RUDOLPH TECHNOLOGIES INC
Form 10-Q
August 02, 2018

Table of Contents

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the Quarterly Period Ended June 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 No. 001-36226

RUDOLPH TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

Delaware	22-3531208
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

16 Jonspin Road, Wilmington, Massachusetts 01887

(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: (978) 253-6200

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post 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		Accelerated filer
Non-accelerated filer	(Do not check if a smaller reporting company)	Smaller reporting company
		Emerging growth company

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.

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

The number of outstanding shares of the Registrant's Common Stock on July 16, 2018 was 31,900,721.

Table of Contents

TABLE OF CONTENTS

Item No.		Page
	PART I FINANCIAL INFORMATION	
Item 1.	Financial Statements (unaudited)	3
	Condensed Consolidated Balance Sheets at June 30, 2018 and December 31, 2017	3
	Condensed Consolidated Statements of Operations for the three and six months ended June 30, 2018 and 2017	4
	Condensed Consolidated Statements of Comprehensive Income for the three and six months ended June 30, 2018 and 2017	5
	Condensed Consolidated Statements of Cash Flows for the six months ended June 30, 2018 and 2017	6
	Notes to Condensed Consolidated Financial Statements	7
Item 2.	Management's Discussion and Analysis of Financial Condition and Results of Operations	19
Item 3.	Quantitative and Qualitative Disclosures about Market Risk	23
Item 4.	Controls and Procedures	23
	PART II OTHER INFORMATION	
Item 1.	Legal Proceedings	24
Item 1A.	Risk Factors	24
Item 2.	Unregistered Sales of Equity Securities and Use of Proceeds	24
Item 3.	Defaults Upon Senior Securities	25
Item 4.	Mine Safety Disclosures	25
Item 5.	Other Information	25
Item 6.	Exhibits	25

Table of Contents

PART I FINANCIAL INFORMATION

Item 1. Financial Statements

RUDOLPH TECHNOLOGIES, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS

(In thousands)

	June 30, 2018 (Unaudited)	December 31, 2017
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 56,491	$ 67,770
Marketable securities	126,966	109,589
Accounts receivable, less allowance of $612 and $460	82,555	65,283
Inventories, net	84,222	67,521
Income taxes receivable	2,060	7,220
Prepaid expenses and other current assets	7,808	4,699
Total current assets	360,102	322,082
Property, plant and equipment, net	16,880	17,342
Goodwill	22,495	22,495
Identifiable intangible assets, net	8,070	8,632
Other assets	15,319	15,371
Total assets	$ 422,866	$ 385,922
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued liabilities	$ 32,011	$ 26,800
Deferred revenue	7,719	6,223
Other current liabilities	6,980	9,284
Total current liabilities	46,710	42,307
Other non-current liabilities	10,166	10,461
Total liabilities	56,876	52,768
Commitments and contingencies		
Stockholders' equity:		
Common stock	32	32
Additional paid-in capital	389,298	386,196
Accumulated other comprehensive loss	(1,298)	(1,205)
Accumulated deficit	(22,042)	(51,869)
Total stockholders' equity	365,990	333,154
Total liabilities and stockholders' equity	$ 422,866	$ 385,922

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

Table of Contents

RUDOLPH TECHNOLOGIES, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands, except per share data)

(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Revenue	$77,476	$67,418	$150,572	$128,097
Cost of revenue	35,740	31,962	66,415	60,773
Gross profit	41,736	35,456	84,157	67,324
Operating expenses:				
Research and development	12,733	12,146	24,516	24,156
Selling, general and administrative	11,946	10,110	24,739	19,778
Amortization	383	505	763	1,010
Total operating expenses	25,062	22,761	50,018	44,944
Operating income	16,674	12,695	34,139	22,380
Interest income, net	(476)	(223)	(867)	(414)
Other expense (income), net	(140)	166	42	435
Income before income taxes	17,290	12,752	34,964	22,359
Provision for income taxes	2,593	3,559	5,137	6,015
Net income	$14,697	$9,193	$29,827	$16,344
Earnings per share:				
Basic	$0.46	$0.29	$0.94	$0.52
Diluted	$0.45	$0.29	$0.92	$0.51
Weighted average shares outstanding:				
Basic	31,859	31,501	31,760	31,397
Diluted	32,437	32,146	32,377	32,104

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

Table of Contents

RUDOLPH TECHNOLOGIES, INC.

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In thousands)

(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Net income	$14,697	$9,193	$29,827	$16,344
Other comprehensive income:				
Change in net unrealized gains on marketable securities, net of tax	107	1	130	45
Change in currency translation adjustments	(855)	133	(223)	1,253
Total comprehensive income	$13,949	$9,327	$29,734	$17,642

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

Table of Contents

RUDOLPH TECHNOLOGIES, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

(Unaudited)

	Six Months Ended June 30,	
	2018	2017
Cash flows from operating activities:		
Net income	$29,827	$16,344
Adjustments to reconcile net income to net cash and cash equivalents provided by operating activities:		
Amortization of intangibles	763	1,010
Depreciation	2,426	1,880
Foreign currency exchange loss	43	435
Change in fair value of contingent consideration	603	132
Share-based compensation	3,588	2,948
Provision for doubtful accounts and inventory valuation	1,875	2,026
Changes in operating assets and liabilities	(29,666)	5,198
Net cash and cash equivalents provided by operating activities	9,459	29,973
Cash flows from investing activities:		
Purchases of marketable securities	(105,721)	(62,527)
Proceeds from sales of marketable securities	88,843	59,491
Purchases of property, plant and equipment	(2,178)	(5,301)
Net cash and cash equivalents used in investing activities	(19,056)	(8,337)
Cash flows from financing activities:		
Redemption of stock warrants	—	(1,025)
Tax payments related to shares withheld for share-based compensation plans	(977)	(1,323)
Payment of contingent consideration for acquired business	(1,057)	(358)
Issuance of shares through share-based compensation plans	490	289
Net cash and cash equivalents used in financing activities	(1,544)	(2,417)
Effect of exchange rate changes on cash and cash equivalents	(138)	627
Net (decrease) increase in cash and cash equivalents	(11,279)	19,846
Cash and cash equivalents at beginning of period	67,770	37,859
Cash and cash equivalents at end of period	$56,491	$57,705
Supplemental disclosure of cash flow information:		
Income taxes paid	$52	$2,246

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

RUDOLPH TECHNOLOGIES, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(In thousands, except per share data)

(Unaudited)

NOTE 1. Basis of Presentation

The accompanying interim unaudited Condensed Consolidated Financial Statements have been prepared by Rudolph Technologies, Inc. (the "Company" or "Rudolph") and in the opinion of management reflect all adjustments, consisting of normal recurring accruals, necessary for their fair presentation in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"). Preparing financial statements requires management to make estimates and assumptions that affect amounts reported in the financial statements and accompanying notes. Actual amounts could differ materially from reported amounts. The interim results for the three and six month periods ended June 30, 2018 are not necessarily indicative of results to be expected for the entire year or any future periods. This interim financial information should be read in conjunction with the financial statements and the notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2017 ("2017 10-K") filed with the Securities and Exchange Commission ("SEC") on February 16, 2018. The accompanying Condensed Consolidated Balance Sheet at December 31, 2017 has been derived from the audited consolidated financial statements included in the 2017 10-K.

Recent Accounting Pronouncements

Recently Adopted

Effective January 1, 2018, the Company adopted Accounting Standards Update ("ASU") No. 2016-16, "Income Tax (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory." This ASU, which is part of the simplification initiative of the Financial Accounting Standards Board ("FASB"), is intended to reduce the complexity of U.S. GAAP and diversity in practice related to the tax consequences of certain types of intra-entity asset transfers, particularly those involving intellectual property. The adoption of ASU No. 2016-16 did not have any impact on the Company's consolidated financial position, results of operations, and cash flows.

Effective January 1, 2018, the Company adopted ASU No. 2016-15, "Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments." This ASU provides guidance on statement of cash flows presentation for eight specific cash flow issues where diversity in practice exists. The adoption of ASU No. 2016-15 did not have a material impact on the Company's consolidated financial position, results of operations, and cash flows.

