. There are no defects in the design or technology embodied in any Products that impair or are likely to impair the intended use of such Products. Seller Products are sold in accordance with the standard terms and conditions (the "**Standard Product Terms**") of Sellers attached to Section 4.13(b) of the Disclosure Schedules. No Product is subject to any guaranty, warranty or other indemnity beyond the applicable Standard Product Terms. To Sellers'

Knowledge, Sellers have no Liability for any injury to individuals or property as a result of the ownership, lease, license, delivery, possession, sale, distribution, resale or use of any Product.

4.14 **Accounts Receivable**. The Accounts Receivable reflected on the Interim Balance Sheet and the Accounts Receivable arising after the date thereof (a) have arisen from bona fide transactions entered into by a Seller involving the sale of goods or the rendering of services in the ordinary course of business consistent with past practice; (b) constitute only valid, undisputed claims of a Seller not subject to claims of set-off or other defenses or counterclaims other than normal cash discounts accrued in the ordinary course of business consistent with past practice; and (c) subject to commercially reasonable efforts by Buyer to collect such accounts and to a reserve for bad debts shown on the Interim Balance Sheet or, with respect to Accounts Receivable arising after the Interim Balance Sheet Date, on the accounting records of the Business, to Seller's Knowledge can reasonably be expected to be collectible in full within 90 days after billing. The reserve for bad debts shown on the Interim Balance Sheet or, with respect to Accounts Receivable arising after the Interim Balance Sheet Date, on the accounting records of the Business have been determined in accordance with GAAP, consistently applied, subject to normal year-end adjustments and the absence of disclosures normally made in footnotes. A correct and complete description of the Accounts Receivable as of June 30, 2018, has been provided to Buyer.

4.15 **Customers and Suppliers**.

(a) Section 4.15(a) of the Disclosure Schedules sets forth with respect to the Business (i) each of the top 20 customers of the Business, taken as a whole, by revenue for the fiscal years ended December 31, 2015, December 31, 2016 and December 31, 2017 (collectively, the "**Material Customers**"); and (ii) the amount of consideration paid by each Material Customer during such periods. No Seller has received any written notice, or to the actual knowledge of Jean-Pierre Maufras, Scott A. Graeff and Dale E. Messick, has reason to believe, that any of the Material Customers has ceased, or intends to cease after the Closing, to use the goods or services of the Business or to otherwise terminate or materially reduce its relationship with the Business.

(b) Section 4.15(b) of the Disclosure Schedules sets forth with respect to the Business (i) each of the top 20 suppliers to the Business, taken as a whole, by revenue for the fiscal years ended December 31, 2015, December 31, 2016 and December 31, 2017 (collectively, the "**Material Suppliers**"); and (ii) the amount of purchases from each Material Supplier during such periods. No Seller has received any written notice, or to the actual knowledge of Jean-Pierre Maufras, Scott A. Graeff and Dale E. Messick, has reason to believe, that any of the Material Suppliers has ceased, or intends to cease, to supply goods or services to the Business or to otherwise terminate or materially reduce its relationship with the Business.

4.16 **Insurance**. Section 4.16 of the Disclosure Schedules sets forth (a) a true and complete list of all current policies or binders of fire, liability, product liability, umbrella liability, real and personal property, workers' compensation, vehicular, fiduciary liability and other casualty and property insurance maintained by a Seller or its Affiliates and relating to the Business, the Purchased Assets or the Assumed Liabilities (collectively, the "**Insurance Policies**"); and (b) with respect to the Business, the Purchased Assets or the Assumed Liabilities, a list of all pending claims and the claims history for each Seller since January 1, 2015. There are no claims related to the Business,

the Purchased Assets or the Assumed Liabilities pending under any such Insurance Policies as to which coverage has been questioned, denied or disputed or in respect of which there is an outstanding reservation of rights. Neither a Seller nor any of its Affiliates is in receipt of any current written notice of cancellation of, premium increase with respect to, or alteration of coverage under, any of such Insurance Policies. All premiums due on such Insurance Policies have either been paid or, if not yet due, accrued. All such Insurance Policies (a) are in full force and effect and enforceable in accordance with their terms; (b) are provided by carriers who are financially solvent; and (c) have not been subject to any lapse in coverage. None of Sellers or any of their Affiliates is in default under, or has otherwise failed to comply with, in any material respect, any provision contained in any such Insurance Policy. The Insurance Policies are of the type and in the amounts customarily carried by Persons conducting a business similar to the Business and are sufficient for compliance with all applicable Laws and Contracts to which a Seller is a party or by which it is bound. True and complete copies of the Insurance Policies have been made available to Buyer.

4.17 **Legal Proceedings; Governmental Orders**.

(a) There are no Actions pending or, to Sellers' Knowledge, threatened against or by a Seller (a) relating to or affecting the Business, the Purchased Assets or the Assumed Liabilities; or (b) that challenge or seek to prevent, enjoin or otherwise delay the transactions contemplated by this Agreement. To Sellers' Knowledge, no event has occurred or circumstances exist that would give rise to, or serve as a basis for, any such Action.

(b) There are no outstanding Governmental Orders and no unsatisfied judgments, penalties or awards against, relating to or affecting the Business.

4.18 **Compliance with Laws; Permits**.

(a) Each Seller has complied, and is now complying, with all Laws applicable to the conduct of the Business or the ownership and use of the Purchased Assets.

(b) All Permits required for a Seller to conduct the Business or for the ownership and use of the Purchased Assets have been obtained by such Seller and are valid and in full force and effect. All fees and charges with respect to such Permits as of the date hereof have been paid in full. Section 4.18(b) of the Disclosure Schedules lists all current Permits issued to a Seller which are related to the conduct of the Business or the ownership and use of the Purchased Assets, including the names of the Permits and their respective dates of issuance and expiration. No event has occurred that, with or without notice or lapse of time or any cure period or the like, or both, would reasonably be expected to result in the revocation, suspension, lapse or limitation of any Permit set forth in Section 4.18(b) of the Disclosure Schedules.

4.19 **Environmental Matters**.

(a) The operations of each Seller with respect to the Business and the Purchased Assets are currently and have been in compliance with all Environmental Laws. No Seller has received from any Person, with respect to the Business or the Purchased Assets, any: (i) Environmental Notice or Environmental Claim; or (ii) written request for information pursuant to

Environmental Law, which, in each case, either remains pending or unresolved, or is the source of ongoing obligations or requirements as of the Closing Date.

(b) Sellers have obtained and are in compliance with all Environmental Permits (each of which is disclosed in Section 4.19(b) of the Disclosure Schedules) necessary for the conduct of the Business or the ownership, lease, operation or use of the Purchased Assets and all such Environmental Permits are in full force and effect and shall be maintained in full force and effect by Sellers through the Closing Date in accordance with Environmental Law, and Sellers are not aware of any condition, event or circumstance that might prevent or impede, after the Closing Date, the conduct of the Business or the ownership, lease, operation or use of the Purchased Assets. With respect to any such Environmental Permits, Sellers have undertaken, or will undertake prior to the Closing Date, all measures necessary to facilitate transferability of the same, and Sellers are not aware of any condition, event or circumstance that might prevent or impede the transferability of the same, and has not received any Environmental Notice or written communication regarding any material adverse change in the status or terms and conditions of the same.

(c) None of the Business or the Purchased Assets or any real property currently or formerly owned, leased or operated by a Seller in connection with the Business is listed on, or has been proposed for listing on, the National Priorities List under CERCLA, any other list of sites that have been the subject of releases of Hazardous Materials including the Superfund Enterprise Management System or any similar state list.

(d) There has been no Release of Hazardous Materials with respect to the Business or the Purchased Assets or, to Sellers' Knowledge, any real property currently or formerly owned, leased or operated by a Seller in connection with the Business. No Seller has received an Environmental Notice that any of the Business or the Purchased Assets or real property currently or formerly owned, leased or operated by a Seller in connection with the Business (including soils, groundwater, surface water, buildings and other structure located thereon) has been contaminated with any Hazardous Material which could reasonably be expected to result in an Environmental Claim against, or a violation of Environmental Law or term of any Environmental Permit by, a Seller.

(e) Section 4.19(e) of the Disclosure Schedules contains a complete and accurate list of all off-site Hazardous Materials treatment, storage, or disposal facilities or locations used by a Seller and any predecessors in connection with the Business or the Purchased Assets as to which a Seller may retain liability, and none of these facilities or locations has been placed or proposed for placement on the National Priorities List under CERCLA, any other list of sites that have been the subject of releases of Hazardous Materials including the Superfund Enterprise Management System or any similar state list, and no Seller has received any Environmental Notice regarding potential liabilities with respect to such off-site Hazardous Materials treatment, storage, or disposal facilities or locations used by a Seller.

(f) No Seller has retained or assumed, by contract or operation of Law, any liabilities or obligations of third parties under Environmental Law.

(g) Sellers have provided or otherwise made available to Buyer: (i) any and all environmental reports, studies, audits, records, sampling data, site assessments, risk assessments,

economic models and other similar documents with respect to the Business or the Purchased Assets or any real property currently or formerly owned, leased or operated by Sellers in connection with the Business which are in the possession or control of Sellers related to compliance with Environmental Laws, Environmental Claims or an Environmental Notice or the Release of Hazardous Materials; and (ii) any and all material documents concerning planned or anticipated capital expenditures required to reduce, offset, limit or otherwise control pollution and/or emissions, manage waste or otherwise ensure compliance with current or future Environmental Laws (including, without limitation, costs of remediation, pollution control equipment and operational changes).

4.20 **Employee Benefit Matters**.

(a) Section 4.20(a) of the Disclosure Schedules contains a true and complete list of each pension, benefit, retirement, compensation, employment, consulting, profit-sharing, deferred compensation, incentive, bonus, performance award, phantom equity, stock or stock-based, change in control, retention, severance, termination, vacation, paid time off (PTO), medical, vision, dental, disability, welfare, Code Section 125 cafeteria, fringe-benefit and other similar agreement, plan, policy, program or arrangement (and any amendments thereto), in each case whether or not reduced to writing and whether funded or unfunded, including each "employee benefit plan" within the meaning of Section 3(3) of ERISA, whether or not tax-qualified and whether or not subject to ERISA, which is or has been maintained, sponsored, contributed to, or required to be contributed to by Sellers for the benefit of any current or former employee, officer, director, retiree, independent contractor or consultant of the Business or any spouse or dependent of such individual, or under which Sellers or any of their ERISA Affiliates has or may have any Liability, or with respect to which Buyer or any of its Affiliates would reasonably be expected to have any Liability, contingent or otherwise (as listed on Section 4.20(a) of the Disclosure Schedules, each, a "**Benefit Plan**").

(b) With respect to each Benefit Plan, Sellers have made available to Buyer accurate, current and complete copies of each of the following: (i) where the Benefit Plan has been reduced to writing, the plan document together with all amendments; (ii) where the Benefit Plan has not been reduced to writing, a written summary of all material plan terms; (iii) where applicable, copies of any trust agreements or other funding arrangements, custodial agreements, insurance policies and contracts, administration agreements and similar agreements, and investment management or investment advisory agreements, now in effect or required in the future as a result of the transactions contemplated by this Agreement or otherwise; (iv) copies of any summary plan descriptions, summaries of material modifications, summaries of benefits and coverage relating to any Benefit Plan; (v) in the case of any Benefit Plan that is intended to be qualified under Section 401(a) of the Code, a copy of the most recent determination, opinion or advisory letter from the Internal Revenue Service and any legal opinions issued thereafter with respect to such Benefit Plan's continued qualification; (vi) in the case of any Benefit Plan for which a Form 5500 must be filed, a copy of the two most recently filed Forms 5500, with all corresponding schedules and financial statements attached; (vii) actuarial valuations and reports related to any Benefit Plans with respect to the most recently completed plan years; (viii) the most recent nondiscrimination tests performed under the Code; and (ix) copies of material notices, letters or other correspondence from the Internal Revenue Service, Department of Labor, Department of Health and Human Services, Pension Benefit Guaranty Corporation or other Governmental Authority relating to the Benefit Plan.

(c) Each Benefit Plan and any related trust (other than any multiemployer plan within the meaning of Section 3(37) of ERISA or multi-employer pension plan within the meaning of the Supplemental Pension Plans Act (Quebec), as amended (each a "**Multiemployer Plan**")) has been established, administered and maintained in accordance with its terms and in compliance with all applicable Laws. Each Benefit Plan that is intended to be qualified within the meaning of Section 401(a) of the Code (a "**Qualified Benefit Plan**") is so qualified and received a favorable and current determination letter from the Internal Revenue Service and nothing has occurred that could reasonably be expected to adversely affect the qualified status of any Qualified Benefit Plan. Nothing has occurred with respect to any Benefit Plan that has subjected or could reasonably be expected to subject Seller or any of its ERISA Affiliates or, with respect to any period on or after the Closing Date, Buyer or any of its Affiliates, to a penalty under Section 502 of ERISA or to tax or penalty under Sections 4975 or 4980H of the Code. All benefits, contributions and premiums relating to each Benefit Plan have been timely paid in accordance with the terms of such Benefit Plan and all applicable Laws and accounting principles, and all benefits accrued under any unfunded Benefit Plan have been paid, accrued or otherwise adequately reserved to the extent required by, and in accordance with GAAP.

(d) Neither a Seller nor any of its ERISA Affiliates has (i) incurred or reasonably expects to incur, either directly or indirectly, any material Liability under Title I or Title IV of ERISA or related provisions of the Code or applicable local Law relating to employee benefit plans; (ii) failed to timely pay premiums to the Pension Benefit Guaranty Corporation; (iii) withdrawn from any Benefit Plan; (iv) engaged in any transaction which would give rise to liability under Section 4069 or Section 4212(c) of ERISA; (v) incurred taxes under Section 4971 of the Code with respect to a single employer pension plan subject to Title IV of ERISA or a registered pension plan; or (vi) participated in a multiple employer welfare arrangements.

(e) With respect to each Benefit Plan (i) no such plan is a Multiemployer Plan; (ii) no such plan is a "multiple employer plan" within the meaning of Section 413(c) of the Code or a "multiple employer welfare arrangement" (as defined in Section 3(40) of ERISA); (iii) no Action has been initiated by the Pension Benefit Guaranty Corporation to terminate any such plan or to appoint a trustee for any such plan; (iv) no such plan or the plan of any ERISA Affiliate maintained or contributed to within the last six (6) years is a single employer pension plan subject to Title IV of ERISA or a registered pension plan; and (v) no "reportable event," as defined in Section 4043 of ERISA, with respect to which the reporting requirement has not been waived, has occurred with respect to any such plan.

(f) Other than as required under Sections 601 to 608 of ERISA or other applicable Law, no Benefit Plan or other arrangement provides post-termination or retiree health benefits to any individual for any reason.

(g) There is no pending or, to Sellers' Knowledge, threatened Action relating to a Benefit Plan (other than routine claims for benefits), and no Benefit Plan has within the three years prior to the date hereof been the subject of an examination or audit by a Governmental Authority or the subject of an application or filing under, or is a participant in, an amnesty, voluntary compliance, self-correction or similar program sponsored by any Governmental Authority.

(h) Neither a Seller nor any of its Affiliates has any commitment or obligation or has made any representations to any director, officer, employee, consultant or independent contractor of the Business, whether or not legally binding, to adopt, amend, modify or terminate any Benefit Plan or any collective bargaining agreement or Contract with a Union.

(i) Each Benefit Plan that is subject to Section 409A of the Code has been administered in compliance with its terms and the operational and documentary requirements of Section 409A of the Code and all applicable regulatory guidance (including, notices, rulings and proposed and final regulations) thereunder. Sellers do not have any obligation to gross up, indemnify or otherwise reimburse any individual for any excise taxes, interest or penalties incurred pursuant to Section 409A of the Code.

(j) Except as set forth in Section 4.20(j) of the Disclosure Schedules, neither the execution of this Agreement nor any of the transactions contemplated by this Agreement will (either alone or upon the occurrence of any additional or subsequent events): (i) entitle any current or former director, officer, employee, independent contractor or consultant of the Business to severance pay or termination pay or any other payment; (ii) accelerate the time of payment, funding or vesting, or increase the amount of compensation (including stock-based compensation) due to any such individual; (iii) increase the amount payable under or result in any other material obligation pursuant to any Benefit Plan; (iv) result in "excess parachute payments" within the meaning of Section 280G(b) of the Code; or (v) require a "gross-up" or other payment to any "disqualified individual" within the meaning of Section 280G(c) of the Code.

4.21 **Employment Matters**.

(a) Section 4.21(a) of the Disclosure Schedules contains a list of all persons who are employees, independent contractors, consultants or interns of the Business as of the date hereof, including any employee who is on a leave of absence of any nature, paid or unpaid, authorized or unauthorized, and sets forth for each such individual the following: (i) name; (ii) title or position (including whether full-time or part-time); (iii) hire or retention date; (iv) current annual base compensation rate or contract fee; (v) identification of commission, bonus or other incentive-based compensation or entitlement (if any) and (vi) state or province from which such person primarily provides services. As of the date hereof, all compensation, including wages, commissions, bonuses, fees and other compensation, payable to all employees, independent contractors, consultants or interns of the Business for services performed on or prior to the date hereof have been paid in full and there are no outstanding agreements, understandings or commitments of Seller with respect to any compensation, commissions, bonuses or fees.

(b) Seller is not, and has not been for the past three years, a party to, bound by, or negotiating any collective bargaining agreement or other Contract with a union, works council or labor organization (collectively, "**Union**"), and there is not, and has not been for the past three years, any Union representing or purporting to represent any employee of a Seller, and, to Sellers' Knowledge, no Union or group of employees is seeking or has sought to organize employees for the purpose of collective bargaining. There has never been, nor has there been any threat of, any strike, slowdown, work stoppage, lockout, concerted refusal to work overtime or other similar labor

disruption or dispute affecting a Seller or any employees of the Business. No Seller has duty to bargain with any Union.

(c) Sellers are and have been in compliance with all applicable Laws pertaining to employment and employment practices to the extent they relate to employees, volunteers, interns, consultants and independent contractors of the Business, including all Laws relating to labor relations, equal employment opportunities, fair employment practices, employment discrimination, harassment, retaliation, reasonable accommodation, disability rights or benefits, immigration, wages, hours, overtime compensation, child labor, hiring, promotion and termination of employees, working conditions, meal and break periods, privacy, health and safety, workers' compensation, leaves of absence, paid sick leave and unemployment insurance. All individuals characterized and treated by a Seller as consultants or independent contractors of the Business are properly treated as independent contractors under all applicable Laws. All employees of the Business classified as exempt under the Fair Labor Standards Act and state and local wage and hour laws are properly classified. Sellers are in compliance with and have complied with all immigration laws, including Form I-9 requirements and any applicable mandatory E-Verify obligations. There are no Actions against any Seller pending, or to the Sellers' Knowledge, threatened to be brought or filed, by or with any Governmental Authority or arbitrator in connection with the employment of any current or former applicant, employee, consultant, volunteer, intern or independent contractor of the Business, including, without limitation, any charge, investigation or claim relating to unfair labor practices, equal employment opportunities, fair employment practices, employment discrimination, harassment, retaliation, reasonable accommodation, disability rights or benefits, immigration, wages, hours, overtime compensation, employee classification, child labor, hiring, promotion and termination of employees, working conditions, meal and break periods, privacy, health and safety, workers' compensation, leaves of absence, paid sick leave, unemployment insurance or any other employment related matter arising under applicable Laws.

(d) Sellers have complied with the WARN Act, and it has no plans to undertake any action before the Closing Date that would trigger the WARN Act.

(e) With respect to each Government Contract, each Seller is and has been in compliance with Executive Order No. 11246 of 1965 ("E.O. 11246"), Section 503 of the Rehabilitation Act of 1973 ("Section 503") and the Vietnam Era Veterans' Readjustment Assistance Act of 1974 ("VEVRAA"), including all implementing regulations. Seller maintains and complies with affirmative action plans in compliance with E.O. 11246, Section 503 and VEVRAA, including all implementing regulations. Each Seller is not, and has not been for the past five years, the subject of any audit, investigation or enforcement action by any Governmental Authority in connection with any Government Contract or related compliance with E.O. 11246, Section 503 or VEVRAA. Sellers have not been debarred, suspended or otherwise made ineligible from doing business with the United States government or any government contractor.

4.22 **Taxes**. Except as set forth in Section 4.22 of the Disclosure Schedules:

(a) All Tax Returns related to or including the Business, including its income, assets, payroll or operations, required to be filed by Seller for any Pre-Closing Tax Period have been, or will be, timely filed. Such Tax Returns are, or will be, true, complete and correct in all

respects. All Taxes due and owing by Seller (whether or not shown on any Tax Return) have been, or will be, timely paid, and Seller has or will properly accrue on its books and records in accordance with GAAP any Tax which is not yet due.

(b) Seller has withheld and paid each Tax required to have been withheld and paid in connection with amounts paid or owing to any Employee, independent contractor, creditor, customer, shareholder or other party, and complied with all information reporting and backup withholding provisions of applicable Law.

(c) No extensions or waivers of statutes of limitations have been given or requested with respect to any Taxes of Seller.

(d) Section 4.22(d) of the Disclosure Schedule sets forth a list of each jurisdiction where a Seller files a Tax Return relating to the Business and the type of Tax Returns filed during the past five years. Sellers have made available for review by Buyer true, correct and complete copies of all Tax Returns filed by or with respect to Sellers relating to the Business during the past five years and of all correspondence to or from a Taxing authority relating thereto and with respect to any

(e) All deficiencies asserted, or assessments made, against Seller as a result of any examinations by any taxing authority have been fully paid.

(f) Seller is not a party to any Action by any taxing authority. There are no pending or threatened Actions by any taxing authority.

(g) There are no Encumbrances for Taxes upon any of the Purchased Assets nor, to Seller's Knowledge, is any taxing authority in the process of imposing any Encumbrances for Taxes on any of the Purchased Assets (other than for current Taxes not yet due and payable).

(h) Seller is not a "foreign person" as that term is used in Treasury Regulations Section 1.1445-2.

(i) Seller is not, and has not been, a party to, or a promoter of, a "reportable transaction" within the meaning of Section 6707A(c)(1) of the Code and Treasury Regulations Section 1.6011-4(b).

(j) None of the Purchased Assets is (i) required to be treated as being owned by another person pursuant to the so-called "safe harbor lease" provisions of former Section 168(f)(8) of the Internal Revenue Code of 1954, as amended, (ii) subject to Section 168(g)(1)(A) of the Code, or (iii) subject to a disqualified leaseback or long-term agreement as defined in Section 467 of the Code.

4.23 **Brokers**. Except for B. Riley FBR, no broker, finder or investment banker is entitled to any brokerage, finder's or other fee or commission in connection with the transactions contemplated by this Agreement or any Transaction Document based upon arrangements made by or on behalf of any Seller.

4.24 **Interested Party Transactions**. No equityholder, officer, director, manager, employee, consultant or Affiliate of a Seller or any family member (whether by blood, marriage, domestic partnership or otherwise) of any of the foregoing owns or holds, directly or indirectly, any interest in (excepting holdings solely for passive investment purposes of securities of publicly held and traded entities constituting less than three percent of the equity of any such entity), or is an equityholder, officer, director, manager, employee or consultant of any Person that is a competitor, lessor, lessee, licensor, licensee, customer, supplier or distributor of Sellers or conducts a business similar to the Business. No equityholder, officer, director, manager, employee or consultant of Sellers or any family member (whether by blood, marriage, domestic partnership or otherwise) of any of the foregoing (a) owns or holds, directly or indirectly, in whole or in part, any interest of any kind in any Intellectual Property Asset or (b) has any material interest in any other property or asset used in or pertaining to the Business.

4.25 **Propriety of Past Payments.**

(a) No unrecorded fund or asset of or relating to the Business has been established for any unlawful purpose. No accumulation or use of funds of Sellers in connection to the Business has been likewise made for unlawful purposes without being properly accounted for in the books and records of Sellers. No payment has been made by or on behalf of Sellers with respect to the Business and with the understanding that any part of such payment is to be used for any unlawful purpose other than that described in the documents supporting such payment.

(b) Neither Sellers, nor, to Sellers' Knowledge, any officers, directors, agents, employees, consultants, members, shareholders, managers, advisors or other Person acting for or on behalf of any Seller (to the extent related to the Business), has, directly or indirectly, offered, promised, authorized or made any illegal contribution, gift, bribe, rebate, payoff, influence payment, kickback or other payment to any Person, private or public, regardless of form, whether in money, property or services to (i) influence an act or decision of any Governmental Authority (including a decision not to act); (ii) induce such a Person to use his or her influence to affect any Governmental Authority's act or decision; (iii) obtain favorable treatment for Sellers or any Affiliate of Sellers in securing business; (iv) pay for favorable treatment for business secured for Sellers or any Affiliate of Sellers; (v) obtain special concessions (or for special concessions already obtained), or secure any improper advantage, for Sellers or any Affiliate of Sellers; or (vi) otherwise benefit Sellers in violation of FCPA or any other Law. Neither Sellers, nor, to Sellers' Knowledge, any officers, directors, agents, employees, consultants, members, shareholders, managers, advisors or other Person acting for or on behalf of any Seller (to the extent related to the Business), have (1) used funds for unlawful contributions, gifts, entertainment or other unlawful expenses related to political activity or (2) accepted or received any unlawful contribution, payment, gift, kickback, expenditure or other item of value. No officer, director, manager, employee, or, to the Sellers' Knowledge, shareholder, consultant, advisor or other Person acting on behalf of Sellers is a government official, a political party or a candidate for political office.

(c) Neither Sellers nor any officer or director or, to Sellers' Knowledge manager, employee, shareholder, consultant, advisor or other Person acting on behalf of Sellers has been convicted of or pleaded guilty to an offense involving fraud or corruption, in any jurisdiction.

(d) Sellers have conducted the Business in compliance in all material respects with FCPA or any other applicable anti-bribery or anti-corruption applicable Law and have retained accurate books and records and instituted and maintained policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

4.1 **International Trade**.

(a) Except as disclosed in Section 4.26(a) of the Disclosure Schedules, Sellers are, and at all times within the past five years have been, in compliance, in all material respects, with all applicable International Trade Applicable Laws and Regulations. Sellers have, to Sellers' Knowledge, not engaged in any activity with any Persons located in or organized under the laws of sanctioned territories (currently, as the date of this Agreement, Cuba, Iran, North Korea, Sudan, Syria or the Crimea Region of Ukraine) or any Person or entity designated by OFAC on the list of Specially Designated Nationals and Blocked Persons, insofar as such activities are prohibited under International Trade Applicable Laws and Regulations that apply to Sellers (to the extent related to the Business), and except as licensed by the cognizant Governmental Authority. During the past five years, Sellers (to the extent related to the Business) have not submitted a voluntary or mandatory disclosure with respect to, or otherwise become aware of, a violation or potential violation of any International Trade Applicable Laws and Regulations by Sellers or initiated any investigation of an actual or potential violation of any International Trade Applicable Laws and Regulations by Sellers. Except as set forth on Section 4.26(a) of the Disclosure Schedule, Sellers (to the extent related to the Business) have not received any written or, to the Knowledge of Sellers, other communication from any Government Authority that alleges that Sellers are not, or may not be, in compliance with, or have, or may have, any Liability under any International Trade Applicable Laws and Regulations. Sellers (to the extent related to the Business) have made available to Buyer accurate information concerning each license issued to Sellers (to the extent related to the Business) for the export of any controlled item, software, technology, technical data or defense service — or for the export to (or from) any sanctioned Person or geographical region — that is currently in effect or was in effect at any time within the last five years.

(b) Section 4.26(b) of the Disclosure Schedules sets forth a true and correct list of each valid Export Authorization issued by a Governmental Authority, as well as each Export Authorization Application, to which Sellers are a party (to the extent related to the Business).

4.2 **Full Disclosure**. No representation or warranty by a Seller in this Agreement (including the Disclosure Schedules) or any Transaction Document contains any untrue statement of a material fact, or omits to state a material fact necessary to make the statements contained therein, in light of the circumstances in which they are made, not misleading.

ARTICLE V
REPRESENTATIONS AND WARRANTIES OF BUYER

Buyer represents and warrants to Sellers that the statements contained in this Article V are true and correct as of the date hereof.

5.1 **Organization of Buyer**. Buyer is a corporation duly organized, validly existing and in good standing under the Laws of the state of Delaware.

5.2 **Authority of Buyer**. Buyer has full corporate power and authority to enter into this Agreement and the Transaction Documents to which Buyer is a party, to carry out its obligations hereunder and thereunder and to consummate the transactions contemplated hereby and thereby. The execution and delivery by Buyer of this Agreement and any Transaction Document to which Buyer is a party, the performance by Buyer of its obligations hereunder and thereunder and the consummation by Buyer of the transactions contemplated hereby and thereby have been duly authorized by all requisite corporate action on the part of Buyer. This Agreement has been duly executed and delivered by Buyer, and (assuming due authorization, execution and delivery by Sellers) this Agreement constitutes a legal, valid and binding obligation of Buyer enforceable against Buyer in accordance with its terms. When each Transaction Document to which Buyer is or will be a party has been duly executed and delivered by Buyer (assuming due authorization, execution and delivery by each other party thereto), such Transaction Document will constitute a legal and binding obligation of Buyer enforceable against it in accordance with its terms.

5.3 **No Conflicts; Consents**. The execution, delivery and performance by Buyer of this Agreement and the Transaction Documents to which it is a party, and the consummation of the transactions contemplated hereby and thereby, do not and will not: (a) conflict with or result in a violation or breach of, or default under, any provision of the certificate of incorporation, by-laws or other organizational documents of Buyer; (b) conflict with or result in a violation or breach of any provision of any Law or Governmental Order applicable to Buyer; or (c) require the consent, notice or other action by any Person under any Contract to which Buyer is a party. No consent, approval, Permit, Governmental Order, declaration or filing with, or notice to, any Governmental Authority is required by or with respect to Buyer in connection with the execution and delivery of this Agreement and the Transaction Documents and the consummation of the transactions contemplated hereby and thereby.

5.4 **Brokers**. No broker, finder or investment banker is entitled to any brokerage, finder's or other fee or commission in connection with the transactions contemplated by this Agreement or any Transaction Document based upon arrangements made by or on behalf of Buyer.

5.5 **Legal Proceedings**. There are no Actions pending or, to Buyer's knowledge, threatened against or by Buyer or any Affiliate of Buyer that challenge or seek to prevent, enjoin or otherwise delay the transactions contemplated by this Agreement. No event has occurred or circumstances exist that may give rise or serve as a basis for any such Action.

5.6 **No Reliance**. Buyer has not relied on any statements or representations and warranties of Sellers or Luna or statements or information from any other Person outside of this Agreement, the Transaction Documents and the Disclosure Schedules.

ARTICLE VI
COVENANTS

6.1 **Conduct of Business Prior to the Closing**. From the date hereof until the Closing, except as otherwise provided in this Agreement or consented to in writing by Buyer (which consent shall not be unreasonably withheld or delayed), Sellers Group shall (x) conduct the Business in the ordinary course of business consistent with past practice; and (y) use commercially reasonable best efforts to maintain and preserve intact its current Business organization, operations and franchise and to preserve the rights, franchises, goodwill and relationships of its employees, customers, lenders, suppliers, regulators and others having relationships with the Business. Without limiting the foregoing, from the date hereof until the Closing Date, Seller Group shall use commercially reasonable best efforts to:

(a) preserve and maintain all Permits required for the conduct of the Business as currently conducted or the ownership and use of the Purchased Assets;

(b) pay the debts, Taxes and other obligations of the Business when due;

(c) not make, amend or terminate any election or change any accounting, method, practice or procedure if such election, amendment, termination or change would increase Taxes due from Buyer after the Closing with respect to the Business or the Purchased Assets;

(d) continue to collect Accounts Receivable in a manner consistent with past practice;

(e) maintain the properties and assets included in the Purchased Assets in the same condition as they were on the date of this Agreement, subject to reasonable wear and tear;

(f) continue in full force and effect without modification all Insurance Policies, except as required by applicable Law;

(g) defend and protect the properties and assets included in the Purchased Assets from infringement or usurpation;

(h) perform all of its obligations under all Assigned Contracts;

(i) maintain the Books and Records in accordance with past practice;

(j) comply in all material respects with all Laws applicable to the conduct of the Business or the ownership and use of the Purchased Assets; and

(k) not take or permit any action that would cause any of the changes, events or conditions described in Section 4.6 to occur.

6.2 **Access to Information**. From the date hereof until the Closing, Seller Group shall (a) afford Buyer and its Representatives reasonable access to and the right to inspect all of the Leased Real Property, properties, assets, premises, Books and Records, Contracts and other documents and data related to the Business; (b) furnish Buyer and its Representatives with such financial, operating and other data and information related to the Business as Buyer or any of its

Representatives may reasonably request; and (c) instruct their Representatives to cooperate reasonably with Buyer in its investigation of the Business. Any investigation pursuant to this Section 6.2 shall be conducted in such manner as not to interfere unreasonably with the conduct of the Business or any other businesses of Sellers. No investigation by Buyer or other information received by Buyer shall operate as a waiver or otherwise affect any representation, warranty or agreement given or made by Sellers in this Agreement or the right of Buyer to rely thereon.

6.3 **No Solicitation of Other Bids**.

(a) Sellers shall not, and shall not authorize or permit any of their Affiliates or any of its or their Representatives to, directly or indirectly, (i) encourage, solicit, initiate, facilitate or continue inquiries regarding an Acquisition Proposal; (ii) enter into discussions or negotiations with, or provide any information to, any Person concerning a possible Acquisition Proposal; or (iii) enter into any agreements or other instruments (whether or not binding) regarding an Acquisition Proposal. Sellers shall immediately cease and cause to be terminated, and shall cause its Affiliates and all of its and their Representatives to immediately cease and cause to be terminated, all existing discussions or negotiations with any Persons conducted heretofore with respect to, or that could lead to, an Acquisition Proposal. For purposes hereof, "**Acquisition Proposal**" means any inquiry, proposal or offer from any Person (other than Buyer or any of its Affiliates) relating to the direct or indirect disposition, whether by sale, merger or otherwise, of all or any portion of the Business or the Purchased Assets.

