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 S	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 S	SECURITIES EXCHANGE ACT OF 1934
For the transition period fromtoCommission File Number	r: 001-35435
Proto Labs, (Exact name of registrant as speci	
Minnesota (State or other jurisdiction of incorporation or organization)	41-1939628 (I.R.S. Employer Identification No.)
5540 Pioneer Creek Drive Maple Plain, Minnesota (Address of principal executive offices)	55359 (Zip Code)
(763) 479-3680 (Registrant's telephone number, in	
Not Applicabl (Former name, former address and former fiscal	
Indicate by check mark whether the registrant (1) has filed all reports required 1934 during the preceding 12 months (or for such shorter period that the registrant w filing requirements for the past 90 days. \square Yes \square No	
Indicate by check mark whether the registrant has submitted electronically and required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the was required to submit and post such files). \square Yes \square No	
Indicate by check mark whether the registrant is a large accelerated filer, an accan emerging growth company. See the definitions of "large accelerated filer," □"accelerated filer," □"accelerated filer," □"accelerated filer," □ accelerated filer, and	
Large accelerated filer	Accelerated filer
Smaller reporting company	Emerging growth company \Box
If an emerging growth company, indicate by check mark if the registrant has eany new or revised financial accounting standards provided pursuant to Section 13(a)	
Indicate by check mark whether the registrant is a shell company (as defined in	n Rule 12b-2 of the Exchange Act). □Yes ☑No
Indicate the number of shares outstanding of each of the issuer's classes of cor Common Stock, par value \$0.001 per share, were outstanding at July 26, 2018.	mmon stock, as of the latest practicable date: 27,027,044 shares of

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

Proto Labs, Inc. Consolidated Balance Sheets (In thousands, except share and per share amounts)

		June 30, 2018 (naudited)	De	cember 31, 2017
Assets	`	,		
Current assets				
Cash and cash equivalents	\$	62,605	\$	36,707
Short-term marketable securities		57,619		57,424
Accounts receivable, net of allowance for doubtful accounts of \$982 and \$757 as of June 30, 2018 and December 31, 2017, respectively		55,928		51,503
Inventory		9,590		11,271
Prepaid expenses and other current assets		7,678		6,267
Income taxes receivable		-		1,832
Total current assets		193,420		165,004
Property and equipment, net		197,339		166,440
Goodwill		128,752		128,504
Other intangible assets, net		18,521		19,084
Long-term marketable securities		24,636		37,034
Other long-term assets		3,519		2,672
Total assets	\$	566,187	\$	518,738
Liabilities and shareholders' equity				
Current liabilities				
Accounts payable	\$	20,038	\$	15,876
Accrued compensation		13,822		12,100
Accrued liabilities and other		9,885		8,408
Short-term debt obligations		-		5,000
Income taxes payable		637		2,371
Total current liabilities		44,382		43,755
Long-term income taxes payable		2,181		2,181
Long-term deferred tax liabilities		8,583		6,966
Other long-term liabilities		4,788		4,621
Total liabilities		59,934		57,523
Shareholders' equity				
Preferred stock, \$0.001 par value, authorized 10,000,000 shares; issued and outstanding 0 shares as of each of June 30, 2018 and December 31, 2017		-		_
Common stock, \$0.001 par value, authorized 150,000,000 shares; issued and outstanding 27,026,394 and 26,828,651 shares as of June 30, 2018 and December 31, 2017, respectively		27		27
Additional paid-in capital		250,063		241,725
Retained earnings		262,522		224,697
Accumulated other comprehensive loss		(6,359)		(5,234)
Total shareholders' equity		506,253		461,215
Toma origination equity				

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

Proto Labs, Inc. Consolidated Statements of Comprehensive Income (In thousands, except share and per share amounts) (Unaudited)

	 Three Mon June 2018		Ended	Six Months Ended June 30, 2018 2017			
	 2010	-	2017		2010		2017
Statements of Operations:							
Revenue	\$ 109,652	\$	82,040	\$	217,397	\$	162,207
Cost of revenue	50,439		35,671		100,276		70,565
Gross profit	59,213		46,369		117,121		91,642
Operating expenses							
Marketing and sales	17,557		14,630		34,129		27,617
Research and development	7,032		6,084		13,697		11,907
General and administrative	 12,640		9,253		25,583		18,034
Total operating expenses	37,229		29,967		73,409		57,558
Income from operations	21,984		16,402		43,712		34,084
Other income, net	 808		1,173		986		1,488
Income before income taxes	22,792		17,575		44,698		35,572
Provision for income taxes	4,478		5,489		8,333		11,286
Net income	\$ 18,314	\$	12,086	\$	36,365	\$	24,286
Net income per share:							
Basic	\$ 0.68	\$	0.46	\$	1.35	\$	0.91
Diluted	\$ 0.67	\$	0.45	\$	1.34	\$	0.91
Shares used to compute net income per share:							
Basic	26,972,990		26,541,978		26,925,673		26,554,262
Diluted	27,274,882		26,649,152		27,232,215		26,710,217
Comprehensive Income (net of tax)							
Comprehensive income	\$ 14,796	\$	14,250	\$	35,240	\$	27,635

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

Consolidated Statements of Cash Flows (In thousands) (Unaudited)

2018	2017	
Operating activities		
Net income \$ 36,365	\$ 2	4,286
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization 12,749		8,700
Stock-based compensation expense 5,034		3,958
Deferred taxes 1,620		1,608
Gain on sale of businesses (671)	-
Amortization of held-to-maturity securities 276		592
Other 7		77
Changes in operating assets and liabilities:		
Accounts receivable (2,648) ((6,914)
Inventories 389		175
Prepaid expenses and other (1,059)	(775)
Income taxes 133		1,769
Accounts payable 4,408		2,534
Accrued liabilities and other 2,714		3,417
Net cash provided by operating activities 59,317	3	9,427
Investing activities		
Purchases of property and equipment (43,194) (1	3,301)
Cash used for acquisitions, net of cash acquired (90)	-
Proceeds from sale of businesses 284		-
Purchases of marketable securities (17,129) (2	20,037)
Proceeds from maturities of marketable securities 29,056	2	5,194
Purchases of other assets and investments		(514)
Net cash used in investing activities (31,073)) ((8,658)
Financing activities		
Payments on debt (5,000)	_
Proceeds from exercises of stock options and other 3,306		3,791
Repurchases of common stock	(-	(4,410)
Net cash used in financing activities (1,694)	(619)
Effect of exchange rate changes on cash and cash equivalents (652		251
Net increase in cash and cash equivalents 25,898		30,401
Cash and cash equivalents, beginning of period 36,707		8,795
Cash and cash equivalents, end of period \$ 62,605		9,196

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

Note 1 - Basis of Presentation

The unaudited interim Consolidated Financial Statements of Proto Labs, Inc. (Protolabs, the Company, we, us or our) have been prepared in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP) for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. In the opinion of management, the accompanying financial statements reflect all adjustments necessary for a fair presentation of the Company's statements of financial position, results of operations and cash flows for the periods presented. Except as otherwise disclosed herein, these adjustments consist of normal, recurring items. Operating results for interim periods are not necessarily indicative of results that may be expected for the fiscal year as a whole.

The preparation of the financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses, and the related disclosures at the date of the financial statements and during the reporting period. Actual results could materially differ from these estimates. For further information, refer to the audited Consolidated Financial Statements and Notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2017 as filed with the Securities and Exchange Commission (SEC) on February 23, 2018.

The accompanying Consolidated Balance Sheet as of December 31, 2017 was derived from the audited Consolidated Financial Statements but does not include all disclosures required by U.S. GAAP for a full set of financial statements. This Form 10-Q should be read in conjunction with the Company's Consolidated Financial Statements and Notes included in the Annual Report on Form 10-K filed on February 23, 2018 as referenced above.

Note 2 - Recent Accounting Pronouncements

Recently Adopted Accounting Pronouncements

During the first quarter of 2018, the Company adopted the Financial Accounting Standards Board (FASB) Accounting Standards Update (ASU) 2014-09, *Revenue from Contracts with Customers* (ASC 606). This ASU is a comprehensive new revenue recognition model that requires a company to recognize revenue from the transfer of goods or services to customers in an amount that reflects the consideration that the entity expects to receive in exchange for those goods or services. The Company has adopted the new revenue standard using the modified retrospective approach. The Company manufactures parts that have no alternative use to the Company since the parts are custom made to specific customer orders, and the Company believes there is a legally enforceable right to payment for performance completed to date on these manufactured parts. For those manufactured parts that meet these two criteria, the Company will recognize revenue over time. The transition adjustment recorded was an increase of \$1.5 million to the Company's retained earnings balance as of January 1, 2018.

During the first quarter of 2018, the Company adopted ASU 2017-09, *Compensation – Stock Compensation*, which is intended to provide clarity and reduce diversity in practice as well as cost and complexity when applying the guidance to a change to the terms or conditions of a share-based payment award. The adoption of this guidance did not have a material impact on the Company's consolidated financial statements.