Effective January 1, 2018, the Company adopted ASU No. 2014-09, "Revenue from Contracts with Customers (Topic 606)," which supersedes nearly all existing revenue recognition guidance. The core principle of this ASU is that revenue should be recognized to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. As a result

of the adoption of ASU No. 2014-09, the Company changed its accounting policy for revenue recognition. Refer to Note 2, "Revenue" for further information.

Recently Issued

In June 2018, the FASB issued ASU No. 2018-07, "Compensation – Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting." This ASU expands the scope of Topic 718 to include share-based payment transactions for acquiring goods and services from nonemployees. An entity should apply the requirements of Topic 718 to nonemployee awards except for specific guidance on inputs to an option pricing model and the attribution of cost. The ASU is effective for the fiscal years beginning after December 15, 2018, including interim periods within that fiscal year. The adoption of ASU 2018-07 is not expected to have a material effect on the Company's consolidated financial position, results of operations, and cash flows.

In February 2018, the FASB issued ASU 2018-02, "Income Statement – Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." The new guidance allows companies to reclassify stranded tax effects resulting from the Tax Cuts and Jobs Act (the "2017 Tax Act") from accumulated other comprehensive income to retained earnings. The guidance also requires certain new disclosures regardless of a company's election. The standard is effective for annual periods beginning after December 15, 2018 and for interim periods within those annual periods, with earlier adoption permitted. The adoption of ASU 2018-02 is not expected to have a material effect on the Company's consolidated financial position, results of operations, and cash flows.

In May 2017, the FASB issued ASU No. 2017-09, “Compensation - Stock Compensation (Topic718): Scope of Modification Accounting.” This ASU amends the scope of modification accounting for share-based payment arrangements and provides guidance on the types of changes to the terms or conditions of share-based payment awards to which an entity would be required to apply modification accounting under Accounting Standards Codification (“ASC”) 718. The ASU is effective for the fiscal years beginning after December 15, 2019 and for interim periods within those fiscal years. The Company is currently evaluating the effect the adoption of ASU No. 2017-09 will have on its consolidated financial position, results of operations, and cash flows, if any.

In January 2017, the FASB issued ASU No. 2017-04, “Intangibles – Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment.” This ASU eliminates Step 2 from the goodwill impairment test. Accordingly, if the carrying amount of a reporting unit exceeds its fair value, an impairment loss will be recognized in an amount equal to the excess, limited to the total amount of goodwill allocated to the reporting unit. The ASU is effective for the fiscal years beginning after December 15, 2019 and for interim periods within those fiscal years. The Company is currently evaluating the effect the adoption of ASU No. 2017-04 will have on its consolidated financial position, results of operations, and cash flows, if any.

In June 2016, the FASB issued ASU No. 2016-13, “Financial Instruments – Credit Losses (Topic 326),” which introduces new guidance for the accounting for credit losses on instruments within its scope. Given the breadth of that scope, the new ASU will impact both financial services and non-financial services entities. The standard is effective for fiscal years beginning after December 15, 2020. The Company is currently evaluating the effect the adoption of ASU No. 2016-13 will have on its consolidated financial position, results of operations, and cash flows, if any.

In February 2016, the FASB issued ASU No. 2016-02, “Leases (Topic 842).” The standard requires that lessees recognize assets and liabilities on the balance sheet for the rights and obligations created by all leases with terms of more than 12 months. ASU No. 2016-02 also requires disclosures designed to give financial statement users information on the amount, timing, and uncertainty of cash flows arising from leases. These disclosures include qualitative and quantitative information. This ASU is effective for annual periods beginning after December 15, 2018 and for interim periods within those annual periods, with earlier adoption permitted. The adoption of this ASU will result in an increase in right-of-use assets and corresponding liabilities. The Company is evaluating the timing and other effects of its adoption of this ASU on its consolidated financial position, results of operations, and cash flows, if any.

Recently issued accounting guidance not discussed above is not applicable or did not have, or is not expected to have, a material impact to the Company.

NOTE 2. Revenue

Adoption of ASC Topic 606, “Revenue from Contracts with Customers”

On January 1, 2018, the Company adopted Topic 606 using the modified retrospective method applied to those contracts which were not completed as of January 1, 2018. Results for reporting periods beginning after January 1, 2018 are presented under Topic 606, while comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods. The Company did not record a cumulative impact due to the adoption of Topic 606.

Revenue Recognition

Revenue is recognized when control of the promised goods or services are transferred to the Company's customers in an amount that reflects the consideration the Company expects to be entitled to receive in exchange for those goods or services. The Company accounts for a contract when it has approval and commitment from both parties, the rights of the parties and payment terms are identified, the contract has commercial substance and collectability of consideration is probable.

The Company has elected to account for shipping and handling activities as the fulfillment of a promise to transfer goods to the customer and therefore records these activities under the caption "Cost of revenue." Sales tax and any other taxes collected concurrent with revenue producing activities are excluded from revenue. Incidental items that are immaterial in the context of the contract are recognized as expense. These accounting policy elections are consistent with the manner in which the Company has historically recorded these items.

Contracts with customers may include multiple performance obligations. For such arrangements, the Company allocates revenue to each performance obligation based on its relative standalone selling price. The Company generally determines standalone selling prices based on the prices charged to customers or the expected cost plus margin.

Disaggregated Revenue

The following table presents the Company's revenue disaggregated by revenue source:

Table of Contents

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2018	2017	2018	2017
Systems	$60,113	$51,244	$116,216	$95,136
Software licensing, support and maintenance	7,547	6,895	15,002	14,394
Parts	6,758	7,348	13,742	13,678
Services	3,058	1,931	5,612	4,889
Total revenue	$77,476	$67,418	$150,572	$128,097

The following table represents a disaggregation of revenue by timing of revenue:

	Three Months Ended June 30, 2018	Six Months Ended June 30, 2018
Point-in-time	$73,283	$142,679
Over-time	4,193	7,893
Total revenue	$77,476	$150,572

See Note 14 for additional discussion of the Company's disaggregated revenue in detail.

Systems Revenue

Revenue from systems is recognized when the Company transfers control of the product to the customer. To indicate transfer of control, the Company must have a present right to payment, legal title must have passed to the customer and the customer must have the significant risks and rewards of ownership. The Company generally transfers control for system sales when the customer or the customer's agent picks up the system at the Company's facility. Payment for the majority of the Company's systems have 80-90% of the invoice amount due within 30 days and the remaining amount due upon customer acceptance, which includes installation, recalibration and qualification by the customer. Customer acceptance is generally based on the Company's products meeting published performance specifications, which have been demonstrated prior to shipment. The Company provides an assurance warranty on its systems for a period of twelve to fifteen months against defects in material and workmanship. The Company provides for the estimated cost of product warranties at the time revenue is recognized.

Depending on the terms of the systems arrangement, the Company may also defer the recognition of a portion of the consideration expected to be received because the Company has to satisfy a future obligation (e.g., installation, training and extended warranties). The Company uses an observable price to determine the standalone selling price for separate performance obligations or a cost plus margin approach when one is not available.

Software Licensing, Support and Maintenance Revenue

Revenue from software licenses provides the customer with a right to use the software as it exists when made available to the customer. Revenue from software licenses are recognized upfront at the point in time when the software is made available to the customer. Revenue from licensing support and maintenance is recognized as the support and maintenance are provided, which is over the contract period. Payment for software licensing, support and

maintenance is generally due in 30 days.

Parts Revenue

Revenue from parts is recognized when the Company transfers control of the product, which typically occurs when the Company ships the product from its facilities to the customer. Payment for parts is generally due in 30 days.

Services Revenue

Revenue from services primarily consists of service contracts, which provide additional maintenance coverage beyond the Company's assurance warranty on its products, service labor, consulting and training. Revenue from service contracts is recognized ratably over the term of the service contract. Revenue from service labor, consulting and training is recognized as services are performed. Payment for services is generally due in 30 days.

Contract Liabilities

The Company records contract liabilities when the customer has been billed in advance of the Company completing its performance obligations. These amounts are recorded as deferred revenue in the Consolidated Balance Sheets. The opening balance in deferred revenue was $7,206 as of January 1, 2018.

Changes in deferred revenue were as follows:

Table of Contents

	Three Months Ended June 30, 2018	Six Months Ended June 30, 2018
Balance, beginning of the period	$8,773	$7,206
Deferral of revenue	1,601	6,154
Recognition of deferred revenue	(1,575)	(4,561)
Balance, ending of the period	$8,799	$8,799

Practical Expedients

The Company generally expenses sales commissions when incurred because the amortization period is one year or less. These costs are recorded within selling, general and administrative expenses.