(b) In addition to the other obligations under this Section 6.3, Seller shall promptly (and in any event within three Business Days after receipt thereof by a Seller or its Representatives) advise Buyer orally and in writing of any Acquisition Proposal, any request for information with respect to any Acquisition Proposal, or any inquiry with respect to or which could reasonably be expected to result in an Acquisition Proposal, the material terms and conditions of such request, Acquisition Proposal or inquiry, and the identity of the Person making the same.

(c) Each Seller agrees that the rights and remedies for noncompliance with this Section 6.3 shall include having such provision specifically enforced by any court having equity jurisdiction, it being acknowledged and agreed that any such breach or threatened breach shall cause irreparable injury to Buyer and that money damages would not provide an adequate remedy to Buyer.

6.4 **Notice of Certain Events**.

(a) From the date hereof until the Closing, Seller Group shall promptly notify Buyer in writing of:

(i) any fact, circumstance, event or action the existence, occurrence or taking of which (A) has had, or is reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect, (B) has resulted in, or is reasonably be expected to result in, any representation or warranty made by a Seller hereunder not being true and correct or (C) has resulted in, or is reasonably be expected to result in, the failure of any of the conditions set forth in Section 7.2 to be satisfied (other than those set forth in Section 7.2(d));

(ii) any notice or other communication from any Person alleging that the consent of such Person is or may be required in connection with the transactions contemplated by this Agreement, excluding for this purpose with respect to any Contract or Standard License for which such requirement need not be disclosed on Section 4.3 of the Disclosure Schedules;

(iii) any notice or other communication from any Governmental Authority challenging the transactions contemplated by this Agreement; and

(iv) any Actions commenced or, to Sellers' Knowledge, threatened against, relating to or involving or otherwise affecting the Business, the Purchased Assets or the Assumed Liabilities that, if pending on the date of this Agreement, would have been required to have been disclosed pursuant to Section 4.16 or that relates to the consummation of the transactions contemplated by this Agreement.

(b) Buyer's receipt of information pursuant to this Section 6.4 shall not operate as a waiver or otherwise affect any representation, warranty or agreement given or made by Seller in this Agreement (including Section 8.2 and Section 9.1(b)) or the right of Buyer to rely thereon and shall not be deemed to amend or supplement the Disclosure Schedules, except that corrections of inadvertent, immaterial omissions in the Disclosure Schedules will be treated as updates as of the date of this Agreement for such purposes. Notwithstanding anything else herein to the contrary, any unintentional breach by Sellers under Section 6.4(a) shall not be treated as a breach under Section 8.2(b).

(c) Subject to Section 8.8, if Buyer, on the one hand, or Sellers, on the other hand, discovers the other's breach of any provision in this Agreement (other than Articles IV or V), the discovering party shall promptly notify the breaching party and give the breaching party a reasonable opportunity to discontinue and/or cure such breach as promptly as possible; provided that any failure or delay in providing such notice will not affect the rights or obligations of any party except and only to the extent that, as a result of such failure, the party entitled to such notice is prejudiced thereby.

6.5 **Employees and Employee Benefits**.

(a) Pursuant to the Transition Services Agreement, Sellers shall provide to Buyer the services of all or some employees of the Business who are actively at work on the Closing Date. At such time as the period for providing the services of any of such employees under the Transition Services Agreement ends (such date for any particular employee or group of employees is referred to as the "**Employee Transition Date**"), Sellers shall terminate any such employees other than the Quebec Employees. Buyer has communicated to Sellers that it, or one of its Affiliates, intends to offer employment to all such employees; provided, that this will be at Buyer's sole discretion, and Buyer, or one of its Affiliates, may offer employment, on an "at will" basis, to any or all of such employees with such others being effective and conditional on Closing and the applicable Employee Transition Date. On the applicable Employee Transition Date, Buyer shall communicate to the Quebec Employees that it (or one of its Affiliates) is continuing their employment on the same or substantially the same terms and conditions, with recognition of their prior service with the Sellers. Buyer shall bear any and all obligations and liability under the WARN Act resulting from employment losses pursuant to this Section 6.5.

(b) Seller Group shall be solely responsible, and Buyer shall have no obligations whatsoever for, any compensation or other amounts payable to any current or former employee, officer, director, independent contractor or consultant, intern or volunteer of the Business, including, without limitation, hourly pay, commission, bonus, salary, accrued vacation, fringe, pension or profit sharing benefits or severance pay or termination pay for any period relating to the service with Sellers at any time on or prior to the Closing Date and Seller Group shall pay all such amounts to all entitled persons by or contemporaneously with the Closing Date.

(c) Seller Group shall remain solely responsible for the satisfaction of all claims for medical, dental, life insurance, health accident or disability benefits brought by or in respect of current or former employees, officers, directors, independent contractors or consultants, intern or volunteers of the Business or the spouses, dependents or beneficiaries thereof, which claims relate to events occurring on or prior to the Closing Date. Seller Group also shall remain solely responsible for all worker's compensation claims of any current or former employees, officers, directors, independent contractors or consultants, intern or volunteers of the Business which relate to events occurring on or prior to the Closing Date. Seller Group shall pay, or cause to be paid, all such amounts to the appropriate persons as and when due.

6.6 **Confidentiality**. From and after the Closing, Sellers shall, and shall cause their Affiliates to, hold, and shall use their reasonable best efforts to cause their respective Representatives to hold, in confidence any and all proprietary information, whether written or oral, concerning the Business, except to the extent that Sellers can show that such information (i) is generally available to and known by the public through no fault of a Seller, any of its Affiliates or their respective Representatives, (ii) is lawfully acquired by a Seller, any of its Affiliates or their respective Representatives from and after the Closing from sources which are not prohibited from disclosing such information by a legal, contractual or fiduciary obligation, or (iii) any information previously publicly disclosed by Seller Group. For reason of clarity, the foregoing shall not prohibit disclosures and communications regarding the terms of this Agreement or the Transaction Documents (excluding the schedules thereto, which shall not be disclosed) and generally describing the transaction contemplated by this Agreement and Luna's business and financial considerations regarding same and its effect upon Luna. If a Seller or any of its Affiliates or their respective Representatives are compelled to disclose any such information by judicial or administrative process or by other requirements of Law, such Seller shall promptly notify Buyer in writing and shall disclose only that portion of such information which such Seller is advised by its counsel in writing is legally required to be disclosed, provided that such Seller shall use commercially reasonable best efforts to obtain an appropriate protective order or other reasonable assurance that confidential treatment will be accorded such information.

6.7 **Non-Competition; Non-Solicitation**.

(a) For a period of five years commencing on the Closing Date (the "**Restricted Period**"), each Seller Group member shall not, and shall not permit any of its Affiliates to, directly or indirectly, (i) engage in or assist others in engaging in the Business in the Territory; (ii) have an interest in any Person that engages directly or indirectly in the Business in the Territory in any capacity, including as a partner, shareholder, member, employee, principal, agent, trustee or consultant; or (iii) cause, induce or encourage any material actual or prospective client, customer,

supplier or licensor of the Business (including any existing or former client or customer of a Seller and any Person that becomes a client or customer of the Business after the Closing), or any other Person who has a material business relationship with the Business, to terminate or modify any such actual or prospective relationship. Notwithstanding the foregoing, Seller Group may own, directly or indirectly, solely as an investment, securities of any Person traded on any national securities exchange if Seller Group is not a controlling Person of, or a member of a group which controls, such Person and does not, directly or indirectly, own 1% or more of any class of securities of such Person.

(b) During the Restricted Period, each Seller Group member shall not, and shall not permit any of its Affiliates to, directly or indirectly, hire or solicit any person who is offered employment by Buyer pursuant to Section 6.5(a), or encourage any such employee to leave such employment or hire any such employee who has left such employment, except pursuant to a general solicitation which is not directed specifically to any such employees; provided, that nothing in this Section 6.7(b) shall prevent a Seller Group member or any of its Affiliates from hiring (i) any employee whose employment has been terminated by Buyer or (ii) after 180 days from the date of termination of employment, any employee whose employment has been terminated by the employee.

(c) Each Seller Group member acknowledges that a breach or threatened breach of this Section 6.7 would give rise to irreparable harm to Buyer, for which monetary damages would not be an adequate remedy, and hereby agrees that in the event of a breach or a threatened breach by such Seller Group member of any such obligations, Buyer shall, in addition to any and all other rights and remedies that may be available to it in respect of such breach, be entitled to equitable relief, including a temporary restraining order, an injunction, specific performance and any other relief that may be available from a court of competent jurisdiction.

(d) Each Seller Group member acknowledges that the restrictions contained in this Section 6.7 are reasonable and necessary to protect the legitimate interests of Buyer and constitute a material inducement to Buyer to enter into this Agreement and consummate the transactions contemplated by this Agreement. In the event that any covenant contained in this Section 6.7 should ever be adjudicated to exceed the time, geographic, product or service or other limitations permitted by applicable Law in any jurisdiction, then any court is expressly empowered to reform such covenant, and such covenant shall be deemed reformed, in such jurisdiction to the maximum time, geographic, product or service or other limitations permitted by applicable Law. The covenants contained in this Section 6.7 and each provision hereof are severable and distinct covenants and provisions. The invalidity or unenforceability of any such covenant or provision as written shall not invalidate or render unenforceable the remaining covenants or provisions hereof, and any such invalidity or unenforceability in any jurisdiction shall not invalidate or render unenforceable such covenant or provision in any other jurisdiction.

6.8 **Governmental Approvals and Consents**.

(a) Each party hereto shall, as promptly as possible, use commercially reasonable best efforts to (i) make, or cause or be made, all filings and submissions required under any Law applicable to such party or any of its Affiliates; and (ii) obtain, or cause to be obtained, all consents, authorizations, orders and approvals from all Governmental Authorities that may be or become

necessary for its execution and delivery of this Agreement and the performance of its obligations pursuant to this Agreement and the Transaction Documents. Each party shall cooperate fully with the other party and its Affiliates in promptly seeking to obtain all such consents, authorizations, orders and approvals. The parties hereto shall not willfully take any action that will have the effect of delaying, impairing or impeding the receipt of any required consents, authorizations, orders and approvals.

(b) At the request of Buyer, Sellers and Buyer shall use commercially reasonable best efforts to give all notices to, and obtain all consents from, all third parties that are described in Section 4.3 of the Disclosure Schedules.

(c) Without limiting the generality of the parties' undertakings pursuant to subsections (a) and (b) above, each of the parties hereto shall use commercially reasonable best efforts to:

(i) respond to any inquiries by any Governmental Authority regarding antitrust or other matters with respect to the transactions contemplated by this Agreement or any Transaction Document;

(ii) avoid the imposition of any order or the taking of any action that would restrain, alter or enjoin the transactions contemplated by this Agreement or any Transaction Document; and

(iii) in the event any Governmental Order adversely affecting the ability of the parties to consummate the transactions contemplated by this Agreement or any Transaction Document has been issued, to have such Governmental Order vacated or lifted.

6.9 **Books and Records**.

(a) In order to facilitate the resolution of any claims made against or incurred by Sellers prior to the Closing, or for any other reasonable purpose, for a period of three years after the Closing, Buyer shall:

(i) retain the Books and Records (including personnel files) relating to periods prior to the Closing; and

(ii) upon reasonable notice, afford Sellers' Representatives reasonable access (including the right to make, at Sellers' expense, photocopies), during normal business hours, to such Books and Records and the employees of Sellers hired by Buyer.

(b) In order to facilitate the resolution of any claims made by or against or incurred by Buyer after the Closing, or for any other reasonable purpose, for a period of three years following the Closing, Seller Group shall:

(i) retain the books and records (including personnel files) of Seller Group which relate to the Business and its operations for periods prior to the Closing; and

(ii) upon reasonable notice, afford the Buyer's Representatives reasonable access (including the right to make, at Buyer's expense, photocopies), during normal business hours, to such books and records.

(c) Neither Buyer nor Sellers shall be obligated to provide the other party with access to any books or records (including personnel files) pursuant to this Section 6.9 where such access would violate any Law.

6.10 **Closing Conditions**. From the date hereof until the Closing, each party hereto shall use commercially reasonable best efforts to take such actions as are necessary to expeditiously satisfy the closing conditions set forth in Article VII.

6.11 **Public Announcements.** Unless otherwise required by applicable Law or stock exchange requirements (based upon the reasonable advice of counsel), the Seller Group and Buyer (and its Affiliates) shall cooperate and provide an advance copy of any press release regarding the transactions contemplated by this Agreement to the other and reasonably accommodate any comments on same from the other and also cooperate as to timing. If Luna intends to file a Form 8-K with respect to the transactions contemplated by this Agreement, Luna shall provide a draft Form 8-K to Buyer at least two (2) Business Days prior to the intended filing date so that Buyer may review and comment on such draft Form 8-K. Unless Luna's legal counsel otherwise advises Luna, the comments of Buyer shall be incorporated in the Form 8-K Filing. Notwithstanding the foregoing, in no event shall Luna include the Disclosure Schedules or schedules to other Transaction Documents in any Form 8-K or other public filing.

6.12 **Bulk Sales Laws.** The parties hereby waive compliance with the provisions of any bulk sales, bulk transfer or similar Laws of any jurisdiction that may otherwise be applicable with respect to the sale of any or all of the Purchased Assets to Buyer; it being understood that any Liabilities arising out of the failure of a Seller to comply with the requirements and provisions of any bulk sales, bulk transfer or similar Laws of any jurisdiction which would not otherwise constitute Assumed Liabilities shall be treated as Excluded Liabilities.

6.13 **Receivables.** From and after the Closing, if a Seller or any of its Affiliates receives or collects any funds attributable to any Accounts Receivable or any other Purchased Asset, such Seller or its Affiliate shall remit such funds to Buyer within five Business Days after its receipt thereof. From and after the Closing, if Buyer or its Affiliate receives or collects any funds relating to any Excluded Asset, Buyer or its Affiliate shall remit any such funds to Luna within five Business Days after its receipt thereof.

6.14 **Transfer Taxes.** Sellers shall pay all transfer, documentary, sales, use, stamp, registration, value added and other such Taxes and fees (including any penalties and interest) incurred in connection with this Agreement and the Transaction Documents (including any real property transfer Tax and any other similar Tax) when due. Buyer shall reimburse Sellers for fifty percent (50%) of the Taxes so paid by Sellers up to a maximum reimbursement of $20,000. Upon payment of such Taxes, Sellers will present a statement to Buyer setting forth the amount of the reimbursement to which Sellers are entitled under this Section 6.14 together with such supporting evidence as is reasonably necessary to calculate the amount to be reimbursed. Buyer will reimburse the paying party no later than ten Business Days after the presentation of the statement. Sellers shall, at their

own expense, timely file any Tax Return or other document with respect to such Taxes or fees (and Buyer shall cooperate with respect thereto as necessary).

6.15 **Apportionment of Ad Valorem Taxes**. All real property Taxes, personal property Taxes, and similar ad valorem obligations levied with respect to the Purchased Assets for a taxable period that includes (but does not end on) the Closing Date (collectively, the "**Apportioned Taxes**") will be apportioned between Sellers and Buyer based on the number of days of the taxable period ending on, and including, the Closing Date. Sellers will be liable for the proportionate amount of Apportioned Taxes attributable to days before or on the Closing Date and Buyer will be liable for the proportionate amount attributable to days after the Closing Date. Apportioned Taxes will be timely paid and all applicable filings, reports and returns will be filed as provided by applicable Laws. The paying party will be entitled to reimbursement from the non-paying party in accordance with this Section 6.15. Upon payment of Apportioned Taxes, the paying party will present a statement to the non-paying party setting forth the amount of the reimbursement to which the paying party is entitled under this Section 6.15 together with such supporting evidence as is reasonably necessary to calculate the amount to be reimbursed. The non-paying party will reimburse the paying party no later than ten Business Days after the presentation of the statement. The parties hereto shall cooperate, including, without limitation, during audits by taxing authorities, to avoid payment of duplicate or inappropriate Apportioned Taxes, and each party shall furnish, at the request of the other, proof of payment of any such Taxes that is a prerequisite to avoiding payment of a duplicate or inappropriate Apportioned Tax. In the event that any refund, rebate or similar payment is received by Buyer or Sellers for any Apportioned Tax, the parties hereto agree that such payment will be apportioned between Sellers and Buyer on the basis described in this Section 6.15.

6.16 **Tax Certificates**. Subject to the application of Section 6.12, Buyer and Sellers agree, upon request, to use their commercially reasonable efforts to obtain any certificate or other documentation from any governmental authority or any other Person as may be necessary to mitigate, reduce or eliminate any Tax that could be imposed with respect to the transactions contemplated by this Agreement.

6.17 **Export Authorizations.** Buyer shall review Section 4.26(b) of the Disclosure Schedules and Sellers shall use commercially reasonable efforts prior to Closing to cooperate with Buyer in respect of any requested modifications thereto, as may be needed, immediately prior to the Closing to reflect all valid Export Authorizations and Export Authorization Applications, or for the transfer of same to Buyer or for Buyer to obtain. Buyer's receipt of information pursuant to this Section 6.17 shall not operate as a waiver or otherwise affect any representation, warranty or agreement given or made by Seller in this Agreement (including Section 8.2 and Section 9.1(b)) or the right of Buyer to rely thereon and shall not be deemed to amend or supplement the Disclosure Schedules.

6.18 **Insurance Claims**. After the Closing, Buyer shall have the right to submit to Seller any claims for any Losses related to the Business that are covered by the Insurance Policies arising out of insured incidents to the extent occurring from the date coverage thereunder first commenced until Closing. With respect to any such claim, Seller shall submit such claim and use its commercially reasonable efforts to administer such claims on behalf of Buyer and to seek reasonable recovery under the applicable insurance provisions of the Insurance Policies covering Losses related to the

Business to the same extent as it would if such Losses were Losses of Seller and to the extent that the terms and conditions of any such policies so allow and Seller shall pay to Buyer the amount of such recovery within 30 days after receipt thereof.

6.19 **Apportionment of CAMs**. Notwithstanding that Buyer will be assuming the obligation under the Lease to pay common area operating expenses, the amounts that are payable with respect to the current Lease year shall be apportioned between Sellers and Buyer based on the number of days of the current Lease year ending on, and including, the Closing Date. Sellers will be liable for the proportionate amount of any such expenses attributable to days before or on the Closing Date and Buyer will be liable for the proportionate amount of any expenses attributable to days after the Closing Date. Buyer will be entitled to reimbursement from Sellers in accordance with this Section 6.19. Upon payment of any amounts relating to such expenses, Buyer will present a statement to Sellers setting forth the amount of the reimbursement to which Buyer is entitled under this Section 6.19 together with such supporting evidence as is reasonably necessary to calculate the amount to be reimbursed. Sellers will reimburse Buyer no later than ten Business Days after the presentation of the statement. In the event that any refund or credit is received by Buyer with respect to such expenses for the current Lease year, the parties hereto agree that such payment will be apportioned between Sellers and Buyer on the basis described in this Section 6.19.

6.20 **Further Assurances.** Following the Closing, each of the parties hereto shall, and shall cause their respective Affiliates to, execute and deliver such additional documents, instruments, conveyances and assurances (including without limitation, conveyances by a member of Seller Group with respect to certain specified assets which may have been transferred by another member of Seller Group) and take such further actions as may be reasonably required to carry out the provisions hereof and give effect to the transactions contemplated by this Agreement and the Transaction Documents.

6.21 **API Corporate Name**. Within thirty (30) days of the date hereof, Seller Group shall take all action necessary to change the corporate name of API so that neither “API” nor “Advanced Photonix” is part of the corporate name and shall deliver to Buyer a copy of such name change as filed with the Delaware Secretary of State. Following such name change, API shall not thereafter change its corporate name to include either “API” or “Advanced Photonix.”

6.22 **Data Room**. Within fourteen (14) days of the date hereof, Seller Group shall provide Buyer with four CDs, each of which shall contain true and correct copies of all of the documents that had been placed in Donnelley Financial Solutions Venue virtual data room with respect to the transactions contemplated hereunder on or before the Closing Date.

ARTICLE VII
CONDITIONS TO CLOSING

7.1 **Conditions to Obligations of All Parties.** The obligations of each party to consummate the transactions contemplated by this Agreement shall be subject to the fulfillment, at or prior to the Closing, of each of the following conditions:

(a) No Governmental Authority shall have enacted, issued, promulgated, enforced or entered any Governmental Order which is in effect and has the effect of making the

transactions contemplated by this Agreement illegal, otherwise restraining or prohibiting consummation of such transactions or causing any of the transactions contemplated hereunder to be rescinded following completion thereof.

(b) Sellers shall have received all consents, authorizations, orders and approvals from the Governmental Authorities referred to in Section 4.3, in each case, in form and substance reasonably satisfactory to Buyer and Sellers, and no such consent, authorization, order and approval shall have been revoked.

7.2 **Conditions to Obligations of Buyer**. The obligations of Buyer to consummate the transactions contemplated by this Agreement shall be subject to the fulfillment or Buyer's waiver, at or prior to the Closing, of each of the following conditions:

(a) Other than the representations and warranties of Sellers contained in Section 4.1, Section 4.2, Section 4.4 and Section 4.22, the representations and warranties of Sellers contained in this Agreement, the Transaction Documents and any certificate or other writing delivered pursuant hereto shall be true and correct in all respects (in the case of any representation or warranty qualified by materiality or Material Adverse Effect) or in all material respects (in the case of any representation or warranty not qualified by materiality or Material Adverse Effect) on and as of the date hereof and on and as of the Closing Date with the same effect as though made at and as of such date (except those representations and warranties that address matters only as of a specified date, the accuracy of which shall be determined as of that specified date in all respects). The representations and warranties of Seller contained in Section 4.1, Section 4.2, Section 4.4 and Section 4.22 shall be true and correct in all respects on and as of the date hereof and on and as of the Closing Date with the same effect as though made at and as of such date (except those representations and warranties that address matters only as of a specified date, the accuracy of which shall be determined as of that specified date in all respects).

(b) Each Seller shall have duly performed and complied in all material respects with all agreements, covenants and conditions required by this Agreement and each of the Transaction Documents to be performed or complied with by it prior to or on the Closing Date.

(c) No Action shall have been commenced against Buyer or a Seller, which would prevent the Closing. No injunction or restraining order shall have been issued by any Governmental Authority, and be in effect, which restrains or prohibits any transaction contemplated hereby.

(d) All approvals, consents and waivers that are listed on Section 4.3 of the Disclosure Schedules shall have been received, and reasonable evidence thereof shall have been delivered to Buyer at or prior to the Closing.

(e) From the date of this Agreement, there shall not have occurred any Material Adverse Effect, nor shall any event or events have occurred that, individually or in the aggregate, with or without the lapse of time, could reasonably be expected to result in a Material Adverse Effect.

(f) Sellers shall have delivered to Buyer duly executed counterparts to the Transaction Documents and such other documents and deliveries set forth in Section 3.2(a).

(g) All Encumbrances relating to the Purchased Assets shall have been released in full, other than Permitted Encumbrances, and Sellers shall have delivered to Buyer written evidence, in form reasonably satisfactory to Buyer, of the release of such Encumbrances.

(h) Buyer shall have received a certificate, dated the Closing Date and signed by a duly authorized officer on behalf of Sellers, that each of the conditions set forth in Section 7.2(a) and Section 7.2(b) have been satisfied (the "**Seller Closing Certificate**").

(i) Buyer shall have received a certificate of the Secretary or an Assistant Secretary (or equivalent officer) on behalf of Sellers certifying that attached thereto are true and complete copies of all resolutions adopted by the board of directors of each Seller authorizing the execution, delivery and performance of this Agreement and the Transaction Documents and the consummation of the transactions contemplated hereby and thereby, and that all such resolutions are in full force and effect and are all the resolutions adopted in connection with the transactions contemplated hereby and thereby.

(j) Buyer shall have received a certificate pursuant to Treasury Regulations Section 1.1445-2(b) (the "**FIRPTA Certificate**") that each Seller is not a foreign person within the meaning of Section 1445 of the Code duly executed by such Seller.

(k) Sellers shall have delivered to Buyer such other documents or instruments as Buyer reasonably requests and are reasonably necessary to consummate the transactions contemplated by this Agreement.

7.3 **Conditions to Obligations of Sellers**. The obligations of Sellers and Luna to consummate the transactions contemplated by this Agreement shall be subject to the fulfillment or Sellers' and Luna's waiver, at or prior to the Closing, of each of the following conditions:

(a) Other than the representations and warranties of Buyer contained in Section 5.1, Section 5.2 and Section 5.4, the representations and warranties of Buyer contained in this Agreement, the Transaction Document and any certificate or other writing delivered pursuant hereto shall be true and correct in all respects (in the case of any representation or warranty qualified by materiality or Material Adverse Effect) or in all material respects (in the case of any representation or warranty not qualified by materiality or Material Adverse Effect) on and as of the date hereof and on and as of the Closing Date with the same effect as though made at and as of such date (except those representations and warranties that address matters only as of a specified date, the accuracy of which shall be determined as of that specified date in all respects). The representations and warranties of Buyer contained in Section 5.1, Section 5.2 and Section 5.4 shall be true and correct in all respects on and as of the date hereof and on and as of the Closing Date with the same effect as though made at and as of such date.

(b) Buyer shall have duly performed and complied in all material respects with all agreements, covenants and conditions required by this Agreement and each of the Transaction Documents to be performed or complied with by it prior to or on the Closing Date.

(c) No injunction or restraining order shall have been issued by any Governmental Authority, and be in effect, which restrains or prohibits any material transaction contemplated hereby.

(d) Buyer shall have delivered to Sellers duly executed counterparts to the Transaction Documents and such other documents and deliveries set forth in Section 3.2(b).

(e) Sellers shall have received a certificate, dated the Closing Date and signed by a duly authorized officer on behalf of Buyer, that each of the conditions set forth in Section 7.3(a) and Section 7.3(b) have been satisfied (the "**Buyer Closing Certificate**").

(f) Sellers shall have received a certificate of the Secretary or an Assistant Secretary (or equivalent officer) on behalf of Buyer certifying that attached thereto are true and complete copies of all resolutions adopted by the board of directors of Buyer authorizing the execution, delivery and performance of this Agreement and the Transaction Documents and the consummation of the transactions contemplated hereby and thereby, and that all such resolutions are in full force and effect and are all the resolutions adopted in connection with the transactions contemplated hereby and thereby.

(g) Buyer shall have delivered to Sellers such other documents or instruments as Sellers reasonably request and are reasonably necessary to consummate the transactions contemplated by this Agreement.

ARTICLE VIII
INDEMNIFICATION

8.1 **Survival**. Subject to the limitations and other provisions of this Agreement, the representations and warranties contained herein shall survive the Closing and shall remain in full force and effect until the date that is 18 months from the Closing Date; provided, that the representations and warranties in (i) Section 4.1(a), Section 4.2, Section 4.8, Section 4.17 and Section 4.23, Section 5.1, Section 5.2 and Section 5.4 shall survive indefinitely, and (ii) Section 4.18, Section 4.19, Section 4.20, Section 4.22, Section 4.25 and Section 4.26 shall survive for the full period of all applicable statutes of limitations (giving effect to any waiver, mitigation or extension thereof) plus 60 days. All covenants and agreements of the parties contained herein shall survive the Closing indefinitely or for the period explicitly specified therein. Notwithstanding the foregoing, any claims asserted in good faith with reasonable specificity (to the extent known at such time) and in writing by notice from the non-breaching party to the breaching party prior to the expiration date of the applicable survival period shall not thereafter be barred by the expiration of the relevant representation or warranty and such claims shall survive until finally resolved.

8.2 **Indemnification By Sellers and Luna.** Subject to the other terms and conditions of this Article VIII, Sellers and Luna shall jointly and severally indemnify and defend each of Buyer and its Affiliates and their respective Representatives (collectively, the "**Buyer Indemnitees**") against, and shall hold each of them harmless from and against, and shall pay and reimburse each of them for, any and all Losses incurred or sustained by, or imposed upon, the Buyer Indemnitees based upon, arising out of, with respect to or by reason of:

(a) any inaccuracy in or breach of any of the representations or warranties of a Seller contained in this Agreement, the Transaction Document or in any certificate or instrument delivered by or on behalf of a Seller pursuant to this Agreement, as of the date such representation or warranty was made or as if such representation or warranty was made on and as of the Closing Date (except for representations and warranties that expressly relate to a specified date, the inaccuracy in or breach of which will be determined with reference to such specified date);

(b) any breach of any covenant, agreement or obligation to be performed by a Seller or Luna pursuant to this Agreement or any Transaction Documents (other than the Transition Services Agreement);

(c) any Excluded Asset or any Excluded Liability;

(d) Ordinary Warranty Obligations in excess of the reserve amount of Ordinary Warranty Obligations set forth in the final Closing Working Capital Statement;

(e) any Third Party Claim based upon, resulting from or arising out of the business, operations, properties, assets or obligations of Seller or any of its Affiliates (other than the Purchased Assets or Assumed Liabilities) conducted, existing or arising prior to the Closing Date;

(f) any Third Party Claim based upon, resulting from or arising out of the use by a Seller Group member of post-employment covenants not to compete in the State of California or any other jurisdiction where such covenants are unlawful;

(g) any Third Party Claim based upon, resulting from or arising out of the implementation by a Seller Group member of an alternative workweek schedule or the therefore consequential non-payment of overtime wages in accordance with applicable Laws; and

(h) any Third Party Claim based upon, resulting from or arising out of the intellectual property assignment documents relating to any Intellectual Property included in the Purchased Assets.

8.3 **Indemnification By Buyer**. Subject to the other terms and conditions of this Article VIII, Buyer shall indemnify and defend each Seller and its Affiliates and their respective Representatives (collectively, the "**Seller Indemnitees**") against, and shall hold each of them harmless from and against, and shall pay and reimburse each of them for, any and all Losses incurred or sustained by, or imposed upon, the Seller Indemnitees based upon, arising out of, with respect to or by reason of:

(a) any inaccuracy in or breach of any of the representations or warranties of Buyer contained in this Agreement or in any certificate or instrument delivered by or on behalf of Buyer pursuant to this Agreement, as of the date such representation or warranty was made or as if such representation or warranty was made on and as of the Closing Date (except for representations and warranties that expressly relate to a specified date, the inaccuracy in or breach of which will be determined with reference to such specified date);

(b) any breach of any covenant, agreement or obligation to be performed by Buyer pursuant to this Agreement or any Transaction Document (other than the Transition Services Agreement);

(c) any Assumed Liability; or

(d) any Third Party Claim based upon, resulting from or arising out of the business, operations, properties, assets or obligations of Buyer or any of its Affiliates conducted, existing or arising on or after to the Closing Date.

8.4 **Certain Limitations**. The indemnification provided for in Section 8.2 and Section 8.3 shall be subject to the following limitations:

(a) Except as otherwise provided herein, Sellers and Luna will have no obligation to indemnify the Buyer Indemnitees pursuant to Section 8.2(a), and Buyer will have no obligation to indemnity the Seller Indemnitees pursuant to Section 8.3(a), unless the aggregate amount of all such Losses exceeds $100,000 (in which event Sellers or Buyer, as applicable, shall only be required to pay or be liable for Losses in excess of such amount).

(b) no claim for Losses under Section 8.2(a) may be made (and no Losses may be recovered from Sellers) by any Buyer Indemnitee, and no claim for Losses under Section 8.3(a) may be made (and no Losses may be recovered from Buyer) by any Seller Indemnitee unless the amount of the Losses, in respect of any such breach exceeds $15,000 resulting from any single claim or series of related claims with respect to such breach.

(c) Except as otherwise provided herein, the aggregate amount of all Losses for which Sellers and Luna shall be liable pursuant to Section 8.2(a), or Buyer shall be liable pursuant to Section 8.3(a), shall not, in either case, exceed $4,375,000 (the "**Cap**").

(d) The aggregate amount of all Losses for which Buyer shall be liable pursuant to Section 8.3(a) shall not exceed the Cap.

(e) Notwithstanding the foregoing, the limitations set forth in Section 8.4(a) – (d) shall not apply to Losses based upon, arising out of, with respect to or by reason of any inaccuracy in or breach of any representation or warranty in Section 4.1(a), Section 4.2, Section 4.8, Section 4.17, Section 4.22, Section 4.23, Section 4.25, Section 5.1, Section 5.2 and Section 5.4 and the limitations set forth in Section 8.4(c) shall not apply to Losses based upon, arising out of, with respect to or by reason of any inaccuracy in or breach of any representation or warranty in Section 4.18 and Section 4.26.

(f) For purposes of this Article VIII, the calculation of Losses pursuant to Section 8.2(a) shall be determined without regard to any materiality, Material Adverse Effect or other similar qualification contained in or otherwise applicable to a representation or warranty.

8.5 **Indemnification Procedures**. The party making a claim under this Article VIII is referred to as the "**Indemnified Party**", and the party against whom such claims are asserted under this Article VIII is referred to as the "**Indemnifying Party**".