Recently Issued Accounting Pronouncements

In February 2016, the FASB issued ASU 2016-02, *Leases*, which introduces the balance sheet recognition of lease assets and lease liabilities by lessees for those leases classified as operating leases under previous guidance. The guidance will be effective for annual reporting periods beginning after December 15, 2018 and interim periods within those fiscal years with early adoption permitted. The Company is evaluating the impact of the future adoption of this standard on its consolidated financial statements, but because the Company owns a majority of its buildings and significant assets, it does not expect the impact to be material.

In January 2017, the FASB issued ASU 2017-04, *Intangibles – Goodwill and Other*, which is intended to simplify the subsequent measurement of goodwill. This guidance will be effective for impairment tests in fiscal years beginning after December 15, 2019 and interim periods within those fiscal years with early adoption permitted. The Company is evaluating the impact of future adoption of this guidance on its consolidated financial statements, but does not expect the impact to be material.

Note 3 – Revenue

The Company's significant accounting policies are disclosed in Note 2 to the Consolidated Financial Statements included in its Annual Report on Form 10-K for the year ended December 31, 2017. Significant changes to the Company's accounting policies as a result of adopting Accounting Standards Codification (ASC) 606 are discussed below:

Revenue Recognition

The Company provides quality prototyping and on-demand manufacturing services at unprecedented speeds. As a result, the majority of revenue recognized in a reporting period is based on completed, invoiced contracts. The Company accounts for revenue in accordance with ASC 606, which the Company adopted on January 1, 2018, using the modified retrospective method. Results for reporting periods beginning after January 1, 2018 are presented under ASC 606, while prior period amounts are not adjusted and continue to be reported in accordance with the Company's historic accounting under ASC 605. The Company recorded a net increase of \$1.5 million to its retained earnings balance on January 1, 2018 due to the cumulative impact of adopting ASC 606. The impact of adopting ASC 606 was to decrease revenue by \$0.2 million and decrease cost of revenue by \$0.1 million for the three months ended June 30, 2018, and to decrease accounts receivable by \$0.2 million and increase inventory by \$0.1 million as of June 30, 2018. For the six months ended June 30, 2018 the impact of adopting ASC 606 was to increase revenue by \$0.1 million and increase cost of revenue by \$0.1 million, as well as increase accounts receivable by \$2.7 million and decrease inventory by \$1.2 million as of June 30, 2018, which includes the transition adjustment of \$1.5 million noted above.

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer, and is the unit of account in ASC 606. The majority of the Company's CNC machining, 3D printing, and sheet metal contracts have a single performance obligation. The majority of the Company's injection molding contracts have multiple performance obligations including one obligation to produce the mold and a second obligation to produce parts. For injection molding contracts with multiple performance obligations, we allocate revenue to each performance obligation based on its relative standalone selling price. We generally determine standalone selling price based on the price charged to customers.

The Company manufactures parts that have no alternative use to the Company since the parts are custom made to specific customer orders, and the Company believes there is a legally enforceable right to payment for performance completed to date on these manufactured parts. For manufactured parts that meet these two criteria, the Company will recognize revenue over time. Revenue is recognized over time using the input method based on time in production to measure progress toward satisfying performance obligations.

Revenue by geographic region for the three and six months ended June 30, 2018 and 2017 was as follows:

	_T	d June 30,	Six Months Ended June 30,					
(in thousands)		2018		2017		2018	2017	
Revenue:								
United States	\$	86,354	\$	63,353	\$	170,521	\$	123,529
Europe		20,213		16,131		40,158		33,130
Japan		3,085		2,556		6,718		5,548
Total revenue	\$	109,652	\$	82,040	\$	217,397	\$	162,207

Revenue by product line for the three and six months ended June 30, 2018 and 2017 was as follows:

	Three Months Ended June 30,						nded	d June 30,	
(in thousands)		2018		2017		2018	2017		
Revenue:									
Injection Molding	\$	51,586	\$	46,792	\$	102,929	\$	94,708	
CNC Machining		37,788		24,180		74,519		46,152	
3D Printing		13,248		10,873		25,573		20,958	
Sheet Metal		6,309		-		12,550		-	
Other Revenue		721		195		1,826		389	
Total revenue	\$	109,652	\$	82,040	\$	217,397	\$	162,207	

The Company generally expenses sales commissions when incurred because the amortization period would have been one year or less. These costs are recorded within marketing and sales expenses. The Company does not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less.

Note 4 - Net Income per Common Share

Basic net income per share is computed based on the weighted-average number of common shares outstanding. Diluted net income per share is computed based on the weighted-average number of common shares outstanding, increased by the number of additional shares that would have been outstanding had potentially dilutive common shares been issued and reduced by the number of shares the Company could have repurchased from the proceeds from issuance of the potentially dilutive shares. Potentially dilutive shares of common stock include stock options, restricted stock units and restricted stock awards granted under stock-based compensation plans and shares committed to be purchased under the employee stock purchase plan. Performance stock units are excluded from the calculation of dilutive potential common shares until the performance conditions have been satisfied.

The table below sets forth the computation of basic and diluted net income per share:

	Three Mor June	Six Months Ended June 30,					
(in thousands, except share and per share amounts)	 2018	2017		2018		2017	
Net income	\$ 18,314	\$ 12,086	\$	36,365	\$	24,286	
Basic - weighted-average shares outstanding:	26,972,990	26,541,978		26,925,673		26,554,262	
Effect of dilutive securities:							
Employee stock options and other	301,892	107,174		306,542		155,955	
Diluted - weighted-average shares outstanding:	27,274,882	26,649,152		27,232,215		26,710,217	
Net income per share:							
Basic	\$ 0.68	\$ 0.46	\$	1.35	\$	0.91	
Diluted	\$ 0.67	\$ 0.45	\$	1.34	\$	0.91	

Note 5 – Goodwill and Other Intangible Assets

There were no changes in the carrying amount of Goodwill during the three months ended June 30, 2018. The changes in the carrying amount of goodwill during the six months ended June 30, 2018 were as follows:

(in thousands)	 Ionths Ended ne 30, 2018
Balance as of the beginning of the period	\$ 128,504
Goodwill acquired during the period	 248
Balance as of the end of the period	\$ 128,752

The Company adjusted goodwill by \$0.2 million during the six months ended June 30, 2018 as a result of the final working capital adjustment for the acquisition of RAPID in November 2017.

Intangible Assets other than goodwill at June 30, 2018 and December 31, 2017 were as follows:

		June	30, 2018			1	Dece	mber 31, 201	7	Useful	Weighted Average Useful Life		
(in thousands)	Gross		ımulated rtization	Ne	t	Gross		ccumulated nortization	N	Vet	Life (in years)	Remaining (in years)	
Intangible Assets with finite								_					
lives:													
Marketing assets	\$ 930	\$	(387)	\$:	543	\$ 930	\$	(341)	\$	589	10.0	5.8	
Non-compete agreement	270		(198)		72	270		(190)		80	2.0-5.0	4.5	
Trade secrets	250		(208)		42	250		(183)		67	5.0	0.8	
Trade names	1,080		(270)	;	310	1,080		-		1,080	2.0	1.5	
Software technology	9,229		(445)	8,	784	8,229		-	;	8,229	10.0	9.5	
Customer relationships	10,070		(1,800)	8,	270	10,070		(1,031)	!	9,039	6.0-9.0	5.3	
Total intangible assets	\$ 21,829	\$	(3,308)	\$ 18,	521	\$ 20,829	\$	(1,745)	\$ 19	9,084			

Amortization expense for intangible assets was \$0.8 million and \$0.1 million for the three months ended June 30, 2018 and 2017, respectively, and \$1.6 million and \$0.3 million for the six months ended June 30, 2018 and 2017, respectively.

Estimated aggregated amortization expense based on the current carrying value of the amortizable intangible assets is as follows:

(in thousands)	Estimated Amortization Expense
Remaining 2018	\$ 1,581
2019	3,128
2020	2,571
2021	2,571
2022	2,571
Thereafter	6,099
Total estimated amortization expense	\$ 18,521

Note 6 – Fair Value Measurements

ASC 820, Fair Value Measurement (ASC 820), defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. ASC 820 also establishes a fair value hierarchy that requires classification based on observable and unobservable inputs when measuring fair value. There are three levels of inputs that may be used to measure fair value:

Level 1—Quoted prices in active markets for identical assets or liabilities.

Level 2—Observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The Company's cash consists of bank deposits. The Company's cash equivalents measured at fair value consist of money market mutual funds. The Company determines the fair value of these investments using Level 1 inputs.