The Company does not adjust the amount of consideration for the effects of a significant financing component as the payment terms are generally one year or less.

The Company does not disclose the value of remaining performance obligations for contracts with an original expected length of one year or less and contracts for which the Company recognizes revenue in the amount to which it has the right to invoice.

NOTE 3. Fair Value Measurements

The Company applies a three-level valuation hierarchy for fair value measurements. This hierarchy prioritizes the inputs into three broad levels. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities. Level 2 inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the asset or liability. Level 3 inputs are unobservable inputs based on management’s assumptions used to measure assets and liabilities at fair value. A financial asset’s or liability’s fair value measurement classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement.

Table of Contents

The following tables provide the assets and liabilities carried at fair value measured on a recurring basis at June 30, 2018 and December 31, 2017:

		Fair Value Measurements Using		
	Carrying Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
June 30, 2018				
Assets:				
Available-for-sale debt securities:				
Municipal notes and bonds	$124,761	$—	$ 124,761	$ —
Corporate bonds	2,205	—	2,205	—
Total assets	$126,966	$—	$ 126,966	$ —
Liabilities:				
Contingent consideration - acquisitions	$2,139	$—	$ —	$ 2,139
Foreign currency forward exchange contracts	10	—	10	—
Total liabilities	$2,149	$—	$ 10	$ 2,139
December 31, 2017				
Assets:				
Available-for-sale debt securities:				
Municipal notes and bonds	$109,589	$—	$ 109,589	$ —
Foreign currency forward exchange contracts	45	—	45	—
Total assets	$109,634	$—	$ 109,634	$ —
Liabilities:				
Contingent consideration - acquisitions	$2,593	$—	$ —	$ 2,593
Total liabilities	$2,593	$—	$ —	$ 2,593

The Company’s available-for-sale debt securities classified as Level 1 are based on quoted market prices that are available in active markets.

The Company’s available-for-sale debt securities classified as Level 2 are valued using observable inputs to quoted market prices, benchmark yields, reported trades, broker/dealer quotes or alternative pricing sources with reasonable levels of price transparency. The foreign currency forward exchange contracts are primarily measured based on the foreign currency spot and forward rates quoted by the banks or foreign currency dealers. Investment prices are obtained from third party pricing providers, which model prices utilizing the above observable inputs, for each asset class.

Level 3 liabilities consisted of contingent consideration related to an acquisition for which the Company uses a discounted cash flow model to value these liabilities. The Level 3 assumptions used in the discounted cash flow model for the contingent consideration included projected revenue, timing of cash flows and estimates of discount rates of 9.4% and 8.6% for the six months ended June 30, 2018 and 2017, respectively. A significant decrease in the projected revenue or increase in discount rates could result in a significantly lower fair value measurement for the contingent consideration.

This table presents a reconciliation of all liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) for the six months ended June 30, 2018:

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)
Balance at December 31, 2017	$ 2,593
Additions	—
Total loss included in selling, general and administrative expense	603
Payments	(1,057)
Transfers into (out of) Level 3	—
Balance at June 30, 2018	$ 2,139

Table of Contents

See Note 4 for additional discussion regarding the fair value of the Company's marketable securities.

Fair Value of Other Financial Instruments

The carrying value of cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities approximates fair value because of the short-term maturity of these instruments. The estimated fair value of these obligations is based primarily on a market approach, comparing the Company's interest rates to those rates the Company believes it would reasonably receive upon re-entry into the market. Judgment is required to estimate the fair value, using available market information and appropriate valuation methods.

NOTE 4. Marketable Securities

The Company has evaluated its investment policies and has determined that all of its marketable securities, which are comprised of debt securities, are to be classified as available-for-sale. The Company's available-for-sale debt securities are carried at fair value, with the unrealized gains and losses reported in Stockholders' equity under the caption "Accumulated other comprehensive loss." Realized gains and losses on available-for-sale debt securities are included in "Other expense" in the Condensed Consolidated Statements of Operations. The Company records other-than-temporary impairment charges for its available-for-sale debt securities when it intends to sell the securities, it is more-likely-than not that it will be required to sell the securities before a recovery, or when it does not expect to recover the entire amortized cost basis of the securities. The cost of securities sold is based on the specific identification method.

The Company has determined that the gross unrealized losses on its marketable securities at June 30, 2018 and December 31, 2017 are temporary in nature. The Company reviews its investment portfolio to identify and evaluate marketable securities that have indications of possible impairment. Factors considered in determining whether a loss is other-than-temporary include the length of time and extent to which fair value has been less than the cost basis, credit quality and the Company's ability and intent to hold the securities for a period of time sufficient to allow for any anticipated recovery in market value.

At June 30, 2018 and December 31, 2017, marketable securities are categorized as follows:

	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Fair Value
June 30, 2018				
Municipal notes and bonds	$ 124,767	$ 39	$ 45	$ 124,761
Corporate bond	2,200	5	—	2,205
Total marketable securities	$ 126,967	$ 44	$ 45	$ 126,966
December 31, 2017				
Municipal notes and bonds	$ 109,750	$ —	$ 161	$ 109,589
Total marketable securities	$ 109,750	$ —	$ 161	$ 109,589

The amortized cost and estimated fair value of marketable securities classified by the maturity date listed on the security, regardless of the Condensed Consolidated Balance Sheet classification, are as follows at June 30, 2018 and December 31, 2017:

	June 30, 2018		December 31, 2017	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Due within one year	$112,427	$112,419	$104,742	$104,605
Due after one through five years	14,540	14,547	5,008	4,984
Due after five through ten years	—	—	—	—
Due after ten years	—	—	—	—
Total marketable securities	$126,967	$126,966	$109,750	$109,589

Table of Contents

The following table summarizes the estimated fair value and gross unrealized holding losses of marketable securities, aggregated by investment instrument and period of time in an unrealized loss position, at June 30, 2018 and December 31, 2017:

	Unrealized Loss Position For Less Than 12 Months		Unrealized Loss Position For Greater Than 12 Months	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
June 30, 2018				
Municipal notes and bonds	$58,999	$ 45	$ —	$ —
Total	$58,999	$ 45	$ —	$ —
December 31, 2017				
Municipal notes and bonds	$98,805	$ 161	$ —	$ —
Total	$98,805	$ 161	$ —	$ —

See Note 2 for additional discussion regarding the fair value of the Company's marketable securities.

NOTE 5. Derivative Instruments and Hedging Activities

The Company, when it considers it to be appropriate, enters into forward exchange contracts to hedge the economic exposures arising from foreign currency denominated transactions. At June 30, 2018 and December 31, 2017, these contracts included the future sale of Japanese Yen to purchase U.S. dollars. Derivative instruments are recognized as either, "Prepaid expenses and other current assets" or "Other current liabilities" in the Condensed Consolidated Balance Sheets and are measured at fair value. The foreign currency forward exchange contracts were entered into by the Company's Japanese subsidiary to economically hedge a portion of certain intercompany obligations. The forward exchange contracts are not designated as hedges for accounting purposes and decreases in the fair value of $55 and $218 for the six months ended June 30, 2018 and 2017, respectively, are recorded under the caption "Other expense (income), net" in the Condensed Consolidated Statements of Operations.

The dollar equivalent of the U.S. dollar forward exchange contracts and related fair values as of June 30, 2018 and December 31, 2017 were as follows:

	June 30, 2018	December 31, 2017
Notional amount	$ 3,734	$ 8,417
Fair value of asset (liability)	$ (10)	$ 45

NOTE 6. Purchased Intangible Assets

Purchased intangible assets as of June 30, 2018 and December 31, 2017 are as follows:

	Gross Carrying Amount	Accumulated Amortization	Net
June 30, 2018			
Finite-lived intangibles:			
Developed technology	$ 66,027	$ 59,103	$6,924
Customer and distributor relationships	9,561	8,950	611
Trade names	4,361	3,826	535
Total identifiable intangible assets	$ 79,949	$ 71,879	$8,070
December 31, 2017			
Finite-lived intangibles:			
Developed technology	$ 65,827	$ 58,522	$7,305
Customer and distributor relationships	9,560	8,818	742
Trade names	4,361	3,776	585
Total identifiable intangible assets	$ 79,748	$ 71,116	$8,632

Intangible asset amortization expenses for the three and six months ended June 30, 2018 were $383 and $763, respectively. For the three and six month periods ended June 30, 2017, intangible assets amortization expenses were $505 and

Table of Contents

$1,010, respectively. Assuming no change in the gross carrying value of identifiable intangible assets and estimated lives, estimated amortization expense for the remainder of 2018 are $768, and for each of the next five years estimated amortization expenses are $1,535 for 2019, $1,333 for 2020, $585 for 2021, $519 for 2022, and $502 for 2023.