(a) Third Party Claims. If any Indemnified Party receives notice of the assertion or commencement of any Action made or brought by any Person who is not a party to this Agreement or an Affiliate of a party to this Agreement or a Representative of the foregoing (a "**Third Party Claim**") against such Indemnified Party with respect to which the Indemnifying Party is obligated to provide indemnification under this Agreement, the Indemnified Party shall give the Indemnifying Party reasonably prompt written notice thereof, but in any event not later than 30 calendar days after receipt of such notice of such Third Party Claim. The failure to give such prompt written notice shall not, however, relieve the Indemnifying Party of its indemnification obligations, except and only to the extent that the Indemnifying Party forfeits rights or defenses by reason of such failure. Such notice by the Indemnified Party shall describe the Third Party Claim in reasonable detail, shall include copies of all material written evidence thereof and shall indicate the estimated amount, if reasonably practicable, of the Loss that has been or may be sustained by the Indemnified Party. The Indemnifying Party shall have the right to participate in, or by giving written notice to the Indemnified Party, to assume the defense of any Third Party Claim at the Indemnifying Party's expense and by counsel of its choice reasonably satisfactory to the Indemnified Party so long as (i) the Indemnifying Party gives written notice to the Indemnified Party within fifteen calendar days after the Indemnified Party has given notice of the Third Party Claim that the Indemnifying Party will indemnify the Indemnified Party from and against the entirety of any and all Losses the Indemnified Party may suffer resulting from, arising out of or relating to the Third Party Claim, (ii) the Indemnifying Party provides the Indemnified Party with evidence reasonably acceptable to the Indemnified Party that the Indemnifying Party will have adequate financial resources to defend against the Third Party Claim and fulfill its indemnification obligations hereunder, (iii) the Third Party Claim involves only money damages and does not seek an injunction or other equitable relief against the Indemnified Party, (iv) the Indemnified Party has not been advised by counsel that an actual or potential conflict exists between the Indemnified Party and the Indemnifying Party in connection with the defense of the Third Party Claim, (v) the Third Party Claim does not relate to or otherwise arise in connection with Taxes or any criminal or regulatory enforcement Action, (vi) settlement of, an adverse judgment with respect to or the Indemnifying Party's conduct of the defense of the Third Party Claim is not, in the good faith judgment of the Indemnified Party, likely to be adverse to the Indemnified Party's reputation or continuing business interests (including its relationships with current or potential customers, suppliers or other parties material to the conduct of its business) and (vii) the Indemnifying Party conducts the defense of the Third Party Claim actively and diligently. In the event that the Indemnifying Party assumes the defense of any Third Party Claim, subject to Section 8.5(b), it shall have the right to take such action as it deems necessary to avoid, dispute, defend, appeal or make counterclaims pertaining to any such Third Party Claim in the name and on behalf of the Indemnified Party. The Indemnified Party shall have the right to participate in the defense of any Third Party Claim with counsel selected by it subject to the Indemnifying Party's right to control the defense thereof. The fees and disbursements of such counsel shall be at the expense of the Indemnified Party, provided, that (I) the Indemnifying Party will pay the fees and expenses of separate co-counsel retained by the Indemnified Party that are incurred prior to Indemnifying Party's assumption of control of the defense of the Third Party Claim, and (II) if in the reasonable opinion of counsel to the Indemnified Party, (A) there are legal defenses available to an Indemnified Party that are different from or additional to those available to the Indemnifying Party; or (B) there exists a conflict of interest between the Indemnifying Party and the Indemnified Party that cannot be waived, the Indemnifying Party shall be liable for the reasonable

fees and expenses of counsel to the Indemnified Party in each jurisdiction for which the Indemnified Party determines counsel is required. If the Indemnifying Party elects not to compromise or defend such Third Party Claim, fails to promptly notify the Indemnified Party in writing of its election to defend as provided in this Agreement, or fails to diligently prosecute the defense of such Third Party Claim, the Indemnified Party may, subject to Section 8.5(b), pay, compromise, defend such Third Party Claim and seek indemnification for any and all Losses based upon, arising from or relating to such Third Party Claim. Sellers and Buyer shall cooperate with each other in all reasonable respects in connection with the defense of any Third Party Claim, including making available (subject to the provisions of Section 6.6) records relating to such Third Party Claim and furnishing, without expense (other than reimbursement of actual out-of-pocket expenses) to the defending party, management employees of the non-defending party as may be reasonably necessary for the preparation of the defense of such Third Party Claim.

(b) Settlement of Third Party Claims. Notwithstanding any other provision of this Agreement, the Indemnifying Party shall not enter into settlement of any Third Party Claim without the prior written consent of the Indemnified Party, except as provided in this Section 8.5(b). If a firm offer is made to settle a Third Party Claim without leading to liability or the creation of a financial or other obligation on the part of the Indemnified Party, involves no finding or admission of any violation of laws or the rights of any Person and no effect on any other claims that may be made against the Indemnified Party, and provides, in customary form, for the unconditional release of each Indemnified Party from all liabilities and obligations in connection with such Third Party Claim and the Indemnifying Party desires to accept and agree to such offer, the Indemnifying Party shall give written notice to that effect to the Indemnified Party. If the Indemnified Party fails to consent to such firm offer within ten days after its receipt of such notice, the Indemnified Party may continue to contest or defend such Third Party Claim and in such event, the maximum liability of the Indemnifying Party as to such Third Party Claim shall not exceed the amount of such settlement offer. If the Indemnified Party fails to consent to such firm offer and also fails to assume defense of such Third Party Claim, the Indemnifying Party may settle the Third Party Claim upon the terms set forth in such firm offer to settle such Third Party Claim. If the Indemnified Party has assumed the defense pursuant to Section 8.5(a), it shall not agree to any settlement without the written consent of the Indemnifying Party (which consent shall not be unreasonably withheld or delayed).

(c) Direct Claims. Any Action by an Indemnified Party on account of a Loss which does not result from a Third Party Claim (a "**Direct Claim**") shall be asserted by the Indemnified Party giving the Indemnifying Party written notice thereof. Such notice by the Indemnified Party shall describe the Direct Claim in reasonable detail, shall include copies of all material written evidence thereof and shall indicate the estimated amount, if reasonably practicable, of the Loss that has been or may be sustained by the Indemnified Party. The Indemnifying Party shall have 30 days after its receipt of such notice to respond in writing to such Direct Claim. If the Indemnifying Party does not so respond within such 30 day period, the Indemnifying Party shall be deemed to have rejected such claim, in which case the Indemnified Party shall be free to pursue such remedies as may be available to the Indemnified Party on the terms and subject to the provisions of this Agreement.

8.6 **Payments**. Once a Loss is agreed to by the Indemnifying Party or finally adjudicated (i.e., a court of competent jurisdiction has, in a judgment that has become final and that is no longer

subject to appeal or review, determined) to be payable pursuant to this Article VIII, the Indemnifying Party shall satisfy its obligations within 15 Business Days of such final, non-appealable adjudication by wire transfer of immediately available funds.

8.7 **Tax Treatment of Indemnification Payments**. All indemnification payments made under this Agreement shall be treated by the parties as an adjustment to the Purchase Price for Tax purposes, unless otherwise required by Law.

8.8 **Effect of Investigation**. The representations, warranties and covenants of the Indemnifying Party, and the Indemnified Party's right to indemnification with respect thereto, shall not be affected or deemed waived by reason of any investigation made by or on behalf of the Indemnified Party (including by any of its Representatives) or by reason of the fact that the Indemnified Party or any of its Representatives knew or should have known that any such representation or warranty is, was or might be inaccurate or by reason of the Indemnified Party's waiver of any condition set forth in Section 7.2 or Section 7.3, as the case may be.

8.9 **Exclusive Remedies**. Subject to Section 2.6, Section 6.6, Section 6.7, Section 9.2 and Section 10.11, the parties acknowledge and agree that their sole and exclusive remedy with respect to any and all claims (other than claims arising from actual fraud, criminal activity (requiring actual criminal prosecution) or intentionally harmful misconduct on the part of a party hereto in connection with the transactions contemplated by this Agreement) for any breach of any representation, warranty, covenant, agreement or obligation set forth herein or otherwise relating to the subject matter of this Agreement, shall be pursuant to the indemnification provisions set forth in this Article VIII. In furtherance of the foregoing, each party hereby waives (other than under Section 2.6, Section 6.6, Section 6.7, Section 9.2 and Section 10.11), to the fullest extent permitted under Law, any and all rights, claims and causes of action for any breach of any representation, warranty, covenant, agreement or obligation set forth herein or otherwise relating to the subject matter of this Agreement it may have against the other parties hereto and their Affiliates and each of their respective Representatives arising under or based upon any Law, except pursuant to the indemnification provisions set forth in this Article VIII. Nothing in this Section 8.9 shall limit any Person's right to seek and obtain any equitable relief to which any Person shall be entitled or to seek any remedy on account of any party's fraudulent, criminal or intentional misconduct.

8.10 **Net of Insurance and Tax Benefits**. Losses under this Article VII shall be calculated net of (i) any insurance proceeds received by the Buyer Indemnitees or Seller Indemnitees, as the case may be, minus all costs and expenses incurred by such recipient in recovering such proceeds from its insurer (and the Buyer Indemnitees or Seller Indemnitees, as the case may be, shall use commercially reasonable efforts to pursue insurance coverage in respect of such Losses) and (ii) any tax benefits actually received by the Buyer Indemnitees or Seller Indemnitees, as the case may be. A "tax benefit" shall be treated as actually received to the extent that the amount of Taxes required to be paid by a Buyer Indemnitee or a Seller Indemnitee, as applicable, is reduced below the amount of Taxes that such Person would have been required to pay absent such Losses with respect to the same or immediately succeeding taxable year as the year in which such Losses occurred.

ARTICLE IX
TERMINATION

9.1 **Termination**. This Agreement may be terminated at any time prior to the Closing:

(a) by the mutual written consent of Sellers and Buyer;

(b) by Buyer by written notice to Sellers if:

(i) Buyer is not then in material breach of any provision of this Agreement and there has been a breach, inaccuracy in or failure to perform any representation, warranty, covenant or agreement made by a Seller pursuant to this Agreement that would give rise to the failure of any of the conditions specified in Article VII and such breach, inaccuracy or failure has not been cured by Sellers within ten days of a Seller's receipt of written notice of such breach from Buyer; or

(ii) any of the conditions set forth in Section 7.1 or Section 7.2 shall not have been, or if it becomes apparent that any of such conditions will not be, fulfilled by August 31, 2018 unless such failure shall be due to the failure of Buyer to perform or comply with any of the covenants, agreements or conditions hereof to be performed or complied with by it prior to the Closing;

(c) by Sellers by written notice to Buyer if:

(i) each Seller is not then in material breach of any provision of this Agreement and there has been a breach, inaccuracy in or failure to perform any representation, warranty, covenant or agreement made by Buyer pursuant to this Agreement that would give rise to the failure of any of the conditions specified in Article VII and such breach, inaccuracy or failure has not been cured by Buyer within ten days of Buyer's receipt of written notice of such breach from Sellers; or

(ii) any of the conditions set forth in Section 7.1 or Section 7.3 shall not have been, or if it becomes apparent that any of such conditions will not be, fulfilled by August 31, 2018 unless such failure shall be due to the failure of a Seller to perform or comply with any of the covenants, agreements or conditions hereof to be performed or complied with by it prior to the Closing; or

(d) by Buyer or Sellers in the event that (i) there shall be any Law that makes consummation of the transactions contemplated by this Agreement illegal or otherwise prohibited or (ii) any Governmental Authority shall have issued a Governmental Order restraining or enjoining the transactions contemplated by this Agreement, and such Governmental Order shall have become final and non-appealable.

9.2 **Effect of Termination**. In the event of the termination of this Agreement in accordance with this Article, this Agreement shall forthwith become void and there shall be no liability on the part of any party hereto except:

(a) as set forth in this Article IX and Section 6.6 and Article X hereof; and

(b) that nothing herein shall relieve any party hereto from liability for any intentional breach of any provision hereof.

ARTICLE X
MISCELLANEOUS

10.1 **Expenses**. Except as otherwise expressly provided herein, all costs and expenses, including, without limitation, fees and disbursements of counsel, financial advisors and accountants, incurred in connection with this Agreement and the transactions contemplated hereby shall be paid by the party incurring such costs and expenses, whether or not the Closing shall have occurred.

10.2 **Notices**. All notices, requests, consents, claims, demands, waivers and other communications hereunder shall be in writing and shall be deemed to have been given (a) when delivered by hand (with written confirmation of receipt); (b) when received by the addressee if sent by a nationally recognized overnight courier (receipt requested); (c) on the date sent by e-mail of a PDF document (with confirmation of transmission) if sent during normal business hours of the recipient, and on the next Business Day if sent after normal business hours of the recipient or (d) on the third day after the date mailed, by certified or registered mail, return receipt requested, postage prepaid. Such communications must be sent to the respective parties at the following addresses (or at such other address for a party as shall be specified in a notice given in accordance with this Section 10.2):

If to any Seller or Luna:	c/o Luna Innovations Incorporated 301 1st Street, SW Suite 200 Roanoke, Virginia 24011 E-mail: graeffs@lunainc.com Attention: Scott. A. Graeff
with a copy to:	Woods Rogers PLC Wells Fargo Tower, 14th Floor 10 S. Jefferson St. Roanoke, Virginia 24011 E-mail: fkemper@woodsrogers.com Attention: Fourd Kemper
If to Buyer:	OSI Optoelectronics, Inc. 12525 Chadron Avenue Hawthorne, CA 90250 E-mail: mmansouri@osi-systems.com Attention: Manoocher Mansouri
with a copy to:	OSI Systems, Inc. – Legal Department 12525 Chadron Avenue

Hawthorne, CA 90250

Attn: Victor Sze, General Counsel

and

Loeb & Loeb LLP
10100 Santa Monica Boulevard
Suite 2200
Los Angeles, California 90067
Facsimile: (310) 919-3965
E-mail: aduboff@loeb.com
Attention: Allan B. Duboff, Esq.

10.3 **Interpretation**. For purposes of this Agreement, (a) the words "include," "includes" and "including" shall be deemed to be followed by the words "without limitation"; (b) the word "or" is not exclusive; and (c) the words "herein," "hereof," "hereby," "hereto" and "hereunder" refer to this Agreement as a whole. Unless the context otherwise requires, references herein: (x) to Articles, Sections, Disclosure Schedules and Exhibits mean the Articles and Sections of, and Disclosure Schedules and Exhibits attached to, this Agreement; (y) to an agreement, instrument or other document means such agreement, instrument or other document as amended, supplemented and modified from time to time to the extent permitted by the provisions thereof and (z) to a statute means such statute as amended from time to time and includes any successor legislation thereto and any regulations promulgated thereunder. This Agreement shall be construed without regard to any presumption or rule requiring construction or interpretation against the party drafting an instrument or causing any instrument to be drafted. The parties intend that each representation, warranty and covenant contained herein will have independent significance. If any party has breached or violated, or if there is an inaccuracy in, any representation, warranty or covenant contained herein in any respect, the fact that there exists another representation, warranty or covenant relating to the same subject matter (regardless of the relative levels of specificity) which the party has not breached or violated, or in respect of which there is not an inaccuracy, will not detract from or mitigate the fact that the party has breached or violated, or there is an inaccuracy in, the first representation, warranty or covenant. The Disclosure Schedules and Exhibits referred to herein shall be construed with, and as an integral part of, this Agreement to the same extent as if they were set forth verbatim herein.

10.4 **Headings**. The headings in this Agreement are for reference only and shall not affect the interpretation of this Agreement.

10.5 **Severability**. If any term or provision of this Agreement is invalid, illegal or unenforceable in any jurisdiction, such invalidity, illegality or unenforceability shall not affect any other term or provision of this Agreement or invalidate or render unenforceable such term or provision in any other jurisdiction. Except as provided in Section 6.7(d), upon such determination that any term or other provision is invalid, illegal or unenforceable, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in a mutually acceptable manner in order that the transactions contemplated hereby be consummated as originally contemplated to the greatest extent possible.

10.6 **Entire Agreement**. This Agreement and the Transaction Documents and the Nondisclosure Agreement between Luna and OSI dated effective February 14, 2018, constitute the sole and entire agreement of the parties to this Agreement with respect to the subject matter contained herein and therein, and supersede that certain letter agreement dated April 17, 2018 between OSI Systems, Inc. and Luna and all other prior and contemporaneous understandings and agreements, both written and oral, with respect to such subject matter. In the event of any inconsistency between the statements in the body of this Agreement and those in the Transaction Documents, the Exhibits and Disclosure Schedules (other than an exception expressly set forth as such in the Disclosure Schedules), the statements in the body of this Agreement will control.

10.7 **Successors and Assigns**. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and permitted assigns. Neither party may assign its rights or obligations hereunder without the prior written consent of the other party, which consent shall not be unreasonably withheld or delayed; provided, however, that prior to the Closing Date, Buyer may, without the prior written consent of any Seller, assign all or any portion of its rights under this Agreement to one or more of its direct or indirect wholly-owned subsidiaries. No assignment shall relieve the assigning party of any of its obligations hereunder.

10.8 **No Third-party Beneficiaries**. Except as provided in Article VIII, this Agreement is for the sole benefit of the parties hereto and their respective successors and permitted assigns and nothing herein, express or implied, is intended to or shall confer upon any other Person or entity any legal or equitable right, benefit or remedy of any nature whatsoever under or by reason of this Agreement.

10.9 **Amendment and Modification; Waiver**. This Agreement may only be amended, modified or supplemented by an agreement in writing signed by each party hereto. No waiver by any party of any of the provisions hereof shall be effective unless explicitly set forth in writing and signed by the party so waiving. No waiver by any party shall operate or be construed as a waiver in respect of any failure, breach or default not expressly identified by such written waiver, whether of a similar or different character, and whether occurring before or after that waiver. Subject to Section 8.9, no failure to exercise, or delay in exercising, any right, remedy, power or privilege arising from this Agreement shall operate or be construed as a waiver thereof; nor shall any single or partial exercise of any right, remedy, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, remedy, power or privilege.

10.10 **Governing Law; Venue**.

(a) This Agreement shall be governed by and construed in accordance with the internal laws of the State of Delaware without giving effect to any choice or conflict of law provision or rule (whether of the State of Delaware or any other jurisdiction).

(b) ANY UNRESOLVED DISPUTE ARISING OUT OF OR BASED UPON THIS AGREEMENT, THE TRANSACTION DOCUMENTS OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY SHALL BE DETERMINED BY ARBITRATION IN CHICAGO, ILLINOIS, BEFORE ONE (1) ARBITRATOR WHO SHALL BE A RETIRED JUDGE ADMITTED TO PRACTICE LAW IN THE STATE OF ILLINOIS. THE ARBITRATION SHALL BE ADMINISTERED BY JAMS (OR ANY LIKE ORGANIZATION SUCCESSOR

THERETO) PURSUANT TO ITS STREAMLINED ARBITRATION RULES AND PROCEDURES. THE ARBITRATOR SHALL FOLLOW ANY APPLICABLE FEDERAL LAW AND DELAWARE STATE LAW IN RENDERING AN AWARD. JUDGMENT ON THE AWARD MAY BE ENTERED IN ANY COURT HAVING JURISDICTION. THIS CLAUSE SHALL NOT PRECLUDE THE PARTIES FROM SEEKING PROVISIONAL REMEDIES IN AID OF ARBITRATION FROM A COURT OF APPROPRIATE JURISDICTION. THE PARTIES FURTHER UNDERSTAND AND AGREE THAT THE ARBITRATOR'S DECISION SHALL BE CONFIDENTIAL AND FINAL AND BINDING TO THE FULLEST EXTENT PERMITTED BY LAW AND ENFORCEABLE BY ANY COURT HAVING JURISDICTION THEREOF.

10.11 **Specific Performance**. The parties agree that irreparable damage would occur if any provision of this Agreement were not performed in accordance with the terms hereof and that the parties shall be entitled to specific performance of the terms hereof, in addition to any other remedy to which they are entitled at law or in equity.

10.12 **Counterparts**. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement. A signed copy of this Agreement delivered by facsimile, e-mail or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first written above by their respective officers thereunto duly authorized.

LUNA INNOVATIONS INCORPORATED

By: /s/ Scott A. Graeff
Name: Scott A. Graeff
Title: President and CEO

ADVANCED PHOTONIX, INC.

By: /s/ Dale E. Messick
Name: Dale E. Messick
Title: Chief Executive Officer

ADVANCED PHOTONIX CANADA, INC.

By: /s/ Dale E. Messick
Name: Dale E. Messick
Title: President

OSI OPTOELECTRONICS, INC.

By: /s/ Manoocher Mansour
Name: Manoocher Mansour
Title: President

Exhibit 2.1

ASSET PURCHASE AGREEMENT

by and among

Luna Technologies, Inc.

as Buyer

Luna Innovations Incorporated

as Buyer Guarantor

and

Micron Optics, Inc.,

as Seller

Dated October 15, 2018

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ASSET PURCHASE AGREEMENT

This Asset Purchase Agreement ("Agreement") is dated October 15, 2018, by and among Luna Technologies, Inc., a Delaware corporation ("Buyer"); Micron Optics, Inc., a Georgia corporation ("Seller"); and, solely for the limited purpose of Section 13.14 hereof, Luna Innovations Incorporated, a Delaware corporation ("Buyer Guarantor").

RECITALS

A. Seller is engaged in the business of the development, design, engineering, manufacture or sale of assemblies, modules, subsystems and instrumentation, operating in the infrared portion of the spectrum (including but not limited to 1450nm – 1650 nm), incorporating Fabry-Perot based swept laser technology as the primary probe light source and fiber optic point sensors of various kinds (primarily fiber Bragg gratings and extrinsic Fabry-Perot cavities) for use in test, measurement or sensing applications (the "Business").

B. Seller desires to sell and assign to Buyer, and Buyer desires to purchase and assume from Seller, substantially all of the assets, and certain specified liabilities, of Seller and the Business, for the consideration and subject to the terms and conditions set forth in this Agreement.

The parties, intending to be legally bound, agree as follows:

1. Definitions and Usage

1.1DEFINITIONS

For purposes of this Agreement, the following terms and variations thereof have the meanings specified or referred to in this Section 1.1:

"401(k) Plan" – as defined in Section 10.1(d).

"Accounting Expert" – a nationally recognized top-ten independent public accounting firm that has not previously been engaged by any of the parties in the twenty-four (24) months preceding the Closing Date and that is agreed upon by Buyer and Seller in writing.

"Accounts Receivable" – (a) all trade accounts receivable and other rights to payment from customers of Seller and the full benefit of all security for such accounts or rights to payment, including all trade accounts receivable representing amounts receivable in respect of goods shipped or products sold or services rendered to customers of Seller, (b) all other accounts or notes receivable of Seller and the full benefit of all security for such accounts or notes and (c) any claim, remedy or other right related to any of the foregoing.

"Active Employees" – as defined in Section 10.1(a).

"Affiliate" – with respect to a Person, any other Person that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such Person. For purposes of this definition, "control" (including "controlling," "controlled by," and "under common control with") means the possession, direct or indirect, of the power to direct or

cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

"Agreement" – as defined in the first paragraph of this Agreement.

"Anti-Bribery Laws" – as defined in Section 3.27.

"Applicable Accounting Principles" – GAAP applied in a manner consistent with the preparation of the Financial Statements, subject to the application of the practices, procedures, judgments, policies and assumptions set forth on Exhibit A-1.

"Assigned Contracts" – as defined in Section 2.1(d).

"Assignment and Assumption Agreement" – as defined in Section 2.7(c)(ii).

"Assignment of Lease" – as defined in Section 2.7(c)(v).

"Assumed Liabilities" – as defined in Section 2.4(a).

"Balance Sheet" – as defined in Section 3.4.

"Basket" – as defined in Section 11.4(a).

"Best Efforts" – the commercially reasonable best efforts that a prudent Person desirous of achieving a result would use in similar circumstances to achieve that result in a reasonably expeditious manner, provided, however, that a Person required to use Best Efforts under this Agreement will not be thereby required to take actions that would result in a material adverse change in the benefits to such Person of this Agreement and the Contemplated Transactions or to dispose of or make any change to its business, expend any material funds or incur any other material burden.

"Bill of Sale" – as defined in Section 2.7(c)(i).

"Breach" – any breach of, or any inaccuracy in, any representation or warranty or any breach of, or failure to perform or comply with, any covenant or obligation, in or of this Agreement or any other Contract, or any event for which if notice was given to a counterparty and if uncured after the expiration of any applicable cure period would constitute such a breach, inaccuracy or failure.

"Bulk Sales Laws" – as defined in Section 5.8.

"Business" – as defined in Recital A.

"Business Day" – any day other than (a) Saturday or Sunday or (b) any other day on which banks in the Commonwealth of Virginia are permitted or required to be closed.

"Buyer" – as defined in the first paragraph of this Agreement.

"Buyer Common Stock" – the common stock of Buyer, no par value.

"Buyer Fundamental Representations" – the representations set forth in Sections 4.1, 4.2, 4.4 and 4.5.

"Buyer Guarantor" – as defined in the first paragraph of this Agreement.

"Buyer Indemnified Parties" – as defined in Section 11.2.

"Buyer Plan" – as defined in Section 10.1(d).

"Buyer's Closing Documents" – as defined in Section 4.2(a).

"Closing" – as defined in Section 2.6.

"Closing Date" – as defined in Section 2.6.

"Closing Effective Time" – 11:59:59 p.m. on the Closing Date.

"COBRA" – as defined in Section 3.16(f).

"Code" – the Internal Revenue Code of 1986, as amended from time to time.

"Competing Business" – as defined in Section 10.8(a).

"Consent" – any approval, consent, ratification, waiver or other authorization.

"Contemplated Transactions" – all of the transactions contemplated by this Agreement.

"Contract" – any agreement, contract, Lease, consensual obligation, promise or undertaking (whether written or oral and whether express or implied).

"Copyrights" – copyrights and works of authorship, whether or not copyrightable, and all registrations, applications for registration, and renewals of any of the foregoing.

"Current Liabilities" - the sum of accounts payable, accrued expenses and other current liabilities of Seller.

"Data Privacy and Security Laws" means any Legal Requirement governing (a) the proper use, collection, recording, storing, altering, retrieving, consulting, transferring, disclosing (whether authorized or unauthorized) or otherwise processing of Personally Identifiable Information or other information regarding an individual who can be identified from such data or from such data and other information in the possession of Seller, (b) notification to individuals or Governmental Bodies upon loss, unauthorized access or other misuse of personal data and (c) the administrative, technical, or physical controls that protect Personally Identifiable Information from unauthorized access, use or disclosure.

"Defined Benefit Plan" – as defined in Section 3.16(a).

"Direct Claim" – as defined in Section 11.5(c).

"Disclosure Schedules" – the disclosure schedules attached hereto and delivered by Seller to Buyer concurrently with the execution and delivery of this Agreement.

"Employee Plans" – as defined in Section 3.16(a).

"Encumbrance" – any charge, claim, community or other marital property interest, condition, equitable interest, lien, option, pledge, security interest, mortgage, right of way, easement, encroachment, servitude, right of first option, right of first refusal or similar restriction, including any restriction on use, voting (in the case of any security or equity interest), transfer, receipt of income or exercise of any other attribute of ownership.

"Environment" – soil, land surface or subsurface strata, surface waters (including navigable waters and ocean waters), groundwaters, drinking water supply, stream sediments, ambient air (including indoor air and sub-slab air), plant and animal life and any other environmental medium or natural resource.

"Environmental, Health and Safety Liabilities" – any cost, damages, expense, liability, obligation or other responsibility arising from or under any Environmental Law or Occupational Safety and Health Law, including those consisting of or relating to:

(a) any environmental, health or safety matter or condition (including on-site or off-site contamination, occupational safety and health and regulation of any chemical substance or product);

(b) any fine, penalty, judgment, award, settlement, legal or administrative proceeding, damages, loss, claim, demand or response, remedial or inspection cost or expense arising under any Environmental Law or Occupational Safety and Health Law;

(c) financial responsibility under any Environmental Law or Occupational Safety and Health Law for cleanup costs or corrective action, including any cleanup, removal, containment or other remediation or response actions ("Cleanup") required by any Environmental Law or Occupational Safety and Health Law (whether or not such Cleanup has been required or requested by any Governmental Body or any other Person) and for any natural resource damages; or

(d) any other compliance, corrective or remedial measure required under any Environmental Law or Occupational Safety and Health Law.

The terms "removal," "remedial" and "response action" include the types of activities covered by the United States Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA").

"Environmental Law" – any Legal Requirement that requires or relates to:

(a) advising appropriate authorities, employees or the public of intended or actual Releases of pollutants or hazardous substances or materials, violations of discharge limits or other prohibitions and the commencement of activities, such as resource extraction or construction, that could have significant impact on the Environment;

(b) preventing or reducing to acceptable levels the Release of pollutants or hazardous substances or materials into the Environment or regulating the discharge or emission of pollutants or contaminants;

(c) reducing the quantities, preventing the Release or minimizing the hazardous characteristics of wastes that are generated, or the proper handling, storage, reuse, recycling, treatment or disposal of solid waste;

(d) assuring that products are designed, formulated, packaged and used so that they do not present unreasonable risks to human health or the Environment when used or disposed of;

(e) protecting resources, species or ecological amenities;

(f) reducing to acceptable levels the risks inherent in the transportation of hazardous substances, pollutants, oil or other potentially harmful substances;

(g) assessing, removing, cleaning up and monitoring pollutants that have been Released, preventing the Threat of Release or paying the costs of such assessment, removal, clean up, monitoring or prevention;

(h) obtaining or complying with Governmental Authorizations for the ownership, use, operation, siting or maintenance of any real or personal property, including equipment and fixtures; or

(i) making responsible parties pay private parties, or groups of them, for damages done to their health or the Environment or permitting self-appointed representatives of the public interest to recover for injuries done to public assets.

"Equitable Exceptions" – as defined in Section 3.2(a).

"ERISA" – the Employee Retirement Income Security Act of 1974, as amended.

"ERISA Affiliate" – as defined in Section 3.16(a).

"Escrow Agent" – Wilmington Trust, National Association.

"Escrow Agreement" – as defined in Section 2.7(c)(iv).

"Escrow Amount" – **$1,000,000** of the Purchase Price.

"Escrow Fund" – as defined in Section 2.10.

"Escrow Termination Date" is the later of (A) October 1, 2019, or (B) the first to occur of: (i) the date of receipt of a warning letter (or similar communication from the responsible U.S. government agency(ies)) resolving the matters described on Schedule 3X, (ii) the date of the signing of a settlement agreement with the responsible U.S. government agency(ies) resolving the matters described on Schedule 3X, or (iii) the date the matters described on Schedule 3X are resolved to the mutual satisfaction of Buyer and Seller, as evidenced by a Joint Release Instruction under the Escrow Agreement; provided, however that in no event will the Escrow Termination Date extend past the second anniversary of the date of this Agreement.

"Exchange Act" – the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

"Excluded Assets" – as defined in Section 2.2.

"Facilities" or "Facility" – any real property, buildings, improvements and other facilities, whether owned in fee simple or by leasehold, and any other interest in real property currently or formerly owned, leased, occupied or operated by Seller, including, without limitation, the Tangible Personal Property used or operated by Seller, at the premises leased under any Real Property Lease.

"Final Net Working Capital" – as defined in Section 2.8(a).

"Financial Statements" – as defined in Section 3.4.

"GAAP" – generally accepted accounting principles for financial reporting in the United States.

"Governing Documents" – with respect to any particular entity, (a) if a corporation, the articles or certificate of incorporation and the bylaws; (b) if a general partnership, the partnership agreement and any statement of partnership; (c) if a limited partnership, the limited partnership agreement and the certificate of limited partnership; (d) if a limited liability company, the articles of organization and operating agreement; (e) if another type of Person, any other charter or similar document adopted or filed in connection with the creation, formation or organization of the Person; and (f) any amendment or supplement to any of the foregoing.

"Governmental Authorization" – any Consent, Order, license, registration or permit issued, granted, given or otherwise made available by or under the authority of any Governmental Body or pursuant to any Legal Requirement.

"Governmental Body" – any:

(a) nation, state, county, city, town, borough, village, district or other jurisdiction;

(b) federal, state, local, municipal, foreign or other government;

(c) governmental or quasi-governmental authority of any nature (including any agency, branch, department, board, commission, court, tribunal, arbitrator or other entity exercising governmental or quasi-governmental powers);

(d) multinational organization or body;

(e) body exercising, or entitled or purporting to exercise, any administrative, executive, judicial, legislative, police, regulatory or taxing authority or power; or

(f) official of any of the foregoing.

"Hazardous Activity" – the distribution, generation, handling, importing, management, manufacturing, processing, production, refinement, Release, storage, transfer, transportation, treatment or use (including any withdrawal or other use of groundwater) of Hazardous Material in, on, under, about or from any of the Facilities or any part thereof into the Environment and any other act, business, operation or thing that increases the danger, or risk of danger, or poses an unreasonable risk of harm, to persons or property on or off the Facilities.

"Hazardous Material" – any substance, material or waste which is or will foreseeably be regulated by any Governmental Body, including any material, substance or waste which is defined as a "hazardous waste," "hazardous material," "hazardous substance," "extremely hazardous waste," "restricted hazardous waste," "contaminant," "toxic waste," "toxic substance," "oil," "petroleum," "solid waste" or "pollutant" under any provision of Environmental Law, and including petroleum, petroleum products, asbestos, presumed asbestos-containing material or asbestos-containing material, urea formaldehyde and polychlorinated biphenyls.

"Indemnified Party" – as defined in Section 11.5.

"Indemnifying Party" – as defined in Section 11.5.

"Insurance Policies" – as defined in Section 3.21(a).

"Intellectual Property" means any and all of the following in any jurisdiction throughout the world and all rights in, arising out of, or associated therewith: (a) Patents; (b) Trademarks; (c) Copyrights; (d) internet domain names and social media account or user names (including "handles"), whether or not Trademarks, all associated web addresses, URLs, websites and web pages, social media accounts and pages, and all content and data thereon or relating thereto, whether or not Copyrights; (e) mask works, and all registrations, applications for registration, and renewals thereof; (f) Trade Secrets; (g) Software; and (h) any other intellectual or industrial property.

