
UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

FOR THE QUARTERLY PERIOD ENDED JUNE 29, 2019

OR

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

FOR THE TRANSITION PERIOD FROM _____ TO _____

Commission file number 000-18032



LATTICE SEMICONDUCTOR CORPORATION

(Exact name of Registrant as specified in its charter)

State of Delaware
(State or other jurisdiction of incorporation or organization)

93-0835214
(I.R.S. Employer Identification No.)

5555 NE Moore Court, Hillsboro, OR
(Address of principal executive offices)

97124
(Zip Code)

(503) 268-8000
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of each class</u>	<u>Trading Symbol</u>	<u>Name of each exchange on which registered</u>
Common Stock, \$.01 par value	LSCC	NASDAQ Global Select Market

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

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

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

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

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

Number of shares of common stock outstanding as of July 30, 2019

132,668,729

LATTICE SEMICONDUCTOR CORPORATION
QUARTERLY REPORT ON FORM 10-Q
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Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements that involve estimates, assumptions, risks, and uncertainties. Any statements about our expectations, beliefs, plans, objectives, assumptions, or future events or performance are not historical facts and may be forward-looking. We use words or phrases such as "anticipate," "believe," "could," "estimate," "expect," "intend," "plan," "predict," "project," "may," "will," "should," "continue," "ongoing," "future," "potential," and similar words or phrases to identify forward-looking statements.

Forward-looking statements include, but are not limited to, statements about: our target or expected financial performance and our ability to achieve those results; future financial results or accounting treatment; our use of cash; our strategies to achieve gross margin and other financial results; our expectations and strategies regarding market trends and opportunities; our judgments involved in accounting matters; our expectations regarding product offerings; our future investments in research and development; our expectations regarding our restructuring plans; our anticipated sharing of HDML royalty revenues; our expectations regarding taxes and tax adjustments and allowances; our beliefs regarding the adequacy of our liquidity, capital resources and facilities; and our beliefs regarding legal proceedings.

Forward-looking statements involve estimates, assumptions, risks, and uncertainties that could cause actual results to differ materially from those expressed in the forward-looking statements. The key factors, among others, that could cause our actual results to differ materially from the forward-looking statements include those more fully described herein or that are otherwise described from time to time in our filings with the Securities and Exchange Commission, including, but not limited to, the items discussed in Part I, Item 1A, "Risk Factors," in our Annual Report on Form 10-K for the fiscal year ended December 29, 2018 and any additional or updated risk factors discussed in any subsequent Quarterly Report on Form 10-Q filed since that date.

You should not unduly rely on forward-looking statements because our actual results could differ materially from those expressed by us. In addition, any forward-looking statement applies only as of the date of this filing. We do not plan to, and undertake no obligation to, update any forward-looking statements to reflect new information or new events, circumstances or developments, or otherwise.

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

LATTICE SEMICONDUCTOR CORPORATION CONSOLIDATED STATEMENTS OF OPERATIONS (unaudited)

	Three Months Ended		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
<i>(In thousands, except per share data)</i>				
Revenue:				
Product	\$ 98,096	\$ 98,294	\$ 189,708	\$ 193,403
Licensing and services	4,200	4,421	10,679	7,935
Total revenue	102,296	102,715	200,387	201,338
Cost of revenue:				
Cost of product revenue	42,258	52,208	82,697	94,310
Cost of licensing and services revenue	—	259	—	259
Total cost of revenue	42,258	52,467	82,697	94,569
Gross margin	60,038	50,248	117,690	106,769
Operating expenses:				
Research and development	19,377	21,081	39,042	44,022
Selling, general, and administrative	19,759	21,068	40,540	48,111
Amortization of acquired intangible assets	3,390	4,523	6,779	10,159
Restructuring charges	3,126	4,376	4,467	5,405
Acquisition related charges	—	864	—	1,531
Impairment of acquired intangible assets	—	11,900	—	11,900
Total operating expenses	45,652	63,812	90,828	121,128
Income (loss) from operations	14,386	(13,564)	26,862	(14,359)
Interest expense	(3,538)	(4,968)	(8,525)	(10,082)
Other (expense) income, net	(2,109)	(348)	(1,956)	206
Income (loss) before income taxes	8,739	(18,880)	16,381	(24,235)
Income tax expense	180	1,343	414	1,940
Net income (loss)	\$ 8,559	\$ (20,223)	\$ 15,967	\$ (26,175)
Net income (loss) per share:				
Basic	\$ 0.06	\$ (0.16)	\$ 0.12	\$ (0.21)
Diluted	\$ 0.06	\$ (0.16)	\$ 0.12	\$ (0.21)
Shares used in per share calculations:				
Basic	132,206	124,843	131,599	124,460
Diluted	137,221	124,843	136,133	124,460

See Accompanying Notes to Unaudited Consolidated Financial Statements.