NOTE 7. Balance Sheet Details

Inventories

Inventories are comprised of the following:

	June 30, 2018	December 31, 2017
Materials	$51,644	$ 39,765
Work-in-process	22,935	20,923
Finished goods	9,643	6,833
Total inventories	$84,222	$ 67,521

The Company has established reserves of $13,792 and $13,035 as of June 30, 2018 and December 31, 2017, respectively, for slow moving and obsolete inventory, which are included in the amounts above.

Property, Plant and Equipment

Property, plant and equipment, net is comprised of the following:

	June 30, 2018	December 31, 2017
Land and building	$2,584	$ 2,584
Machinery and equipment	29,721	29,870
Furniture and fixtures	3,231	3,201
Computer equipment and software	5,943	5,444
Leasehold improvements	9,400	9,472
	50,879	50,571
Accumulated depreciation	(33,999)	(33,229)
Total property, plant and equipment, net	$16,880	$ 17,342

Other assets

Other assets is comprised of the following:

	June 30, 2018	December 31, 2017
Deferred income taxes	$ 14,850	$ 14,879
Other	469	492
Total other assets	$ 15,319	$ 15,371

Other current liabilities

Other current liabilities is comprised of the following:

	June 30, 2018	December 31, 2017
Intangible asset acquisition - Stella Alliance	$ 150	$ 100
Contingent consideration - acquisitions	781	634
Customer deposits	965	5,561
Other	5,084	2,989
Total other current liabilities	$ 6,980	$ 9,284

Table of Contents

Other non-current liabilities

Other non-current liabilities is comprised of the following:

	June 30, 2018	December 31, 2017
Unrecognized tax benefits (including interest)	$4,727	$ 4,660
Contingent consideration - acquisitions	1,358	1,959
Deferred revenue	1,080	983
Other	3,001	2,859
Total other non-current liabilities	$10,166	$ 10,461

NOTE 8. Commitments and Contingencies

Intellectual Property Indemnification Obligations

The Company has entered into agreements with customers that include limited intellectual property indemnification obligations that are customary in the industry. These guarantees generally require the Company to compensate the other party for certain damages and costs incurred as a result of third party intellectual property claims arising from these transactions. The nature of the intellectual property indemnification obligations prevents the Company from making a reasonable estimate of the maximum potential amount it could be required to pay to its customers. Historically, the Company has not made any indemnification payments under such agreements and no amount has been accrued in the accompanying Condensed Consolidated Financial Statements with respect to these indemnification guarantees.

Warranty Reserves

The Company generally provides a warranty on its products for a period of 12 to 15 months against defects in material and workmanship. The Company estimates the costs that may be incurred during the warranty period and records a liability in the amount of such costs at the time revenue is recognized. The Company's estimate is based primarily on historical experience. The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary. Settlements of warranty reserves are generally associated with sales that occurred during the 12 to 15 months prior to the quarter-end and warranty accruals are related to sales during the same year.

Changes in the Company's warranty reserves are as follows:

	Six Months Ended June 30,	
	2018	2017
Balance, beginning of the period	$2,427	$1,788
Accruals	1,930	1,659
Usage	(1,692)	(1,311)

Balance, end of the period	$2,665	$2,136

Warranty reserves are reported in the Condensed Consolidated Balance Sheets under the caption "Accounts payable and accrued liabilities."

Legal Matters

From time to time, the Company is subject to legal proceedings and claims in the ordinary course of business. There are no legal proceedings pending or threatened against the Company that management believes are likely to have a material adverse effect on the Company's consolidated financial position or otherwise.

Line of Credit

The Company has a credit agreement with a bank that provides for a line of credit which is secured by the marketable securities the Company has with the bank. The Company is permitted to borrow up to 70% of the value of eligible securities held at the time the line of credit is accessed. The available line of credit as of June 30, 2018 was approximately $99 million with an available interest rate of 3.5%. The credit agreement is available to the Company until such time that either party terminates the arrangement at their discretion. The Company has not utilized the line of credit to date.

Table of Contents

NOTE 9. Share-Based Compensation

Restricted Stock Unit Activity

A summary of the activity with respect to the Company's unvested restricted stock units during the six months ended June 30, 2018 is as follows:

	Number of Shares	Weighted Average Grant Date Fair Value
Unvested at December 31, 2017	1,014	$ 14.88
Granted	266	$ 28.27
Vested	(299)	$ 14.22
Forfeited	(18)	$ 15.27
Unvested at June 30, 2018	963	$ 18.78

Included in the number of shares granted in the table directly above are 53 market performance-based restricted stock units ("MPRSUs") granted to executives in 2018. Vesting of these MPRSUs is contingent upon the Company meeting certain total shareholder return ("TSR") levels as compared to a select peer group over three years from the year granted. The 2018 MPRSUs cliff vest at the end of the three-year period and have a maximum potential to vest at 200% (105 shares) based on TSR performance. The related share-based compensation expense is determined based on the estimated fair value of the underlying shares on the date of grant and is recognized straight-line over the vesting term. The estimated fair value per share of the MPRSUs was $30.76.

As of June 30, 2018 and December 31, 2017, there was $13,079 and $9,420 of total unrecognized compensation cost related to restricted stock units granted under the Company's stock plans, respectively. That cost is expected to be recognized over a weighted average period of 2.2 years for each of the respective periods.

NOTE 10. Other Expense (Income), net

Other expense (income), net is comprised of the following:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Foreign currency exchange losses (gains), net	$(140)	$166	$43	$435
Rental income	—	—	(1)	—
Total other expense (income), net	$(140)	$166	$42	$435

NOTE 11. Income Taxes

The following table provides details of income taxes:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Income before income taxes	$17,290	$12,752	$34,964	$22,359
Provision for income taxes	$2,593	$3,559	$5,137	$6,015
Effective tax rate	15.0 %	27.9 %	14.7 %	26.9 %

The income tax provision for the three and six months ended June 30, 2018 was computed based on the Company's annual forecast of profit by jurisdiction and forecasted effective tax rate for the year. The changes in the Company's effective tax rate for the three and six months ended June 30, 2018 as compared to the same period in 2017 are primarily due to enactment of U.S. tax reform, which provides for a change in the corporate tax rate from 35% to 21%, changes in the mix of forecasted earnings by jurisdictions and the Foreign Derived Intangible Income Deduction.

The 2017 Tax Act was enacted on December 22, 2017. The 2017 Tax Act reduces the U.S. federal corporate income tax rate from 35% to 21%, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, provides tax benefits for export sales and creates new taxes on certain foreign sourced earnings. The Company is applying the guidance in SAB 118 when accounting for the enactment-date effects of the 2017 Tax Act. At June 30, 2018, the Company has not completed its accounting for all of the tax effects of the 2017 Tax Act. In all cases, the Company will continue to make and refine its calculations as additional analysis is completed. The Company's estimates may

Table of Contents

also be affected as it gains a more thorough understanding of the 2017 Tax Act. These changes could be material to income tax expense.

Foreign-Derived Intangible Income: The 2017 Tax Act provides tax incentives to U.S. companies to earn income from the sale, lease or license of goods and services abroad in the form of a deduction for foreign-derived intangible income (“FDII”). FDII is taxed at an effective rate of 13.1% for taxable years beginning after December 31, 2017 and at an effective rate of 16.4% for taxable years beginning after December 31, 2025. The accounting for the deduction for FDII is similar to a special deduction and should be accounted for based on the guidance in ASC 740-10-25-37. The tax benefits for special deductions ordinarily are recognized no earlier than the year in which they are deductible on a tax return. As of June 30, 2018, the Company has made sufficient progress in its calculations to reasonably estimate the effect on its estimated annual effective tax rate. As a result of a large portion of the Company’s sales are made to non-U.S. customers, this adjustment decreased its effective tax rate by 4.8%. The Company will continue to refine its calculations, which may result in changes to this amount.