"Intellectual Property Agreements" means all licenses, sublicenses, consent to use agreements, settlements, coexistence agreements, covenants not to sue, waivers, releases, permissions and other Contracts, whether written or oral, relating to any Intellectual Property that relates to or is used or held for use in the conduct of the Business to which Seller is a party, beneficiary or otherwise bound, excluding for this purpose commercially available Software that constitutes Open Source Materials or off-the-shelf or shrinkwrap Software licenses or licenses of Software supplied with equipment or office computers, in each case with annual fees of less than $1,500 per year ("Standard Licenses").

"Intellectual Property Assets" means all Intellectual Property that is owned by Seller and relates to or is used or held for use in the conduct of the Business, together with all (i) royalties, fees, income, payments, and other proceeds now or hereafter due or payable to Seller with respect to such Intellectual Property; and (ii) claims and causes of action, whether known or unknown, with respect to such Intellectual Property, whether accruing before, on, or after the date hereof, including all rights to and claims for

damages (including attorneys' fees), restitution, and injunctive and other legal or equitable relief for past, present, or future infringement, misappropriation, or other violation thereof.

"Intellectual Property Assignment" – as defined in Section 2.7(c)(iii).

"Intellectual Property Registrations" means all Intellectual Property Assets that are subject to any issuance, registration, or application by or with any Governmental Authority or authorized private registrar in any jurisdiction, including issued Patents, registered Trademarks, domain names and Copyrights, and pending applications for any of the foregoing.

"Interim Balance Sheet" – as defined in Section 3.4.

"International Trade Applicable Laws and Regulations" means all applicable Legal Requirements concerning the importation of merchandise, export controls, economic or financial sanctions, and anti-bribery, including: (i) regulations issued or enforced by and programs administered by the United States Customs and Border Protection, (ii) the International Emergency Economic Powers Act, as amended, (iii) the Arms Export Control Act of 1976, as amended, (iv) the International Traffic in Arms Regulations, (v) any other export controls administered by an agency of the United States government, Executive Orders of the President regarding embargoes and restrictions on trade with designated countries and Persons, (vi) the embargoes and restrictions administered by the United States Department of Treasury Office of Foreign Sellers Control ("OFAC"), (vii) the Foreign Corrupt Practices Act or any other applicable anti-bribery or anti-corruption applicable Law, (viii) the anti-boycott regulations administered by the United States Department of Commerce and the anti-boycott regulations administered by the United States Department of Treasury, (ix) North American Free Trade Agreement legislation and regulations of the United States, Canada, and Mexico, (x) U.S. antidumping and countervailing duty laws, and (xi) other applicable Legal Requirements adopted by the governments or agencies of other countries relating to the same subject matter as the laws described above that apply to the Seller.

"Inventories" or "Inventory" – all inventories of Seller, wherever located, including all finished goods, work in process, raw materials, spare parts and all other materials and supplies to be used or consumed by Seller in the production of finished goods.

"IRS" – the United States Internal Revenue Service and, to the extent relevant, the United States Department of the Treasury.

"Knowledge of Seller" or "Seller's Knowledge" or any similar knowledge qualification – the actual knowledge of Todd Haber or Tom Graver, after due and reasonable inquiry.

"Landlord" means the landlord under the Real Property Lease for Seller's offices located at 1852 Century Place NE, First Floor, Atlanta GA 30345.

"Lease" – any Real Property Lease, and any lease or rental agreement, license, right to use or installment and conditional sale agreement to which Seller is a party and any other Seller Contract pertaining to the leasing or use of any Tangible Personal Property.

"Leased Real Property" – as defined in Section 3.8(b).

"Legal Requirement" – any federal, state, local, municipal, foreign, international, multinational or other constitution, law, ordinance, principle of common law, code, rule, ordinance, order, decree, regulation, statute or treaty.

"Liability" – with respect to any Person, any liability or obligation of such Person of any kind, character or description, whether known or unknown, absolute or contingent, accrued or unaccrued, disputed or undisputed, liquidated or unliquidated, secured or unsecured, joint or several, due or to become due, vested or unvested, executory, determined, determinable or otherwise, and whether or not the same is required to be accrued on the financial statements of such Person.

"Losses" – losses, damages, Liabilities, deficiencies, Proceedings, judgments, interest, awards, penalties, fines, costs or expenses of whatever kind, including reasonable attorneys' fees and the cost of enforcing any right to indemnification hereunder and the cost of pursuing any insurance providers; provided, however, that "Losses" shall not include incidental, consequential or punitive damages, except in the case of actual fraud or to the extent actually awarded to a Governmental Authority or other third party.

"Material Adverse Effect" – any event, occurrence, fact, condition or change that is, or could reasonably be expected to become, individually or in the aggregate, materially adverse to (a) the Business, (b) the value of the Purchased Assets, or (c) the ability of Seller to consummate the Contemplated Transactions on a timely basis; provided, however, that "Material Adverse Effect" shall not include any event, occurrence, fact, condition or change, directly or indirectly, arising out of or attributable to: (i) general economic or political conditions; (ii) conditions generally affecting the industry or markets in which the Business operates; (iii) any changes in financial or securities markets in general; (iv) acts of war (whether or not declared), armed hostilities or terrorism, sabotage, or the escalation or worsening thereof; (v) any action required or permitted by this Agreement, except pursuant to Sections

3.2(b), 3.2(c) and 5.4; (vi) any changes in applicable Legal Requirements or accounting rules, including GAAP; or (vii) the public announcement, pendency or completion of the Contemplated Transactions or any other action required by this Agreement; provided further, however, that any event, occurrence, fact, condition or change referred to in clauses (i) through (iv) immediately above shall be taken into account in determining whether a Material Adverse Effect has occurred or could reasonably be expected to occur only to the extent that such event, occurrence, fact, condition or change has a disproportionate effect on the Business compared to other participants in the industry in which the Business operates.

"Material Consents" means any consents to assignment listed on Exhibit A-2.

"Multiemployer Plan" – as defined in Section 3.16(a).

"Net Working Capital" means, as of the Closing, (a) the sum of accounts receivable, Inventory and prepaid expenses and other current assets of the Seller, other than any Excluded Assets, *less* (b) Current Liabilities and excluding any Retained Liabilities. For the avoidance of doubt, in calculating the Net Working Capital, Buyer shall be able to use relevant information available up until the time in which the Net Working Capital Statement is delivered; *provided* that the Buyer shall provide the Seller and its Representatives the right to observe and participate in any physical count of the Inventory of the Business to be used in the calculation of Net Working Capital.

"Net Working Capital Statement" – as defined in Section 2.8(a).

"Net Working Capital Target" – $2.05 million.

"Nondisclosure Agreement"- the Nondisclosure Agreement by and between Buyer Guarantor and Seller dated effective August 27, 2017.

"Notice of Disagreement" – as defined in Section 2.8(f).

"Occupational Safety and Health Law" – any Legal Requirement designed to provide safe and healthful working conditions and to reduce occupational safety and health hazards, including the Occupational Safety and Health Act.

"Open Source Materials" means any material (including Software) that contains, or is derived in any manner (in whole or in part) from, any Software or other material that is distributed as free or open source (e.g., under a license now or in the future approved by the Open Source Initiative and listed at http://www.opensource.org/licenses, which licenses include all versions of the GNU GPL, the GNU LGPL, the GNU Affero GPL, the MIT license, the Eclipse Public License, the Common Public License, the CDDL, the Mozilla Public License, the Academic Free License, the BSD license and the Apache License), or pursuant to similar licensing and distribution models (as presently conducted and as proposed to be conducted).

"Order" – any order, injunction, judgment, decree, ruling, assessment or arbitration award of any Governmental Body.

"Ordinary Course of Business" – an action taken by a Person will be deemed to have been taken in the Ordinary Course of Business only if that action:

(a) is consistent in nature, scope and magnitude with the past practices of such Person and is taken in the ordinary course of the normal, day-to-day operations of such Person;

(b) does not require authorization by the board of directors or shareholders of such Person; and

(c) is similar in nature, scope and magnitude to actions customarily taken, without any separate or special authorization, in the ordinary course of the normal, day-to-day operations of other Persons that are in the same lines of business as such first Person.

"Patents" – issued patents and patent applications (whether provisional or non-provisional), including divisionals, continuations, continuations-in-part, substitutions, reissues, reexaminations, renewals, extensions, nationalizations, validations, counterparts (domestic or foreign), or restorations of any of the foregoing (regardless of lapse, expiration or abandonment status), and other Governmental Body-issued indicia of invention ownership (including certificates of invention, petty patents, and patent utility models) together with industrial designs, registrations, applications for registration, and renewals thereof.

"PBGC" – as defined in Section 3.16(b).

"Permitted Encumbrances" – as defined in Section 3.9(a).

"Person" – an individual, partnership, corporation, business trust, limited liability company, limited liability partnership, joint stock company, trust, unincorporated association, joint venture or other entity or a Governmental Body.

"Personally Identifiable Information" – with respect to any natural Person, such person's name, street address, telephone number, e-mail address, photograph, social security number, tax identification number, driver's license number, passport number, credit card number, bank account number and other financial information, customer or account numbers, account access codes or passwords, or other information that allows the identification of or could be used to identify such Person or enables access to or could be used to enable access to such Person's financial information.

"Proceeding" – any action, arbitration, audit, hearing, investigation, litigation or suit (whether civil, criminal, administrative, judicial or investigative, whether formal or informal, whether public or private) commenced, brought, conducted or heard by or before, or otherwise involving, any Governmental Body.

"Purchase Price" – as defined in Section 2.3.

"Purchase Price Allocation" – as defined in Section 2.5.

"Purchased Assets" – as defined in Section 2.1.

"Real Property Lease" – as defined in Section 3.8(b).

"Record" – information that is inscribed on a tangible medium or that is stored in an electronic or other medium and is retrievable in perceivable form.

"Related Person" –

With respect to a particular individual:

(a) each other member of such individual's Family;

(b) any Person that is directly or indirectly controlled by any one or more members of such individual's Family;

(c) any Person in which members of such individual's Family hold (individually or in the aggregate) a Material Interest; and

(d) any Person with respect to which one or more members of such individual's Family serves as a director, officer, partner, executor or trustee (or in a similar capacity).

With respect to a specified Person other than an individual:

(a) any Person that directly or indirectly controls, is directly or indirectly controlled by or is directly or indirectly under common control with such specified Person;

(b) any Person that holds a Material Interest in such specified Person;

(c) each Person that serves as a director, officer, partner, executor or trustee of such specified Person (or in a similar capacity);

(d) any Person in which such specified Person holds a Material Interest; and

(e) any Person with respect to which such specified Person serves as a general partner or a trustee (or in a similar capacity).

For purposes of this definition, (a) "control" (including "controlling," "controlled by," and "under common control with") means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise, and shall be construed as such term is used in the rules promulgated under the Securities Act; (b) the "Family" of an individual includes (i) the individual, (ii) the individual's spouse, (iii) any other natural person who is related to the individual or the individual's spouse within the second degree and (iv) any other natural person who resides with such individual; and (c) "Material Interest" means direct or indirect beneficial ownership (as defined in Rule 13d-3 under the Exchange Act) of voting securities or other voting interests representing at least ten percent (10%) of the outstanding voting power of a Person or equity securities or other equity interests representing at least ten percent (10%) of the outstanding equity securities or equity interests in a Person.

"Release" – any release, spill, emission, leaking, pumping, pouring, dumping, emptying, injection, deposit, disposal, discharge, dispersal, leaching or migration on or into the Environment or into or out of any property.

"Remedial Action" – all actions, including any capital expenditures, required or voluntarily undertaken (a) to clean up, remove, treat or in any other way address any Hazardous Material or other substance; (b) to prevent the Release or Threat of Release or to minimize the further Release of any Hazardous Material or other substance so it does not migrate or endanger or threaten to endanger public health or welfare or the Environment; (c) to perform pre-remedial studies and investigations or post-remedial monitoring and care; or (d) to bring all Facilities and the operations conducted thereon into compliance with Environmental Laws and environmental Governmental Authorizations.

"Representative" – with respect to a particular Person, any director, officer, manager, employee, agent, consultant, advisor, accountant, financial advisor, legal counsel or other representative of that Person.

"Restricted Period" – as defined in Section 10.8(a).

"Retained Liabilities" – as defined in Section 2.4(b).

"SEC" – the United States Securities and Exchange Commission.

"Securities Act" – as defined in Section 3.3.

"Seller" – as defined in the first paragraph of this Agreement.

"Seller Contract" – any Contract (a) under which Seller has or may acquire any rights or benefits; (b) under which Seller has or may become subject to any obligation or liability; or (c) by which Seller or any of the assets owned or used by Seller, including, without limitation, the Purchased Assets, is or may become bound.

"Seller Data" – as defined in Section 3.26.

"Seller Fundamental Representations" – the representations set forth in Sections 3.1(b), 3.2, 3.7, 3.9, 3.14, 3.16, 3.17(c), 3.22, 3.28 and 3.29.

"Seller Indemnified Parties" – as defined in Section 11.3.

"Seller's Closing Documents" – as defined in Section 3.2(a).

"Shareholder" shall mean anyone holding any shares of capital stock of Seller or any rights or options to acquire same.

"Software" – all computer software and subsequent versions thereof, including source code, object, executable or binary code, objects, comments, screens, user interfaces, report formats, templates, menus, buttons and icons and all files, data, materials, manuals, design notes and other items and documentation related thereto or associated therewith.

"Subsidiary" – with respect to any Person (the "Owner"), any corporation or other Person of which securities or other interests having the power to elect a majority of that corporation's or other Person's board of directors or similar governing body, or otherwise having the power to direct the business and policies of that corporation or other Person (other than securities or other interests having such power only upon the happening of a contingency that has not occurred), are held by the Owner or one or more of its Subsidiaries.

"Tangible Personal Property" – all machinery, equipment, tools, furniture, office equipment, computer hardware, supplies, materials, vehicles and other items of tangible personal property (other than Inventories) of every kind owned or leased by Seller (wherever located and whether or not carried on Seller's books), together with any express or implied warranty by the manufacturers or sellers or lessors of any item or component part thereof and all maintenance records and other documents relating thereto.

"Tax" – any income, gross receipts, license, payroll, employment, excise, severance, stamp, occupation, premium, property, environmental, windfall profit, customs, vehicle, airplane, boat, vessel or other title or registration, capital stock, franchise, employees' income withholding, foreign or domestic withholding, social security, unemployment, disability, real property, personal property, sales, use, transfer, value added, alternative, add-on minimum and other tax, fee, assessment, levy, tariff, charge or duty of any kind whatsoever and any interest, penalty, addition or additional amount thereon imposed, assessed or collected by or under the authority of any Governmental Body or payable under any tax-sharing agreement or any other Contract or pursuant to operation of law.

"Tax Return" – any return (including any information return), report, statement, schedule, notice, form, declaration, claim for refund or other document or information filed with or submitted to, or required to be filed with or submitted to, any Governmental Body in connection with the determination, assessment, collection or payment of any Tax or in connection with the administration, implementation or enforcement of or compliance with any Legal Requirement relating to any Tax.

"Third Party" – a Person that is not a party to this Agreement.

"Third-Party Claim" – as defined in Section 11.5(a).

"Threat of Release" – a reasonable likelihood of a Release that requires action in order to prevent or mitigate damage to the Environment that may result from such Release.

"Trade Secrets" – trade secrets, know-how, inventions (whether or not patentable), discoveries, improvements, technology, business and technical information, databases, data compilations and collections, tools, methods, processes, techniques, and other confidential and proprietary information and all rights therein.

"Trademarks" - trademarks, service marks, brands, certification marks, logos, trade dress, trade names, and other similar indicia of source or origin, together with the goodwill connected with the use of and symbolized by, and all registrations, applications for registration, and renewals of, any of the foregoing.

"Transaction Documents" means this Agreement (including the Disclosure Schedules hereto), the Escrow Agreement, Bill of Sale, the Assignment and Assumption Agreement, the Intellectual Property Assignment, the Assignment of Lease, and the other agreements, instruments and documents required to be delivered at the Closing.

"Transferred Employees" – as defined in Section 10.1(b)(i).

"WARN Act" – as defined in Section 3.23(d).

1.2USAGE

(a) Interpretation. In this Agreement, unless a clear contrary intention appears:

(i) the singular number includes the plural number and vice versa;

(ii) reference to any Person includes such Person's successors and assigns but, if applicable, only if such successors and assigns are not prohibited by this Agreement, and reference to a Person in a particular capacity excludes such Person in any other capacity or individually;

(iii) reference to any gender includes each other gender;

(iv) reference to any agreement, document or instrument means such agreement, document or instrument as amended or modified and in effect from time to time in accordance with the terms thereof;

(v) reference to any Legal Requirement means such Legal Requirement as amended, modified, codified, replaced or reenacted, in whole or in part, and in effect from time to time, including rules and regulations promulgated thereunder, and reference to any Section or other provision of any Legal Requirement means that provision of such Legal Requirement from time to time in effect and constituting the substantive amendment, modification, codification, replacement or reenactment of such Section or other provision;

(vi) "hereunder," "hereof," "hereto," and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Article, Section or other provision hereof;

(vii) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term;

(viii) "or" is used in the inclusive sense of "and/or";

(ix) with respect to the determination of any period of time, "from" means "from and including" and "to" means "to but excluding"; and

(x) references to documents, instruments or agreements shall be deemed to refer as well to all addenda, exhibits, schedules or amendments thereto.

(b) Accounting Terms and Determinations. Unless otherwise specified herein, all accounting terms used herein shall be interpreted and all accounting determinations hereunder shall be made in accordance with GAAP.

(c) Legal Representation of the Parties. This Agreement was negotiated by the parties with the benefit of legal representation, and any rule of construction or interpretation otherwise requiring this Agreement to be construed or interpreted against any party shall not apply to any construction or interpretation hereof.

2. Sale and Transfer of Assets; Closing

2.1ASSETS TO BE SOLD

Upon the terms and subject to the conditions set forth in this Agreement, at the Closing, but effective as of the Closing Effective Time, Seller shall sell, convey, assign, transfer and deliver to Buyer, and Buyer shall purchase and acquire from Seller, free and clear of any Encumbrances other than Permitted Encumbrances, all of Seller's right, title and interest in and to all of Seller's property, rights and assets, real, personal or mixed, tangible and intangible, of every kind and description, wherever located, including the following (but excluding the Excluded Assets):

(a) all Tangible Personal Property, including those items described in Schedule 2.1(a);

(b) all Inventories;

(c) all Accounts Receivable;

(d) all Seller Contracts, including those listed in Schedule 3.20(a) for which consent to assignment is not expressly required or for which Material Consents are obtained or for which Consents to assignment are later obtained pursuant to Section 2.9(a) (but excluding those listed in Schedule 2.2(j) or those expressly designated on Schedule 3.20(a) as not being assigned to or assumed by Buyer) ("Assigned Contracts"), and all outstanding offers or solicitations made by or to Seller to enter into any Contract;

(e) all Governmental Authorizations and all pending applications therefor or renewals thereof, in each case to the extent transferable to Buyer, including those listed in Schedule 3.17(b);

(f) all data and Records related to the operations of Seller, including client and customer lists and Records, referral sources, research and development reports and Records, production reports and Records, service and warranty Records, equipment logs, operating guides and manuals, financial and accounting Records, creative materials, advertising materials, promotional materials, studies, reports, correspondence and other similar documents and Records and, subject to Legal Requirements, copies of all personnel Records and other Records described in Section 2.2(f);

(g) all of the intangible rights and property of Seller, including Intellectual Property Assets, going concern value, goodwill, telephone, telecopy and e-mail addresses, data/databases and listings and those items listed in Schedules 3.25(a) and (b);

(h) all insurance proceeds, if any, recovered pursuant to Section 10.12;

(i) all claims of Seller against third parties relating to the Purchased Assets, whether choate or inchoate, known or unknown, contingent or noncontingent (other than a right to submit a claim in the future for insurance benefits), including all such claims listed in Schedule 2.1(i);

(j) all rights of Seller relating to deposits and prepaid expenses, claims for refunds and rights to offset in respect thereof that are not Excluded Assets; and

(k) the property, rights and assets expressly designated in Schedule 2.1(k).

All of the property, rights and assets to be transferred to Buyer hereunder are herein referred to collectively as the "Purchased Assets."

Notwithstanding the foregoing, the transfer of the Purchased Assets pursuant to this Agreement shall not include the assumption of any Liability related to the Purchased Assets unless Buyer expressly assumes that Liability pursuant to Section 2.4(a).

2.2EXCLUDED ASSETS

Notwithstanding anything to the contrary contained in Section 2.1 or elsewhere in this Agreement, the following assets of Seller (collectively, the "Excluded Assets") are not part of the sale and purchase contemplated hereunder, are excluded from the Purchased Assets and shall remain the property of Seller after the Closing:

(a) all cash, cash equivalents and short-term investments;

(b) all minute books, stock Records and corporate seals of Seller;

(c) the shares of capital stock of Seller held in treasury;

(d) all insurance policies and benefits and rights thereunder (except to the extent specified in Section 10.12);

(e) all Seller Contracts other than Assigned Contracts;

(f) all personnel Records and other Records that Seller is required by law to retain in its possession;

(g) all claims for refund of Taxes, deferred Tax assets (including net operating loss carryforwards and research and development tax credits) and other governmental charges of whatever nature;

(h) all rights in connection with and assets of the Employee Plans;

(i) all rights of Seller under this Agreement and the other Transaction Documents;

(j) the property, rights and assets expressly designated in Schedule 2.2(j);

(k) any equity interest in any subsidiary organized and located outside the United States of America; and

(l) all rights and control of its attorney-client privilege and any other related rights *vis a vis* its legal counsel with respect to the negotiation of the Transaction Documents and the Contemplated Transactions.

2.3PURCHASE PRICE

The aggregate purchase price for the Purchased Assets shall be $5,000,000, subject to adjustment following the Closing pursuant to Section 2.8 (the "Purchase Price"), plus the assumption of the Assumed Liabilities. The Purchase Price shall be paid as provided in Sections 2.7(a) and (b).

2.4LIABILITIES

(a) Assumed Liabilities. On the Closing Date, but effective as of the Closing Effective Time, Buyer shall assume and agree to discharge only the following Liabilities of Seller (the "Assumed Liabilities"):

(i) any trade account payable that is included as a Current Liability in the Final Net Working Capital;

(ii) any Liability to Seller's customers incurred by Seller in the Ordinary Course of Business for non-delinquent orders outstanding as of the Closing Effective Time reflected on Seller's books (other than any Liability arising out of or relating to a Breach that occurred prior to the Closing Effective Time);

(iii) any Liability to Seller's customers under warranty agreements in the forms disclosed in Schedule 2.4(a)(iii) given by Seller to its customers prior to the Closing Effective Time (other than any Liability arising out of or relating to a non-warranty Breach that occurred prior to the Closing Effective Time);

(iv) any Liability arising after the Closing Effective Time under the Assigned Contracts (other than any Liability arising out of or relating to a Breach that occurred prior to the Closing Effective Time); and

(v) any Liability of Seller described in Schedule 2.4(a)(vi) to the extent expressly included as a Current Liability in the Final Net Working Capital.

(b) Retained Liabilities. The Retained Liabilities shall remain the sole responsibility of and shall be retained, paid, performed and discharged solely by Seller. "Retained Liabilities" shall mean every Liability of Seller other than the Assumed Liabilities, including:

(i) any Liability arising out of or relating to products of Seller to the extent manufactured or sold prior to the Closing Effective Time other than to the extent assumed under Section 2.4(a)(ii), (iii) or (iv);

(ii) any Liability under any Assigned Contract that arises after the Closing Effective Time to the extent it arises out of a Breach by Seller that occurred prior to the Closing Effective Time;

(iii) any Liability for Taxes prorated as of the Closing Effective Time, including (A) any Taxes arising as a result of Seller's operation of its business or ownership of the Purchased Assets prior to the Closing Effective Time, (B) any Taxes

assessable against Seller that will arise as a result of the sale of the Purchased Assets pursuant to this Agreement and (C) any deferred Taxes of any nature;

(iv) any Liability under any Contract not assumed by Buyer under Section 2.4(a), including any Liability arising out of or relating to Seller's credit facilities or any security interest related thereto;

(v) any Environmental, Health and Safety Liabilities arising out of or relating to the operation of Seller's Business or Seller's leasing, ownership or operation of real property prior to the Closing;

(vi) any Liability under the Employee Plans, including but not limited to the 401(k) Plan or relating to payroll, vacation, sick leave, workers' compensation, unemployment benefits, pension benefits, employee stock option or profit-sharing plans, any other bonus plans, health care plans or benefits or any other employee plans or benefits of any kind for Seller's employees or former employees or both;

(vii) any Liability under any employment, severance, retention or termination agreement with any employee of Seller or any of its Related Persons;

(viii) any Liability arising out of or relating to any employee grievance whether or not the affected employees are hired by Buyer;

(ix) any Liability of Seller to any Shareholder or Related Person of Seller or any Shareholder;

(x) any Liability to indemnify, reimburse or advance amounts to any officer, director, employee or agent of Seller;

(xi) any Liability to distribute to any of Seller's shareholders or otherwise apply all or any part of the consideration received hereunder;

(xii) any Liability arising out of any Proceeding pending as of the Closing Effective Time;

(xiii) any Liability arising out of any Proceeding resulting from or arising out of occurrences or events happening prior to the Closing Effective Time, including without limitation arising out of the matters referenced in Schedule 3X;

(xiv) any Liability arising out of or resulting from Seller's compliance or noncompliance with any Legal Requirement or Order of any Governmental Body, including without limitation arising out of the matters referenced in Schedule 3X;

(xv) any Liabilities associated with debt, loans or credit facilities of Seller and the Business owing to a Person;

(xvi) any Liability of Seller under this Agreement or any other document executed in connection with the Contemplated Transactions;

(xvii) any Liability under, arising out of or relating to that certain Settlement, Release and Indemnity Agreement dated November 30, 2016 between National Instruments Corporation and Seller, as amended by that certain First Amendment to Settlement, Release and Indemnity Agreement dated December 19, 2016 and that Second Amendment to Settlement, Release and Indemnity Agreement dated March 16, 2017; and

(xviii) any Liability of Seller based upon Seller's acts or omissions occurring after the Closing Effective Time.

(c) Notwithstanding anything else herein to the contrary, to the extent any Liabilities are included as a Current Liabilities in the final calculation of the Final Net Working Capital, they shall be treated as Assumed Liabilities to the extent set forth in the final calculation of the Final Net Working Capital.

2.5ALLOCATION

Within 120 days of the Closing, the parties shall agree on an allocation of the Purchase Price (including any adjustments made thereto) and any liabilities assumed, for Tax purposes (such allocation, the "Purchase Price Allocation"). Buyer shall prepare, and provide to Seller, a draft Purchase Price Allocation within 90 days after Closing. Seller shall provide any comments to the draft Purchase Price Allocation to Buyer within 20 days upon receipt thereof. If Seller does not provide any comments within the requisite time period, the draft Purchase Price Allocation shall be treated as final. The parties agree to use the final Purchase Price Allocation for all Tax purposes and in all filings, declarations and reports with the IRS in respect thereof, including any reports required to be filed under Section 1060 of the Code and the Treasury Regulations promulgated thereunder. The parties shall timely file, or cause to be timely filed, IRS Form 8594 (or any comparable form under state, local or foreign Tax Legal Requirements) and any required

attachments thereto in accordance with the final Purchase Price Allocation. Neither Buyer nor Seller shall take any position in any Tax Return, audit, or otherwise, that is inconsistent with the final Purchase Price Allocation, nor shall Buyer or Seller in any way represent that the final Purchase Price Allocation is not correct, unless otherwise required by applicable Legal Requirements.

2.6CLOSING

The closing of the Contemplated Transactions (the "Closing") shall take place on as soon as practical when all Closing conditions set forth in Sections 7 and 8 have been satisfied or duly waived (other than conditions which, by their nature, are to be satisfied on the Closing Date, but subject to the satisfaction or due waiver of such conditions at such time) by electronic mail or overnight courier delivery as the parties may agree. The date on which the Closing takes place shall be the "Closing Date". The Closing shall be deemed to be effective as of the Closing Effective Time.

2.7CLOSING OBLIGATIONS

In addition to any other documents or deliverables to be delivered under other provisions of this Agreement, at the Closing:

(a) Buyer shall pay or cause to be paid, in cash by wire transfer of immediately available funds to an account designated in writing by Seller to Buyer, the Purchase Price less the Escrow Amount;

(b) Buyer shall deliver the Escrow Amount, in cash by wire transfer of immediately available funds, to the Escrow Agent, to be held and disbursed by the Escrow Agent in accordance with the terms of this Agreement and the Escrow Agreement;

(c) Seller shall deliver or cause to be delivered to Buyer the following items (in form and substance reasonably satisfactory to Buyer and its counsel, unless otherwise specified below):

(i) a bill of sale for all of the Purchased Assets that are Tangible Personal Property in substantially the form of Exhibit B (the "Bill of Sale"), duly executed by Seller;

(ii) an assignment of all of the Purchased Assets that are intangible personal property in substantially the form of Exhibit C, which assignment shall also contain Buyer's undertaking and assumption of the Assumed Liabilities (the "Assignment and Assumption Agreement"), duly executed by Seller;

(iii) an assignment of all Intellectual Property Assets in substantially the form of Exhibit D, duly executed by Seller (the "Intellectual Property Assignment");

(iv) an escrow agreement in substantially the form of Exhibit E, duly executed by Seller (the "Escrow Agreement");

(v) an assignment of lease in substantially the form of Exhibit F, duly executed by Seller and Landlord (the "Assignment of Lease");

(vi) a certificate pursuant to Treasury Regulation Section 1.1445-2(b), duly executed and acknowledged by Seller, certifying that Seller is not a foreign person within the meaning of Section 1445 of the Code;

(vii) certificate(s) of insurance evidencing Buyer being named as an additional insured under Seller's insurance policies in effect as of the Closing Date to the extent that Seller was able to have Buyer so named with reasonable effort;

(viii) releases of all Encumbrances on the Purchased Assets, other than Permitted Encumbrances, including releases or certificates of satisfaction of each mortgage, deed of trust or other similar encumbrance of record with respect to each parcel of real property included in the Purchased Assets, if any;

(ix) a certificate dated as of a date not earlier than the third Business Day prior to the Closing as to the good standing of Seller in the State of Georgia;

(x) a certificate, dated as of the Closing Date, executed by Seller stating that the conditions specified in Section 7.1, Section 7.2 and Section 7.8 have been satisfied;

(xi) a certificate of the Secretary of Seller, dated as of the Closing Date, certifying, as complete and accurate as of the Closing, attached copies of the Governing Documents of Seller, (i) certifying and attaching all requisite resolutions or actions of Seller's board of directors and shareholders approving the execution and delivery of this Agreement and the consummation of the Contemplated Transactions and the change of name contemplated by Section 10.4 and (ii) certifying as to the incumbency and signatures of the officers of Seller executing this Agreement and any other Transaction Document; and

(xii) all other consents, filings, certificates, documents, instruments and other items required to be delivered by Seller pursuant to this Agreement, and all such other documents, certificates and instruments as Buyer shall reasonably request to give effect to the Contemplated Transactions or to vest in Buyer good, valid, insurable and marketable title in and to the Purchased Assets free and clear of all Encumbrances, except Permitted Encumbrances.

(d) Buyer shall deliver, or cause to be delivered, to Seller the following items (in form and substance reasonably satisfactory to Seller and its counsel, unless otherwise specified below):

(i) the Escrow Agreement, duly executed by Buyer and the Escrow Agent;

(ii) the Assignment and Assumption Agreement, duly executed by Buyer;

(iii) the Assignment of Lease, duly executed by Buyer;

(iv) a certificate, dated as of the Closing Date, executed by Buyer stating that the conditions specified in Section 8.1 and Section 8.2 have been satisfied; and

(v) a certificate of the Secretary of Buyer, dated as of the Closing Date, certifying, as complete and accurate as of the Closing, attached copies of the Governing Documents of Buyer and certifying and attaching all requisite resolutions or actions of Buyer's board of directors approving the execution and delivery of this Agreement and the consummation of the Contemplated Transactions and certifying as to the incumbency and signatures of the officers of Buyer executing this Agreement and any other Transaction Document.

2.8POST-CLOSING FINAL NET WORKING CAPITAL ADJUSTMENT

(a) As soon as practicable but in no event later than 75 days after the Closing Date, Buyer shall deliver to Seller a statement (the "Net Working Capital Statement") of the Net Working Capital as of the Closing without giving effect to any of the Contemplated Transactions and determined in accordance with the Applicable Accounting Principles (as may be adjusted pursuant to Section 2.8(f) below, the "Final Net Working Capital"), together with supporting calculations.

(b) For purposes of complying with the terms set forth in this Section 2.8, each party shall cooperate with and make available to the other parties and their respective Representatives all information, records, data and working papers, and shall permit reasonable access to its officers, employees, agents, books and records, as may be reasonably required in connection with the preparation and analysis of the Net Working Capital Statement and the Final Net Working Capital reflected in the Net Working Capital Statement and the resolution of any disputes in connection with the Net Working Capital Statement (in any case until the Accounting Expert has made a final determination pursuant to Section 2.8(f) below, if applicable).

(c) If the Final Net Working Capital is more than $50,000 less than the Net Working Capital Target, then Seller shall cause to be paid to Buyer, as an adjustment to the Purchase Price, by wire transfer of immediately available funds, an amount in cash equal to the difference between the Net Working Capital Target and the Final Net Working Capital, within 3 Business Days after determination of Final Net Working Capital pursuant to Section 2.8(f). Buyer may elect, in its sole and absolute discretion, that any such payment owed by Seller to Buyer pursuant to this Section 2.8(c) be paid (i) by the Escrow Agent from the Escrow Amount pursuant to the terms of the Escrow Agreement or (ii) by Seller from its own funds.

(d) If the Final Net Working Capital is more than $50,000 greater than the Net Working Capital Target, then Buyer shall cause to be paid to Seller, as an adjustment to the Purchase Price, by wire transfer of immediately available funds, an amount in cash equal to the difference between the Net Working Capital Target and the Final Net Working Capital, within 3 Business Days after determination of Final Net Working Capital pursuant to Section 2.8(f).