The following table summarizes financial assets as of June 30, 2018 and December 31, 2017 measured at fair value on a recurring basis:

			Ju	ıne 30, 2018				December 31, 2017								
(in thousands)	Level 1	vel 1 Level 2			Level 3			Level 1		Level 2	Level 3					
Financial Assets:																
Cash and cash equivalents																
Money market mutual fund	\$	8,366	\$	-	\$		-	\$	3,034	\$	-	\$				
Total	\$	8,366	\$	-	\$		-	\$	3,034	\$	-	\$				

Note 7 - Marketable Securities

The Company invests in short-term and long-term agency, municipal, corporate, commercial paper and other debt securities. The securities are categorized as held-to-maturity and are recorded at amortized cost. Categorization as held-to-maturity is based on the Company's ability and intent to hold these securities to maturity. The following table summarizes information regarding the Company's short-term and long-term marketable securities as of June 30, 2018 and December 31, 2017:

	June 30, 2018							
		U	nrealized	1	Unrealized		<u>.</u>	
(in thousands)	Cost		Gains		Losses	Fai	r Value	
U.S. municipal securities	\$ 18,013	\$	-	\$	(58)	\$	17,955	
Corporate debt securities	34,346		-		(157)		34,189	
U.S. government agency securities	24,674		-		(178)		24,496	
Certificates of deposit/time deposits	3,968		-		(38)		3,930	
Commercial paper	1,254		-		(0)		1,254	
Total marketable securities	\$ 82,255	\$		\$	(431)	\$	81,824	

	December 31, 2017							
		Unrealized			Unrealized			
(in thousands)	Cost		Gains		Losses	Fair	¹ Value	
U.S. municipal securities	\$ 28,364	\$	-	\$	(104)	\$	28,260	
Corporate debt securities	29,806		-		(128)		29,678	
U.S. government agency securities	32,320		-		(199)		32,121	
Certificates of deposit/time deposits	3,968		-		(32)		3,936	
Total marketable securities	\$ 94,458	\$	-	\$	(463)	\$	93,995	

Fair values for the corporate debt securities are primarily determined based on quoted market prices (Level 1). Fair values for the U.S. municipal securities, U.S. government agency securities, commercial paper and certificates of deposit are primarily determined using dealer quotes or quoted market prices for similar securities (Level 2).

The Company tests for other-than-temporary losses on a quarterly basis and has considered the unrealized losses indicated above to be temporary in nature. In reaching this conclusion, the Company considered the credit quality of the issuers of the debt securities as well as the Company's intent to hold the investments to maturity and recover the full principal.

Classification of marketable securities as current or non-current is based upon the security's maturity date as of the date of these financial statements.

The June 30, 2018 balance of held-to-maturity debt securities by contractual maturity is shown in the following table at amortized cost. Actual maturities may differ from contractual maturities because the issuers of the securities may have the right to prepay obligations without prepayment penalties.

(in thousands)	June 30, 2018
Due in one year or less	\$ 57,619
Due after one year through five years	24,636
Total marketable securities	\$ 82,255

Note 8 - Inventory

Inventory consists primarily of raw materials, which are recorded at the lower of cost or market using the average-cost method, which approximates first-in, first-out (FIFO) cost. The Company periodically reviews its inventory for slow-moving, damaged and discontinued items and provides allowances to reduce such items identified to their recoverable amounts.

The Company's inventory consisted of the following as of the dates indicated:

(in thousands)	June 30, 2018	Dec	ember 31, 2017
Raw materials	\$ 9,382	\$	9,767
Work in process	712		1,998
Total inventory	10,094		11,765
Allowance for obsolescence	(504)		(494)
Inventory, net of allowance	\$ 9,590	\$	11,271

Note 9 - Stock-Based Compensation

Under the Company's 2012 Long-Term Incentive Plan, as amended (the 2012 Plan), the Company has the ability to grant stock options, stock appreciation rights (SARs), restricted stock, restricted stock units, other stock-based awards and cash incentive awards. Awards under the 2012 Plan have a maximum term of ten years from the date of grant. The compensation committee may provide that the vesting or payment of any award will be subject to the attainment of specified performance measures in addition to the satisfaction of any continued service requirements and the compensation committee will determine whether such measures have been achieved. The per-share exercise price of stock options and SARs granted under the 2012 Plan generally may not be less than the fair market value of a share of our common stock on the date of the grant.

Employee Stock Purchase Plan

The Company's 2012 Employee Stock Purchase Plan (ESPP) allows eligible employees to purchase a variable number of shares of the Company's common stock each offering period at a discount through payroll deductions of up to 15 percent of their eligible compensation, subject to plan limitations. The ESPP provides for six-month offering periods with a single purchase period ending May 15 and November 15, respectively. At the end of each offering period, employees are able to purchase shares at 85 percent of the lower of the fair market value of the Company's common stock on the first trading day of the offering period or on the last trading day of the offering period.

Stock-Based Compensation Expense

Stock-based compensation expense was \$2.7 million and \$2.2 million for the three months ended June 30, 2018 and 2017, respectively, and \$5.0 million and \$4.0 million for the six months ended June 30, 2018 and 2017, respectively.

Stock Options

The following table summarizes stock option activity during the six months ended June 30, 2018:

	Stock Options	Weighted- Average Exercise Price
Options outstanding at December 31, 2017	399,397	\$ 51.14
Granted	34,386	109.91
Exercised	(108,941)	37.04
Forfeited	(17,077)	61.30
Options outstanding at June 30, 2018	307,765	\$ 62.14
Exercisable at June 30, 2018	168,243	\$ 49.52

The outstanding options generally have a term of ten years. For employees, options granted become exercisable ratably over the vesting period, which is generally a period from four to five years, beginning on the first anniversary of the grant date, subject to the employee's continuing service to the Company. For directors, options generally become exercisable in full on the first anniversary of the grant date.

The weighted-average grant date fair value of options that were granted during the six months ended June 30, 2018 was \$49.76.

The following table provides the assumptions used in the Black-Scholes pricing model valuation of options during the six months ended June 30, 2018 and 2017:

	Six Months End	led June 30,
	2018	2017
Risk-free interest rate	2.52 - 3.07%	2.24%
Expected life (years)	6.25	6.50
Expected volatility	41.95 - 42.22%	44.68%
Expected dividend yield	0%	0%

As of June 30, 2018, there was \$4.4 million of unrecognized compensation expense related to unvested stock options, which is expected to be recognized over a weighted-average period of 3.3 years.

Restricted Stock

Restricted stock awards are share-settled awards and restrictions lapse ratably over the vesting period, which is generally a period from four to five years, beginning on the first anniversary of the grant date, subject to the employee's continuing service to the Company. For directors, restrictions generally lapse in full on the first anniversary of the grant date.

The following table summarizes restricted stock activity during the six months ended June 30, 2018:

	Restricted Stock	Weighted- Average Grant Date Fair Value Per Share
Restricted stock at December 31, 2017	334,608	\$ 63.29
Granted	103,818	115.20
Restrictions lapsed	(83,390)	62.84
Forfeited	(21,969)	62.28
Restricted stock at June 30, 2018	333,067	\$ 79.64

As of June 30, 2018, there was \$25.1 million of unrecognized compensation expense related to non-vested restricted stock, which is expected to be recognized over a weighted-average period of 3.5 years.

Performance Stock

Performance stock units (PSUs) are expressed in terms of a target number of PSUs, with anywhere between 0 percent and 150 percent of that target number capable of being earned and vesting at the end of a three-year performance period depending on the Company's performance in the final year of the performance period and the award recipient's continued employment.

The following table summarizes performance stock activity during the six months ended June 30, 2018:

	Performance Stock	Weighted- Average Grant Date Fair Value Per Share
Performance stock at December 31, 2017	25,707	\$ 58.35
Granted	20,006	105.75
Restrictions lapsed	-	-
Performance change	6,427	58.35
Forfeited	-	-
Performance stock at June 30, 2018	52,140	\$ 76.54

As of June 30, 2018, there was \$2.9 million of unrecognized compensation expense related to non-vested performance stock, which is expected to be recognized over a weighted-average period of 2.3 years.

Employee Stock Purchase Plan

The following table presents the assumptions used to estimate the fair value of the ESPP during the six months ended June 30, 2018 and 2017:

	Six Months En	ided June 30,
	2018	2017
Risk-free interest rate	1.48 - 2.06%	0.59% - 0.97%
Expected life (months)	6.00	6.00
Expected volatility	24.49 - 31.50%	34.51% - 39.51%
Expected dividend yield	0%	0%

Note 10 - Accumulated Other Comprehensive Loss

Other comprehensive income (loss) is comprised entirely of foreign currency translation adjustments. The following table presents the changes in accumulated other comprehensive income (loss) balances during the three and six months ended June 30, 2018 and 2017:

	Three Months Ended June 30,					Six Mont June				
(in thousands)	2018			2017		2017		2018		2017
Foreign currency translation adjustments										
Balance at beginning of period	\$	(2,841)	\$	(9,568)	\$	(5,234)	\$	(10,753)		
Other comprehensive income (loss) before reclassifications		(3,518)		2,164		(1,125)		3,349		
Amounts reclassified from accumulated other comprehensive loss		-		-		-		-		
Net current-period other comprehensive income (loss)		(3,518)		2,164		(1,125)		3,349		
Balance at end of period	\$	(6,359)	\$	(7,404)	\$	(6,359)	\$	(7,404)		

Note 11 - Income Taxes

The Company is subject to income tax in multiple jurisdictions and the use of estimates is required to determine the provision for income taxes. For the three months ended June 30, 2018 and 2017, the Company recorded an income tax provision of \$4.5 million and \$5.5 million, respectively. For the six months ended June 30, 2018 and 2017, the Company recorded an income tax provision of \$8.3 million and \$11.3 million, respectively. The income tax provision is based on the estimated annual effective tax rate for the year applied to pre-tax income. The effective income tax rate for the three months ended June 30, 2018 was 19.6 percent compared to 31.2 percent in the same period of the prior year. The effective tax rate decreased by 11.6 percent for the three months ended June 30, 2018 when compared to the same period in 2017 primarily due to the impact of tax reform and benefits from the vesting of restricted stock and the exercise of stock options. The effective income tax rate for the six months ended June 30, 2018 was 18.6 percent compared to 31.7 percent in the same period of the prior year. The effective tax rate decreased by 13.1 percent for the six months ended June 30, 2018 when compared to the same period in 2017 primarily due to the impact of tax reform and benefits from the vesting of restricted stock and the exercise of stock options.