The Company does not expect other provisions of the 2017 Tax Act, including global intangible low-taxed income (“GILTI”), the new interest expense limitations and base erosion anti-abuse tax (“BEAT”) to have a material impact on the Company’s effective tax rate.

Deferred Tax Assets and Liabilities: The Company remeasured certain deferred tax assets and liabilities based on the rates to which they are expected to reverse in the future, which is anticipated to be 21%. The Company recorded a provisional amount of $8.0 million as of December 31, 2017 related to the remeasurement of certain deferred tax balances. Due to the continued refinement of the Company’s transition tax calculation, discussed further below, and the effect it may have on the measurement of NOLs and other carryforwards, it will continue to analyze and refine its calculations related to the measurement of these balances.

One-Time Transition Tax: The one-time transition tax is based on its total post-1986 earnings and profits (“E&P”), which it has deferred from U.S. income taxes under previous U.S. law. The Company originally recorded a provisional amount for its one-time transition tax liability for all of its foreign subsidiaries, resulting in a transition tax benefit (net of foreign tax credits) of $0.1 million being recorded at December 31, 2017. As the Company continues to refine its E&P analysis, it will refine its calculations of the one-time transition tax, which could affect the measurement of this liability. No additional income taxes have been provided for any remaining undistributed foreign earnings not subject to the transition tax, or any additional outside basis difference inherent in these entities, as these amounts continue to be indefinitely reinvested in foreign operations.

The Company currently has a partial valuation allowance recorded against certain foreign and state net operating loss and credit carryforwards where the realizability of such deferred tax assets is substantially in doubt. Each quarter, the Company assesses the likelihood that it will be able to recover its deferred tax assets. The Company considers available evidence, both positive and negative, including forecasted earnings in assessing the need for a valuation allowance. As a result of the Company’s analysis, it concluded that it is more likely than not that a portion of its deferred tax assets will not be realized. Therefore, the Company continues to provide a valuation allowance against certain deferred tax assets. The Company continues to monitor available evidence and may reverse some or all of the remaining valuation allowance in future periods, if appropriate. The Company has a recorded valuation allowance against certain of its deferred tax assets of $2,447 as of June 30, 2018 and December 31, 2017.

NOTE 12. Earnings Per Share

Basic earnings per share is calculated using the weighted average number of shares of common stock outstanding during the period. Diluted earnings per share is computed in the same manner and also gives effect to all dilutive common equivalent shares outstanding during the period. Potential common shares that would have the effect of increasing diluted earnings per share are considered to be anti-dilutive. In accordance with U.S. GAAP, these shares were not included in calculating diluted earnings per share.

The following table sets forth the weighted average number of stock options and restricted stock units that have been excluded from the calculation of diluted earnings per share as their effect would have been anti-dilutive:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Stock options	—	—	—	—
Restricted stock units	11	1	22	13
Total	11	1	22	13

Table of Contents

The Company’s basic and diluted earnings per share amounts are as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Numerator:				
Net income	$14,697	$9,193	$29,827	$16,344
Denominator:				
Basic earnings per share - weighted average shares outstanding	31,859	31,501	31,760	31,397
Effect of potential dilutive securities:				
Employee stock options and restricted stock units - dilutive shares	578	645	617	704
Warrant - dilutive shares	—	—	—	3
Diluted earnings per share - weighted average shares outstanding	32,437	32,146	32,377	32,104
Earnings per share:				
Basic	$0.46	$0.29	$0.94	$0.52
Diluted	$0.45	$0.29	$0.92	$0.51

NOTE 13. Accumulated Other Comprehensive Loss

Comprehensive income includes net income, foreign currency translation adjustments and net unrealized gains and losses on available-for-sale debt securities. See the Condensed Consolidated Statements of Comprehensive Income for the effect of the components of comprehensive income on the Company’s net income.

The components of accumulated other comprehensive loss, net of tax, are as follows:

	Foreign currency translation adjustments	Net unrealized (gains) losses on marketable securities	Accumulated other comprehensive loss (income)
Balance at December 31, 2017	$ 1,079	$ 126	$ 1,205
Net current period other comprehensive income	223	(130)	93
Reclassifications	—	—	—
Balance at June 30, 2018	$ 1,302	$ (4)	$ 1,298

NOTE 14. Segment Reporting and Geographic Information

The Company is engaged in the design, development, manufacture and support of high-performance control metrology, defect inspection, advanced packaging lithography and data analysis systems used by microelectronics device manufacturers. The Company and its subsidiaries currently operate in a single operating segment: the design, development, manufacture and support of high-performance process control defect inspection and metrology, advanced packaging lithography and process control software systems used by microelectronics device manufacturers. Therefore the Company has one reportable segment. The Company's chief operating decision maker is the Chief Executive Officer (the "CEO"). The CEO allocates resources and assesses performance of the business and other activities at the reporting segment level.

The following table lists the different sources of revenue:

	Three Months Ended June 30,						Six Months Ended June 30,					
	2018			2017			2018			2017		
Systems and Software:												
Process control	$56,262	72	%	$47,711	71	%	$104,295	70	%	$91,586	72	%
Lithography	3,851	5	%	3,533	5	%	11,921	7	%	3,550	2	%
Software licensing, support and maintenance	7,547	10	%	6,895	10	%	15,002	10	%	14,394	11	%
Parts	6,758	9	%	7,348	11	%	13,742	9	%	13,678	11	%
Services	3,058	4	%	1,931	3	%	5,612	4	%	4,889	4	%
Total revenue	$77,476	100	%	$67,418	100	%	$150,572	100	%	$128,097	100	%

18

Table of Contents

For geographical revenue reporting, revenue is attributed to the geographic location to which the product is shipped. Revenue by geographic region is as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
Revenue from third parties:				
United States	$8,800	$9,182	$17,868	$18,190
Taiwan	10,943	20,323	25,410	34,156
Japan	5,818	3,468	9,948	6,677
China	23,347	5,904	41,318	20,005
South Korea	16,374	14,221	33,604	23,751
Singapore	3,059	1,945	7,341	5,211
Other Asia	501	1,444	2,418	1,559
Germany	3,818	4,789	5,142	7,869
Other Europe	4,816	6,142	7,523	10,679
Total revenue	$77,476	$67,418	$150,572	$128,097

The following customer accounted for more than 10% of total revenue for the indicated periods:

	Six Months Ended June 30,	
	2018	2017
Customer A	11.6%	11.2%

NOTE 15. Share Repurchase Authorization

In January 2015, the Board of Directors authorized the Company to repurchase up to 3,000 shares of the Company's common stock with no established end date. The authorization allows for repurchases to be made in the open market or through negotiated transactions from time to time. During the three and six months ended June 30, 2018, the Company did not repurchase any shares of common stock pursuant to the share repurchase authorization. At June 30, 2018, there were 711 shares available for future stock repurchases under this share repurchase authorization. Shares of common stock purchased under the share repurchase authorization are retired.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Certain statements in this Quarterly Report on Form 10-Q (this "Form 10-Q") are forward-looking statements, including those concerning our business momentum and future growth, acceptance of our products and services, our ability to deliver both products and services consistent with our customers' demands and expectations and to strengthen our market position, our expectations of the semiconductor market outlook, future revenue, gross profits, research and development and engineering expenses, selling, general and administrative expenses, product introductions, technology development, manufacturing practices, cash requirements, our dependence on certain significant customers and anticipated trends and developments in and management plans for our business and the markets in which we operate, our anticipated revenue as a result of acquisitions, and our ability to be successful in managing our cost structure and cash expenditures and results of litigation. The statements contained in this Form 10-Q that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by words such as, but not limited to, "anticipate," "believe," "expect," "intend," "plan," "should," "may," "could," "will" and words or phrases of meaning, as they relate to our management or us.