(e) If the Final Net Working Capital is within $50,000 of the Net Working Capital Target, there shall be no payment by either Buyer or Seller pursuant to this Section 2.8.

(f) Within 45 days following receipt by Seller of the Net Working Capital Statement, Seller shall either inform Buyer in writing that the Net Working Capital Statement is acceptable, or deliver written notice (the "Notice of Disagreement") to Buyer of any dispute Seller has with respect to the preparation or content of the Net Working Capital Statement or the Final Net Working Capital reflected in the Net Working Capital Statement. The Notice of Disagreement must describe in reasonable detail the items contained in the Net Working Capital Statement that Seller disputes and the disputed amount of any such disputes. Any items not identified on the Notice of Disagreement shall be deemed agreed to by Seller and all amounts that are not in dispute shall be paid by the party owing such payment by wire transfer of immediately available funds no later than three (3) Business Days after the time period in which Seller may deliver the Notice of Disagreement expires. If Seller does not notify Buyer of a dispute with respect to the Net Working Capital Statement within such 45-day period, such Net Working Capital Statement and the Final Net Working

Capital reflected in the Net Working Capital Statement will be final, conclusive and binding on the parties. In the event a Notice of Disagreement is delivered to Buyer, Buyer and Seller shall negotiate in good faith to resolve such dispute. If Buyer and Seller, notwithstanding such good faith effort, fail to resolve such dispute within 10 Business Days after Seller advises Buyer of its objections, then Buyer and Seller jointly shall engage the Accounting Expert to resolve such dispute in accordance with the standards set forth in this Section 2.8(f). The Seller and Buyer shall use reasonable efforts to cause the Accounting Expert to render a written decision resolving the matters submitted to the Accounting Expert within 30 days of the making of such submission. The scope of the disputes to be resolved by the Accounting Expert shall be limited only to the items in dispute that were included in the Notice of Disagreement and if such items were calculated in accordance with Applicable Accounting Principles and the Accounting Expert shall determine, on such basis, whether and to what extent, the Net Working Capital Statement and the Final Net Working Capital reflected in the Net Working Capital Statement, require adjustment. The Final Net Working Capital, as adjusted by the Accounting Expert, shall be deemed the Final Net Working Capital. The Accounting Expert is not to make any other determination, including any determination as to whether the Net Working Capital Target is correct. The Accounting Expert's decision shall be based solely on presentations by Buyer and Seller (and not independent review) and made in strict accordance with the terms of this Agreement, without regard for principles of equity. The Accounting Expert shall apply the relevant provisions of this Agreement to the disputed amounts, and shall have no authority to alter, modify, amend, add to or subtract from any term of provision of this Agreement. The Accounting Expert shall not assign a value to any item in dispute greater than the greatest value for such item assigned to it by Buyer, on the one hand, or Seller, on the other hand, or less than the smallest value for such item assigned to it by Buyer, on the one hand, or Seller, on the other hand. The fees and expenses of the Accounting Expert shall be borne in the same proportion that the aggregate dollar amount of such remaining disputed items so submitted to the Accounting Expert that are unsuccessfully disputed by Buyer, on the one hand, and Seller, on the other hand, as finally determined by the Accounting Expert, bears to the total dollar amount of such remaining disputed items so submitted. All determinations made by the Accounting Expert will be final, conclusive and binding on the parties.

2.9CONSENTS

(a) If any Material Consent is not obtained (or for any other Consent to assignment of a Seller Contract reasonably requested by Buyer to be obtained after Closing) or if any attempted assignment would be ineffective or would impair Buyer's rights under the Purchased Asset in question so that Buyer would not in effect acquire the benefit of all such rights, Seller and Buyer, to the maximum extent permitted by Legal Requirement and in respect of the underlying Purchased Asset, shall cooperate after the Closing in order to: (i) obtain for Buyer the benefits thereunder, to enforce, at the request of and for the account of the Buyer at Buyer's expense, any rights of Seller or its Affiliates arising thereunder against any Person, including the right to elect to terminate in accordance with the terms thereof upon the direction of the Buyer; and (ii) make any other reasonable arrangement designed to provide such benefits to Buyer. To the extent Buyer is provided with the benefits of any such Purchased Asset, Buyer shall perform the obligations of Seller or its Affiliates thereunder. To the extent that any Assumed Liability relates to any such Purchased Asset, Seller shall bear all of the costs arising from such Assumed Liability until such Purchased Asset is transferred and assigned to Buyer or Buyer obtains all the benefits of such Purchased Asset under this Section 2.9; provided, that to the extent Buyer obtains a portion of the benefits of such Purchased Asset, Buyer shall bear a *pro rata* portion of the costs arising from the related Assumed Liability. If and when any such Material Consent (or other requested Consent) is obtained, Seller shall promptly assign, transfer, convey and deliver the applicable Purchased Asset to Buyer, and Buyer shall promptly assume the associated Assumed Liabilities and Buyer and Seller shall execute such transfer, assignment and assumption document as may be reasonably requested.

(b) With respect to any Seller Contracts not assumed by Buyer, at the reasonable request and direction of Buyer, Seller shall enforce its rights thereunder, at Buyer's expense and to the benefit of Buyer. To the extent Seller learns or is made aware that the counterparty is in breach of any such Seller Contract, Seller shall promptly notify Buyer of same.

2.10ESCROW FUND

The Escrow Amount delivered by Buyer at Closing pursuant to the Escrow Agreement shall be held in an escrow account and shall serve as security for payment of any indemnification obligations of Seller (the "Escrow Fund"). If there are no outstanding claims for indemnification by Buyer as of the Escrow Termination Date, all amounts remaining in the Escrow Fund shall be distributed by the Escrow Agent in accordance with the terms and conditions of the Escrow Agreement to Seller. If there are outstanding claims for indemnification by the Buyer Indemnified Parties on the Escrow Termination Date, all amounts remaining in the Escrow Fund, less the disputed amount corresponding to each such outstanding claim, shall be distributed by the Escrow Agent in accordance with the terms and conditions of the Escrow Agreement to Seller; provided, that the remaining balance of any amounts withheld with respect to each outstanding claim shall be distributed to Seller upon resolution and final satisfaction of such outstanding claim in accordance with Article 11 and the provisions of the Escrow Agreement. Final distribution of the Escrow Fund shall be made net of any accrued fees and expenses of the Escrow Agent then outstanding.

3. Representations and Warranties of Seller

Except as set forth in the correspondingly numbered and/or lettered section of the attached Disclosure Schedules (a "Schedule"), Seller represents and warrants to Buyer as follows:

3.1ORGANIZATION AND GOOD STANDING

(a) Schedule 3.1(a) contains a complete and accurate list of Seller's jurisdiction of incorporation and any other jurisdictions in which it is qualified to do business as a foreign corporation. Seller is duly qualified to do business as a foreign corporation and is in good standing under the laws of each state or other jurisdiction in which either the ownership or use of the properties owned or used by it, or the nature of the activities conducted by it, requires such qualification.

(b) Seller is a corporation duly organized, validly existing and in good standing under the laws of its jurisdiction of incorporation, with full corporate power and authority to conduct its Business as it is now being conducted, to own or use the properties and assets that it purports to own or use (including, without limitation, the Purchased Assets), and to perform all of its obligations under the Seller Contracts.

(c) Complete and accurate copies of the Governing Documents of Seller have previously been made available to Buyer.

(d) Except as disclosed on Schedule 3.1(d), Seller has no Subsidiary and does not own any shares of capital stock or other securities of any other Person.

3.2ENFORCEABILITY; AUTHORITY; NO CONFLICT

(a) This Agreement constitutes the legal, valid and binding obligation of Seller, enforceable against Seller in accordance with its terms. Upon the execution and delivery by Seller of the Transaction Documents to be executed or delivered by Seller at Closing (collectively, the "Seller's Closing Documents"), each of Seller's Closing Documents will constitute the legal, valid and binding obligation of Seller, enforceable against Seller in accordance with its terms, except as such enforcement may be limited by (i) applicable bankruptcy, reorganization, insolvency, liquidation, fraudulent conveyance, moratorium or other similar laws relating to or affecting the enforcement of creditors' rights and remedies generally, (ii) applicable laws, court decisions and general principles of equity (regardless of whether such enforceability is adjudicated in proceeding in equity or at law), (iii) procedural requirements of law applicable to conflicts of laws principles and the exercise of creditors' rights and remedies generally, and (iv) matters of public policy ("Equitable Exceptions"). Seller has the absolute and unrestricted right, power and authority to execute and deliver this Agreement and the Seller's Closing Documents to which it is a party and to perform its obligations under this Agreement and the Seller's Closing Documents, and such action has been duly authorized by all necessary action by Seller's shareholders and board of directors.

(b) Except as set forth in Schedule 3.2(b) or except as otherwise expressly contemplated by this Agreement and/or the other Transaction Documents, neither the execution and delivery of this Agreement nor the consummation or performance of any of the Contemplated Transactions by Seller will, directly or indirectly (with or without notice or lapse of time):

(i) Breach (A) any provision of any of the Governing Documents of Seller or (B) any resolution adopted by the board of directors or the shareholders of Seller;

(ii) Breach or give any Governmental Body or other Person the right to challenge any of the Contemplated Transactions or to exercise any remedy or obtain any relief under any Legal Requirement or any Order to which Seller, or any of the Purchased Assets, may be subject;

(iii) contravene, conflict with or result in a violation or breach of any of the terms or requirements of, or give any Governmental Body the right to revoke, withdraw, suspend, cancel, terminate or modify, any Governmental Authorization that is held by Seller or that otherwise relates to the Purchased Assets or to the Business;

(iv) Breach any provision of, or give any Person the right to declare a default or exercise any remedy under, or to accelerate the maturity or performance of, or payment under, or to cancel, terminate or modify, Seller Contract;

(v) result in the imposition or creation of any Encumbrance upon or with respect to any of the Purchased Assets; or

(vi) result in any shareholder of Seller having the right to exercise dissenters' appraisal rights.

(c) Except as set forth in Schedule 3.2(c), Seller is not required to give any notice to or obtain any Consent from any Person in connection with the execution and delivery of this Agreement or the consummation or performance of any of the Contemplated Transactions.

3.3CAPITALIZATION

Schedule 3.3 sets forth the numbers and par value of the authorized and issued and outstanding shares of capital stock of Seller, as well as the name of each Shareholder and the number of shares owned or acquirable by exercise of any option or right. Except as set forth on Schedule 3.3, there are no Contracts relating to the issuance, sale or transfer of any equity securities or other securities of Seller. None of the outstanding equity securities of Seller was issued in violation of the Securities Act of 1933, as amended (the "Securities Act"), or any other Legal Requirement.

3.4FINANCIAL STATEMENTS

Seller has made available to Buyer: (a) the balance sheet of Seller as at December 31, 2017 (the "Balance Sheet"), and the related statement of income for the fiscal year then ended; (b) the balance sheet of Seller as at December 31, 2016, and the related statement of income for the fiscal year then ended; and (c) the balance sheet of Seller as at July 31, 2018 (the "Interim Balance Sheet") and the related statement of income for the 7 months then ended (the financial statements described in clauses (a), (b) and (c) above collectively being the "Financial Statements"). Except as may be in accord with the Applicable Accounting Principles or as set forth in Schedule 3.4, the Financial Statements (i) fairly present the financial condition and the results of operations of Seller as at the respective dates of and for the periods referred to in the Financial Statements, all in accordance with GAAP, (ii) reflect the consistent application of such accounting principles throughout the periods involved, and (iii) have been and will be prepared from and are in accordance with the accounting Records of Seller.

3.5BOOKS AND RECORDS

The books of account and other financial Records of Seller, all of which have been made available to Buyer, are materially complete and correct and represent actual, bona fide transactions and have been maintained in accordance with sound business practices. The minute books of Seller, all of which have been made available to Buyer, contain accurate and complete Records of all meetings held of, and corporate action taken by, the shareholders, the board of directors and committees of the board of directors of Seller in the past 10 years, and no meeting of any such shareholders, board of directors or committee has been held for which minutes have not been prepared or are not contained in such minute books during such period.

3.6SUFFICIENCY OF ASSETS

Except as set forth in Schedule 3.6, the Purchased Assets (a) constitute all of the assets, tangible and intangible, of any nature whatsoever, necessary to operate Seller's Business in the manner presently operated by Seller and (b) include all of the operating assets of Seller.

3.7ROYALTIES

Schedule 3.7 sets forth any and all royalties or license fees or similar payments due, payable or paid in respect of the sale or use of any products, services or components or Intellectual Property by Seller or the Business in the past 5 years or as contemplated to be sold or used under any written business plans.

3.8REAL PROPERTY

(a) Seller does not own any of the real property used in or necessary for the conduct of the Business.

(b) Schedule 3.8 sets forth each parcel of real property leased by Seller and used in or necessary for the conduct of the Business (together with all rights, title and interest of Seller in and to leasehold improvements relating thereto, including, but not limited to, security deposits, reserves or prepaid rents paid in connection therewith, collectively, the "Leased Real Property"), and a true and complete list of all leases, subleases, licenses, rental, concessions and other agreements (whether written or oral), including all amendments, extensions renewals, guaranties and other agreements with respect thereto, pertaining to the use or occupancy by Seller of any land, improvements or other facilities not owned by Seller or pursuant to which Seller holds any Leased Real Property (each, a "Real Property Lease", and collectively, the "Real Property Leases"). Seller has made available to Buyer a true and complete copy of each Real Property Lease. With respect to each Real Property Lease:

(i) such Real Property Lease is valid, binding, enforceable and in full force and effect, and Seller enjoys peaceful and undisturbed possession of the Leased Real Property;

(ii) Seller is not in breach or default under such Real Property Lease, and no event has occurred or circumstance exists which, with the delivery of required notice and the expiration of any applicable cure period or the like, passage of time or both, would constitute such a breach or default, and Seller has paid all rent due and payable under such Real Property Lease;

(iii) Seller has not received nor given any notice of any default or event that with, if applicable, notice and lapse of any cure period or the like, passage of time or both, would constitute a default by Seller under such Real Property Lease and, to the Knowledge of Seller, no other party is in default thereof, and no party to any Real Property Lease has exercised any termination rights with respect thereto;

(iv) Seller has not subleased, assigned or otherwise granted to any Person the right to use or occupy such Leased Real Property or any portion thereof; and

(v) Seller has not pledged, mortgaged or otherwise granted an Encumbrance on its leasehold interest in any Leased Real Property.

(c) Seller has not received any notice of (i) violations of building codes and/or zoning ordinances or other governmental or regulatory Legal Requirements affecting the Leased Real Property, (ii) existing, pending or threatened condemnation proceedings affecting the Leased Real Property, or (iii) existing, pending or threatened zoning, building code or other moratorium proceedings, or similar matters which could reasonably be expected to adversely affect the ability to operate the Leased Real Property as currently operated. Neither the whole nor any material portion of any Leased Real Property has been damaged or destroyed by fire or other casualty.

(d) The Leased Real Property is sufficient for the continued conduct of the Business after the Closing in substantially the same manner as conducted prior to the Closing and constitutes all of the real property necessary to conduct the Business.

3.9TITLE TO ASSETS; ENCUMBRANCES

(a) Seller has good and valid title to all of the Purchased Assets (it being understood that some of the Purchased Assets represent leasehold interests or license rights, in which case Seller does not have title to the underlying leased or licensed property). Seller has a good and valid leasehold interest in the Leased Real Property described in the Real Property Leases. All such Purchased Assets (including leasehold interests) and the Leased Real Property are free and clear of Encumbrances except for the following (collectively referred to as "Permitted Encumbrances"):

(i) liens for Taxes not yet due and payable;

(ii) mechanics', carriers', workmen's, repairmen's or other like liens arising or incurred in the ordinary course of business consistent with past practice or amounts that are not delinquent and which are not, individually or in the aggregate, material to the Business, the Purchased Assets or the Leased Real Property;

(iii) easements, rights of way, zoning ordinances and other similar encumbrances affecting any Leased Real Property that are not, individually or in the aggregate, material to the Business or the Purchased Assets, and which do not prohibit or interfere with the current occupancy or operation of such Leased Real Property; or

(iv) liens arising under original purchase price conditional sales contracts and equipment leases with third parties entered into in the Ordinary Course of Business which are not, individually or in the aggregate, material to the Business, the Purchased Assets or the Leased Real Property.

3.10CONDITION OF PROPERTY

(a) Use of each Leased Real Property for the various purposes for which it is presently being used is permitted as of right under all applicable zoning legal requirements and is not subject to "permitted nonconforming" use or structure classifications. All improvements comprising the Leased Real Property are in compliance with all applicable Legal Requirements, including those pertaining to zoning, building and the disabled, are in good repair and in good condition, ordinary wear and tear excepted. No part of any such improvement encroaches on any real property not included in the Leased Real Property, and there are no buildings, structures, fixtures or other improvements primarily situated on adjoining property which encroach on any part of the Leased Real Property. The Leased Real Property abuts on and has direct vehicular access to a public road or has access to a public road via a permanent, irrevocable, appurtenant easement benefiting such land and comprising a part of the real property, is supplied with public or quasi-public utilities and other services appropriate for the operation of the facilities located thereon and is not located within any flood plain or area subject to wetlands regulation or any similar restriction. To the Knowledge of Seller there is no existing or proposed plan to modify or realign any street or highway or any existing or proposed eminent domain proceeding that would result in the taking of all or any part of any Leased Real Property or that would prevent or hinder the continued use of any Leased Real Property as heretofore used in the conduct of the Business.

(b) Except as disclosed on Schedule 3.10(b), (i) each item of Tangible Personal Property is in good repair and good operating condition, ordinary wear and tear excepted, is suitable for immediate use in the Ordinary Course of Business and is free

from material defects and (ii) no item of Tangible Personal Property is in need of repair or replacement other than as part of routine maintenance in the Ordinary Course of Business. Except as disclosed in Schedule 3.10(b), all Tangible Personal Property used in Seller's Business is in the possession of Seller.

3.11ACCOUNTS RECEIVABLE

The Accounts Receivable reflected on the Interim Balance Sheet and the Accounts Receivable arising after the date thereof (a) have arisen from bona fide transactions entered into by Seller involving the sale of goods or the rendering of services in the Ordinary Course of Business; (b) constitute only valid, undisputed claims of Seller not subject to claims of set-off or other defenses or counterclaims other than normal cash discounts accrued in the Ordinary Course of Business of Seller; and (c) subject to a reserve for bad debts shown on the Interim Balance Sheet or, with respect to Accounts Receivable arising after the Interim Balance Sheet Date, on the accounting records of the Business, are, to the Knowledge of Seller, collectible in full in the Ordinary Course of Business of Seller. The reserve for bad debts shown on the Interim Balance Sheet or, with respect to Accounts Receivable arising after the Interim Balance Sheet Date, on the accounting records of the Business, have been determined in accordance with GAAP, consistently applied, subject to normal year-end adjustments and the absence of disclosures normally made in footnotes. There is no contest, claim, defense or right of setoff, other than returns or warranty claims in the Ordinary Course of Business of Seller, under any Contract with any account debtor of an Account Receivable relating to the amount or validity of such Account Receivable. Schedule 3.11 contains a complete and accurate list of all Accounts Receivable as of the date of the Interim Balance Sheet, which list sets forth the aging of each such Account Receivable.

3.12INVENTORIES

All items included in the Inventories consist of a quality and quantity usable and, with respect to finished goods, saleable, in the Ordinary Course of Business of Seller except for obsolete items and items of below-standard quality, all of which have been written off or written down to net realizable value in the Balance Sheet or the Interim Balance Sheet or on the accounting Records of Seller as of the Closing Date, as the case may be. Except as set forth on Schedule 3.12, Seller is not in possession of any inventory not owned by Seller, including goods already sold. All of the Inventories have been valued at the lower of cost or market. Inventories now on hand that were purchased after the date of the Balance Sheet or the Interim Balance Sheet were purchased in the Ordinary Course of Business of Seller at a cost not exceeding market prices prevailing at the time of purchase. The quantities of each item of Inventories (whether raw materials, work-in-process or finished goods) are not excessive but rather are reasonable in the circumstances of Seller for the previous twelve months. Except as may be in accord with the Applicable Accounting Principles or as set forth on Schedule 3.12, work-in-process Inventories are now valued, and will be valued on the Closing Date, according to GAAP.

3.13NO UNDISCLOSED LIABILITIES

Seller has no Liabilities with respect to the Business or the Purchased Assets of the type required to be reflected as liabilities on a balance sheet prepared in accordance with Applicable Accounting Principles, except for Liabilities reflected or reserved against in the Balance Sheet or the Interim Balance Sheet and Current Liabilities incurred in the Ordinary Course of Business of Seller since the date of the Interim Balance Sheet.

3.14TAXES

(a) Seller has filed or caused to be filed on a timely basis all Tax Returns and all reports with respect to Taxes that are or were required to be filed pursuant to applicable Legal Requirements. All Tax Returns and reports filed by Seller are true, correct and complete. Seller has paid, or made provision for the payment of, all Taxes that have or may have become due for all periods covered by the Tax Returns or otherwise, or pursuant to any assessment received by Seller, except such Taxes, if any, as are being contested in good faith and as to which adequate reserves (determined in accordance with Applicable Accounting Principles) have been provided in the Balance Sheet and the Interim Balance Sheet. Seller currently is not the beneficiary of any extension of time within which to file any Tax Return. No claim has ever been made or is expected to be made by any Governmental Body in a jurisdiction where Seller does not file Tax Returns that it is or may be subject to taxation by that jurisdiction. There are no Encumbrances on any of the Purchased Assets that arose in connection with any failure (or alleged failure) to pay any Tax, and Seller has no Knowledge of any basis for assertion of any claims attributable to Taxes that, if adversely determined, would result in any such Encumbrance. Seller has (1) withheld all required amounts from its employees, agents, contractors, customers and nonresidents and remitted such amounts to the proper agencies; (2) paid or accrued for all employer contributions and premiums; and (3) filed all federal, state, local and foreign returns and reports with respect to employee income Tax withholding, social security, unemployment Taxes and premiums, all in compliance with the withholding Tax provisions of the Code, as amended, as in effect for the applicable year and other applicable federal, state, local or foreign Legal Requirements.

(b) Seller has delivered or made available to Buyer copies of, and Schedule 3.14(b) contains a complete and accurate list of, all Tax Returns filed for tax years from and including 2013. Schedule 3.14(b) contains a complete and accurate list of all Tax Returns of Seller that have been audited or are currently under audit and accurately describe any deficiencies or other amounts that were paid or are currently being contested. No undisclosed deficiencies are expected to be asserted with respect to any such audit. All deficiencies proposed as a result of such audits have been paid, reserved against, settled or are being contested in good faith by appropriate proceedings as described in Schedule 3.14(b). Seller has delivered, or made available to Buyer, copies of any examination reports, statements or deficiencies or similar items with respect to such audits. Except as provided in Schedule 3.14(b), Seller has no Knowledge that any Governmental Body is likely to assess any additional taxes for any period for which Tax Returns have been filed. There is no dispute or claim concerning any Taxes of Seller either (i) claimed or raised by any Governmental Body in writing or (ii) as to which Seller has Knowledge. Schedule 3.14(b) contains a list of all Tax Returns for which the applicable statute of limitations has not run. Except as described in Schedule 3.14(b), Seller has not given or been requested to give waivers or extensions (or is or would be subject to a waiver or extension given by any other Person) of any statute of limitations relating to the payment of Taxes of Seller or for which Seller may be liable.

(c) The charges, accruals and reserves with respect to Taxes on the Records of Seller are adequate (determined in accordance with Applicable Accounting Principles) and are at least equal to Seller's liability for Taxes. There exists no proposed tax assessment or deficiency against Seller except as disclosed in the Interim Balance Sheet.

(d) All Taxes that Seller is or was required by Legal Requirements to withhold, deduct or collect have been duly withheld, deducted and collected and, to the extent required, have been paid to the proper Governmental Body or other Person.

3.15NO MATERIAL ADVERSE EFFECT

Since the date of the Balance Sheet, there has not been any Material Adverse Effect, and no event has occurred or circumstance exists that would result in a Material Adverse Effect.

3.16EMPLOYEE BENEFITS

(a) Set forth in Schedule 3.16(a) is a complete and correct list of all "employee benefit plans" as defined by Section 3(3) of ERISA, all specified fringe benefit plans as defined in Section 6039D of the Code, and all other bonus, incentive-compensation, deferred-compensation, profit-sharing, stock-option, stock-appreciation-right, stock-bonus, stock-purchase, employee-stock-ownership, savings, severance, change-in-control, supplemental-unemployment, layoff, salary-continuation, retirement, pension, health, life-insurance, disability, accident, group-insurance, vacation, holiday, sick-leave, fringe-benefit or welfare plan, and any other employee compensation or benefit plan, agreement, policy, practice, commitment, contract or understanding (whether qualified or nonqualified, currently effective or terminated, written or unwritten) and any trust, escrow or other agreement related thereto that (i) is maintained or contributed to by Seller or any other corporation or trade or business controlled by, controlling or under common control with Seller (within the meaning of Section 414 of the Code or Section 4001(a)(14) or 4001(b) of ERISA) ("ERISA Affiliate") or has been maintained or contributed to by Seller or any ERISA Affiliate, or with respect to which Seller or any ERISA Affiliate has or may have any liability, and (ii) provides benefits, or describes policies or procedures applicable to any current or former director, officer, employee or service provider of Seller or any ERISA Affiliate, or the dependents of any thereof, regardless of how (or whether) liabilities for the provision of benefits are accrued or assets are acquired or dedicated with respect to the funding thereof (collectively the "Employee Plans"). Schedule 3.16(a) identifies as such any Employee Plan that is (w) a "Defined Benefit Plan" (as defined in Section 414(l) of the Code); (x) a plan intended to meet the requirements of Section 401(a) of the Code; (y) a "Multiemployer Plan" (as defined in Section 3(37) of ERISA); or (z) a plan subject to Title IV of ERISA, other than a Multiemployer Plan. Also set forth on Schedule 3.16(a) is a complete and correct list of all ERISA Affiliates of Seller during the last 6 years.

(b) Seller has made available to Buyer true, accurate and complete copies of (i) the documents comprising each Employee Plan (or, with respect to any Employee Plan which is unwritten, a detailed written description of eligibility, participation, benefits, funding arrangements, assets and any other matters which relate to the obligations of Seller or any ERISA Affiliate); (ii) all trust agreements, insurance contracts or any other funding instruments related to the Employee Plans; (iii) all rulings, determination letters, no-action letters or advisory opinions from the IRS, the U.S. Department of Labor, the Pension Benefit Guaranty Corporation ("PBGC") or any other Governmental Body that pertain to each Employee Plan and any open requests therefor; (iv) the most recent actuarial and financial reports (audited and/or unaudited) and the annual reports filed with any Government Body with respect to the Employee Plans during the current year and each of the three preceding years; (v) all collective bargaining agreements pursuant to which contributions to any Employee Plan(s) have been made or obligations incurred (including both pension and welfare benefits) by Seller or any ERISA Affiliate, and all collective bargaining agreements pursuant to which contributions are being made or obligations are owed by such entities; (vi) all securities registration statements filed with respect to any Employee Plan; (vii) all

contracts with third-party administrators, actuaries, investment managers, consultants and other independent contractors that relate to any Employee Plan, (viii) with respect to Employee Plans that are subject to Title IV of ERISA, the Form PBGC-1 filed for each of the three most recent plan years; and (ix) all summary plan descriptions, summaries of material modifications and memoranda, employee handbooks and other written communications regarding the Employee Plans.

(c) Except as set forth in Schedule 3.16(c), full payment has been made of all amounts that are required under the terms of each Employee Plan to be paid as contributions with respect to all periods prior to and including the last day of the most recent fiscal year of such Employee Plan ended on or before the date of this Agreement and all periods thereafter prior to the Closing Date, and no accumulated funding deficiency or liquidity shortfall (as those terms are defined in Section 302 of ERISA and Section 412 of the Code) has been incurred with respect to any such Employee Plan, whether or not waived. The value of the assets of each Employee Plan exceeds the amount of all benefit liabilities (determined on a plan termination basis using the actuarial assumptions established by the PBGC as of the Closing Date) of such Employee Plan. Seller is not required to provide security to an Employee Plan under Section 401(a)(29) of the Code. Seller has paid in full all required insurance premiums, subject only to normal retrospective adjustments in the ordinary course, with regard to the Employee Plans for all policy years or other applicable policy periods ending on or before the Closing Date.

(d) No Employee Plan, if subject to Title IV of ERISA, has been completely or partially terminated, nor has any event occurred nor does any circumstance exist that could result in the partial termination of such Employee Plan. The PBGC has not instituted or threatened a Proceeding to terminate or to appoint a trustee to administer any of the Employee Plans pursuant to Subtitle 1 of Title IV of ERISA, and no condition or set of circumstances exists that presents a material risk of termination or partial termination of any of the Employee Plans by the PBGC. None of the Employee Plans has been the subject of, and no event has occurred or condition exists that could be deemed, a reportable event (as defined in Section 4043 of ERISA) as to which a notice would be required (without regard to regulatory monetary thresholds) to be filed with the PBGC. Seller has paid in full all insurance premiums due to the PBGC with regard to the Employee Plans for all applicable periods ending on or before the Closing Date.

(e) Neither Seller nor any ERISA Affiliate has any liability or has Knowledge of any facts or circumstances that might give rise to any liability, and the Contemplated Transactions will not result in any liability, (i) for the termination of or withdrawal from any Employee Plan under Sections 4062, 4063 or 4064 of ERISA, (ii) for any lien imposed under Section 302(f) of ERISA or Section 412(n) of the Code, (iii) for any interest payments required under Section 302(e) of ERISA or Section 412(m) of the Code, (iv) for any excise tax imposed by Section 4971 of the Code, (v) for any minimum funding contributions under Section 302(c)(11) of ERISA or Section 412(c)(11) of the Code or (vi) for withdrawal from any Multiemployer Plan under Section 4201 of ERISA.

(f) Seller has, at all times, complied, and currently complies, in all material respects with the applicable continuation requirements for its welfare benefit plans, including (1) Section 4980B of the Code (as well as its predecessor provision, Section 162(k) of the Code) and Sections 601 through 608, inclusive, of ERISA, which provisions are hereinafter referred to collectively as "COBRA" and (2) any applicable state statutes mandating health insurance continuation coverage for employees.

(g) Except as set forth in Schedule 3.16(g), each Welfare Benefit Plan that is a "group health plan" within the meaning of Section 5000(b)(1) of the Code and Section 607(1) of ERISA has been administered in material compliance with, and Seller has otherwise materially complied with the requirements of the Patient Protection and Affordable Care Act of 2010 and the regulations promulgated thereunder; and (ii) the Medicare Secondary Payor Provisions of Section 1862 of the Social Security Act and the regulations promulgated thereunder.

(h) The form of all Employee Plans is in compliance with the applicable terms of ERISA, the Code, and any other applicable laws, including the Americans with Disabilities Act of 1990, the Family Medical Leave Act of 1993 and the Health Insurance Portability and Accountability Act of 1996 (including in each case, any amendments thereto and any regulations promulgated thereunder), and such plans have been operated in compliance with such laws and the written Employee Plan documents. Neither Seller nor any fiduciary of an Employee Plan has violated the requirements of Section 404 of ERISA. All required reports and descriptions of the Employee Plans (including Internal Revenue Service Form 5500 Annual Reports, Summary Annual Reports and Summary Plan Descriptions and Summaries of Material Modifications) have been (when required) timely filed with the IRS, the U.S. Department of Labor or other Governmental Body and distributed as required, and all notices required by ERISA or the Code or any other Legal Requirement with respect to the Employee Plans have been appropriately given.

(i) Each Employee Plan that is intended to be qualified under Section 401(a) of the Code has received a favorable determination letter from the IRS, or have adopted a plan that is preapproved by the IRS and Seller has no Knowledge of any circumstances that will or could result in revocation of any such favorable determination letter or approval. Each trust created under any Employee Plan has been determined to be exempt from taxation under Section 501(a) of the Code, and Seller is not aware of any circumstance that will or could result in a revocation of such exemption. Each Employee Welfare Benefit Plan (as defined in Section

3(1) of ERISA) that utilizes a funding vehicle described in Section 501(c)(9) of the Code or is subject to the provisions of Section 505 of the Code has been the subject of a notification by the IRS that such funding vehicle qualifies for tax-exempt status under Section 501(c)(9) of the Code or that the plan complies with Section 505 of the Code, unless the IRS does not, as a matter of policy, issue such notification with respect to the particular type of plan. With respect to each Employee Plan, no event has occurred or condition exists that will or could give rise to a loss of any intended tax consequence or to any Tax under Section 511 of the Code.

(j) There is no material pending or to the Knowledge of Seller threatened Proceeding relating to any Employee Plan, nor is there any basis for any such Proceeding. Neither Seller nor any fiduciary of an Employee Plan has engaged in a transaction with respect to any Employee Plan that, assuming the taxable period of such transaction expired as of the date hereof, could subject Seller or Buyer to a Tax or penalty imposed by either Section 4975 of the Code or Section 502(l) of ERISA or a violation of Section 406 of ERISA. The Contemplated Transactions will not result in the potential assessment of a Tax or penalty under Section 4975 of the Code or Section 502(l) of ERISA nor result in a violation of Section 406 of ERISA.

(k) Seller has maintained workers' compensation coverage as required by applicable state law through purchase of insurance and not by self-insurance or otherwise.

(l) Except as set forth on Schedule 3.16(l) or required by Legal Requirements and as provided in Section 10.1(d), the consummation of the Contemplated Transactions will not accelerate the time of vesting or the time of payment, or increase the amount, of compensation due to any director, employee, officer, former employee or former officer of Seller. There are no contracts or arrangements providing for change of control payments that could subject any person to liability for tax under Section 4999 of the Code.