The Tax Cuts and Jobs Act (the Act) was enacted on December 22, 2017. The Act reduces the U.S. federal corporate tax rate from 35 percent to 21 percent, requires companies to pay a transition tax on earnings of certain foreign subsidiaries that were previously tax-deferred and creates new taxes on certain foreign-sourced earnings. The Company has applied the guidance in ASU 2018-05, *Income Taxes (Topic 740): Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin* No. 118, when accounting for the enactment-date effects of the Act. As of June 30, 2018, the Company had not completed its accounting for the tax effects of the Act, as the Company is in the process of analyzing certain aspects of the Act, obtaining information, and refining its calculations of the Act's impact. There have been no material measurement period adjustments made during the three and six months ended June 30, 2018 related to the provisional amounts recorded and disclosed in our Annual Report on Form 10-K for the year ended December 31, 2017. The Company expects to complete the accounting for the tax effects of the Act during 2018.

The effective income tax rate for the three and six months ended June 30, 2018 differs from the U.S. federal statutory rate of 21.0 percent due primarily to the mix of income earned in domestic and foreign tax jurisdictions and deductions for which the Company qualifies.

The Company had reserves against unrecognized tax benefits totaling \$4.4 million at June 30, 2018 and \$4.2 million at December 31, 2017, all of which, if recognized, would affect the Company's effective tax rate. The Company recognizes interest and penalties related to income tax matters in income tax expense, and reports the liability in current or long-term income taxes payable as appropriate.

Note 12 - Segment Reporting

The Company's reportable segments are based on the internal reporting used by the Company's Chief Executive Officer, who is the chief operating decision maker (CODM), to assess operating performance and make decisions about the allocation of resources. The Corporate Unallocated and Japan category includes non-reportable segments, as well as research and development and general and administrative costs that the Company does not allocate directly to its operating segments.

Intercompany transactions primarily relate to intercontinental activity and have been eliminated and are excluded from the reported amounts. The difference between income from operations and pre-tax income relates to foreign currency-related gains and losses and interest income on cash balances and investments, which are not allocated to business segments.

Revenue and income from operations by reportable segment for the three and six months ended June 30, 2018 and 2017 were as follows:

	Th	Three Months Ended June 30,				Six Months E	Ended June 30,			
(in thousands)	2018 2017 2018		2018 2017			18 2017		2018		2017
Revenue:										
United States	\$	86,354	\$	63,353	\$	170,521	\$	123,529		
Europe		20,213		16,131		40,158		33,130		
Japan		3,085		2,556		6,718		5,548		
Total revenue	\$	109,652	\$	82,040	\$	217,397	\$	162,207		

	Three Months Ended June 30,					Six Months E	nded	June 30,		
(in thousands)	2018			2017		2017		2018		2017
Income from Operations:										
United States	\$	30,459	\$	25,723	\$	60,532	\$	50,069		
Europe		4,022		2,335		7,401		6,375		
Corporate Unallocated and Japan		(12,497)		(11,656)		(24,221)		(22,360)		
Total Income from Operations	\$	21,984	\$	16,402	\$	43,712	\$	34,084		

(in thousands)	 June 30, 2018	December 31, 2017
Total long-lived assets:		
United States	\$ 156,831	\$ 125,30
Europe	33,194	33,69
Japan	7,314	7,44
Total Assets	\$ 197,339	\$ 166,44

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our unaudited consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q and our Annual Report on Form 10-K for the year ended December 31, 2017.

Forward-Looking Statements

Statements contained in this report regarding matters that are not historical or current facts are "forward-looking statements" within the meaning of The Private Securities Litigation Reform Act of 1995. In some cases, you can identify forward-looking statements by the following words: "may," "will," "could," "would," "should," "expect," "intend," "plan," "anticipate," "believe," "estimate," "predict," "project," "potential," "continue," "ongoing" or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. These statements involve known and unknown risks, uncertainties and other factors that may cause our results to be materially different than those expressed or implied in such statements. Certain of these risk factors and others are described in Item 1A. "Risk Factors" of our most recent Annual Report on Form 10-K as filed with the SEC. Other unknown or unpredictable factors also could have material adverse effects on our future results. We cannot guarantee future results, levels of activity, performance or achievements. Accordingly, you should not place undue reliance on these forward-looking statements. Finally, we expressly disclaim any intent or obligation to update any forward-looking statements to reflect subsequent events or circumstances.

Overview

We are the world's largest and fastest digital manufacturer of custom prototypes and on-demand production parts. We manufacture prototypes and low-volume production parts for companies worldwide, who are under increasing pressure to bring their finished products to market faster than their competition. We utilize injection molding, computer numerical control (CNC) machining, 3D printing and sheet metal fabrication to manufacture custom parts for our customers. Our proprietary technology eliminates most of the time-consuming and expensive skilled labor conventionally required to quote and manufacture parts. Our customers conduct nearly all of their business with us over the Internet. We target our products to the millions of product developers and engineers who use three-dimensional computer-aided design (3D CAD) software to design products across a diverse range of end-markets

Our primary manufacturing product lines currently include Injection Molding, CNC Machining, 3D Printing and Sheet Metal. We continually seek to expand the range of sizes and geometric complexity of the parts we can make with these processes, to extend the variety of materials we are able to support and to identify additional manufacturing processes to which we can apply our technology in order to better serve the evolving preferences and needs of product developers and engineers.

Injection Molding

Our Injection Molding product line uses our 3D CAD-to-CNC machining technology for the automated design and manufacture of molds, which are then used to produce custom plastic and liquid silicone rubber injection-molded parts and over-molded and insert-molded injection-molded parts on commercially available equipment. Our Injection Molding product line works best for on-demand production, bridge tooling, pilot runs and functional prototyping. Our affordable aluminum molds and quick turnaround times help reduce design risk and limit overall production costs for product developers and engineers. Prototype quantities typically range from 25 to 100 parts. Because we retain possession of the molds, customers who need short-run production often come back to Protolabs' Injection Molding product line for additional quantities. They do so to support pilot production for product testing, while their tooling for high-volume production is being prepared, because they need on-demand manufacturing due to disruptions in their manufacturing process, because their product requires limited annual quantity or because they need end-of-life production support. In 2017, we launched an on-demand manufacturing injection molding service. This service utilizes our existing processes, but is designed to fulfill the needs of customers with on-going production needs, typically in annual volumes of less than 10,000 parts.

CNC Machining

Our CNC Machining product line uses commercially available CNC machines to offer milling and turning. CNC milling is a manufacturing process that cuts plastic and metal blocks into one or more custom parts based on the 3D CAD model uploaded by the product developer or engineer. CNC turning with live tooling combines both lathe and mill capabilities to machine parts with cylindrical features from metal rod stock. Our efficiencies derive from the automation of the programming of these machines and a proprietary fixturing process.

Quick-turn CNC machining works best for prototyping, form and fit testing, jigs and fixtures and functional components for end-use applications. The CNC Machining product line is well suited to produce small quantities, typically in the range of one to 200 parts.

3D Printing

Our 3D Printing product line includes stereolithography, selective laser sintering, direct metal laser sintering, Multi Jet Fusion and PolyJet processes, which offer customers a wide-variety of high-quality, precision rapid prototyping and low-volume production. These processes create parts with a high level of accuracy, detail, strength and durability. Industrial 3D Printing is best suited for functional prototypes, complex designs and end-use applications produced in small quantities, typically in the range of one to 50 parts.

Sheet Metal

Our Sheet Metal product line includes quick-turn and e-commerce-enabled custom sheet metal parts, which provides customers with prototype and low-volume production parts. The rapid prototype sheet metal process is most often used when form, fit and function are all a priority. Our manufacturing process uses customer 3D CAD models uploaded by the product developer or engineer to fabricate quick-turn prototype sheet metal or short-run production parts. The Sheet Metal product line is well suited to produce quantities in the range of one to 500 parts.