The forward-looking statements contained herein reflect our expectations with respect to future events and are subject to certain risks, uncertainties and assumptions. Actual results may differ materially from those included in such forward-looking statements for a number of reasons including, but not limited to, the following: variations in the level of orders which can be affected by general economic conditions; seasonality and growth rates in the semiconductor manufacturing industry and in the markets served by our customers; the global economic and political climates; difficulties or delays in product functionality or performance; the delivery performance of sole source vendors; the timing of future product releases; failure to respond adequately to either changes in technology or customer preferences; changes in pricing by us or our competitors; our ability to

Table of Contents

manage growth; changes in management; risk of nonpayment of accounts receivable; changes in budgeted costs; our ability to leverage our resources to improve our position in our core markets, to weather difficult economic environments, to open new market opportunities and to target high-margin markets; the strength/weakness of the back-end and/or front-end semiconductor market segments; our ability to successfully integrate acquired businesses into our business and fully realize, or realize within the expected time frame, the expected combination benefits from the acquisitions and the "Risk Factors" set forth in Item 1A in our 2017 10-K and any subsequently filed Quarterly Reports on Form 10-Q. The forward-looking statements reflect our position as of the date of this report and we undertake no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

Critical Accounting Policies

The preparation of condensed consolidated financial statements and related disclosures in conformity with accounting principles generally accepted in the United States ("U.S. GAAP") requires management to make judgments, assumptions and estimates that affect the amounts reported. Certain of these significant accounting policies are considered to be critical accounting policies, as defined below.

A critical accounting policy is defined as one that is both material to the presentation of our condensed consolidated financial statements and requires management to make difficult, subjective or complex judgments that could have a material effect on our financial condition or results of operations. Specifically, these policies have the following attributes: (1) we are required to make judgments and assumptions about matters that are highly uncertain at the time of the estimate; and (2) different estimates we could reasonably have used, or changes in the estimate that are reasonably likely to occur, could have a material effect on our financial position and results of operations.

Estimates and assumptions about future events and their effects cannot be determined with certainty. We base our estimates on historical experience and on various other assumptions believed to be applicable and reasonable under the circumstances. These estimates may change as new events occur, as additional information is obtained and as our operating environment changes. In addition, management is periodically faced with uncertainties, the outcomes of which are not within our control and will not be known for prolonged periods of time. Certain of these uncertainties are discussed in our 2017 10-K in the Items entitled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations." Based on a critical assessment of our accounting policies and the underlying judgments and uncertainties affecting the application of those policies, we believe that our condensed consolidated financial statements are fairly stated in accordance with U.S. GAAP, and provide a fair presentation of our financial position and results of operations.

For more information, please see our critical accounting policies as previously disclosed in our 2017 10-K.

During the quarter ended March 31, 2018, the Company adopted the provisions of ASC 606, "Revenue from Contracts with Customers." See Note 1 to the Condensed Consolidated Financial Statements included in this Form 10-Q regarding the impact of recent accounting pronouncements on our financial position and results of operations and Note 2, "Revenue," in the notes to the financial statements, related to the impact of the adoption of ASC 606 on our financial statements and accounting policies.

Overview

We are a worldwide leader in the design, development, manufacture and support of process control tools that perform macro-defect inspections and metrology, lithography systems and process control analytical software used by

semiconductor and advanced packaging device manufacturers. We deliver comprehensive solutions throughout the semiconductor fabrication process with our families of proprietary products that provide critical yield-enhancing information, enabling microelectronic device manufacturers to drive down costs and the time to market of their devices. We provide process and yield management solutions used in both wafer processing facilities, often referred to as “front-end” manufacturing, and device packaging and test facilities, or “back-end” manufacturing, through a portfolio of standalone systems for macro-defect inspection, lithography, probe card test and analysis, and transparent and opaque thin film measurements. All of our systems feature sophisticated software and production-worthy automation. In addition, our advanced process control software portfolio includes powerful solutions for standalone tools, group of tools, or factory-wide suites to enhance productivity and achieve significant cost savings. Our systems are backed by worldwide customer support.

Our business is affected by the annual spending patterns of our customers on semiconductor capital equipment. The amount that our customers devote to capital equipment spending depends on a number of factors, including general worldwide economic conditions, as well as other economic drivers such as sales of personal computers, tablets, cell phones, wearable devices, other personal electronic devices and automotive sales. Current forecasts by industry analysts for the semiconductor

Table of Contents

device manufacturing industry project an increase capital equipment spending of approximately 7% for 2018. Our revenue and profitability tend to follow the trends of certain segments within the semiconductor market.

Historically, a significant portion of our revenue in each quarter and year has been derived from sales to relatively few customers, and we expect this trend to continue. For the six months ended June 30, 2018 and for the years ended December 31, 2017, 2016 and 2015, aggregate sales to customers that individually represented at least five percent of our revenue accounted for 34.6%, 27.2%, 34.5%, and 23.3% of our revenue, respectively.

We do not have purchase contracts with any of our customers that obligate them to continue to purchase our products, and they could cease purchasing products from us at any time. A delay in purchase or a cancellation by any of our large customers could cause quarterly revenue to vary significantly. In addition, during any given quarter, a significant portion of our revenue may be derived from the sale of a relatively small number of systems, with one customer accounting for 10% or more of our revenue. One customer accounted for 11.6% of our revenue for the six months ended June 30, 2018. The following table lists the average selling price for our systems:

System	Average Selling Price Per System
Process control	$250,000 to $2.1 million
Lithography steppers	$3.0 million to $8.5 million

A significant portion of our revenue is derived from customers outside of the United States. A substantial portion of our international sales is denominated in U.S. dollars. We expect that revenue generated from customers outside of the United States will continue to account for a significant percentage of our revenue.

The sales cycle for our systems typically ranges from six to twenty-four months and can be longer when our customers are evaluating new technology. Due to the length of these cycles, we invest significantly in research and development and sales and marketing in advance of generating revenue related to these investments.

Results of Operations for the Three and Six Month Periods Ended June 30, 2018 and 2017

Revenue. Our revenue is primarily derived from the sale of our systems, services, spare parts and software licensing. Our revenue of $77.5 million increased 14.9% for the three months ended June 30, 2018 as compared to the same period in 2017, in which revenue totaled $67.4 million. For the six month period ended June 30, 2018 and 2017, our revenue totaled $150.6 million and $128.1 million, respectively, representing a year-over-year increase of 17.5%.

The following table lists, for the periods indicated, the different sources of our revenue in dollars (thousands) and as percentages of our total revenue:

	Three Months Ended June 30,				Six Months Ended June 30,			
	2018		2017		2018		2017	
Systems and Software:								
Process control	$56,262	72 %	$47,711	71 %	$104,295	70 %	$91,586	72 %

Lithography	3,851	5 %	3,533	5 %	11,921	7 %	3,550	2 %
Software licensing, support and maintenance	7,547	10 %	6,895	10 %	15,002	10 %	14,394	11 %
Parts	6,758	9 %	7,348	11 %	13,742	9 %	13,678	11 %
Services	3,058	4 %	1,931	3 %	5,612	4 %	4,889	4 %
Total revenue	$77,476	100%	$67,418	100%	$150,572	100%	$128,097	100%

Total systems and software revenue increased $21.7 million for the six months ended June 30, 2018, as compared to the six months ended June 30, 2017. Process control system revenue increased $12.7 million for the six months ended June 30, 2018, as compared to the same period in 2017, primarily due to higher metrology system sales in the 2018 period. Lithography system revenue increased $8.4 million for the six months ended June 30, 2018, as compared to the same period in 2017, primarily due to the shipment of a JetStep G system during the first half of 2018. Software revenue increased slightly for the six months ended June 30, 2018, as compared to the same period in 2017. Systems revenue generated by our latest product releases and major enhancements in each of our product families amounted to 75% of total revenue for both the three and six months ended June 30, 2018, as compared to 74% and 72% of total revenue for the three and six months ended June 30, 2017, respectively. The year-over-year increase in total parts and services revenue for the six months ended June 30, 2018 is primarily due to increased spending by our customers on system upgrades and repairs of existing systems. Parts and services revenue are generated from parts sales, maintenance service contracts, system upgrades, as well as from time and material billable service calls.

Table of Contents

Deferred revenue of $7.7 million was recorded in the Condensed Consolidated Balance Sheet under the caption "Deferred revenue" and $1.1 million was recorded under the caption "Other non-current liabilities" at June 30, 2018. Deferred revenue primarily consisted of $6.2 million for deferred maintenance agreements and $2.6 million for outstanding deliverables.