(m) Except for the continuation coverage requirements of COBRA, Seller has no obligations or potential liability for benefits to employees, former employees or their respective dependents following termination of employment or retirement under any of the Employee Plans that are Employee Welfare Benefit Plans.

(n) No written or oral representations have been made to any employee or former employee of Seller promising or guaranteeing any employer payment or funding for the continuation of medical, dental, life or disability coverage for any period of time beyond the end of the current plan year (except to the extent of coverage required under COBRA). No written or oral representations have been made to any employee or former employee of Seller concerning the employee benefits of Buyer.

(o) Each plan that is a "non-qualified deferred compensation plan" (as defined in Section 409A(d)(1) of the Code) and any award thereunder, in each case that is subject to Section 409A of the Code, has since January 1, 2005, been, in all material respects, in compliance with Section 409A of the Code, to the extent required by applicable guidance, and Seller has no obligation to indemnify any individual for any taxes imposed under Section 409A of the Code.

(p) With respect to any Employee Plan that is a "multiemployer plan" within the meaning of Section 4001(a)(3) of ERISA ("Multiemployer Plan"), and any other Multiemployer Plan to which Seller has at any time had an obligation to contribute:

(i) all contributions required by the terms of such Multiemployer Plan and any collective bargaining agreement have been made when due; and

(ii) Seller would not be subject to any withdrawal liability under Part 1 of Subtitle E of Title IV of ERISA if, as of the date hereof, Seller were to engage in a "complete withdrawal" (as defined in ERISA Section 4203) or a "partial withdrawal" (as defined in ERISA Section 4205) from such Multiemployer Plan.

3.17COMPLIANCE WITH LEGAL REQUIREMENTS; GOVERNMENTAL AUTHORIZATIONS

(a) Except as set forth in Schedule 3.17(a):

(i) Seller is, and at all times since January 1, 2013, has been, in full compliance in all material respects with each Legal Requirement that is or was applicable to it or to the conduct or operation of the Business or the ownership or use of any of the Purchased Assets;

(ii) No event has occurred or circumstance exists that (with or without notice or after expiration of any applicable cure period) (A) may constitute or result in a violation by Seller of, or a failure on the part of Seller to comply with, any Legal Requirement or (B) may give rise to any obligation on the part of Seller to undertake, or to bear all or any portion of the cost of, any remedial action of any nature; and

(iii) Seller has not received, at any time since January 1, 2013, any notice or other communication (whether oral or written) from any Governmental Body or any other Person regarding (A) any actual, alleged, possible or potential violation

of, or failure to comply with, any Legal Requirement or (B) any actual, alleged, possible or potential obligation on the part of Seller to undertake, or to bear all or any portion of the cost of, any remedial action of any nature.

(b) Schedule 3.17(b) contains a complete and accurate list of each Governmental Authorization that is held by Seller or that otherwise is required for and applicable to the Business or the Purchased Assets. Each Governmental Authorization listed or required to be listed in Schedule 3.17(b) is valid, in full force and effect, final and non-appealable. Except as set forth in Schedule 3.17(b):

(i) Seller is, and at all times since January 1, 2013, has been, in full compliance with all of the terms and requirements of each Governmental Authorization identified or required to be identified in Schedule 3.17(b);

(ii) no event has occurred or circumstance exists that may (with or without notice or after expiration of any applicable cure period, but other than expiration of the term or effective period of a Governmental Authorization) (A) constitute or result directly or indirectly in a violation of or a failure to comply with any term or requirement of any Governmental Authorization listed or required to be listed in Schedule 3.17(b) or (B) result directly or indirectly in the revocation, withdrawal, suspension, cancellation or termination of, or any modification to, any Governmental Authorization listed or required to be listed in Schedule 3.17(b);

(iii) Seller has not received, at any time since January 1, 2013, any notice or other communication (whether oral or written) from any Governmental Body or any other Person regarding (A) any actual, alleged, possible or potential violation of or failure to comply with any term or requirement of any Governmental Authorization or (B) any actual, proposed, possible or potential revocation, withdrawal, suspension, cancellation, termination of or modification to any Governmental Authorization;

(iv) all applications required to have been filed for the renewal of the Governmental Authorizations listed or required to be listed in Schedule 3.17(b) have been duly filed on a timely basis with the appropriate Governmental Bodies, and all other filings required to have been made with respect to such Governmental Authorizations have been duly made on a timely basis with the appropriate Governmental Bodies, and Seller does not believe there is a reason that such renewed Governmental Authorizations will not be issued in a timely manner without any new conditions that could have a material effect on compliance with such renewed Governmental Authorizations or ownership, use or operation of the Purchased Assets; and

(v) Seller has no reason to believe that any required approval from a Governmental Body for the transfer, issuance or reissuance of any Governmental Authorization required to own, operate or use the Purchased Assets and Leased Real Property upon Closing in compliance with the Legal Requirements will not be granted.

The Governmental Authorizations listed in Schedule 3.17(b) collectively constitute all of the Governmental Authorizations necessary to permit Seller to lawfully conduct and operate the Purchased Assets and its business in the manner in which it currently conducts and operates such business, and has conducted and operated the Purchased Assets such since January 1, 2013, and to permit Seller to own and use its assets in the manner in which it currently owns and uses such assets and has owned and used its assets since January 1, 2013.

(c) Without limiting the generality of the foregoing, except as disclosed in Schedule 3X, (1) Seller is, and at all times within the past five years has been, in compliance, in all material respects, with all applicable International Trade Applicable Laws and Regulations; (2) Seller has not engaged in any activity with any Persons located in or organized under the laws of sanctioned territories that have been designated a state sponsor of terrorism (currently, as the date of this Agreement, Cuba, Iran, North Korea, Sudan, Syria or the Crimea Region of Ukraine) or any Person or entity designated by OFAC on the Specially Designated Nationals and Blocked Persons List or the Foreign Sanctions Evaders List, except insofar as such activities are permitted under International Trade Applicable Laws and Regulations that apply to Seller, and except as licensed by the cognizant Governmental Body; (3) during the past five years, Seller has not submitted a voluntary or mandatory disclosure with respect to, or otherwise become aware of, a violation or potential violation of any International Trade Applicable Laws and Regulations by Seller or initiated any investigation of an actual or potential violation of any International Trade Applicable Laws and Regulations by Seller; (4) Seller has not received any written or other communication from any Government Body that alleges that Seller is not, or may not be, in compliance with, or have, or may have, any Liability under any International Trade Applicable Laws and Regulations; and (5) Seller has made available to Buyer accurate information concerning each license issued to Seller for the export of any controlled item, software, technology, technical data or defense service — or for the export to (or from) any sanctioned Person or geographical region — that is currently in effect or was in effect at any time within the last five years.

3.18LEGAL PROCEEDINGS; ORDERS

(a) Except as set forth in Schedule 3.18(a), there is no pending or, to Seller's Knowledge, threatened Proceeding:

(i) by or against Seller or involving the Business or the Purchased Assets; or

(ii) that has been commenced against Seller and that challenges, or that may have the effect of preventing, delaying, making illegal or otherwise interfering with, any of the Contemplated Transactions.

To the Knowledge of Seller, no event has occurred or circumstance exists that is reasonably likely to give rise to or serve as a basis for the commencement of any such Proceeding. Seller has made available to Buyer copies of all pleadings, correspondence and other documents relating to each Proceeding listed in Schedule 3.18(a). There are no Proceedings listed or required to be listed in Schedule 3.18(a) that would have a Material Adverse Effect.

(b) Except as set forth in Schedule 3.18(b):

(i) there is no Order to which Seller, its Business or any of the Purchased Assets is subject; and

(ii) no officer, director, agent or employee of Seller is subject to any Order that prohibits such officer, director, agent or employee from engaging in or continuing any conduct, activity or practice relating to the Business.

(c) Except as set forth in Schedule 3.18(c):

(i) Seller is, and, at all times since January 1, 2013, has been in compliance with all of the terms and requirements of each Order to which it or any of the Purchased Assets is or has been subject;

(ii) no event has occurred or circumstance exists that is reasonably likely to constitute or result in (with or without notice or lapse of time) a violation of or failure to comply with any term or requirement of any Order to which Seller or any of the Purchased Assets is subject; and

(iii) Seller has not received, at any time since January 1, 2013, any notice or other communication (whether oral or written) from any Governmental Body or any other Person regarding any actual, alleged, possible or potential violation of, or failure to comply with, any term or requirement of any Order to which Seller or any of the Purchased Assets is or has been subject.

3.19ABSENCE OF CERTAIN CHANGES AND EVENTS

Except as set forth in Schedule 3.19, since the date of the Interim Balance Sheet, Seller has conducted its Business only in the Ordinary Course of Business and there has not been any:

(a) change in Seller's authorized or issued capital stock, grant of any stock option or right to purchase shares of capital stock of Seller or issuance of any security convertible into such capital stock;

(b) amendment to the Governing Documents of Seller;

(c) payment (except in the Ordinary Course of Business) or increase by Seller of any bonuses, salaries or other compensation to any shareholder, director, officer, employee or independent contractor or entry into any employment, severance or similar Contract with any director, officer, employee or independent contractor;

(d) adoption of, amendment to or increase in the payments to or benefits under, any Employee Plan;

(e) amendment of, or any change to any Contract with any third party governing the administration of any Employee Plan;

(f) material damage to or destruction or loss of any tangible Purchased Asset, whether or not covered by insurance;

(g) entry into, termination of or receipt of notice of termination of (i) any license, distributorship, dealer, sales representative, joint venture, credit or similar Contract to which Seller is a party, or (ii) any Contract or transaction involving a total remaining commitment by Seller of at least $50,000 other than Contracts or transactions relating to the purchase of inventory or supplies or the sale of products in the Ordinary Course of Business;

(h) sale (other than sales of Inventories in the Ordinary Course of Business), lease or other disposition of any Purchased Asset or property of Seller (including the Intellectual Property Assets) or the creation of any Encumbrance on any Purchased Asset;

(i) cancellation or waiver of any claims or rights with a value to Seller in excess of $50,000;

(j) statement by or notice from any customer or supplier of an intention to discontinue or change the terms of its relationship with Seller;

(k) material change in the accounting methods used by Seller; or

(l) Contract by Seller to do any of the foregoing.

3.20CONTRACTS; NO DEFAULTS

(a) Schedule 3.20(a) contains an accurate and complete list, and Seller has made available to Buyer accurate and complete copies, of:

(i) each Seller Contract that involves performance of services or delivery of goods or materials by Seller of an amount or value in excess of $50,000;

(ii) each Seller Contract that involves performance of services or delivery of goods or materials to Seller of an amount or value in excess of $50,000;

(iii) each Seller Contract that was not entered into in the Ordinary Course of Business and that involves expenditures or receipts of Seller in excess of $10,000;

(iv) each Seller Contract affecting the ownership of, leasing of, title to, use of or any leasehold or other interest in any real or personal property (except personal property leases and installment and conditional sales agreements having a value per item or aggregate payments of less than $25,000 and with a term of less than one year);

(v) each Seller Contract with any labor union or other employee representative of a group of employees relating to wages, hours and other conditions of employment;

(vi) each Seller Contract with any independent third party relating to the delivery or administration of any employee benefits to Seller's employees;

(vii) each Contract which is in respect of the employment, compensation or indemnification of a director or executive officer of Seller;

(viii) each Seller Contract (however named) involving a sharing of profits, losses, costs or liabilities by Seller with any other Person;

(ix) each Seller Contract containing covenants that in any way purport to restrict Seller's business activity or limit the freedom of Seller to engage in any line of business or to compete with any Person;

(x) each Seller Contract providing for payments to or by any Person based on sales, purchases or profits, other than direct payments for goods;

(xi) each power of attorney of Seller that is currently effective and outstanding;

(xii) each Seller Contract entered into other than in the Ordinary Course of Business that contains or provides for an express undertaking by Seller to be responsible for consequential damages;

(xiii) each Seller Contract for capital expenditures in excess of $25,000;

(xiv) each Seller Contract not denominated in U.S. dollars in excess of $25,000;

(xv) each written warranty, guaranty and/or other similar undertaking with respect to contractual performance extended by Seller other than in the Ordinary Course of Business;

(xvi) each Contract that provides for the indemnification of any Person or the assumption of any Tax, environmental or other Liability of any Person;

(xvii) each Contract that involves, as parties thereto, Seller, on the one hand, and any of the directors, officers or other Affiliates of Seller or any Person that owns or controls more than ten percent of any class of capital stock or other equity interest of Seller and each such Person's respective directors, officers or other Affiliates, on the other hand;

(xviii) each Contract that establishes or relates to a joint venture or partnership involving Seller;

(xix) each Contract that constitutes a mortgage, indenture, note, installment obligation or other instrument relating to the borrowing of money or under which it has imposed a security interest on any of the Purchased Assets;

(xx) each Contract which constitutes a guarantee of any obligation of another Person;

(xxi) each other Contract that is material to the Purchased Assets or the operation of the Business and not previously disclosed pursuant to this Section 3.20(a);

(xxii) each Real Property Lease (each of which are deemed to constitute Seller Contract for the purposes of this Agreement); and

(xxiii) each material amendment, supplement and modification (whether oral or written) in respect of any of the foregoing.

(b) Except as set forth in Schedule 3.20(b), no Shareholder has or may acquire any rights under any Contract that relates to the Business or any of the Purchased Assets.

(c) Except as set forth in Schedule 3.20(c):

(i) each Assigned Contract is in full force and effect and is valid and enforceable in accordance with its terms; and

(ii) each Assigned Contract is assignable by Seller to Buyer without the consent of any other Person.

(d) Except as set forth on Schedule 3.20(d):

(i) Seller is, and has been, in compliance with all applicable terms and requirements of each Seller Contract;

(ii) to the Knowledge of Seller each other Person that has or had any obligation or liability under any Seller Contract is, and has been, in full compliance with all applicable terms and requirements of such Contract;

(iii) to the Knowledge of Seller no event has occurred or circumstance exists that (with or without notice or after the expiration of any applicable cure period) may contravene, conflict with or result in a Breach of, or give Seller or other Person the right to declare a default or exercise any remedy under, or to accelerate the maturity or performance of, or payment under, or to cancel, terminate or modify, any Seller Contract;

(iv) no event has occurred or circumstance exists under or by virtue of any Contract that (with or without notice or after the expiration of any applicable cure period) would cause the creation of any Encumbrance affecting any of the Purchased Assets; and

(v) Seller has not given to or received from any other Person any notice or other communication (whether oral or written) regarding any actual, alleged, possible or potential violation or Breach of, or default under, any Assigned Contract.

(e) There are no renegotiations of, attempts to renegotiate or outstanding rights to renegotiate any material amounts paid or payable to Seller under current or completed Contracts with any Person having the contractual or statutory right to demand or require such renegotiation and no such Person has made written demand for such renegotiation.

(f) Each Contract relating to the sale, design, manufacture or provision of products or services by Seller has been entered into in the Ordinary Course of Business of Seller and has been entered into without the commission of any act alone or in concert with any other Person, or any consideration having been paid or promised, that is or would be in violation of any Legal Requirement.

3.21INSURANCE

(a) Schedule 3.21(a) sets forth (i) a true and complete list of all current policies or binders of fire, liability, product liability, umbrella liability, real and personal property, workers' compensation, vehicular, fiduciary liability and other casualty and property insurance maintained by Seller or its Affiliates and relating to the Business, the Purchased Assets or the Assumed Liabilities (collectively, the "Insurance Policies"); (ii) any (A) self-insurance arrangement of Seller, including any reserves established thereunder, (B) any Contract or arrangement, other than the Insurance Policies, for the transfer or sharing of any risk of a nature typically covered by insurance to which Seller is a party, and (C) all obligations of Seller to provide insurance coverage to third parties (for example, under Leases or service agreements) and identifies the policy under which such coverage is provided; and (iii) with respect to the Business, the Purchased Assets or the Assumed Liabilities, a list of all pending claims and the claims history for Seller since December 31, 2012. Except as set forth in Schedule 3.21(a), there are no claims related to the Business, the Purchased

Assets or the Assumed Liabilities pending under any such Insurance Policies as to which coverage has been questioned, denied or disputed or in respect of which there is an outstanding reservation of rights.

(b) Neither Seller nor any of its Affiliates has received any written notice of cancellation of, premium increase with respect to, or alteration of coverage under, any of such Insurance Policies. All premiums due on such Insurance Policies have either been paid or, if not yet due, accrued. All such Insurance Policies (i) are in full force and effect and enforceable in accordance with their terms (except as the enforceability of any such Insurance Policy may be limited by the insurer's bankruptcy, insolvency, moratorium and other similar Legal Requirements relating to or affecting creditors' rights generally or by general equitable principles); (ii) are provided by carriers who are financially solvent; and (iii) have not been subject to any lapse in coverage. None of Seller or any of its Affiliates is in default under, or has otherwise failed to comply with, in any material respect, any provision contained in any such Insurance Policy. True and complete copies of the Insurance Policies have been made available to Buyer.

3.22ENVIRONMENTAL MATTERS

(a) Seller is, and at all times since January 1, 2013, has been, in full compliance in all material respects with, and has not been and is not in material violation of or materially liable under, any Environmental Law or Occupational Safety and Health Law. Seller does not expect, nor has it nor any other Person for whose conduct it may be held to be responsible received, any actual or threatened order, notice or other communication from (i) any Governmental Body or private citizen acting in the public interest or (ii) the current or prior owner or operator of any Facilities, of any actual or potential violation or failure to comply with any Environmental Law or Occupational Safety and Health Law, or of any actual or threatened obligation to undertake or bear the cost of any Environmental, Health and Safety Liabilities with respect to any Facility or other property or asset (whether real, personal or mixed) in which Seller has or had an interest, or with respect to any property or Facility at or to which Hazardous Materials were generated, manufactured, refined, transferred, imported, used or processed by Seller or any other Person for whose conduct it is or may be held responsible, or from which Hazardous Materials have been transported, treated, stored, handled, transferred, disposed, recycled or received.

(b) There are no pending or, to the Knowledge of Seller, threatened claims, Encumbrances, or other restrictions of any nature resulting from any Environmental, Health and Safety Liabilities or arising under or pursuant to any Environmental Law or Occupational Safety and Health Law with respect to or affecting any Facility or any other property or asset (whether real, personal or mixed) in which Seller has or had an interest.

(c) Seller has no Knowledge of and does not expect, nor has it or any other Person for whose conduct it may be held responsible received, any citation, directive, inquiry, notice, Order, summons, warning or other communication that relates to Hazardous Activity, Hazardous Materials, or any alleged, actual, or potential violation or failure to comply with any Environmental Law or Occupational Safety and Health Law, or of any alleged, actual, or potential obligation to undertake or bear the cost of any Environmental, Health and Safety Liabilities with respect to any Facility or property or asset (whether real, personal or mixed) in which Seller has or had an interest, or with respect to any property or facility to which Hazardous Materials generated, manufactured, refined, transferred, imported, used or processed by Seller or any other Person for whose conduct it is or may be held responsible, have been transported, treated, stored, handled, transferred, disposed, recycled or received.

(d) Neither Seller nor any other Person for whose conduct it is or may be held responsible has any Environmental, Health and Safety Liabilities with respect to any Facility or with respect to any other property or asset (whether real, personal or mixed) in which Seller (or any predecessor) has or had an interest or at any property geologically or hydrologically adjoining any Facility or any such other property or asset.

(e) There are no Hazardous Materials present on or in the Environment at any Facility or at any geologically or hydrologically adjoining property, including any Hazardous Materials contained in barrels, aboveground or underground storage tanks, landfills, land deposits, dumps, equipment (whether movable or fixed) or other containers, either temporary or permanent, and deposited or located in land, water, sumps, or any other part of the Facility or such adjoining property, or incorporated into any structure therein or thereon. Neither Seller nor any Person for whose conduct it is or may be held responsible, or to the Knowledge of Seller, any other Person, has permitted or conducted, or is aware of, any Hazardous Activity conducted with respect to any Facility or any other property or assets (whether real, personal or mixed) in which Seller has or had an interest except in full compliance in all material respects with all applicable Environmental Laws.

(f) There has been no Release or Threat of Release of any Hazardous Materials at or from any Facility or at any other location where any Hazardous Materials were generated, manufactured, refined, transferred, produced, imported, used, or processed from or by any Facility, or from any other property or asset (whether real, personal or mixed) in which Seller has or had an interest, or any geologically or hydrologically adjoining property, whether by Seller or any other Person.

(g) Seller has made available to Buyer true and complete copies and results of any reports, studies, analyses, tests, or monitoring possessed or initiated by Seller pertaining to Hazardous Materials or Hazardous Activities in, on, or under the Facilities, or concerning compliance, by Seller or any other Person for whose conduct it is or may be held responsible, with Environmental Laws or Occupational Safety and Health Laws.

3.23EMPLOYEES

(a) Schedule 3.23(a) contains a complete and accurate list of the following information for each employee, director (other than Ward Council), independent contractor, consultant and agent of Seller, including each employee on leave of absence or layoff status: name; job title; date of hiring or engagement; date of commencement of employment or engagement; current compensation paid or payable and any change in compensation since and including January 1, 2018; sick and vacation leave that is accrued but unused as of October 15, 2018; and additional service time credited for purposes of vesting and eligibility to participate under any Employee Plan, or any other employee or director benefit plan.

(b) No retired employee or director of Seller, and none of their dependents, is receiving benefits from Seller or scheduled to receive benefits from Seller in the future.

(c) Schedule 3.23(c) states the number of employees terminated by Seller since and including January 1, 2018, and contains a complete and accurate list of the following information for each employee of Seller who has been terminated or laid off, or whose hours of work have been reduced by more than 50% by Seller, in the 6 months prior to the date of this Agreement: (i) the date of such termination, layoff or reduction in hours; (ii) the reason for such termination, layoff or reduction in hours; and (iii) the location to which the employee was assigned.

(d) Seller has not violated the Worker Adjustment and Retraining Notification Act (the "WARN Act") or any similar state or local Legal Requirement. During the 90-day period prior to the date of this Agreement, Seller has not terminated any employee(s).

(e) To the Knowledge of Seller no officer, director, agent, employee, consultant, or contractor of Seller is bound by any Contract that purports to limit the ability of such officer, director, agent, employee, consultant, or contractor (i) to engage in or continue or perform any conduct, activity, duties or practice relating to the Business or (ii) to assign to Seller or to any other Person any rights to any invention, improvement, or discovery. No former or current employee of Seller is a party to, or is otherwise bound by, any Contract that in any way adversely affected, affects, or will affect the ability of Seller or Buyer to conduct the Business as heretofore carried on by Seller.

(f) To the Knowledge of Seller, as of the date hereof, no salaried employee has any plans to terminate employment with Seller.

3.24LABOR DISPUTES; COMPLIANCE

(a) Seller has complied in all respects with all Legal Requirements relating to employment practices, including Legal Requirements related to the terms and conditions of employment, equal employment opportunity, nondiscrimination, immigration, wages (including the Fair Labor Standards Act), hours, worker classification (including the proper classification of workers as independent contractors or consultants), benefits, collective bargaining and other requirements, the payment of social security and similar Taxes and occupational safety and health. Seller is not delinquent in any material payments to, or on behalf of, any current or former employees or other service providers, including temporary employees and independent contractors, for any services or amounts required to be reimbursed or otherwise paid. Seller is not liable for the payment of any Taxes, fines, penalties, or other amounts, however designated, for failure to comply with any of the foregoing Legal Requirements.

(b) Seller has properly classified all service providers as either (i) employees or independent contractors for purposes of all tax and wage reporting and withholding Legal Requirements and for the purpose of employee benefit plan participation, and (ii) as "exempt" or "non-exempt" from overtime requirements under the Fair Labor Standards Act and other applicable Legal Requirements. No consultant or independent contractor retained by the Seller has made a claim for employee benefits from the Seller.

(c) (i) Seller has not been, and is not now, a party to any collective bargaining agreement or other labor contract; (ii) since and including January 1, 2013, there has not been, there is not presently pending or existing, and to Seller's Knowledge there is not threatened, any strike, slowdown, picketing, work stoppage or employee grievance process involving Seller; (iii) no event has occurred or circumstance exists that could provide the basis for any work stoppage or other labor dispute; (iv) there is not pending or, to Seller's Knowledge, threatened against or affecting Seller any Proceeding relating to the alleged violation of any Legal Requirement pertaining to labor relations or employment matters, including any charge or complaint filed with the National Labor Relations Board or any comparable Governmental Body, and there is no organizational activity or other labor dispute against or

affecting Seller or the Business; (v) no application or petition for an election of or for certification of a collective bargaining agent is pending; (vi) no grievance or arbitration Proceeding exists that would have a Material Adverse Effect; (vii) there is no lockout of any employees by Seller, and no such action is contemplated by Seller; (viii) there are no pending or, to Seller's Knowledge, threatened unresolved claims, charges, or employment-related suits or controversies, complaints or proceedings of any kind against or involving Seller before the Equal Employment Opportunity Commission or other similar Governmental Body or adjudicative entity; (ix) there are no outstanding charges or orders against or involving Seller under occupational health and safety legislation with respect to any employees and all levies and penalties made against Seller pursuant to workers' compensation or workplace safety insurance that were required to be paid before the date hereof with respect to employees have been paid; and (x) Seller is not subject to any judgments, decrees, conciliation agreements, or settlement agreements concerning employment-related matters.

(d) Seller has not received written or other information to indicate that any of its employment practices is currently being audited or is under threat to be audited by any Governmental Body.

3.25INTELLECTUAL PROPERTY ASSETS

(a) Schedule 3.25(a) contains a correct, current and complete list of: (i) all Intellectual Property Registrations, specifying as to each, as applicable: the title, mark, or design; the jurisdiction by or in which it has been issued, registered or filed; the patent, registration or application serial number; the issue or registration date, the filing date; and the current status (*e.g.*, abandoned, expired, in use, etc.); (ii) all material unregistered Trademarks included in the Intellectual Property Assets; and (iii) all proprietary Software included in the Intellectual Property Assets. All required filings and fees related to the Intellectual Property Registrations have been timely filed with and paid to the relevant Governmental Authorities and authorized registrars, and all Intellectual Property Registrations are otherwise in good standing. Seller has made available to Buyer true and complete copies of file histories related to all Intellectual Property Registrations that are within the possession or control of Seller. Except as set forth in Schedule 3.25(a), there are no actions that must be taken within 90 days after the Closing Date for the purposes of prosecuting, maintaining, or preserving or renewing any Intellectual Property Registrations, including the payment of any filing, registration, maintenance or renewal fees or the filing of any responses to or with any Governmental Authority, including office actions, documents, applications or certificates. With respect to expired or abandoned patents and patent applications or foreign patent and patent applications listed on Schedule 3.25(a), Seller's representations and warranties in this Section 3.25 are qualified by Seller's Knowledge.

(b) Schedule 3.25(b) contains a correct, current and complete list of all Intellectual Property Agreements, specifying for each the date, title and parties thereto. Seller has made available to Buyer true and complete copies (or in the case of any oral agreements, a complete and correct written description) of all such Intellectual Property Agreements, including all modifications, amendments and supplements thereto and waivers thereunder. Each Intellectual Property Agreement is valid and binding on Seller in accordance with its terms and is in full force and effect except to the extent that enforcement of the rights and remedies created thereby is subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws of general application affecting the rights and remedies of creditors and to general principles of equity (regardless of whether enforceability is considered in a proceeding in equity or at law). Neither Seller nor, to Seller's Knowledge, any other party thereto is, or is alleged to be, in breach of or default under, or has provided or received any notice of breach of, default under, or intention to terminate (including by non-renewal), any Intellectual Property Agreement. No Seller or Seller Affiliate has transferred ownership of any Intellectual Property to a Third Party in the prior 5 years that was material to the Business at the time it was transferred.

(c) Seller is the sole and exclusive legal and beneficial owner of all right, title, and interest in and to the Intellectual Property Registrations and Intellectual Property Assets, free and clear of Encumbrances (it being understood and acknowledged that the foregoing representation and warranty does not constitute a representation and warranty of enforceability of any such Intellectual Property Registrations and Intellectual Property Assets). Except as set forth in Schedule 3.25(c), none of the Intellectual Property Assets will be subject to any Encumbrance as a result of any written agreement or other facts or circumstances existing before the date hereof. No Seller or Seller Affiliate (nor any of their predecessors-in-interest) has granted or agreed to grant, in each case in writing, any option or right to any Person to purchase any subsisting Intellectual Property Asset (in whole or in part) and none of the Intellectual Property Assets is subject to any reversionary interest or other interest created under any written Contract. No Seller or Seller Affiliate (or to the Knowledge of Seller, any predecessor-in-interest) has received any written notice or written claim within the preceding three years challenging the exclusive ownership of any Intellectual Property Assets or suggesting that any Person other than Seller, its Affiliate, or predecessor-in-interest has any claim of legal or beneficial ownership with respect thereto. Seller has the exclusive, unrestricted right to sue for past, present, and future infringement of the Intellectual Property Assets. Seller (and its predecessor-in-interest) have entered into Contracts with each current and former employee in the form attached to Schedule 3.25(c) and has entered into Contracts with each current and former independent contractor who is or was involved in or has contributed to the invention, creation, or development of any Intellectual Property during the course of engagement with or for the benefit of Seller whereby such independent contractor (i) acknowledges Seller's exclusive ownership of all Intellectual Property Assets invented, created or developed by such independent contractor within the scope of his or her engagement with such Seller; (ii) grants to such

Seller a present, irrevocable assignment of any ownership interest such independent contractor may have in or to such Intellectual Property; and (iii) irrevocably waives any right or interest, including any moral rights, regarding such Intellectual Property, to the extent permitted by applicable Legal Requirement. Seller have made available to Buyer true and complete copies of all such Contracts.

(d) Neither the execution, delivery or performance of this Agreement, nor the consummation of the transactions contemplated hereunder, will result in the loss or impairment of or payment of any additional amounts with respect to, nor require the consent of any other Person in respect of, Buyer's right to own or use any Intellectual Property Assets or any Intellectual Property subject to any Intellectual Property Agreement. Immediately after the Closing, Buyer will own all right, title, and interest in and to all Intellectual Property Assets on identical terms and conditions as Seller enjoyed immediately prior to the Closing.

(e) Except as set forth on Schedule 3.25, the Intellectual Property Registrations and Intellectual Property Assets are valid and enforceable and all Intellectual Property Registrations are subsisting and in full force and effect. Seller has taken commercially reasonable steps to maintain and enforce the Intellectual Property Assets and to preserve the confidentiality of all Trade Secrets included in the Intellectual Property Assets, including by requiring all Persons having access thereto to execute binding, written non-disclosure agreements, except such Persons who have served as outside counsel to Seller and who are under a similar duty of confidentiality under applicable law. No Seller or Seller Affiliate has received any written notice or written claim within the preceding three years challenging the validity or enforceability of any Intellectual Property Asset or alleging any misuse of any Intellectual Property Asset. To Seller's Knowledge, there has been no unauthorized use, access by, or disclosure to a Third Party of Trade Secrets within the Intellectual Property Asserts. No source code of any Software within the Intellectual Property Rights has been licensed to a Third Party or provided to a Third Party other than to consultants and contractors performing work on behalf of Seller who are bound by confidentiality obligations of customary scope with respect to such source code. No other Person has the right under a written agreement, contingent or otherwise, to obtain access to or use any source code associated with Software within the Intellectual Property Assets.

(f) The conduct of the Business as currently and formerly conducted, including the use of the Intellectual Property Assets and the Intellectual Property licensed to or for the benefit of Seller under the Intellectual Property Agreements in connection therewith, and the products, processes, and services of the Business have not infringed, misappropriated, or otherwise violated the Intellectual Property or other rights of any Person. The products, processes and services of the Business that are under development or that have not yet been sold or otherwise commercialized as of the Closing Date will not, in the form that they exist as of the Closing Date, infringe, misappropriate or otherwise violate the Intellectual Property or other rights of any Person. Except as set forth on Schedule 3.25(f), to the Knowledge of Seller, no Person has infringed, misappropriated, or otherwise violated any Intellectual Property Assets or the Intellectual Property licensed to or for the benefit of Seller under the Intellectual Property Agreements.

(g) There are no Actions (including any opposition, cancellation, revocation, review, or other post-grant proceeding) settled, pending or, threatened in writing (including in the form of offers to obtain a license), or, to Seller's Knowledge, otherwise threatened (including in the form of offers to obtain a license): (i) alleging any infringement, misappropriation, or other violation of the Intellectual Property of any Person by Seller in the conduct of the Business; (ii) challenging the validity, enforceability, registrability, patentability, or ownership of any Intellectual Property Assets; or (iii) by Seller alleging any infringement, misappropriation, or violation by any Person of any Intellectual Property Assets. Seller is not aware of any facts or circumstances that give rise to any such Action. Seller is not subject to, no Intellectual Property Assets are subject to, and to the Knowledge of Seller no Intellectual Property licensed to or for the benefit of Seller under any Intellectual Property Agreements is subject to, any outstanding or prospective Governmental Order (including any motion or petition therefor) that does or could reasonably be expected to restrict or impair the use, licensing or other exploitation of any Intellectual Property Assets or Intellectual Property licensed to or for the benefit of Seller under any Intellectual Property Agreement. Except as set forth in Schedule 3.25(g), Seller has not, in the past 5 years, received any written notice, written claim, or written indemnification request asserting that any infringement, misappropriation, or violation of any Intellectual Property of a Third Party is or was occurring, including in the form of written offers to Seller or any of its Representatives to take a license under any Patent owned by a Third Party, in each case with respect to the conduct of the Business. Schedule 3.25(g) includes a list of all written notices by or on behalf of Seller to a Third Party in the past 6 years asserting that the Third Party is or was infringing, misappropriating, or violating, or has infringed, misappropriated, or violated any Intellectual Property Asset or Intellectual Property licensed to or for the benefit of Seller under the Intellectual Property Agreements, including in the form of written offers to take a license to any Intellectual Property.