Key Financial Measures and Trends

Revenue

Our operations are comprised of three geographic operating segments in the United States, Europe and Japan. Revenue is derived from our Injection Molding, CNC Machining, 3D Printing and Sheet Metal product lines. Injection Molding revenue consists of sales of custom injection molds and injection-molded parts. CNC Machining revenue consists of sales of CNC-machined custom parts. 3D Printing revenue consists of sales of 3D-printed parts. Sheet Metal revenue consists of sales of fabricated sheet metal custom parts. Our historical and current efforts to increase revenue have been directed at expanding the breadth of our product offerings, gaining new customers and selling to our existing customer base by increasing marketing and selling activities, including:

- expanding the breadth and scope of each of our product lines by adding more sizes and materials to our offerings;
- the introduction of our 3D Printing product line through our acquisition of FineLine in 2014;
- expanding internationally through our acquisition of Alphaform in October 2015;
- the introduction of our Sheet Metal product line through our acquisition of RAPID in 2017; and
- continuously improving the usability of our product lines such as our web-centric applications.

During the three months ended June 30, 2018, we served 19,198 unique product developers and engineers who purchased our products through our web-based customer interface, an increase of 18.7% over the same period in 2017. During the six months ended June 30, 2018, we served 28,598 unique product developers and engineers who purchased our products through our web-based customer interface, an increase of 17.9% over the same period in 2017. The information does not include customers who do not utilize our web-based interface; these customers are principally related to our recent acquisitions.

Cost of Revenue, Gross Profit and Gross Margin

Cost of revenue consists primarily of raw materials, equipment depreciation, employee compensation, benefits, stock-based compensation, facilities costs and overhead allocations associated with the manufacturing process for molds and custom parts. We expect cost of revenue to increase in absolute dollars, but remain relatively constant as a percentage of total revenue.

We define gross profit as our revenue less our cost of revenue, and we define gross margin as gross profit expressed as a percentage of revenue. Our gross profit and gross margin are affected by many factors, including our mix of revenue by product line and geography, pricing, sales volume and manufacturing costs, the costs associated with increasing production capacity, and foreign exchange rates.

Operating Expenses

Operating expenses consist of marketing and sales, research and development and general and administrative expenses. Personnel-related costs are the most significant component in each of these categories.

Our recent growth in operating expenses is mainly due to recent acquisitions and higher headcounts to support our growth and expansion, and we expect that trend to continue. Our business strategy is to continue to be a leading online and technology-enabled manufacturer of quick-turn, on-demand injection-molded, CNC-machined, CNC-turned, 3D-printed and sheet metal custom parts for prototyping and low-volume production. In order to achieve our goals, we anticipate continued substantial investments in technology and personnel, resulting in increased operating expenses.

Marketing and sales. Marketing and sales expense consists primarily of employee compensation, benefits, commissions, stock-based compensation, marketing programs such as electronic, print and pay-per-click advertising, trade shows and other related overhead. We expect sales and marketing expense to increase in the future as we increase the number of marketing and sales professionals and marketing programs targeted to increase our customer base and grow revenue.

Research and development. Research and development expense consists primarily of personnel and outside service costs related to the development of new processes and product lines, enhancement of existing product lines, development of software for internal use, maintenance of internally developed software, quality assurance and testing. All of our internal research and development costs have been expensed as incurred. We expect research and development expense to increase in the future as we seek to enhance and expand our product line offerings and supporting business systems.

General and administrative. General and administrative expense consists primarily of employee compensation, benefits, stock-based compensation, professional service fees related to accounting, tax and legal and other related overhead. We expect general and administrative expense to increase in the future as we continue to grow and expand as a global organization.

Other Income, net

Other income, net primarily consists of foreign currency-related gains and losses and interest income on cash balances and investments. Our foreign currency-related gains and losses will vary depending upon movements in underlying exchange rates. Our interest income will vary each reporting period depending on our average cash balances during the period, composition of our marketable security portfolio and the current level of interest rates.

Provision for Income Taxes

Provision for income taxes is comprised of federal, state, local and foreign taxes based on pre-tax income. On December 22, 2017, the Tax Cuts and Jobs Act was signed into law in the United States. As a result, many provisions will affect our tax rate in future years. Some provisions, such as the reduction to the U.S. corporate tax rate from 35% to 21%, beginning in 2018, will reduce our effective tax rate in future years. Other provisions taken in isolation, such as the elimination of the Domestic Production Activities Deduction, will likely result in an increase to our tax rate. Overall, we anticipate our effective tax rate will be lower in 2018 and beyond than in recent periods based on the current tax laws.

Results of Operations

The following table summarizes our results of operations and the related changes for the periods indicated. The results below are not necessarily indicative of the results for future periods.

	Three Months Ended June 30,			Chang	ge	Six Months Ended June 30,				Change		
(dollars in thousands)	2018	}	2017	7	\$	%	2018	}	2017	,	\$	%
Revenue	\$109,652	100.0	\$ 82,040	100.0%	\$ 27,612	33.7	\$217,397	100.0	\$162,207	100.0	\$ 55,190	34.0
Cost of revenue	50,439	46.0	35,671	43.5	14,768	41.4	100,276	46.1	70,565	43.5	29,711	42.1
Gross profit	59,213	54.0	46,369	56.5	12,844	27.7	117,121	53.9	91,642	56.5	25,479	27.8
Operating expenses:												
Marketing and sales	17,557	16.0	14,630	17.8	2,927	20.0	34,129	15.7	27,617	17.0	6,512	23.6
Research and												
development	7,032	6.5	6,084	7.4	948	15.6	13,697	6.3	11,907	7.3	1,790	15.0
General and												
administrative	12,640	11.5	9,253	11.3	3,387	36.6	25,583	11.8	18,034	11.1	7,549	41.9
Total operating												
expenses	37,229	34.0	29,967	36.5	7,262	24.2	73,409	33.8	57,558	35.4	15,851	27.5
Income from												
operations	21,984	20.0	16,402	20.0	5,582	34.0	43,712	20.1	34,084	21.1	9,628	28.2
Other income, net	808	8.0	1,173	1.4	(365)	(31.1)	986	0.4	1,488	0.9	(502)	(33.7)
Income before income												
taxes	22,792	20.8	17,575	21.4	5,217	29.7	44,698	20.5	35,572	22.0	9,126	25.6
Provision for income												
taxes	4,478	4.1	5,489	6.7	(1,011)	(18.4)	8,333	3.8	11,286	7.0	(2,953)	(26.2)
Net income	\$ 18,314	16.7%	\$ 12,086	14.7%	\$ 6,228	51.5%	\$ 36,365	16.7%	\$ 24,286	15.0%	\$ 12,079	49.7%

Stock-based compensation expense included in the statements of operations data above for the three and six months ended June 30, 2018 and 2017 was as follows:

	Three Months Ended June 30,				Six Months Ended June 30,			l June 30,
(dollars in thousands)		2018		2017		2018		2017
Stock options and restricted stock	\$	2,534	\$	2,077	\$	4,688	\$	3,643
Employee stock purchase plan		192		164		346		315
Total stock-based compensation expense	\$	2,726	\$	2,241	\$	5,034	\$	3,958
•								
Cost of revenue	\$	363	\$	237	\$	650	\$	434
Operating expenses:								
Marketing and sales		443		338		820		607
Research and development		376		279		690		501
General and administrative		1,544		1,387		2,874		2,416
Total stock-based compensation expense	\$	2,726	\$	2,241	\$	5,034	\$	3,958

Comparison of Three Months Ended June 30, 2018 and 2017

Revenue

Revenue by reportable segment and the related changes for the three months ended June 30, 2018 and 2017 were as follows:

	Three Months Ended June 30,								
	 2018			2017			Change		
		% of Total		% of	Total				
(dollars in thousands)	 \$	Revenue	\$	Reve	nue		\$	%	
Revenue									
United States	\$ 86,354	78.8%	\$ 63	,353	77.2%	\$	23,001	36.3%	
Europe	20,213	18.4	16	,131	19.7		4,082	25.3	
Japan	3,085	2.8	2	,556	3.1		529	20.7	
Total revenue	\$ 109,652	100.0%	\$ 82	,040	100.0%	\$	27,612	33.7%	

Our revenue increased \$27.6 million, or 33.7%, for the three months ended June 30, 2018 compared to the same period in 2017. By reportable segment, revenue in the United States increased \$23.0 million, or 36.3% for the three months ended June 30, 2018 compared to the same period in 2017. Revenue growth in the United States was partially attributable to the acquisition of RAPID in November 2017. Revenue in Europe increased \$4.1 million, or 25.3%, and revenue in Japan increased \$0.5 million, or 20.7%, in each case for the three months ended June 30, 2018 compared to the same period in 2017.

Our revenue growth during the three months ended June 30, 2018 was the result of an increase in the volume of the product developers and engineers we served through our web-based customer interface and the acquisition of RAPID. During the three months ended June 30, 2018, we served 19,198 unique product developers and engineers through our web-based customer interface, an increase of 18.7% over the same period in 2017. The information does not include customers who do not utilize our web-based interface; these customers are principally related to our recent acquisitions.

Our revenue increases were primarily driven by increases in sales personnel and marketing activities. Our sales personnel focus on gaining new customer accounts and expanding the depth and breadth of existing customer accounts. Our marketing personnel focus on marketing activities that result in the greatest number of customer leads to support sales activity. International revenue was positively impacted by \$1.5 million during the three months ended June 30, 2018 compared to the same period in 2017 as a result of foreign currency movements, primarily the strengthening of the British Pound relative to the Dollar.