Gross Profit. Our gross profit has been and will continue to be affected by a variety of factors, including manufacturing efficiencies, provision for excess and obsolete inventory, pricing by competitors or suppliers, new product introductions, production volume, customization and reconfiguration of systems, international and domestic sales mix, system and software product mix and parts and service margins. Our gross profit was $41.7 million and $84.2 million for the three and six months ended June 30, 2018, respectively, as compared to $35.5 million and $67.3 million for the same periods in 2017. Our gross profit represented 53.9% and 55.9% of our revenue for the three and six months ended June 30, 2018, respectively. For both the three and six months ended June 30, 2017, gross profit represented 52.6% of our revenue. The increase in gross profit as a percentage of revenue for the six months ended June 30, 2018, as compared to the same period in 2017, is primarily due to system and software product mix and the sale of a lithography system that had been previously written down in purchase accounting. We expect our gross profit to be in the range of 53.0% to 54.0% for the quarter ending September 30, 2018.

Operating Expenses. Major components of operating expenses include research and development, as well as selling, general and administrative expenses.

Research and Development. Our research and development expenses were $12.7 million and $24.5 million for the three and six months ended June 30, 2018, respectively, as compared to $12.1 million and $24.2 million for the same periods in 2017. Research and development expenses represented 16.4% and 16.3% of our revenue for the three and six months ended June 30, 2018, respectively, as compared to 18.0% and 18.9% of revenue for the prior year periods. Research and development expenses increased for the year-over-year periods due to increases in compensation, which were partially offset by decrease in litigation expenses and project costs.

Selling, General and Administrative. Our selling, general and administrative expenses were $11.9 million and $24.7 million for the three and six months ended June 30, 2018, respectively, as compared to $10.1 million and $19.8 million for the same periods in 2017. Selling, general and administrative expenses represented 15.4% and 16.4% of our revenue for the three and six months ended June 30, 2018, respectively, as compared to 15.0% and 15.4% of our revenue for the same periods in 2017. The year-over-year dollar increase for the six months ended June 30, 2018 in selling, general and administrative expenses was primarily due to an increase in compensation costs, a loss contingency accrual recorded for the possible misappropriation of payroll taxes by a third party accountant and an increase in sales commissions.

Income Taxes. We recorded an income tax provision of $2.6 million and $5.1 million for the three and six months ended June 30, 2018, respectively. Our effective tax rate of 14.7% differs from the statutory rate of 21% for the six months ended June 30, 2018 primarily due to the enactment of the 2017 Tax Act, which provides for a projected foreign derived intangible income deduction and a federal research and development credit. For the three and six months ended June 30, 2017, we recorded an income tax provision of $3.6 million and $6.0 million, respectively.

Among other things, the 2017 Tax Act lowered the U.S. federal corporate income tax rate from 35% to 21% and implemented a territorial tax system. The lower U.S. corporate income tax rate is effective January 1, 2018; however the U.S. deferred tax assets and liabilities were re-measured in 2017 when the 2017 Tax Act was enacted. Also in 2017, as part of the transition to the new territorial tax system, the 2017 Tax Act imposed a one-time tax on deemed repatriation of foreign subsidiaries' earnings. At June 30, 2018, we have not completed our accounting for the tax

effects of enactment of the 2017 Tax Act; however, we have made reasonable estimates of the effects. The total provisional impact of the 2017 Tax Act as summarized below, which is included as a component of the provision from income taxes, is further described in Note 11 in the accompanying Notes to the Consolidated Financial Statements (dollars in thousands).

Table of Contents

	Six Months Ended June 30, 2018	Year Ended December 31, 2017
Re-measurement of U.S. deferred tax assets and liabilities	$—	$ 8,020
Transition tax on non-U.S. subsidiaries' earnings	—	1,450
Foreign tax credits applied against transition tax	—	(1,556)
Valuation allowance for unused foreign tax credits	—	1,542
Foreign Derived Intangible Income	(3,083)	—
Global Intangible Low-Taxed Income (net of Foreign Tax Credit)	132	—
Interest Expense Deduction Limitation	—	—
Base Erosion Anti-Abuse Tax	—	—
Total impact of the 2017 Tax Act on the provision for income taxes	$(2,951)	$ 9,456

We are continuing to assess the impact of the 2017 Tax Act and may record adjustments in 2018 as additional analysis is completed and as we gain a more thorough understanding of the legislation.

Our future effective income tax rate depends on various factors, such as future impacts of the 2017 Tax Act, new tax legislation, the geographic composition of our pre-tax income, the amount of our pre-tax income as business activities fluctuate, and non-deductible expenses incurred in connection with acquisitions and research and development credits as a percentage of aggregate pre-tax income.

We currently have a partial valuation allowance recorded for certain foreign and state loss and credit carryforwards where the realizability of such deferred tax assets is substantially in doubt. Each quarter we assess the likelihood that we will be able to recover our deferred tax assets primarily relating to state research and development credits. We consider available evidence, both positive and negative, including historical levels of income, expectations and risks associated with estimates of future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for a valuation allowance. As a result of our analysis, we concluded that it is more likely than not that a portion of our net deferred tax assets will not be realized. Therefore, we continue to provide a valuation allowance against certain net deferred tax assets. We continue to monitor available evidence and may reverse some or all of the valuation allowance in future periods, if appropriate.

Liquidity and Capital Resources

At June 30, 2018, we had $183.5 million of cash, cash equivalents and marketable securities and $313.4 million in working capital. At December 31, 2017, we had $177.4 million of cash, cash equivalents and marketable securities and $279.8 million in working capital.

Operating activities provided $9.5 million in net cash and cash equivalents for the six months ended June 30, 2018. The net cash and cash equivalents provided by operating activities during the six months ended June 30, 2018 resulted primarily from net income, adjusted to exclude the effect of non-cash operating charges of $39.1 million and offset by a decrease in cash used in operating assets and liabilities of $29.6 million. This decrease was primarily attributed to increases in inventory and accounts receivable. Operating activities provided $30.0 million in net cash and cash equivalents for the six months ended June 30, 2017. The net cash and cash equivalents provided by operating activities during the six months ended June 30, 2017 resulted primarily from net income, adjusted to exclude the effect

of non-cash operating charges of $24.8 million and an increase in cash provided from operating assets and liabilities of $5.2 million.

Net cash and cash equivalents of $19.1 million used in investing activities during the six months ended June 30, 2018 resulted from the purchase of marketable securities of $105.7 million and capital expenditures of $2.2 million, offset by proceeds from sales of marketable securities of $88.8 million. Net cash and cash equivalents used in investing activities of $8.3 million during the six months ended June 30, 2017 resulted from the purchase of marketable securities of $62.5 million and capital expenditures of $5.3 million, partially offset by proceeds from sales of marketable securities of $59.5 million.

Net cash and cash equivalents used in financing activities during the six months ended June 30, 2018 of $1.5 million was due primarily to the payment of contingent consideration for acquired business of $1.0 million, and tax payments related to shares withheld for share-based compensation plans of $1.0 million, offset by proceeds from sales of shares through share-based compensation plans of $0.5 million. For the six months ended June 30, 2017, financing activities used $2.4 million, which resulted primarily from tax payments related to share withheld for share-based compensation plans of $1.3 million, the redemption of stock warrants of $1.0 million and payment of contingent consideration for acquired business of $0.4 million, partially offset by proceeds from sales of shares through share-based compensation plans of $0.3 million.

Table of Contents

From time to time, we evaluate whether to acquire new or complementary businesses, products and/or technologies. We may fund all of a portion of the purchase price of these acquisitions in cash, stock, or a combination of cash and stock.

In January 2015, our Board of Directors authorized the Company to repurchase up to 3.0 million shares of our common stock with no established end date. The authorization allows for repurchases to be made in the open market or through negotiated transactions from time to time. During the six months ended June 30, 2018, the Company did not repurchase any shares of common stock pursuant to the shares repurchase authorization. At June 30, 2018, there were 0.7 million shares available for future stock repurchases under this share repurchase authorization. Shares of common stock purchased under the share repurchase authorization are retired. For further information, see Note 15 in the accompanying Notes to the Condensed Consolidated Financial Statements included in this Form 10-Q.

We have a credit agreement with a bank that provides for a line of credit that is secured by the marketable securities we have with the bank. We are permitted to borrow up to 70% of the value of eligible securities held at the time the line of credit is accessed. As of June 30, 2018, the available line of credit was approximately $99 million with an available interest rate of 3.5%. The credit agreement is available to us until such time that either party terminates the arrangement at its discretion. To date, we have not utilized this line of credit.