(h) No Open Source Materials have been incorporated into, linked, or used or distributed with any of the Software within the Intellectual Property Assets or any of the Software licensed by or for the benefit of Seller in a manner that requires or conditions the licensing, sale, or distribution of such Software or derivative works thereof on: (i) publication or distribution of source code for such Software or derivative works thereof; (ii) permitting Third Parties to make derivative works thereof; (iii) permitting Third Parties to reverse engineer or replace portions of such Software or derivative works thereof; (iv) the granting of any licenses or

covenants not to sue on any Patents with the Intellectual Property Assets; (v) limiting in any manner the ability to charge fees or otherwise seek compensation in connection with marketing, licensing or distribution of such Software or derivative works thereof or (vi) granting the right to decompile, disassemble, reverse engineer, or otherwise derive the source code or underlying structure of such Software or derivative works thereof.

(i) Schedule 3.25(i): (A) identifies each standards-setting organization (including but not limited to ETSI, 3GPP, 3GPP2, TIA, IEEE, IETF, and ITU-R), university or industry body, consortium, other multi-party special interest group and any other collaborative or other group in which Seller or any of its Affiliates is currently participating, or in which Seller or any of its Affiliates have participated in the past or applied for future participation in, including any of the foregoing that may be organized, funded, sponsored, formed or operated, in whole or in part, by any Governmental Authority, in all cases, to the extent related to any Intellectual Property Asset (each a "Standards Body"); and (B) sets forth a listing and description of the membership agreements and other Contracts, bylaws, policies, rules and similar materials relating to such Standards Bodies, to which Seller or any of its Affiliates is bound (collectively, "Standards Agreements"). True, complete and correct copies of all Standards Agreements have been made available to the Buyer. Neither Seller nor any of its Affiliates is bound by, or has agreed to be bound by, any Contract (including any written licensing commitment), bylaw, policy, or rule of any Person that requires or purports to require Seller or any of its Affiliates (or, following the Closing Date, Buyer or any of its Affiliates) to contribute, disclose or license any Intellectual Property to such Person or its other members. Seller has not made any written Patent disclosures to any Standards Body. Seller are in material compliance with all Standards Agreements that relate to the Intellectual Property Assets. Seller is not engaged in any material dispute with any Standards Body with respect to any Intellectual Property Asset or with any Third Parties with respect to such Seller's conduct with respect to any Standards Body.

(j) All Software that constitutes Intellectual Property Assets is substantially free of any material defects, bugs and errors, and does not contain any disabling software, code or instructions, spyware, Trojan horses, worms, viruses or other software routines that permit or cause unauthorized access to, or disruption, impairment, disablement or destruction of, Software, data, computer systems, networks, or other or other devices or materials.

(k) Except as set forth on Schedule 3.25(k): (i) the Intellectual Property Assets constitute all of the material Intellectual Property owned by Seller that relates to, is used or held for use in or necessary for the Business as of the Closing Date and as planned to be conducted as of the Closing Date; and (ii) the Intellectual Property Assets, together with the Intellectual Property licensed to or for the benefit of Seller under any Intellectual Property Agreements and Standard Licenses, constitute all of the Intellectual Property in which Seller has any rights or interest that relates to, is used or held for use in or necessary for the Business as of the Closing Date and as planned to be conducted as of the Closing Date. No Seller Affiliate (other than as identified on Schedule 3.25(a)) owns, directly or indirectly, or has any interest (including but not limited to license-based interests) in any Intellectual Property Asset or other Intellectual Property that relates to, is used or held for use in, or is necessary for the Business.

(l) No funding or facilities of any Governmental Authority, or funding or facilities of a university, college, other educational institution or research center, was used in the development of any of the Intellectual Property Assets.

3.26DATA PRIVACY AND SECURITY

Seller has (a) complied with all Data Privacy and Security Laws and other applicable Legal Requirements relating to data privacy, data protection and data security, including with respect to the collection, storage, transmission, transfer (including cross-border transfers), disclosure, destruction and use of Personally Identifiable Information; and (b) taken commercially reasonable measures to ensure that all data and information owned or held by Seller (including any Personally Identifiable Information) (collectively "Seller Data") is protected against loss, damage and unauthorized access, use, modification or other misuse. To Seller's Knowledge, there has been no loss, damage or unauthorized access, use, modification or other misuse of Seller Data. No Person has provided any notice, made any claim or commenced any Proceeding with respect to loss, damage or unauthorized access, use, modification or other misuse of Seller Data or alleging a violation of any Data Privacy and Security Laws and, to Seller's Knowledge, there is no reasonable basis for any such notice, claim or Proceeding.

3.27CERTAIN BUSINESS PRACTICES

Neither Seller nor any of its directors, officers, and employees have engaged, directly or indirectly, in any activity in violation of (i) the Foreign Corrupt Practices Act of 1977, as amended or any other similar Legal Requirement which makes unlawful payments to Governmental Authorities or international non-governmental agencies and their employees in exchange for favorable treatment of benefits not otherwise available but for such payments, or (ii) any local anti-corruption and anti-bribery Legal Requirements, in each case, in jurisdictions in which Seller is operating (collectively, "Anti-Bribery Laws"). Seller has not received any written or oral notice that alleges that Seller or any of its Representatives, distributors or contractors is in violation of, or has any liability under, the Anti-Bribery Laws. Seller has not been or currently is not under any administrative, civil or criminal investigation

or indictment and is not party to any Proceeding involving alleged false statements, false claims or other improprieties relating to Seller's non-compliance with the Anti-Bribery Laws.

3.28RELATIONSHIPS WITH RELATED PERSONS

Except as disclosed in Schedule 3.28, neither Seller nor any Shareholder nor any Related Person of any of them has, or since January 1, 2015, has had, any interest in any property (whether real, personal or mixed and whether tangible or intangible) used in or pertaining to Seller's Business. Neither Seller nor any Shareholder nor any Related Person of any of them owns, or since January 1, 2015, has owned, of record or as a beneficial owner, an equity interest or any other financial or profit interest in any Person that has (a) had business dealings or a material financial interest in any transaction with Seller other than business dealings or transactions disclosed in Schedule 3.28, each of which has been conducted in the Ordinary Course of Business with Seller at substantially prevailing market prices and on substantially prevailing market terms or (b) engaged in a Competing Business in any market presently served by Seller, except for ownership of less than two percent (2%) of any class of the securities of any Competing Business that is listed on any national or regional securities exchange or has been registered under Section 12(g) of the Exchange Act. Except as set forth in Schedule 3.28, neither Seller nor any Shareholder nor any Related Person of any of them is a party to any Contract with, or has any claim or right against, Seller.

3.29BROKERS OR FINDERS

Neither Seller nor any of its Representatives have incurred any obligation or liability, contingent or otherwise, for brokerage or finders' fees or agents' commissions or other similar payments in connection with the sale of the Business or the Purchased Assets or the Contemplated Transactions.

3.30SOLVENCY

Immediately after giving effect to the Contemplated Transactions, Seller shall be solvent and shall: (a) be able to pay its debts as they become due; (b) own property that has a fair saleable value greater than the amounts required to pay its debts (including a reasonable estimate of the amount of all contingent liabilities); and (c) have adequate capital to carry on its business. No transfer of property is being made and no obligation is being incurred in connection with the Contemplated Transactions with the intent to hinder, delay or defraud either present or future creditors of Seller. In connection with the Contemplated Transactions, Seller has not incurred, nor plans to incur, debts beyond its ability to pay as they become absolute and matured.

3.31CUSTOMERS

Schedule 3.31 sets forth a true, complete and correct list of the 20 largest customers of Seller by dollar volume of sales for fiscal years 2015, 2016 and 2017, and the 2018 fiscal year-to-date. Except as set forth in Schedule 3.31, Seller has not received written or oral notice from any customer identified in the list for the 2018 fiscal year-to-date set forth in Schedule 3.31 to the effect that any such customer will stop, or materially decrease the rate of, buying products or services from the Seller.

3.32SUPPLIERS

Schedule 3.32 sets forth a true, complete and correct list of the 20 largest suppliers of the Seller by dollar volume of purchases for fiscal years 2015, 2016 and 2017, and the 2018 fiscal year-to-date. Except as set forth in Schedule 3.32, since December 31, 2017, Seller has not received written or oral notice from any supplier identified in the list for the 2018 fiscal year-to-date set forth in Schedule 3.32 to the effect (i) that any such supplier will stop, or materially decrease the rate of, supplying materials, products or services to Seller or increase the price for such materials, products or services by more than 5% or (ii) that the payment terms applicable to such suppliers as of the date hereof are to be materially and adversely changed.

3.33PRODUCT WARRANTIES; PRODUCT LIABILITY

(a) Except as set forth in Schedule 3.33, there are no written or oral warranties with respect to the products sold and/or services conducted by the Seller within the past three (3) years. Schedule 3.33 sets forth (i) the aggregate amount of all costs incurred by Seller with respect to warranty claims, product liability claims and recalls that have occurred since July 2017, (ii) a list of all warranty claims or product liability and recalls that have resulted in Seller incurring costs in excess of $5,000 or more since July 2017, and (iii) a list of all pending or, to the Knowledge of Seller, threatened warranty claims or product liability claims, in each case, that assert damages or claims in excess of $5,000, or any recalls. The warranty reserve for products sold, shipped or delivery by or on behalf of the Seller on or prior to the Closing Date is in an amount adequate and sufficient to cover any liabilities of Seller pursuant to any such warranties provided in connection with any products of Seller shipped, distributed or delivered by or on behalf of Seller on or prior to the Closing Date.

3.34DISCLOSURE

No representation or warranty or other statement made by Seller in this Agreement, the Disclosure Schedules hereto, or any certificate or document delivered pursuant to Section 2.7(c) or to be furnished to Buyer pursuant to this Agreement contains any untrue statement or omits to state a material fact necessary to make any of them, in light of the circumstances in which it was made, not misleading.

3.35NO OTHER REPRESENTATIONS OR WARRANTIES

Buyer acknowledges that Seller has not made and is not making any representations or warranties whatsoever regarding the subject matter of this Agreement, express or implied, except as expressly set forth in a Transaction Document, and it is not relying and has not relied on any representations or warranties whatsoever regarding the subject matter of this Agreement, express or implied, except for representations and warranties expressly set forth in a Transaction Document.

4. Representations and Warranties of Buyer

Buyer represents and warrants to Seller as follows:

4.1ORGANIZATION AND GOOD STANDING

Buyer is a corporation duly organized, validly existing and in good standing under the laws of the Commonwealth of Virginia, with full corporate power and authority to conduct its business as it is now conducted.

4.2AUTHORITY; NO CONFLICT

(a) This Agreement constitutes the legal, valid and binding obligation of Buyer, enforceable against Buyer in accordance with its terms. Upon the execution and delivery by Buyer of the other Transaction Documents to be executed or delivered by Buyer at Closing (collectively, the "Buyer's Closing Documents"), each of the Buyer's Closing Documents will constitute the legal, valid and binding obligation of Buyer, enforceable against Buyer in accordance with its respective terms, except as such enforcement may be limited by Equitable Exceptions. Buyer has the absolute and unrestricted right, power and authority to execute and deliver this Agreement and the Buyer's Closing Documents and to perform its obligations under this Agreement and the Buyer's Closing Documents, and such action has been duly authorized by all necessary corporate action.

(b) Neither the execution and delivery of this Agreement by Buyer nor the consummation or performance of any of the Contemplated Transactions by Buyer will give any Person the right to prevent, delay or otherwise interfere with any of the Contemplated Transactions.

Buyer is not and will not be required to obtain any material Consent from any Person in connection with the execution and delivery of this Agreement or the consummation or performance of any of the Contemplated Transactions.

4.3CERTAIN PROCEEDINGS

No Proceeding has been commenced against Buyer that challenges, or may have the effect of preventing, delaying, making illegal or otherwise interfering with, any of the Contemplated Transactions.

4.4BROKERS OR FINDERS

Except as set forth in Schedule 4.4, neither Buyer nor any of its Representatives have incurred any obligation or liability, contingent or otherwise, for brokerage or finders' fees or agents' commissions or other similar payment in connection with the Contemplated Transactions.

4.5SUFFICIENCY OF FUNDS

As of the date hereof, Buyer has cash available that is sufficient to enable it to make payment of the Purchase Price at Closing and consummate the Contemplated Transactions.

5. Covenants of Seller Prior to Closing

5.1ACCESS AND INVESTIGATION

(a) Between the date of this Agreement and the Closing Date, and upon reasonable advance notice received from Buyer, Seller shall (a) afford Buyer and its Representatives and prospective lenders and their Representatives (collectively, "Buyer Group")

access to Seller's personnel, properties, Contracts, Governmental Authorizations, books and Records and other documents and data, such rights of access to be exercised in a manner that does not unreasonably interfere with the operations of Seller and that minimizes potential disruption among employees, suppliers and customers; (b) furnish Buyer Group with access to copies of all such Contracts, Governmental Authorizations, books and Records and other existing documents and data as Buyer may reasonably request; (c) furnish Buyer Group with such additional financial, operating and other relevant data and information as Buyer may reasonably request; and (d) otherwise cooperate and assist, to the extent reasonably requested by Buyer, with Buyer's investigation of the properties, assets and financial condition related to Seller.

5.2OPERATION OF THE BUSINESS OF SELLER

Between the date of this Agreement and the Closing, Seller shall:

(a) conduct its Business only in the Ordinary Course of Business, except that Seller may take actions necessary or advisable to comply with its obligations under this Agreement and may make payments against any Liabilities that would otherwise be Retained Liabilities after Closing;

(b) except as otherwise requested by Buyer in writing, and without making any commitment on Buyer's behalf, use its Best Efforts in the Ordinary Course of Business to preserve intact its current business organization, keep available the services of its officers, employees and agents and maintain its relations and good will with suppliers, customers, landlords, creditors, employees, agents and others having business relationships with it;

(c) confer with Buyer prior to implementing operational decisions of a material and significant nature, to the extent allowable under law;

(d) otherwise report periodically to Buyer concerning the status of its Business, operations and finances;

(e) make no material changes in management personnel without prior consultation with Buyer;

(f) maintain the Purchased Assets and the Leased Real Property in a state of repair and condition that complies with Legal Requirements (and, as applicable, each Real Property Lease) in the Ordinary Course of Business;

(g) keep in full force and effect, without amendment, all material rights relating to the Business and the Purchased Assets;

(h) comply with all Legal Requirements and contractual obligations applicable to the Business and the Purchased Assets;

(i) continue in full force and effect the insurance coverage under the Insurance Policies or substantially equivalent policies;

(j) except as required to comply with ERISA or to maintain qualification under Section 401(a) of the Code or except as set forth in this Agreement, not amend, modify or terminate any Employee Plan without the express written consent of Buyer, and except as required under the provisions of any Employee Plan, not make any contributions to or with respect to any Employee Plan without the express written consent of Buyer, provided that Seller shall contribute that amount of cash to each Employee Plan necessary to fully fund all of the benefit liabilities of such Employee Plan on a plan-termination basis as of the Closing Date;

(k) cooperate with Buyer and assist Buyer in identifying the Governmental Authorizations required by Buyer to operate the Business from and after the Closing Date and either transferring existing Governmental Authorizations of Seller to Buyer, where permissible, or obtaining new Governmental Authorizations for Buyer; and

(l) maintain all books and Records of Seller relating to Seller's Business in the Ordinary Course of Business.

5.3NEGATIVE COVENANT

Except as otherwise expressly permitted or contemplated herein, between the date of this Agreement and the Closing Date, Seller shall not, without the prior written Consent of Buyer, (a) take any affirmative action, or fail to use its Best Efforts in the Ordinary Course of Business to take any reasonable action within its control, as a result of which any of the changes or events listed in Sections 3.15 or 3.19 would be likely to occur; (b) make any modification to any material Contract or Governmental Authorization; (c) fail to use its Best Efforts in the Ordinary Course of Business to not allow the levels of raw materials, supplies or other materials included in the Inventories to vary materially from the levels customarily maintained; or (d) enter into any compromise or settlement of any Proceeding relating to the Purchased Assets, the Business or the Assumed Liabilities.

5.4REQUIRED APPROVALS

Seller shall use Best Efforts to obtain all Material Consents. As promptly as practicable after the date of this Agreement, Seller shall make all filings required by Legal Requirements to be made by it in order to consummate the Contemplated Transactions. Seller also shall cooperate with Buyer and its Representatives with respect to all filings that Buyer elects to make or, pursuant to Legal Requirements, shall be required to make in connection with the Contemplated Transactions.

5.5NOTIFICATION

Between the date of this Agreement and the Closing, Seller shall promptly notify Buyer in writing if it becomes aware of (a) any fact or condition that causes or constitutes a Breach of any of Seller's representations and warranties made as of the date of this Agreement or (b) the occurrence after the date of this Agreement of any fact or condition that would or be reasonably likely to (except as expressly contemplated by this Agreement) cause or constitute a Breach of any such representation or warranty had that representation or warranty been made as of the time of the occurrence of, or Seller's discovery of, such fact or condition. Between the date of this Agreement and the Closing, Seller also shall promptly notify Buyer of the occurrence of any Breach of any covenant of Seller in this Article 5 or of the occurrence of any event that may make the satisfaction of the conditions in Article 7 impossible or unlikely. Buyer's receipt of information pursuant to this Section 5.5 shall not operate as a waiver or otherwise affect any representation, warranty or agreement given or made by Seller in this Agreement and shall not be deemed to amend or supplement the Disclosure Schedules, provided that from time to time prior to the Closing, Seller shall promptly supplement or amend the Disclosure Schedules hereto with respect to any matter hereafter arising that, if existing or occurring at the date of this Agreement, would have been required to be set forth or described in such sections of the Disclosure Schedules. Any disclosure in any such supplement or amendment shall not be deemed to have cured any inaccuracy in or breach of any representation or warranty contained in this Agreement, including for purposes of the indemnification or termination rights contained in this Agreement or of determining whether or not the conditions set forth in Article 7 have been satisfied.

5.6NO NEGOTIATION

Until such time as this Agreement shall be terminated pursuant to Section 9.1, Seller shall not directly or indirectly solicit, initiate, encourage or entertain any inquiries or proposals from, discuss or negotiate with, provide any nonpublic information to, consider the merits of any inquiries or proposals from any Person (other than Buyer), or enter into any written or oral agreement or understanding with any Person (other than Buyer) relating to any business combination transaction involving Seller, including the sale of Seller's stock, the merger or consolidation of Seller or the sale of Seller's Business or any of the Purchased Assets (other than in the Ordinary Course of Business), or otherwise enter into any written or oral agreement, arrangement or understanding requiring Seller to abandon, terminate or fail to consummate the Contemplated Transactions. Seller shall notify Buyer of any such inquiry or proposal within 24 hours of receipt or awareness of the same by Seller.

5.7BEST EFFORTS

Seller shall use its Best Efforts to cause the conditions in Article 7 to be satisfied.

5.8PAYMENT OF LIABILITIES

Seller shall pay or otherwise satisfy in the Ordinary Course of Business all of its Liabilities and obligations. Buyer and Seller hereby waive compliance with the bulk-transfer provisions of the Uniform Commercial Code (or any similar law) ("Bulk Sales Laws") in connection with the Contemplated Transactions.

6. Covenants of Buyer Prior to Closing

6.1REQUIRED APPROVALS

As promptly as practicable after the date of this Agreement, Buyer shall make, or cause to be made, all filings required by Legal Requirements to be made by it to consummate the Contemplated Transactions. Buyer also shall cooperate, and cause its Related Persons to cooperate, with Seller (a) with respect to all filings Seller shall be required by Legal Requirements to make and (b) in obtaining all Consents identified in Schedule 3.2(c), provided, however, that Buyer shall not be required to dispose of or make any change to its business, expend any material funds or incur any other burden in order to comply with this Section 6.1.

6.2BEST EFFORTS

Buyer shall use its Best Efforts to cause the conditions in Article 8 to be satisfied.

7. Conditions Precedent to Buyer's Obligation to Close

Buyer's obligation to purchase the Purchased Assets and to take the other actions required to be taken by Buyer at the Closing is subject to the satisfaction, at or prior to the Closing, of each of the following conditions (any of which may be waived by Buyer, in whole or in part):

7.1ACCURACY OF REPRESENTATIONS

The representations and warranties of Seller contained in this Agreement and the other Transaction Documents delivered pursuant hereto shall be true and correct in all respects (in the case of any representation or warranty qualified by materiality) or in all material respects (in the case of any representation or warranty not qualified by materiality) on and as of the date hereof and on and as of the Closing Date with the same effect as though made at and as of such date (except those representations and warranties that address matters only as of a specified date, the accuracy of which shall be determined as of that specified date in all respects).

7.2SELLER'S PERFORMANCE

All of the covenants and obligations that Seller is required to perform or to comply with pursuant to this Agreement at or prior to the Closing (considered collectively), and each of these covenants and obligations (considered individually), including the deliverables set forth in Section 2.7(c), shall have been duly performed and complied with in all material respects.

7.3CONSENTS

Each of the Material Consents shall have been obtained and shall be in full force and effect.

7.4NO INJUNCTION

There shall not be in effect any Legal Requirement or any injunction or other Order that (a) prohibits the consummation of the Contemplated Transactions and (b) has been adopted or issued, or has otherwise become effective, since the date of this Agreement.

7.5NO PROCEEDINGS

Since the date of this Agreement, there shall not have been commenced or threatened against Buyer, or against any Related Person of Buyer, any Proceeding (a) involving any challenge to, or seeking Losses or other relief in connection with, any of the Contemplated Transactions or (b) that may have the effect of preventing, delaying, making illegal, imposing limitations or conditions on or otherwise interfering with any of the Contemplated Transactions.

7.6NO CONFLICT

Neither the consummation nor the performance of any of the Contemplated Transactions will, directly or indirectly (with or without notice or lapse of time), contravene or conflict with or result in a violation of or cause Buyer or any Related Person of Buyer to suffer any adverse consequence under (a) any applicable Legal Requirement or Order or (b) any Legal Requirement or Order that has been published, introduced or otherwise proposed by or before any Governmental Body, excluding Bulk Sales Laws.

7.7GOVERNMENTAL AUTHORIZATIONS

Buyer shall have received such Governmental Authorizations as may be identified in Schedule 7.7 as are necessary or desirable to allow Buyer to operate the Purchased Assets from and after the Closing.

7.8NO MATERIAL ADVERSE EFFECT

Since the date of the Balance Sheet, there has not been any Material Adverse Effect, and no event has occurred or circumstance exists that would have a Material Adverse Effect.

8. Conditions Precedent to Seller's Obligation to Close

Seller's obligation to sell the Purchased Assets and to take the other actions required to be taken by Seller at the Closing is subject to the satisfaction, at or prior to the Closing, of each of the following conditions (any of which may be waived by Seller in whole or in part):

8.1ACCURACY OF REPRESENTATIONS

The representations and warranties of Buyer contained in this Agreement and the other Transaction Documents delivered pursuant hereto shall be true and correct in all respects (in the case of any representation or warranty qualified by materiality) or in all material respects (in the case of any representation or warranty not qualified by materiality) on and as of the date hereof and on

and as of the Closing Date with the same effect as though made at and as of such date (except those representations and warranties that address matters only as of a specified date, the accuracy of which shall be determined as of that specified date in all respects).

8.2BUYER'S PERFORMANCE

All of the covenants and obligations that Buyer is required to perform or to comply with pursuant to this Agreement at or prior to the Closing (considered collectively), and each of these covenants and obligations (considered individually), including the deliverables set forth in Section 2.7(d), shall have been performed and complied with in all material respects.

8.3NO INJUNCTION

There shall not be in effect any Legal Requirement or any injunction or other Order that (a) prohibits the consummation of the Contemplated Transactions and (b) has been adopted or issued, or has otherwise become effective, since the date of this Agreement.

8.4NO PROCEEDINGS

Since the date of this Agreement, there shall not have been commenced or threatened against Seller, or against any Related Person of Seller, any Proceeding (a) involving any challenge to, or seeking Losses or other relief in connection with, any of the Contemplated Transactions or (b) that may have the effect of preventing, delaying, making illegal, imposing limitations or conditions on or otherwise interfering with any of the Contemplated Transactions.

8.5NO CONFLICT

Neither the consummation nor the performance of any of the Contemplated Transactions will, directly or indirectly (with or without notice or lapse of time), contravene or conflict with or result in a violation of or cause Seller or any Related Person of Seller to suffer any adverse consequence under (a) any applicable Legal Requirement or Order or (b) any Legal Requirement or Order that has been published, introduced or otherwise proposed by or before any Governmental Body, excluding Bulk Sales Laws.

9. Termination

9.1TERMINATION EVENTS

By notice given at any time prior to the Closing, subject to Section 9.2, this Agreement may be terminated as follows:

(a) by Buyer, if a material Breach of any provision of this Agreement has been committed by Seller, unless such Breach shall be due to a Breach by Buyer, that would give rise to the failure of any of the conditions specified in Article 7 and such Breach has not been cured by Seller within 20 days of Seller's receipt of written notice of such Breach from Buyer;

(b) by Seller, if a material Breach of any provision of this Agreement has been committed by Buyer, unless such Breach shall be due to a Breach by Seller, that would give rise to the failure of any of the conditions specified in Article 8 and such Breach has not been cured by Buyer within 20 days of Buyer's receipt of written notice of such Breach from Seller;

(c) by Buyer, if any of the conditions set forth in Article 7 shall not have been, or if it becomes apparent that any of such conditions will not be, fulfilled by December 31, 2018, unless such failure shall be due to the failure of Buyer to perform or comply with any of the covenants or agreements hereof to be performed or complied with by it prior to the Closing;

(d) by Seller, if any of the conditions set forth in Article 8 shall not have been, or if it becomes apparent that any of such conditions will not be, fulfilled by December 31, 2018, unless such failure shall be due to the failure of Seller to perform or comply with any of the covenants or agreements hereof to be performed or complied with by it prior to the Closing; or

(e) by mutual consent of Buyer and Seller.

9.2EFFECT OF TERMINATION

If this Agreement is terminated pursuant to Section 9.1, all obligations of the parties under this Agreement will terminate, except that the obligations of the parties in this Section 9.2 and Article 12 (the first and second sentences only) and 13 (except for those in Section 13.5) survive. This right to terminate shall be the exclusive remedy of the terminating party, except, the terminating party's right to pursue all legal remedies will survive such termination unimpaired if the termination is pursuant to Section 9.1(a) or (b) and the underlying Breach is due to the non-terminating party's actual fraud or Willful Breach. "Willful Breach" means a Breach that is the consequence of an act or omission by a party with the actual knowledge that the taking of such act or failure to take such act would cause, or would reasonably be expected to cause, a material Breach of this Agreement.

10. Additional Covenants

10.1EMPLOYEES AND EMPLOYEE BENEFITS

(a) Information on Active Employees. For the purpose of this Agreement, the term "Active Employees" shall mean all employees employed on the Closing Date by Seller for its Business who are employed exclusively in Seller's Business as currently conducted, including employees on temporary leave of absence, including family medical leave, military leave, temporary disability or sick leave, but excluding employees on long-term disability leave.

(b) Employment of Active Employees by Buyer.

(i) Buyer shall be given reasonable access to such key employee of Seller as Buyer reasonably identifies for the purpose of discussing employment terms and Buyer shall offer employment effective on the Closing to all or substantially all of the Active Employees of the Seller as of the Closing, except as set forth in Section 10.1(g)(iv). Any such Active Employees of the Seller as of the Closing who accept and continue employment with the Buyer shall be referred to herein as "Transferred Employees".

(ii) Subject to Legal Requirements, Buyer will have reasonable access to the facilities and personnel Records (including performance appraisals, disciplinary actions, grievances and medical Records) of Seller. Access will be provided by Seller upon reasonable prior notice during normal business hours. Effective immediately before the Closing, Seller will terminate the employment of all of the Transferred Employees. Without limiting the generality of the foregoing, Seller shall terminate prior to Closing any express employment agreements with any Active Employees and provide evidence of same to Buyer.

(iii) It is understood and agreed that Buyer's express intent to extend offers of employment as set forth in this Section 10.1 shall not constitute any commitment, Contract or understanding (expressed or implied) of any obligation on the part of Buyer to a post-Closing employment relationship of any fixed term or duration or upon any terms or conditions other than those that Buyer may establish pursuant to individual offers of employment, and any employment offered by Buyer is "at will" and may be terminated by Buyer or by an employee at any time for any reason (subject to any written commitments to the contrary made by Buyer or an employee and Legal Requirements). Nothing in this Agreement shall be deemed to prevent or restrict in any way the right of Buyer to terminate, reassign, promote or demote any of the Transferred Employees after the Closing or to change adversely or favorably the title, powers, duties, responsibilities, functions, locations, salaries, other compensation or terms or conditions of employment of such employees.

(iv) Seller and Buyer agree to cooperate in good faith to determine whether any notification may be required under the WARN Act or any similar state or local Legal Requirement as a result of the Contemplated Transactions and agree to comply with their respective obligations, if any, under the WARN Act and any other similar state or local Legal Requirement.

(c) Salaries and Benefits.

(i) Seller shall be directly responsible for (A) the payment of all wages and other remuneration due to Active Employees with respect to their services as employees of Seller through the close of business on the Closing Date, including any bonus payments and vacation pay attributed to periods prior to the Closing Date; (B) the payment of any termination or severance payments and the provision of health plan continuation coverage in accordance with the requirements of COBRA and Sections 601 through 608 of ERISA.

(ii) Seller shall be directly liable for any claims made or incurred by Active Employees and their beneficiaries under all Employee Plans. For purposes of the immediately preceding sentence, a charge will be deemed incurred, in the case of hospital, medical or dental benefits, when the services that are the subject of the charge are performed and, in the case of other benefits (such as disability or life insurance), when an event has occurred or when a condition has been diagnosed that entitles the employee to the benefit.

(iii) For purposes of Buyer's employee benefit plans, each Transferred Employee will be credited with his or her years of service with the Seller prior to the Closing (including predecessor or acquired entities or any other entities for which the Seller has given credit for prior service), to the same extent as such Transferred Employee was entitled, prior to the Closing, to credit for such service under the corresponding Employee Plan), except (A) for any purpose where service credit for the applicable period is not provided to participants generally, or (B) to the extent such credit would result in a duplication of benefits.

(d) Seller's 401(k) Savings Plans. Seller shall (i) terminate the Micron Optics, Inc. 401(k) Plan (the "401(k) Plan") as soon as practicable, (ii) cause the account balances of all participants in the 401(k) Plan to be fully vested effective immediately prior to the Closing Date; and (iii) take any actions necessary to ensure that the account balances of participants in the 401(k) Plan are distributable from the 401(k) Plan on, or as soon as administratively practicable after, the Closing Date. As of the Closing Date, Buyer shall cover (or cause to be covered) each Transferred Employee under a defined contribution plan qualified under Sections 401(a) and 401(k) of the Code (the "Buyer Plan"). Buyer shall cause each Transferred Employee who (i) was a participant in the 401(k) Plan, (ii) has an account balance under the 401(k) Plan and (iii) is then an employee of Buyer, to be permitted to roll over such account balance (including any outstanding loan) to the Buyer Plan, provided that such rollover is elected by the eligible Transferred Employee before the first anniversary of the Closing Date.

(e) No Transfer of Assets. Seller shall not make any transfer of pension or other employee benefit plan assets to Buyer.

(f) Collective Bargaining Matters, Severance. Buyer will set its own initial terms and conditions of employment for the Transferred Employees and others it may hire, including work rules, benefits and salary and wage structure, all as permitted by law. Buyer is not obligated to assume any collective bargaining agreements under this Agreement. Seller shall be solely liable for any severance payment required to be made to its employees due to the Contemplated Transactions.

(g) General Employee Provisions.

(i) Seller and Buyer shall give any notices required by Legal Requirements and take whatever other actions with respect to the plans, programs and policies described in this Section 10.1 as may be necessary to carry out the arrangements described in this Section 10.1.

(ii) Seller and Buyer shall provide each other with such plan documents and summary plan descriptions, employee data or other information as may be reasonably required to carry out the arrangements described in this Section 10.1.

(iii) If any of the arrangements described in this Section 10.1 are determined by the IRS or other Governmental Body to be prohibited by law, Seller and Buyer shall modify such arrangements to as closely as possible reflect their expressed intent and retain the allocation of economic benefits and burdens to the parties contemplated herein in a manner that is not prohibited by law.

(iv) Seller shall provide Buyer with completed I-9 forms and attachments with respect to all Transferred Employees, except for such employees as Seller certifies in writing to Buyer are exempt from such requirement. While Buyer anticipates extending offers of employment to substantially all of Seller's Active Employees subject to applicable Legal Requirements, Buyer shall have no responsibility to offer employment to any Active Employee for whom an I-9 form has not been furnished.

(v) Buyer shall not have any responsibility, liability or obligation, whether to Active Employees, former employees, their beneficiaries or to any other Person, with respect to any employee benefit plans, practices, programs or arrangements (including the establishment, operation or termination thereof and the notification and provision of COBRA coverage extension) maintained by Seller.

10.2PAYMENT OF ALL TAXES RESULTING FROM SALE OF ASSETS BY SELLER

Except as otherwise contemplated by this Agreement, Seller shall pay in a timely manner all Taxes resulting from or payable in connection with the sale of the Purchased Assets pursuant to this Agreement, regardless of the Person on whom such Taxes are imposed by Legal Requirements.

10.3PAYMENT OF OTHER RETAINED LIABILITIES

In addition to payment of Taxes pursuant to Section 10.2, Seller shall pay, or make adequate provision for the payment, in full all of the Retained Liabilities and other Liabilities of Seller under this Agreement. Without limiting the generality of the foregoing, Seller shall use commercially reasonably efforts to resolve the matters described on Schedule 3X.