Revenue by product line and the related changes for the three months ended June 30, 2018 and 2017 were as follows:

		Three Months En	ded June 30,				
	 2018		201	7	Change		
		% of Total		% of Total			
(dollars in thousands)	\$	Revenue	\$	Revenue	\$	%	
Revenue							
Injection Molding	\$ 51,586	47.0% \$	46,792	57.0%	\$ 4,794	10.2%	
CNC Machining	37,788	34.5	24,180	29.5	13,608	56.3	
3D Printing	13,248	12.1	10,873	13.3	2,375	21.8	
Sheet Metal	6,309	5.8	-	-	6,309	*	
Other Revenue	721	0.6	195	0.2	526	*	
Total revenue	\$ 109,652	100.0% \$	82,040	100.0%	\$ 27,612	33.7%	

^{*}Percentage change not meaningful

By product line, our revenue growth was driven by a 10.2% increase in Injection Molding revenue, a 56.3% increase in CNC Machining revenue and a 21.8% increase in 3D Printing revenue, as well as a \$0.5 million increase in Other Revenue, in each case for the three months ended June 30, 2018 compared to the same period in 2017. Revenue growth in our CNC Machining, Sheet Metal and Other product lines was partially attributable to the acquisition of RAPID in November 2017.

Cost of Revenue, Gross Profit and Gross Margin

Cost of Revenue. Cost of revenue increased \$14.8 million, or 41.4%, for the three months ended June 30, 2018 compared to the same period in 2017, which was faster than the rate of revenue increase of 33.7% for the three months ended June 30, 2018 compared to the same period in 2017. The increase in cost of revenue resulted from the growth of the business, including via the RAPID acquisition, and was due to raw material and production cost increases of \$4.3 million, an increase in direct labor headcount resulting in personnel and related cost increases of \$8.1 million and equipment and facility-related cost increases of \$2.4 million to support increased sales volumes.

Gross Profit and Gross Margin. Gross profit increased from \$46.4 million in the three months ended June 30, 2017 to \$59.2 million in the three months ended June 30, 2018 primarily due to an increase in revenue. Gross margin decreased from 56.5% in the three months ended June 30, 2017 to 54.0% in the three months ended June 30, 2018 due to the timing and mix of revenue, with the RAPID acquisition being the primary driver of the reduction in gross margin.

Operating Expenses, Other Income, net and Provision for Income Taxes

Marketing and Sales. Marketing and sales expenses increased \$2.9 million, or 20.0%, during the three months ended June 30, 2018 compared to the same period in 2017 due primarily to an increase in headcount resulting in personnel and related cost increases of \$2.7 million as well as marketing program cost increases of \$0.2 million.

Research and Development. Our research and development expenses increased \$0.9 million, or 15.6%, during the three months ended June 30, 2018 compared to the same period in 2017 due to an increase in headcount resulting in personnel and related cost increases of \$1.1 million, which was partially offset by a decrease in operating costs of \$0.2 million.

General and Administrative. Our general and administrative expenses increased \$3.4 million, or 36.6%, during the three months ended June 30, 2018 compared to the same period in 2017 due to an increase in headcount resulting in personnel and related cost increases of \$1.0 million, stock based compensation cost increases of \$0.2 million, amortization cost increases of \$0.7 million and administrative cost increases of \$1.5 million.

Other Income, net. We recognized other income, net of \$0.8 million for the three months ended June 30, 2018, a decrease of \$0.4 million compared to other income, net of \$1.2 million for the three months ended June 30, 2017. Other income, net for the three months ended June 30, 2018 primarily consisted of a \$0.7 million gain on our sale of the RAPID Wire & Cable, LLC and \$0.4 million in interest income on investments, which was partially offset by a \$0.3 million loss on foreign currency. Other income, net for the three months ended June 30, 2017 primarily consisted of \$0.5 million in interest income on investments, a \$0.4 million favorable legal settlement and a \$0.3 million gain on foreign currency.

Provision for Income Taxes. Our effective tax rate of 19.6% for the three months ended June 30, 2018 decreased 11.6% compared to 31.2% for the same period in 2017. The decrease in the effective tax rate is primarily due to the Tax Cuts and Jobs Act that went into effect in 2018 and benefits from the vesting of restricted stock and the exercise of stock options. Our income tax provision decreased by \$1.0 million to \$4.5 million for the three months ended June 30, 2018 compared to our income tax provision of \$5.5 million for the three months ended June 30, 2017.

Comparison of Six Months Ended June 30, 2018 and 2017

Revenue

Revenue by reportable segment and the related changes for the six months ended June 30, 2018 and 2017 were as follows:

	Six Months Ended June 30,								
	 201	18		2017			Change		
		% of Total			% of Total				
(dollars in thousands)	\$	Revenue	\$		Revenue		\$	%	
Revenue									
United States	\$ 170,521	78.4%	\$ 123	3,529	76.2%	\$	46,992	38.0%	
Europe	40,158	18.5	33	3,130	20.4		7,028	21.2	
Japan	6,718	3.1	5	,548	3.4		1,170	21.1	
Total revenue	\$ 217,397	100.0%	\$ 162	2,207	100.0%	\$	55,190	34.0%	

Our revenue increased \$55.2 million, or 34.0%, for the six months ended June 30, 2018 compared to the same period in 2017. By reportable segment, revenue in the United States increased \$47.0 million, or 38.0% for the six months ended June 30, 2018 compared to the same period in 2017. Revenue growth in the United States was partially attributable to the acquisition of RAPID in November 2017. Revenue in Europe increased \$7.0 million, or 21.2%, and revenue in Japan increased \$1.2 million, or 21.1%, in each case for the six months ended June 30, 2018 compared to the same period in 2017.

Our revenue growth during the six months ended June 30, 2018 was the result of an increase in the volume of the product developers and engineers we served through our web-based customer interface and the acquisition of RAPID. During the six months ended June 30, 2018, we served 28,598 unique product developers and engineers through our web-based customer interface, an increase of 17.9% over the same period in 2017. The information does not include customers who do not utilize our web-based interface; these customers are principally related to our recent acquisitions.

Our revenue increases were primarily driven by increases in sales personnel and marketing activities. Our sales personnel focus on gaining new customer accounts and expanding the depth and breadth of existing customer accounts. Our marketing personnel focus on marketing activities that result in the greatest number of customer leads to support sales activity. International revenue was positively impacted by \$4.2 million during the six months ended June 30, 2018 compared to the same period in 2017 as a result of foreign currency movements, primarily the strengthening of the British Pound relative to the Dollar.

Revenue by product line and the related changes for the six months ended June 30, 2018 and 2017 were as follows:

		Six Months Ended	June 30,			
	 201	8	201	7	Cha	nge
		% of Total		% of Total		
(dollars in thousands)	\$	Revenue	\$	Revenue	\$	%
Revenue	 		_			
Injection Molding	\$ 102,929	47.3% \$	94,708	58.4%	\$ 8,221	8.7%
CNC Machining	74,519	34.3	46,152	28.5	28,367	61.5
3D Printing	25,573	11.8	20,958	12.9	4,615	22.0
Sheet Metal	12,550	5.8	-	-	12,550	*
Other Revenue	 1,826	0.8	389	0.2	1,437	*
Total revenue	\$ 217,397	100.0% \$	162,207	100.0%	\$ 55,190	34.0%

^{*}Percentage change not meaningful

By product line, our revenue growth was driven by an 8.7% increase in Injection Molding revenue, a 61.5% increase in CNC Machining revenue and a 22.0% increase in 3D Printing revenue, as well as a \$1.4 million increase in Other Revenue, in each case for the six months ended June 30, 2018 compared to the same period in 2017. Revenue growth in our CNC Machining, Sheet Metal and Other product lines was partially attributable to the acquisition of RAPID in November 2017.

Cost of Revenue, Gross Profit and Gross Margin

Cost of Revenue. Cost of revenue increased \$29.7 million, or 42.1%, for the six months ended June 30, 2018 compared to the same period in 2017, which was faster than the rate of revenue increase of 34.0% for the six months ended June 30, 2018 compared to the same period in 2017. The increase in cost of revenue resulted from the growth of the business, including via the RAPID acquisition, and was due to raw material and production cost increases of \$8.9 million, an increase in direct labor headcount resulting in personnel and related cost increases of \$16.1 million and equipment and facility-related cost increases of \$4.7 million to support increased sales volumes.

Gross Profit and Gross Margin. Gross profit increased from \$91.6 million in the six months ended June 30, 2017 to \$117.1 million in the six months ended June 30, 2018, primarily due to an increase in revenue. Gross margin decreased from 56.5% in the six months ended June 30, 2017 to 53.9% in the six months ended June 30, 2018 due to the timing and mix of revenue, with the RAPID acquisition being the primary driver of the reduction in gross margin.

Operating Expenses, Other Income, net and Provision for Income Taxes

Marketing and Sales. Marketing and sales expenses increased \$6.5 million, or 23.6%, during the six months ended June 30, 2018 compared to the same period in 2017 due primarily to an increase in headcount resulting in personnel and related cost increases of \$5.8 million as well as marketing program cost increases of \$0.7 million.