Our future capital requirements will depend on many factors, including the timing and amount of our revenue and our investment decisions, which will affect our ability to generate additional cash. We expect that our existing cash, cash equivalents, marketable securities and availability under our line of credit will be sufficient to meet our anticipated cash requirements for working capital, capital expenditures and other cash needs for the next 12 months following the filing of this Form 10-Q. Thereafter, if cash generated from operations and financing activities is insufficient to satisfy our working capital requirements, we may seek additional funding through bank borrowings, sales of securities or other means. There can be no assurance that we will be able to raise any such capital on terms acceptable to us or at all.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Interest Rate and Credit Market Risk

We are exposed to changes in interest rates and market liquidity including our investments in certain available-for-sale debt securities. Our available-for-sale securities consist of fixed and variable rate income investments, such as municipal notes, municipal bonds and corporate bonds. We continually monitor our exposure to changes in interest rates, market liquidity and credit ratings of issuers for our available-for-sale debt securities. It is possible that we are at risk if interest rates, market liquidity or credit ratings of issuers change in an unfavorable direction. The magnitude of any gain or loss will be a function of the difference between the fixed or variable rate of the financial instrument and the market rate, and our financial condition and results of operations could be materially affected. Based on a sensitivity analysis performed on our marketable securities held as of June 30, 2018, an immediate adverse change of 10% in interest rates (e.g., a change from 3.00% to 3.30%) would result in an immaterial decrease in the fair value of our available-for-sale debt securities and would not have a material impact on our consolidated financial position, results of operations or cash flows.

Foreign Currency Risk

A substantial portion of our systems and software sales are denominated in U.S. dollars with the exception of Japan. As a result, we have relatively little exposure to foreign currency exchange risk with respect to these sales.

Substantially all of our sales in Japan are denominated in Japanese yen. From time to time, we may enter into forward exchange contracts to economically hedge a portion, but not all, of the existing and anticipated foreign currency denominated transactions expected to occur within 12 months. The change in fair value of the forward exchange contracts is recognized under the caption “Other (income) expense” in the Condensed Consolidated Statements of Operations for each reporting period. As of June 30, 2018, we had thirteen forward exchange contracts outstanding with a total notional contract value of $3.7 million. We do not use derivative financial instruments for trading or speculative purposes.

We have branch operations in Taiwan, Singapore and South Korea and wholly-owned subsidiaries in Europe, Japan and China. Our international subsidiaries and branches operate primarily using local functional currencies. Our exposure to foreign currency exchange rate fluctuations arise from intercompany balances between our U.S. headquarters and that of our foreign owned entities. Our intercompany balances are denominated in U.S. dollars. Since each foreign entity’s functional currency is generally denominated in its local currency, there is exposure to foreign exchange risk when the foreign entity’s intercompany balance is remeasured at a reporting date, resulting in transaction gains or losses. The intercompany balance, exposed to foreign currency risk, as of June 30, 2018 was approximately $29.0 million. A hypothetical change of 10% in the relative value of the U.S. dollar versus local functional currencies could result in approximately $1.3 million in foreign currency exchange losses / (gains) which would be recorded as non-operating expense in other expense (income) in our

Table of Contents

Condensed Consolidated Statements of Operations. We cannot accurately predict future exchange rates or the overall impact of future exchange rate fluctuations on our business, results of operations and financial condition.

Item 4. Controls and Procedures

We maintain a set of disclosure controls and procedures, as defined in Rule 13a-15(e) or Rule 15d-15(e) under the Exchange Act, designed to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms and that such information is accumulated and communicated to our management, including our CEO and Chief Financial Officer ("CFO"), as appropriate, to allow for timely decisions regarding required disclosure. The disclosure controls and procedures are designed to provide reasonable assurance of achieving the desired control objectives.

Scope of the Controls Evaluation

The evaluation of our disclosure controls and procedures included a review of the controls' objectives and design, our implementation of the controls and the effect of the controls on the information generated for use in this Form 10-Q. In the course of the evaluation, we sought to identify data errors, control problems or acts of fraud and confirm that appropriate corrective actions, if any, including process improvements, were being undertaken. This type of evaluation is performed on a quarterly basis so that the conclusions of management, including the CEO and CFO, concerning the effectiveness of the controls can be reported in our Quarterly Reports on Form 10-Q and in our Annual Reports on Form 10-K. Many of the components of our disclosure controls and procedures are also evaluated on an ongoing basis by other personnel in our accounting, finance, internal audit and legal functions. The overall goals of these various evaluation activities are to monitor our disclosure controls and procedures and to modify them on an ongoing basis as necessary. A control system can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures. Because of inherent limitations in a cost effective control system, misstatements due to error or fraud may occur and not be detected.

Conclusions

As of June 30, 2018, an evaluation of our disclosure controls and procedures was carried out under the supervision and with the participation of our management, including the CEO and CFO. Based on this evaluation, the CEO and CFO have concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of the end of the period covered by this Form 10-Q.

Changes in Internal Control over Financial Reporting

There has been no change in our internal control over financial reporting that occurred during the quarter ended June 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

For a description of our previously reported legal proceedings refer to Part I, Item 3, “Legal Proceedings” in our 2017 10-K.

From time to time we may be a party to routine legal proceedings and claims in the ordinary course of business. There are no legal proceedings pending or threatened against the Company that management believes are likely to have a material adverse effect on the Company’s consolidated financial position or otherwise.

Item 1A. Risk Factors

There have been no material changes to our risk factors as discussed in Part I, Item 1A, “Risk Factors” in our 2017 10-K.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

In January 2015, our Board of Directors authorized the Company to repurchase up to 3.0 million shares of our common stock with no established end date. The authorization allows for repurchases to be made in the open market or through

Table of Contents

negotiated transactions from time to time. During the six months ended June 30, 2018, the Company did not repurchase any shares of common stock pursuant to the share repurchase authorization. At June 30, 2018, there were 0.7 million shares available for future stock repurchases under this share repurchase authorization. Shares of common stock purchased under the share repurchase authorization are retired. For further information, see Note 15 in the accompanying Notes to the Condensed Consolidated Financial Statements.

In addition to our share repurchase program, we withhold shares of common stock associated with net share settlements to cover tax withholding obligations upon the vesting of restricted stock units awarded under our equity incentive program. During the three and six months ended June 30, 2018, we withheld 5 thousand and 36 thousand shares, respectively, through net share settlements. For the three and six months ended June 30, 2018 net share settlements costs were $137 thousand and $976 thousand, respectively. Please refer to Note 9 in the accompanying Notes to the Condensed Consolidated Financial Statements for additional information regarding our share-based compensation plans.

The following table provides details of the shares of common stock purchased and withheld during the three months ended June 30, 2018 (in thousands, except per share data):

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total number of shares purchased as part of repurchase program	Max No of shares that may yet be purchased under the plan
April 1, 2018 - April 30, 2018	4.6	$ 27.74	—	711
May 1, 2018 - May 31, 2018	0.2	31.80	—	711
June 1, 2018 - June 30, 2018	0.1	30.25	—	711
Three months ended June 30, 2018	4.9	$ 27.97	—	711

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Table of Contents

Item 6. Exhibits

Exhibit No.	Description
10.1	Form of Stock Unit Purchase Agreements pursuant to the Rudolph Technologies, Inc. 2018 Stock Plan.
10.2	Form of Stock Option Agreements pursuant to the Rudolph Technologies, Inc. 2018 Stock Plan.
31.1	Certification of Michael P. Plisinski, Chief Executive Officer, pursuant to Securities Exchange Act Rule 13a-14(a).
31.2	Certification of Steven R. Roth, Chief Financial Officer, pursuant to Securities Exchange Act Rule 13a-14(a).
32.1	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, signed by Michael P. Plisinski, Chief Executive Officer of Rudolph Technologies, Inc.
32.2	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, signed by Steven R. Roth, Chief Financial Officer of Rudolph Technologies, Inc.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

Table of Contents

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.

		Rudolph Technologies, Inc.
Date:	August 2, 2018	By: /s/ Michael P. Plisinski Michael P. Plisinski Chief Executive Officer
Date:	August 2, 2018	By: /s/ Steven R. Roth Steven R. Roth Senior Vice President, Chief Financial Officer and Principal Accounting Officer