10.4CHANGE OF NAME

Within 30 days after the Closing Date, Seller shall amend its Governing Documents and take all other actions necessary to change to change its corporate name from "Micron Optics" to a dissimilar name and shall no longer use, whether directly or indirectly, any name or mark similar to "Micron Optics," except as may be incidental to acting pursuant to Sections 2.9(b) and 10.13.

10.5RESTRICTIONS ON SELLER DISSOLUTION AND DISTRIBUTIONS

Seller shall remain in existence and in good standing in the State of Georgia for at least 24 months following the Closing Date, during which time Seller shall not file for dissolution. Seller shall not be prevented from making dividends or distributions to its shareholders or creditors, including distributions of the Purchase Price; *provided that* such distributions are in accordance with applicable Legal Requirements and this Agreement.

10.6REMOVING EXCLUDED ASSETS

On or before the Closing Date, Seller shall remove all Excluded Assets from the Facilities.

10.7ASSISTANCE IN PROCEEDINGS

(a) Seller will, provided that Buyer shall reimburse Seller's out-of-pocket expenses, cooperate with Buyer and its counsel in the contest or defense of, and make available its personnel and provide any testimony and access to its books and Records in connection with, any Proceeding involving or relating to (a) any Contemplated Transaction or (b) any action, activity, circumstance, condition, conduct, event, fact, failure to act, incident, occurrence, plan, practice, situation, status or transaction on or before the Closing Date involving Seller or its Business..

(b) Seller agrees to assist Buyer, as reasonably requested by Buyer, in the preparation of any required financial statements or other disclosures required by the rules and regulations of the SEC (including Regulation S-X) relating to Seller, including, without limitation, in the preparation of post-Closing financial statements (including pro forma financial statements) and the timely preparation of required SEC reports to be filed or furnished by Buyer. In connection with the foregoing, Seller agrees to provide access to financial and other relevant information, as needed, in order to prepare such required financial statements and make such other disclosures.

10.8NONCOMPETITION, NONSOLICITATION AND NONDISPARAGEMENT

(a) Noncompetition. For a period of 5 years after the Closing Date (the "Restricted Period"), Seller shall not, anywhere in the United States, directly or indirectly invest in, own, manage, operate, finance, control, advise, render services to or guarantee the obligations of any Person engaged in or planning to become engaged in a business that competes with the Business ("Competing Business"), provided, however, that Seller may purchase or otherwise acquire up to (but not more than) 2% of any class of the securities of any Person (but may not otherwise participate in the activities of such Person) if such securities are listed on any national or regional securities exchange or have been registered under Section 12(g) of the Exchange Act.

(b) Nonsolicitation. During the Restricted Period, Seller shall not, directly or indirectly:

(i) solicit the business of any Person who is a customer of Buyer in a manner competitive with the Business;

(ii) cause, induce or attempt to cause or induce any customer, supplier, licensee, licensor, franchisee, employee, consultant or other business relation of Buyer to cease doing business with Buyer, to deal with any competitor of Buyer or in any way interfere with its relationship with Buyer;

(iii) cause, induce or attempt to cause or induce any customer, supplier, licensee, licensor, franchisee, employee, consultant or other business relation of Seller on the Closing Date or within the year preceding the Closing Date to cease doing business with Buyer, to deal with any competitor of Buyer or in any way interfere with its relationship with Buyer; or

(iv) hire, retain or attempt to hire or retain any employee or independent contractor of Buyer or in any way interfere with the relationship between Buyer and any of its employees or independent contractors.

(c) Nondisparagement. After the Closing Date, neither Seller nor Buyer will disparage Buyer or any of Buyer's Representatives or Seller or Seller's Representatives, as the case may be.

(d) Modification of Covenant. If a final judgment of a court or tribunal of competent jurisdiction determines that any term or provision contained in Section 10.8(a) through (c) is invalid or unenforceable, then the parties agree that the court or tribunal will have the power to reduce the scope, duration or geographic area of the term or provision, to delete specific words or phrases or to replace any invalid or unenforceable term or provision with a term or provision that is valid and enforceable and that comes closest to expressing the intention of the invalid or unenforceable term or provision. This Section 10.8 will be enforceable as so modified after the expiration of the time within which the judgment may be appealed. This Section 10.8 is reasonable and necessary to protect and preserve Buyer's legitimate business interests and the value of the Purchased Assets and to prevent any unfair advantage conferred on Seller.

10.9CUSTOMER AND OTHER BUSINESS RELATIONSHIPS

After the Closing, Seller will cooperate with Buyer, provided that Buyer shall reimburse Seller's out-of-pocket expenses and compensate personnel (other than Transferred Employees) reasonably for their time, in its efforts to continue and maintain for the benefit of Buyer those business relationships of Seller existing prior to the Closing and relating to the Business, including relationships with lessors, employees, regulatory authorities, licensors, customers, suppliers and others, and Seller will satisfy the Retained Liabilities in a manner that is not detrimental to any of such relationships. Seller will refer to Buyer all business inquiries relating to the Business.

10.10 RETENTION OF AND ACCESS TO RECORDS

After the Closing Date, Buyer shall retain for a period consistent with Buyer's record-retention policies and practices those Records of Seller delivered to Buyer. Buyer also shall provide Seller its Representatives reasonable access thereto, during normal business hours and on at least three days' prior written notice, to enable them to prepare financial statements or tax returns or deal with tax audits. After the Closing Date, Seller shall provide Buyer and its Representatives reasonable access to Records that are Excluded Assets, during normal business hours and on at least three days' prior written notice, for any reasonable business purpose specified by Buyer in such notice.

10.11 FURTHER ASSURANCES

Subject to the proviso in Section 6.1, the parties shall cooperate reasonably with each other and with their respective Representatives in connection with any steps required to be taken as part of their respective obligations under this Agreement, and shall (a) furnish upon request to each other such further information; (b) execute and deliver to each other such other documents; and (c) do such other acts and things, all as the other party may reasonably request for the purpose of carrying out the intent of this Agreement and the Contemplated Transactions.

10.12 INSURANCE CLAIMS

After the Closing, Buyer shall have the right to submit to Seller any claims for any Losses related to the Business with respect to which Seller would be required to indemnify Buyer pursuant to Article 11 and that are covered by the Insurance Policies arising out of insured incidents to the extent occurring from the date coverage thereunder first commenced until the Closing. With respect to any such claim, Seller shall submit such claim and use its commercially reasonable efforts to administer such claims on behalf of the Buyer and to seek reasonable recovery under the applicable insurance provisions of the Insurance Policies covering Losses related to the Business to the same extent as it would if such Losses were Losses of Seller and to the extent that the terms and conditions of any such policies so allow and Seller shall pay to Buyer the amount of such recovery within 30 days after receipt thereof.

10.13 SELLER RECEIVABLES AND PAYABLES

From and after the Closing, if Seller or any of its Affiliates receives or collects any funds attributable to any Accounts Receivable or any other Purchased Asset, Seller or its Affiliate shall remit such funds to Buyer within 30 days after its receipt thereof, unless used to fund payments of Current Liabilities pursuant to the following sentence. From and after Closing for a period of up to 6 months, at Buyer's request and direction and subject to the availability of the foregoing funds or other funding from Buyer, Seller shall make payment of Current Liabilities.

11. Indemnification; Remedies

11.1 SURVIVAL

Subject to the limitations and other provisions of this Agreement, the representations and warranties contained in this Agreement, the other Transaction Documents or in any certificate or instrument delivered by pursuant to this Agreement shall survive the Closing and shall remain in full force and effect until the date that is 18 months from the Closing Date; provided, that the Seller Fundamental Representations and the Buyer Fundamental Representations shall survive the Closing for the duration of the applicable statutes of limitation. All covenants and agreements of the parties contained herein shall survive the Closing indefinitely or for the period explicitly specified therein. Notwithstanding the foregoing, any claims asserted in good faith with reasonable specificity (to the extent known at such time) and in writing by notice from the non-breaching party to the breaching party prior to the expiration date of the applicable survival period shall not thereafter be barred by the expiration of the relevant representation or warranty and such claims shall survive until finally resolved.

11.2 INDEMNIFICATION BY SELLER

Subject to the other terms and conditions of this Section 11, Seller shall indemnify and defend each of Buyer and its Affiliates and their respective Representatives (collectively, the "Buyer Indemnified Parties") against, and shall hold each of them harmless from and against, and shall pay and reimburse each of them for, any and all Losses incurred or sustained by, or imposed upon, the Buyer Indemnitees to the extent based upon, arising out of, with respect to or by reason of:

(a) any inaccuracy in or breach of any of the representations or warranties of Seller contained in this Agreement, the other Transaction Documents or in any certificate or instrument delivered by or on behalf of Seller pursuant to this Agreement, as of the date such representation or warranty was made or as if such representation or warranty was made on and as of the Closing Date (except for representations and warranties that expressly relate to a specified date, the inaccuracy in or breach of which will be determined with reference to such specified date); provided, however, that, once there is such a breach or inaccuracy, qualifications as to material, materiality or similar qualifier contained in such representations and warranties shall not be given effect for the sole purpose of calculating the amount of any Losses;

(b) any breach of any covenant, agreement or obligation to be performed by Seller pursuant to this Agreement, the other Transaction Documents or any certificate or instrument delivered by or on behalf of Seller pursuant to this Agreement;

(c) any Excluded Asset or any Retained Liability; or

(d) any Third Party Claim to the extent it is based upon, resulting from or arising out of the business, operations, properties, assets or obligations of Seller or any of its Affiliates (other than the Purchased Assets or Assumed Liabilities) conducted, existing or arising prior to the Closing Effective Time.

11.3 INDEMNIFICATION BY BUYER

Subject to the other terms and conditions of this Section 11, Buyer shall indemnify and defend each of Seller and its Affiliates and their respective Representatives (collectively, the "Seller Indemnified Parties") against, and shall hold each of them harmless from and against, and shall pay and reimburse each of them for, any and all Losses incurred or sustained by, or imposed upon, the Seller Indemnified Parties to the extent based upon, arising out of, with respect to or by reason of:

(a) any inaccuracy in or breach of any of the representations or warranties of Buyer contained in this Agreement, the other Transaction Documents or in any certificate or instrument delivered by or on behalf of Buyer pursuant to this Agreement, as of the date such representation or warranty was made or as if such representation or warranty was made on and as of the Closing Date (except for representations and warranties that expressly relate to a specified date, the inaccuracy in or breach of which will be determined with reference to such specified date);

(b) any breach or non-fulfillment of any covenant, agreement or obligation to be performed by Buyer pursuant to this Agreement, the other Transaction Documents or in any certificate or instrument delivered by or on behalf of Buyer pursuant to this Agreement;

(c) any Assumed Liability; or

(d) any Third Party Claim to the extent it is based upon, resulting from or arising out of the business, operations, properties, assets or obligations of Buyer or any of its Affiliates conducted, existing or arising after the Closing Effective Time;

11.4 CERTAIN LIMITATIONS

The indemnification provided for in Section 11.2 shall be subject to the following limitations:

(a) Seller shall not be liable to the Buyer Indemnified Parties for indemnification under Section 11.2(a) until the aggregate amount of all Losses in respect of indemnification under Section 11.2(a) exceeds $50,000 (the "Basket"), in which event Seller shall only be required to pay or be liable for Losses in excess of the Basket. The aggregate amount of all Losses for which Seller shall be liable pursuant to Section 11.2(a) shall not exceed the Escrow Amount.

(b) Notwithstanding the foregoing, the limitations set forth in Section 11.4(a) shall not apply to Losses based upon, arising out of, with respect to or by reason of any inaccuracy in the Seller Fundamental Representations.

(c) Notwithstanding anything herein to the contrary, from and after the Closing, any claims or indemnification under Section 11.2 shall, subject to the foregoing provisions of this Section 11.4, be satisfied (i) first, to the extent recovery is available under the Escrow Fund, pursuant to the Escrow Agreement, and (ii) second, to the extent recovery is not available under the Escrow Fund, directly by Seller.

11.5 INDEMNIFICATION PROCEDURES

The party making a claim under this Section 11 is referred to as the "Indemnified Party", and the party against whom such claims are asserted under this Section 11 is referred to as the "Indemnifying Party".

(a) Third Party Claims. If any Indemnified Party receives notice of the assertion or commencement of any Proceeding made or brought by any Person who is not a party to this Agreement or an Affiliate of a party to this Agreement or a Representative of the foregoing (a "Third Party Claim") against such Indemnified Party with respect to which the Indemnifying Party is obligated to provide indemnification under this Agreement, the Indemnified Party shall give the Indemnifying Party reasonably prompt written notice thereof, but in any event not later than 30 days after receipt of such notice of such Third Party Claim. The failure to give such prompt written notice shall not, however, relieve the Indemnifying Party of its indemnification obligations, (i) unless the applicable survival period has expired pursuant to Section 11.1 or (ii) except and only to the extent that the Indemnifying Party forfeits rights or defenses by reason of such failure. Such notice by the Indemnified Party shall describe the Third Party Claim in reasonable detail, shall include copies of all material written evidence thereof and shall indicate the estimated amount, if reasonably practicable, of the Loss that has been or may be sustained by the Indemnified Party. The Indemnifying Party shall have the right to participate in, or by giving written notice to the Indemnified Party, to assume the defense of any Third Party Claim at the Indemnifying Party's expense and by the Indemnifying Party's own counsel, and the Indemnified Party shall cooperate in good faith in such defense; provided, that if the Indemnifying Party is Seller, such Indemnifying Party shall not have the right to defend or direct the defense of any such Third Party Claim that (x) is asserted directly by or on behalf of a Person that is a supplier or customer of the Business, or (y) seeks an injunction or other equitable relief against the Indemnified Party. In the event that the Indemnifying Party assumes the defense of any Third Party Claim, subject to Section 11.5(b), it shall have the right to take such action as it deems necessary to avoid, dispute, defend, appeal or make counterclaims pertaining to any such Third Party Claim in the name and on behalf of the Indemnified Party. The Indemnified Party shall have the right to participate in the defense of any Third Party Claim with counsel selected by it subject to the Indemnifying Party's right to control the defense thereof. The fees and disbursements of such counsel shall be at the expense of the Indemnified Party, provided, that if in the reasonable opinion of counsel to the Indemnified Party, (A) there are legal defenses available to an Indemnified Party that are different from or additional to those available to the Indemnifying Party; or (B) there exists a conflict of interest between the Indemnifying Party and the Indemnified Party that cannot be waived, the Indemnifying Party shall be liable for the reasonable fees and expenses of counsel to the Indemnified Party in each jurisdiction for which the Indemnified Party determines counsel is required. If the Indemnifying Party elects not to compromise or defend such Third Party Claim, fails to promptly notify the Indemnified Party in writing of its election to defend as provided in this Agreement, or fails to diligently prosecute the defense of such Third Party Claim, the Indemnified Party may, subject to Section 11.5(b), pay, compromise, defend such Third Party Claim and seek indemnification for any and all Losses based upon, arising from or relating to such Third Party Claim. Seller and Buyer shall cooperate with each other in all reasonable respects in connection with the defense of any Third Party Claim, including making available (subject to the provisions of Article 12) records relating to such Third Party Claim and furnishing, without expense (other than reimbursement of actual out-of-pocket expenses) to the defending party, management employees of the non-defending party as may be reasonably necessary for the preparation of the defense of such Third Party Claim.

(b) Settlement of Third Party Claims. Notwithstanding any other provision of this Agreement, the Indemnifying Party shall not enter into settlement of any Third Party Claim without the prior written consent of the Indemnified Party, except as provided in this Section 11.5(b). If a firm offer is made to settle a Third Party Claim without leading to liability or the creation of a financial or other obligation on the part of the Indemnified Party and provides, in customary form, for the unconditional release of each Indemnified Party from all liabilities and obligations in connection with such Third Party Claim and the Indemnifying Party desires to accept and agree to such offer, the Indemnifying Party shall give written notice to that effect to the Indemnified Party. If the Indemnified Party fails to consent to such firm offer within 10 days after its receipt of such notice, the Indemnified Party may continue to contest or defend such Third Party Claim and in such event, the maximum liability of the Indemnifying Party as to such Third Party Claim shall not exceed the amount of such settlement offer. If the Indemnified Party fails to consent to such firm offer and also fails to assume defense of such Third Party Claim, the Indemnifying Party may settle the Third Party Claim upon the terms set forth in such firm offer to settle such Third Party Claim. If the Indemnified Party has assumed the defense pursuant to Section 11.5(a), it shall not agree to any settlement without the written consent of the Indemnifying Party (which consent shall not be unreasonably withheld or delayed).

(c) Direct Claims. Any claim by an Indemnified Party on account of a Loss that does not result from a Third Party Claim (a "Direct Claim") shall be asserted by the Indemnified Party giving the Indemnifying Party reasonably prompt written notice thereof. The failure to give such prompt written notice shall not, however, relieve the Indemnifying Party of its indemnification obligations, (i) unless the applicable survival period has expired pursuant to Section 11.1 or (ii) except and only to the extent that the Indemnifying Party forfeits rights or defenses by reason of such failure. Such notice by the Indemnified Party shall describe the Direct Claim in reasonable detail and shall indicate the estimated amount, if reasonably practicable, of the Loss that has been or may be sustained by the Indemnified Party. The Indemnifying Party shall have 30 days after its receipt of such notice to respond in writing to such Direct Claim. The Indemnified Party shall allow the Indemnifying Party and its professional advisors to investigate

the matter or circumstance alleged to give rise to the Direct Claim, and whether and to what extent any amount is payable in respect of the Direct Claim and the Indemnified Party shall assist the Indemnifying Party's investigation by giving such information and assistance (including access to the Indemnified Party's premises and personnel and the right to examine and copy any accounts, documents or records) as the Indemnifying Party or any of its professional advisors may reasonably request. If the Indemnifying Party does not so respond within such 30-day period, the Indemnifying Party shall be deemed to have rejected such claim, in which case the Indemnified Party shall be free to pursue such remedies as may be available to the Indemnified Party on the terms and subject to the provisions of this Agreement.

11.6 PAYMENTS

Once a Loss is agreed to or accepted by the Indemnifying Party or finally adjudicated to be payable pursuant to this Article 11, the Indemnifying Party shall satisfy its obligations within 15 Business Days of such final, non-appealable adjudication by wire transfer of immediately available funds. The parties hereto agree that should an Indemnifying Party not make full payment of any such obligations within such 15-Business Day period, any amount payable shall accrue interest from and including the date of agreement of the Indemnifying Party or final, non-appealable adjudication to and including the date such payment has been made at a monthly compounded rate equal to three-month LIBOR (or similar successor rate) plus 2% per annum. Such interest shall be calculated daily on the basis of a 365-day year and the actual number of days elapsed.

11.7 TAX TREATMENT OF INDEMNIFICATION PAYMENTS; NET OF INSURANCE

All indemnification payments made under this Agreement shall be treated by the parties as an adjustment to the Purchase Price for Tax purposes, unless otherwise required by Legal Requirement. The amount of any Losses for which indemnification is provided under this Article 11 shall be net of any amounts actually recovered by the Indemnified Party under insurance coverage with respect to such Losses (minus the out-of-pocket expenses of pursuing payment of such amounts and any retrospective premium adjustments, as applicable).

11.8 EXCLUSIVE REMEDIES; EFFECT OF INVESTIGATION

(a) Subject to Section 10.8 and Section 13.5, the parties acknowledge and agree that their sole and exclusive remedy with respect to any and all claims (other than claims arising from actual fraud or intentional wrongful misconduct on the part of a party hereto in connection with the Contemplated Transactions) for any breach of any representation, warranty, covenant, agreement or obligation set forth herein or otherwise relating to the subject matter of this Agreement, shall be pursuant to the indemnification provisions set forth in this Section 11. In furtherance of the foregoing, each party hereby waives, to the fullest extent permitted under Legal Requirement, any and all rights, claims and causes of action for any breach of any representation, warranty, covenant, agreement or obligation set forth herein or otherwise relating to the subject matter of this Agreement it may have against the other parties hereto and their Affiliates and each of their respective Representatives arising under or based upon any Legal Requirement, except pursuant to the indemnification provisions set forth in this Article 11. Nothing in this Section11.8 shall limit any Person's right to seek and obtain any equitable relief to which any Person shall be entitled or to seek any remedy on account of any party's actual fraud or intentional wrongful misconduct.

(b) The representations, warranties and covenants of the Indemnifying Party, and the Indemnified Party's right to indemnification with respect thereto, shall not be affected or deemed waived by reason of any investigation made by or on behalf of the Indemnified Party (including by any of its Representatives) or by reason of the fact that the Indemnified Party or any of its Representatives knew or should have known that any such representation or warranty is, was or might be inaccurate or by reason of the Indemnified Party's waiver of any condition set forth in Article 7 or Article 8, as the case may be.

12. Confidentiality

This Agreement and all information disclosed to a party or its Representatives by another party or its Representatives pursuant to this Agreement or any of the other Transaction Documents shall be governed by the Nondisclosure Agreement. The Nondisclosure Agreement shall survive any termination of this Agreement. Following the Closing, Buyer's "Confidential Information" (as defined in the Nondisclosure Agreement) shall include any and all confidential or proprietary information related to the Business, the Purchased Assets and the Assumed Liabilities (for the avoidance of doubt, following the Closing none of the foregoing shall be considered Seller's or any Shareholder's "Confidential Information" thereunder), and for such purpose Seller shall be deemed to be a Receiving Party with respect thereto.

13. General Provisions

13.1 EXPENSES

Except as otherwise provided in this Agreement, each party to this Agreement will bear its respective fees and expenses incurred in connection with the preparation, negotiation, execution and performance of this Agreement and the Contemplated Transactions, including all fees and expense of its Representatives. Buyer will pay one-half and Seller will pay one-half of the fees and expenses of the Escrow Agent under the Escrow Agreement. If this Agreement is terminated, the obligation of each party to pay its own fees and expenses will be subject to any rights of such party arising from a Breach of this Agreement by another party.

13.2PUBLIC ANNOUNCEMENTS

The parties agree that they shall cooperate in respect of any public press release or public announcement, statement or disclosure concerning the Contemplated Transactions, except for any release or announcement as may be required by applicable Legal Requirement or applicable stock exchange regulation (including Buyer making a public announcement through the filing of a Current Report on Form 8-K upon execution of this Agreement or otherwise). Seller and Buyer will consult with each other concerning the means by which Seller's employees, customers, suppliers and others having dealings with Seller will be informed of the Contemplated Transactions, and Buyer will have the right to be present for any such communication.

13.3NOTICES

All notices, Consents, waivers and other communications required or permitted by this Agreement shall be in writing and shall be deemed given to a party when (a) delivered to the appropriate address by hand or by nationally recognized overnight courier service (costs prepaid); (b) sent by e-mail with confirmation of transmission by the transmitting equipment; or (c) received or rejected by the addressee, if sent by certified mail, return receipt requested, in each case to the following addresses or e-mail addresses and marked to the attention of the person (by name or title) designated below (or to such other address, e-mail address or person as a party may designate by notice to the other parties):

Seller (before the Closing):

Micron Optics, Inc.
Attention:
1852 Century Place NE, First Floor
Atlanta GA 30345
Email:

with a mandatory copy to (which shall not constitute notice):

Ward Council
P.O. Box 72305
Marietta, GA 30007
E-mail: ward@wardcouncillaw.com

Seller (after the Closing):

Cerulean Sunset, Inc.
Attention: Todd Haber
1852 Century Place
Suite 100
Atlanta, GA 30345
E-mail: todd.haber@me.com

with a mandatory copy to (which shall not constitute notice):

Ward Council
P.O. Box 72305
Marietta, GA 30007
E-mail: ward@wardcouncillaw.com

Buyer and Buyer Guarantor:

Luna Innovations Incorporated
301 1st Street, SW, Suite 200
Roanoke, VA 24011
Attention: Scott Graeff
E-mail: graeffs@lunainc.com

with a mandatory copy to (which shall not constitute notice):

Woods Rogers, PLC
Wells Fargo Tower, 14th Floor
10 S. Jefferson Street
Roanoke, VA 24011
Attention: Fourd Kemper
E-mail: fkemper@woodsrogers.com

13.4JURISDICTION; SERVICE OF PROCESS; WAIVER OF JURY TRIAL

(a) Any Proceeding arising out of or relating to this Agreement or any Contemplated Transaction must be brought in the state, or, if it has or can acquire jurisdiction, in the United States District Court, in the jurisdiction of which the principal office of the defendant is located, and each of the parties irrevocably submits to the exclusive jurisdiction of each such court in any such Proceeding, waives any objection it may now or hereafter have to venue or to convenience of forum, agrees that all claims in respect of the Proceeding shall be heard and determined only in any such court and agrees not to bring any Proceeding arising out of or relating to this Agreement or any Contemplated Transaction in any other court. The parties agree that either or both of them may file a copy of this paragraph with any court as written evidence of the knowing, voluntary and bargained agreement between the parties irrevocably to waive any objections to venue or to convenience of forum. Process in any Proceeding referred to in the first sentence of this Section may be served on any party anywhere in the world.

(b) EACH PARTY ACKNOWLEDGES AND AGREES THAT ANY CONTROVERSY WHICH MAY ARISE UNDER THIS AGREEMENT OR THE OTHER TRANSACTION DOCUMENTS IS LIKELY TO INVOLVE COMPLICATED AND DIFFICULT ISSUES AND, THEREFORE, EACH SUCH PARTY IRREVOCABLY AND UNCONDITIONALLY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LEGAL ACTION ARISING OUT OF OR RELATING TO THIS AGREEMENT, THE OTHER TRANSACTION DOCUMENTS OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY. EACH PARTY TO THIS AGREEMENT CERTIFIES AND ACKNOWLEDGES THAT (A) NO REPRESENTATIVE OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT SEEK TO ENFORCE THE FOREGOING WAIVER IN THE EVENT OF A PROCEEDING, (B) SUCH PARTY HAS CONSIDERED THE IMPLICATIONS OF THIS WAIVER, (C) SUCH PARTY MAKES THIS WAIVER VOLUNTARILY, AND (D) SUCH PARTY HAS BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 13.4(b).

13.5ENFORCEMENT OF AGREEMENT

Each party acknowledges and agrees that the other party would be irreparably damaged if any of the provisions of this Agreement are not performed in accordance with their specific terms and that any Breach of this Agreement by a party could not be adequately compensated in all cases by monetary damages alone. Accordingly, in addition to any other right or remedy to which a party may be entitled, at law or in equity, each party shall be entitled to enforce any provision of this Agreement by a decree of specific performance and to temporary, preliminary and permanent injunctive relief to prevent Breaches or threatened Breaches of any of the provisions of this Agreement, without the requirement of posting a bond.

13.6WAIVER; REMEDIES CUMULATIVE

Subject to Section 9.2 until Closing and subject to Section 11.8 after Closing, the rights and remedies of the parties to this Agreement are cumulative and not alternative. Neither any failure nor any delay by any party in exercising any right, power or privilege under this Agreement or any of the documents referred to in this Agreement will operate as a waiver of such right, power or privilege, and no single or partial exercise of any such right, power or privilege will preclude any other or further exercise of such right, power or privilege or the exercise of any other right, power or privilege. To the maximum extent permitted by applicable law, (a) no claim or right arising out of this Agreement or any of the documents referred to in this Agreement can be discharged by one party, in whole or in part, by a waiver or renunciation of the claim or right unless in writing signed by the other party; (b) no waiver that may be given by a party will be applicable except in the specific instance for which it is given; and (c) no notice to or demand on one party will be deemed to be a waiver of any obligation of that party or of the right of the party giving such notice or demand to take further action without notice or demand as provided in this Agreement or the documents referred to in this Agreement.

13.7ENTIRE AGREEMENT AND MODIFICATION

This Agreement supersedes all prior agreements, whether written or oral, between the parties with respect to its subject matter (including any letter of intent) and constitutes (along with the Transaction Documents and the Nondisclosure Agreement) a complete and exclusive statement of the terms of the agreement between the parties with respect to its subject matter. This

Agreement may not be amended, supplemented, or otherwise modified except by a written agreement executed by the party to be charged with the amendment.

13.8ASSIGNMENTS, SUCCESSORS AND NO THIRD-PARTY RIGHTS

No party may assign any of its rights or delegate any of its obligations under this Agreement without the prior written consent of the other parties, except that Buyer may assign any of its rights and delegate any of its obligations under this Agreement to any Subsidiary of Buyer and may collaterally assign its rights hereunder to any financial institution providing financing in connection with the Contemplated Transactions. Subject to the preceding sentence, this Agreement will apply to, be binding in all respects upon and inure to the benefit of the successors, heirs and permitted assigns of the parties. Nothing expressed or referred to in this Agreement will be construed to give any Person other than the parties to this Agreement any legal or equitable right, remedy or claim under or with respect to this Agreement or any provision of this Agreement, except such rights as shall inure to a successor or permitted assignee pursuant to this Section 13.9.

13.9SEVERABILITY

If any provision of this Agreement is held invalid or unenforceable by any court of competent jurisdiction, the other provisions of this Agreement will remain in full force and effect. Any provision of this Agreement held invalid or unenforceable only in part or degree will remain in full force and effect to the extent not held invalid or unenforceable.

13.10CONSTRUCTION

The headings of Articles and Sections in this Agreement are provided for convenience only and will not affect its construction or interpretation. All references to “Articles,” “Sections” and “Parts” refer to the corresponding Articles, Sections and Parts of this Agreement and the Disclosure Schedules.

13.11TIME OF ESSENCE

With regard to all dates and time periods set forth or referred to in this Agreement, time is of the essence.

13.12GOVERNING LAW

This Agreement will be governed by and construed under the laws of the Commonwealth of Virginia without regard to conflicts-of-laws principles that would require the application of any other law.

13.13EXECUTION OF AGREEMENT

This Agreement may be executed by electronic transmission and in one or more counterparts, each of which will be deemed to be an original copy of this Agreement and all of which, when taken together, will be deemed to constitute one and the same agreement. The exchange of copies of this Agreement and of signature pages by electronic transmission shall constitute effective execution and delivery of this Agreement as to the parties and may be used in lieu of the original Agreement for all purposes. Signatures of the parties transmitted by electronic transmission shall be deemed to be their original signatures for all purposes.

13.14BUYER GUARANTOR

Subject to the prior satisfaction of any conditions set forth herein, Buyer Guarantor unconditionally and irrevocably agrees to take any and all actions necessary to cause Buyer to perform all of its covenants, agreements and obligations under this Agreement and any Transaction Document to which Buyer is a party, including with respect to the consummation of the transactions contemplated thereby, and Buyer Guarantor shall be liable for any breach by any Buyer of any representation, warranty, covenant, agreement or obligation under this Agreement or any Transaction Document.

[Signature Pages Follow]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

BUYER: **SELLER:**

LUNA TECHNOLOGIES, INC.

By: /s/ Scott A. Graeff
Name: Scott A. Graeff
Title: President

MICRON OPTICS, INC.

By: /s/ Todd Harber
Name: Todd Harber
Title: CEO

BUYER GUARANTOR:

LUNA INNOVATIONS INCORPORATED

By: /s/ Scott A. Graeff
Name: Scott A. Graeff
Title: President & CEO

EXHIBIT INDEX

Exhibit A-1

Applicable Accounting Principles

1. Seller has a 64% ownership stake (the “CMIWS Stake”) in CMIWS Co Ltd., a company organized under the laws of Japan

("CMIWS"). CMIWS is Seller's distributor in Japan. The CMIWS financial statements are not consolidated with those of Seller. The CMIWS Stake is carried at the lower of cost or market on the balance sheet. The CMIWS Stake is a passive investment: Seller management takes no part in the day-to-day operations of CMIWS. The CMIWS Stake is an Excluded Asset.

2. Finished goods inventory value does not include manufacturing labor costs or overhead allocations. Manufacturing labor costs are expensed as incurred. The value of finished goods inventory is the sum of the individual component costs based on the bill of materials.

3. Prior to August 2018, Seller did not accrue earned but unused personal time off. At each year-end, carryover of accrued personal time off is capped at 40 hours per employee.

4. Seller does not account for income taxes in accordance with GAAP. Seller has significant net operating loss carryforwards ("NOLs") and management has determined that it is appropriate to maintain a 100% valuation allowance against the deferred tax asset arising from the NOLs. Management has not performed a detailed analysis of the individual current and deferred tax assets and liabilities to confirm whether netting all current and long-term assets and liabilities against the valuation allowance is appropriate.

5. The Company accrues the costs of providing warranty services, but does not regularly analyze the accrual to determine whether or not it is adequate. For billable warranty extensions, revenue is recognized when billed, not deferred and recognized ratable over the warranty extension period.

Exhibit A-2

Material Consents

1. Consent to assignment of the Supply Agreement between Hexagon (TESA SA) and Seller, as amended.

2. Consent to assignment of Seller's Lease with Landlord, as amended (already obtained).

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Scott A. Graeff, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Luna Innovations Incorporated;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 13, 2018

/s/ Scott A. Graeff

Scott A. Graeff

President and Chief Executive Officer
(principal executive officer)

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Dale E. Messick, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Luna Innovations Incorporated;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 13, 2018

/s/ Dale E. Messick

Dale E. Messick

Chief Financial Officer
(principal financial officer)

Exhibit 32.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report of Luna Innovations Incorporated (the "Company") on Form 10-Q for the quarter ended September 30, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Scott A. Graeff, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

This certification accompanies this Report to which it relates, shall not be deemed "filed" with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Report), irrespective of any general incorporation language contained in such filing.

/s/ Scott A. Graeff

Scott A. Graeff

President and Chief Executive Officer
(principal executive officer)

November 13, 2018

Exhibit 32.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report of Luna Innovations Incorporated (the "Company") on Form 10-Q for the quarter ended September 30, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Dale E. Messick, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

This certification accompanies this Report to which it relates, shall not be deemed "filed" with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Report), irrespective of any general incorporation language contained in such filing.

/s/ Dale E. Messick

Dale E. Messick

Chief Financial Officer
(principal financial officer)

November 13, 2018