Research and Development. Our research and development expenses increased \$1.8 million, or 15.0%, during the six months ended June 30, 2018 compared to the same period in 2017 due to an increase in headcount resulting in personnel and related cost increases of \$1.9 million and professional services cost increases of \$0.2 million, which were partially offset by a decrease in operating cost of \$0.3 million.

General and Administrative. Our general and administrative expenses increased \$7.5 million, or 41.9%, during the six months ended June 30, 2018 compared to the same period in 2017 due to an increase in headcount resulting in personnel and related cost increases of \$2.4 million, stock based compensation cost increases of \$0.4 million, professional services cost increases of \$0.4 million, amortization cost increases of \$1.3 million and administrative cost increases of \$3.0 million.

Other Income, net. We recognized other income, net of \$1.0 million for the six months ended June 30, 2018, a decrease of \$0.5 million compared to other income, net of \$1.5 million for the six months ended June 30, 2017. Other income, net for the six months ended June 30, 2018 primarily consisted of a \$0.7 million gain on our sale of the RAPID Wire & Cable, LLC and \$0.6 million in interest income on investments, which was partially offset by a \$0.3 million loss on foreign currency. Other income, net for the six months ended June 30, 2017 primarily consisted of \$0.8 million in interest income on investments, a \$0.4 million favorable legal settlement and a \$0.3 million gain on foreign currency.

Provision for Income Taxes. Our effective tax rate of 18.6% for the six months ended June 30, 2018 decreased 13.1% compared to 31.7% for the same period in 2017. The decrease in the effective tax rate is primarily due to the Tax Cuts and Jobs Act that went into effect in 2018 and benefits from the vesting of restricted stock and the exercise of stock options. Our income tax provision decreased by \$3.0 million to \$8.3 million for the six months ended June 30, 2018 compared to our income tax provision of \$11.3 million for the six months ended June 30, 2017.

Liquidity and Capital Resources

Cash Flows

The following table summarizes our cash flows during the six months ended June 30, 2018 and 2017:

	Six M	Ionths Ended	June 30,
(dollars in thousands)	2018		2017
Net cash provided by operating activities	\$	59,317 \$	39,427
Net cash used in investing activities		(31,073)	(8,658)
Net cash used in financing activities		(1,694)	(619)
Effect of exchange rates on cash and cash equivalents		(652)	251
Net increase in cash and cash equivalents	\$	25,898 \$	30,401

Sources of Liquidity

Historically, we have primarily financed our operations and capital expenditures through cash flow from operations. We also have a line of credit facility in place, which we recently utilized in connection with our acquisitions at the end of 2017, and repaid in the three months ended March 31, 2018. We had cash and cash equivalents of \$62.6 million as of June 30, 2018, an increase of \$25.9 million from December 31, 2017. The increase in our cash was primarily due to cash generated through operations and proceeds from maturities of marketable securities, which were partially offset by investing activity and payments on debt.

Cash Flows from Operating Activities

Cash flows from operating activities were \$59.3 million during the six months ended June 30, 2018 and primarily consisted of net income of \$36.4 million, adjusted for certain non-cash items, including depreciation and amortization of \$12.7 million, stock-based compensation expense of \$5.0 million, deferred taxes of \$1.6 million, amortization of held-to-maturity securities of \$0.3 million and gain on sale of business of \$0.7 million. Cash flows from operating activities increased \$19.9 million during the six months ended June 30, 2018 compared to the same period in 2017, primarily due to increases in net income of \$12.1 million mostly driven by general growth of the business and a benefit from the decrease in our effective tax rate, depreciation and amortization of \$4.0 million driven by an increase in capital investments, an increase in stock-based compensation expense of \$1.1 million and by changes in operating assets and liabilities of \$3.8 million driven by general growth of the business and timing of cash receipts and payments. These increases were partially offset by a decrease in amortization of held-to-maturity securities of \$0.3 million, gain on the sale of businesses of \$0.7 million and a decrease in other adjustments of \$0.1 million primarily due to changes in foreign currency.

Cash flows from operating activities were \$39.4 million during the six months ended June 30, 2017 and primarily consisted of net income of \$24.3 million, adjusted for certain non-cash items, including depreciation and amortization of \$8.7 million, stock-based compensation expense of \$4.0 million, deferred taxes of \$1.6 million, amortization of held-to-maturity securities of \$0.6 million and other adjustments of \$0.1 million.

Cash Flows from Investing Activities

Cash used in investing activities was \$31.1 million during the six months ended June 30, 2018, consisting of \$43.2 million for the purchases of property and equipment, \$17.1 million for the purchases of marketable securities, and \$0.1 million in cash used for acquisitions, which were partially offset by \$29.0 million in proceeds from maturities of marketable securities and \$0.3 million in proceeds from the sale of businesses.

Cash used in investing activities was \$8.7 million during the six months ended June 30, 2017, consisting of \$13.3 million for the purchases of property and equipment, \$20.1 million for the purchases of marketable securities and \$0.5 million for the purchases of other investments, which were partially offset by \$25.2 million in proceeds from maturities of marketable securities.

Cash Flows from Financing Activities

Cash used in financing activities was \$1.7 million during the six months ended June 30, 2018, consisting of proceeds from exercises of stock options of \$3.3 million, which were partially offset by payments on debt of \$5.0 million.

Cash used in financing activities was \$0.6 million during the six months ended June 30, 2017, consisting of repurchases of common stock of \$4.4 million, which were partially offset by proceeds from exercises of stock options of \$3.8 million.

Off-Balance Sheet Arrangements

Since our inception, we have not engaged in any off-balance sheet arrangements, including the use of structured finance, special purpose entities or variable interest entities.

Critical Accounting Policies and Use of Estimates

We have adopted various accounting policies to prepare the Consolidated Financial Statements in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP). Our significant accounting policies are disclosed in Note 2 to the Consolidated Financial Statements included in our Annual Report on Form 10-K for the year ended December 31, 2017. See Note 3 to the Consolidated Financial Statements appearing in Part I, Item 1 in this Quarterly Report on Form 10-Q for significant changes to the Company's accounting policies as a result of adopting ASC 606.

Recent Accounting Pronouncements

For information on recent accounting pronouncements, see Note 2 to the Consolidated Financial Statements appearing in Part I, Item 1 in this Quarterly Report on Form 10-Q.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Foreign Currency Risk

As a result of our foreign operations, we have revenue, expenses, assets and liabilities that are denominated in foreign currencies. We generate revenue and incur production costs and operating expenses in British Pounds, Euros and Japanese Yen.

Our operating results and cash flows are adversely impacted when the United States Dollar appreciates relative to foreign currencies. Additionally, our operating results and cash flows are adversely impacted when the British Pound appreciates relative to the Euro. As we expand internationally, our results of operations and cash flows will become increasingly subject to changes in foreign currency exchange rates.

We have not used forward contracts or currency borrowings to hedge our exposure to foreign currency risk. Foreign currency risk can be assessed by estimating the change in results of operations or financial position resulting from a hypothetical 10% adverse change in foreign exchange rates. We believe such a change would generally not have a material impact on our financial position, but could have a material impact on our results of operations. We recognized foreign currency losses of \$0.3 million in each of the three and six months ended June 30, 2018, respectively. We recognized foreign currency gains of \$0.4 million and \$0.3 million in the three and six months ended June 30, 2017, respectively.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934 (Exchange Act)) as of the end of the period covered by this report. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of the period covered by this quarterly report, our disclosure controls and procedures are effective and provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported accurately and within the time frames specified in the SEC's rules and forms and accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) during the period covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

From time to time, we are subject to various legal proceedings and claims that arise in the ordinary course of our business activities. Although the results of litigation and claims cannot be predicted with certainty, as of the date of these financial statements, we do not believe we are party to any litigation the outcome of which, if determined adversely to us, would individually or in the aggregate be reasonably expected to have a material adverse effect on our business.

Item 1A. Risk Factors

There have been no material changes from the risk factors we previously disclosed in Part I, Item 1A. "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2017.

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

On February 9, 2017, we announced that our board of directors had authorized the repurchase of shares of our common stock from time to time on the open market or in privately negotiated purchases, at an aggregate purchase price of up to \$50 million. The timing and amount of any share repurchases will be determined by our management based on market conditions and other factors. The term of the program runs through December 31, 2021.

During the three months ended June 30, 2018, we did not repurchase shares of our common stock.

Item 3. Defaults Upon Senior Securities

No matters to disclose.

Item 4. Mine Safety Disclosures

No matters to disclose.

Item 5. Other Information

No matters to disclose.

Item 6. Exhibits

The following documents are filed as part of this report:

Exhibit Number	Description of Exhibit
3.1(1)	Third Amended and Restated Articles of Incorporation of Proto Labs, Inc.
3.2(2)	Articles of Amendment to Third Amended and Restated Articles of Incorporation of Proto Labs, Inc. dated May 20, 2015
$3.3^{(3)}$	Second Amended and Restated By-Laws of Proto Labs, Inc., as amended through November 8, 2016
10.1	Form of Deferred Stock Unit Agreement under 2012 Long-Term Incentive Plan
31.1	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act
31.2	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act
32.1	Certification of the Chief Executive Officer and the Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act
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

⁽¹⁾Previously filed as Exhibit 3.2 to the Company's Registration Statement on Form S-1/A (File No. 333-175745), filed with the Commission on February 13, 2012, and incorporated by reference herein.

⁽²⁾Previously filed as Exhibit 3.1 to the Company's Form 8-K (File No. 001-35435), filed with the Commission on May 21, 2015, and incorporated by reference herein.

⁽³⁾Previously filed as Exhibit 3.2 to the Company's Form 8-K (File No. 001-35435), filed with the Commission on November 8, 2016, and incorporated by reference herein.

Date: August 1, 2018

SIGNATURE

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.

Proto Labs, Inc.

Date: August 1, 2018 /s/ Victoria M. Holt

Victoria M. Holt

President and Chief Executive Officer

(Principal Executive Officer)

/s/ John A. Way

John A. Way

Chief Financial Officer (Principal Financial Officer)

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PROTO LABS, INC. 2012 LONG-TERM INCENTIVE PLAN

Deferred Stock Unit Agreement

This Deferred Stock Unit Agreement (the "<u>Agreement</u>") is made and entered into as of the grant date indicated below (the "<u>Grant Date</u>"), by and between Proto Labs, Inc. (the "<u>Company</u>"), and you, the participant whose name appears below. The Agreement consists of this cover page and the Deferred Stock Unit Terms and Conditions on the following pages.

Stock office refinis and conditions on the following pages.		
has authority to grant Awards to Non-Employee Directors. The equity-based awards under the Plan with an aggregate grant restricted stock units or deferred stock units. You elected to a	Incentive Plan (the " <u>Plan</u> "), pursuant to which the Company's Board of Directors (the " <u>Board</u> " he Board determined that for fiscal year 20, Non-Employee Directors would receive an at date fair value of \$ Each Non-Employee Director was entitled to elect to recreceive your equity-based award for fiscal 20 in the form of deferred stock units, which capitalized term used in this Agreement is not defined, it shall have the meaning assigned to the Code section 409A, as it is amended in the future.	nnual ceive h are
In consideration of the foregoing, the Company and y	you hereby agree as follows:	
indicated below. Each Unit represents the right to receive one of this deferred stock unit award (this "Award") are set forth in	grants to you, subject to your acceptance hereof, the number of deferred stock units (the " <u>Un</u> s Share of the Company's common stock upon settlement of the Unit. The terms and condition this Agreement and in the Plan document which is attached. s and Conditions, the Units shall vest according to the schedule below.	
Name of Participant:		
Number of Deferred Stock Units:	Grant Date:	
Vesting Schedule: 100% on []		
	age, you agree to all of the terms and conditions contained in this Agreement and in the ocuments and that they set forth the entire agreement between you and the Company regar	
PARTICIPANT	PROTO LABS, INC.	

Title:

PROTO LABS, INC. 2012 LONG-TERM INCENTIVE PLAN

Deferred Stock Unit Terms and Conditions

1. Vesting and Forfeiture.

- (a) The Company hereby confirms the grant to you, as of the Grant Date and subject to the terms and conditions of this Agreement and the Plan, the Award of Units in the amount specified on the cover page to this Agreement. Subject to Section 1(b), each Unit will vest as to the portion of Units and on the dates specified in the Vesting Schedule on the cover page to this Agreement, so long as your Service to the Company or any Affiliate does not end prior to such dates.
- (b) Vesting of the Units will be accelerated (i) upon the termination of your Service due to death or disability, as defined under Code Section 409A ("<u>Disability</u>") and (ii) on the date a Change in Control (within the meaning of Section 2(g)(3) of the Plan, including the last sentence thereof) occurs, so long as you have continuously provided Service to the Company or any Affiliate between the Grant Date and the date of such Change in Control.
- (c) Except as otherwise expressly provided in this Agreement or the Plan, if you cease to continue providing Service to the Company or any Affiliate, then this Award shall terminate and all Units subject to this Award that have not yet vested shall be forfeited.
- (d) Each Unit that vests will entitle you to receive one Share.
- 2. **Nature of Units**. The Units granted pursuant to this Award are bookkeeping entries only and do not provide you with any dividend, voting or other rights of a shareholder of the Company. The Units shall remain forfeitable at all times unless and to the extent the vesting conditions set forth in this Agreement are satisfied.

3. **Settlement of Units**.

- (a) Settlement Dates. The Company shall cause to be issued to you (or your beneficiary or personal representative) one Share in payment and settlement of each vested Unit. All Shares so issued will be fully paid and nonassessable. The issuance of Shares in settlement of vested Units under this Agreement will be made in whole Shares with any fractional shares paid in cash during whichever of the following periods ends first:
 - (i) the month of February following the calendar year of your separation from service, as defined under Code Section 409A, unless you have elected to defer settlement in accordance with Section 3(b) below;
 - (ii) within 90 days of the date of your death or Disability; and
 - (iii) within 30 days of the date of a Change in Control within the meaning of Section 2(g)(3) of the Plan, including the last sentence thereof.
- (b) Settlement Payout Options. You were given the opportunity to elect to receive Shares upon settlement of the vested Units in a single lump sum or in a series of substantially equal annual payouts of Shares over up to 10 years, beginning during the period established in Section 3(a) and on each anniversary thereafter until paid in full. Your payout election made pursuant to this Section 3(b) was irrevocable and must have been made by executing and submitting the appropriate election form to the Company's Corporate Secretary prior to the Grant Date.

- (c) Death, Disability, or Change in Control During Settlement Period. Upon your death or Disability or upon a Change in Control (within the meaning of Section 2(g)(3) of the Plan, including the last sentence thereof) prior to or during the installment period set forth in Section 3(b), issuance of any remaining Shares in settlement of your vested Units under this Agreement will be made in a lump sum payment during the period specified in Section 3(a)(ii) in the case of a Change in Control, notwithstanding any election to the contrary.
- 4. <u>Dividend Equivalents</u>. If cash dividends are declared and paid by the Company with respect to its common stock, then the Company will credit to your account, as of each dividend payment date, a number of additional Units (the "<u>Dividend Units</u>"). The number of Dividend Units so credited as of any dividend payment date will be equal to (i) the total cash dividends you would have received on that dividend payment date if your outstanding Units as of the record date for such dividend payment (including any previously credited Dividend Units) had been actual Shares, divided by (ii) the Fair Market Value of a Share on the dividend payment date (with the quotient rounded down to the nearest whole number). Once credited to your account, Dividend Units will be considered Units for all purposes of this Agreement.
- 5. **Transfer of Units**. You may not assign or transfer the Units other than a transfer upon your death in accordance with your will, by the laws of descent and distribution or pursuant to a beneficiary designation submitted in accordance with Section 6(d) of the Plan. If no beneficiary designation is on file, or if all named beneficiaries fail to survive you, your beneficiary will be your estate. Following any such transfer, the Units shall continue to be subject to the same terms and conditions that were applicable to the Units immediately prior to their transfer.
- 6. **Discontinuance of Service**. This Agreement does not give you a right to continued Service with the Company or any Affiliate, and the Company or any such Affiliate may terminate your Service at any time and otherwise deal with you without regard to the effect it may have upon you under this Agreement.
- 7. **Governing Plan Document**. This Agreement and the Units are subject to all the provisions of the Plan, and to all interpretations, rules and regulations which may, from time to time, be adopted and promulgated by the Committee pursuant to the Plan. If there is any conflict between the provisions of this Agreement and the Plan, the provisions of the Plan will govern.
- 8. <u>Choice of Law</u>. This Agreement will be interpreted and enforced under the laws of the state of Minnesota (without regard to its conflicts or choice of law principles).
- 9. **Binding Effect**. This Agreement will be binding in all respects on your heirs, representatives, successors and assigns, and on the successors and assigns of the Company.

By signing or otherwise authenticating the cover page of this Agreement, you agree to all the terms and conditions described above and in the Plan document.

CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Victoria M. Holt, certify that:

- 1. I have reviewed this Quarterly Report on Form 10-Q of Proto Labs, Inc.;
- 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: August 1, 2018 By: /s/ Victoria M. Holt

Victoria M. Holt
President and Chief Executive Officer
(Principal Executive Officer)

CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John A. Way, certify that:

- 1. I have reviewed this Quarterly Report on Form 10-Q of Proto Labs, Inc.;
- 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: August 1, 2018 By: /s/ John A. Way

John A. Way Chief Financial Officer (Principal Financial Officer)

CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Victoria M. Holt, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Proto Labs, Inc. on Form 10-Q for the fiscal quarter ended June 30, 2018 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of Proto Labs, Inc.

Date: August 1, 2018

By: /s/ Victoria M. Holt

Name: Victoria M. Holt

Title: President and Chief Executive Officer

I, John A. Way, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Proto Labs, Inc. on Form 10-Q for the fiscal quarter ended June 30, 2018 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of Proto Labs, Inc.

Date: August 1, 2018

By: /s/ John A. Way

Name: John A. Way

Title: Chief Financial Officer