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(unaudited)

<i>(In thousands)</i>	Three Months Ended		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
Net income (loss)	\$ 8,559	\$ (20,223)	\$ 15,967	\$ (26,175)
Other comprehensive income (loss):				
Unrealized gain related to marketable securities, net of tax	—	9	42	2
Reclassification adjustment for gains related to marketable securities included in Other (expense) income, net of tax	—	—	(53)	(1)
Translation adjustment, net of tax	39	(1,129)	86	(540)
Comprehensive income (loss)	<u>\$ 8,598</u>	<u>\$ (21,343)</u>	<u>\$ 16,042</u>	<u>\$ (26,714)</u>

See Accompanying Notes to Unaudited Consolidated Financial Statements.

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED BALANCE SHEETS
(unaudited)

<i>(In thousands, except share and par value data)</i>	June 29, 2019	December 29, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 122,636	\$ 119,051
Short-term marketable securities	—	9,624
Accounts receivable, net of allowance for doubtful accounts	37,893	60,890
Inventories	64,964	67,096
Prepaid expenses and other current assets	30,752	27,762
Total current assets	256,245	284,423
Property and equipment, less accumulated depreciation of \$136,863 at June 29, 2019 and \$141,367 at December 29, 2018	39,593	34,883
Operating lease right-of-use assets	26,092	—
Intangible assets, net	13,784	21,325
Goodwill	267,514	267,514
Deferred income taxes	227	215
Other long-term assets	13,204	15,327
Total assets	\$ 616,659	\$ 623,687
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued expenses (includes restructuring)	\$ 52,067	\$ 51,763
Accrued payroll obligations	9,056	9,365
Current portion of long-term debt	17,190	8,290
Current portion of operating lease liabilities	4,804	—
Total current liabilities	83,117	69,418
Long-term debt, net of current portion	172,287	251,357
Long-term operating lease liabilities, net of current portion	23,792	—
Other long-term liabilities	42,286	44,455
Total liabilities	321,482	365,230
Contingencies (Note 11)	—	—
Stockholders' equity:		
Preferred stock, \$.01 par value, 10,000,000 shares authorized, none issued and outstanding	—	—
Common stock, \$.01 par value, 300,000,000 shares authorized; 132,536,000 shares issued and outstanding as of June 29, 2019 and 129,728,000 shares issued and outstanding as of December 29, 2018	1,325	1,297
Additional paid-in capital	756,924	736,274
Accumulated deficit	(460,816)	(476,783)
Accumulated other comprehensive loss	(2,256)	(2,331)
Total stockholders' equity	295,177	258,457
Total liabilities and stockholders' equity	\$ 616,659	\$ 623,687

See Accompanying Notes to Unaudited Consolidated Financial Statements.

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)

(In thousands)	Six Months Ended	
	June 29, 2019	June 30, 2018
Cash flows from operating activities:		
Net income (loss)	\$ 15,967	\$ (26,175)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation and amortization	16,450	22,425
Impairment of acquired intangible assets	—	11,900
Amortization of operating lease right-of-use assets	2,907	—
Loss on re-financing of long-term debt	2,235	—
Amortization of debt issuance costs and discount	1,215	1,058
Stock-based compensation expense	7,655	7,200
Impairment of operating lease right-of-use asset (recorded in Restructuring charges)	977	—
Other non-cash adjustments	(39)	(130)
Changes in assets and liabilities:		
Accounts receivable, net	22,997	(19,654)
Inventories	2,132	14,687
Prepaid expenses and other assets	(5,097)	(7,891)
Accounts payable and accrued expenses (includes restructuring)	3,974	7,095
Accrued payroll obligations	(309)	(1,716)
Operating lease liabilities, current and long-term portions	(3,975)	—
Income taxes payable	(593)	851
Deferred licensing and services revenue	—	(68)
Net cash provided by operating activities	66,496	9,582
Cash flows from investing activities:		
Proceeds from sales of and maturities of short-term marketable securities	9,655	2,500
Purchases of marketable securities	—	(9,603)
Capital expenditures	(8,459)	(4,105)
Cash paid for software licenses	(3,597)	(3,981)
Net cash used in investing activities	(2,401)	(15,189)
Cash flows from financing activities:		
Restricted stock unit tax withholdings	(1,014)	(1,369)
Proceeds from issuance of common stock	14,037	6,409
Proceeds from issuance of long-term debt	206,500	—
Original issue discount and debt issuance costs	(2,086)	—
Repayment of debt	(278,033)	(12,009)
Net cash used in financing activities	(60,596)	(6,969)
Effect of exchange rate change on cash	86	(540)
Net increase (decrease) in cash and cash equivalents	3,585	(13,116)
Beginning cash and cash equivalents	119,051	106,815
Ending cash and cash equivalents	\$ 122,636	\$ 93,699
Supplemental disclosure of cash flow information and non-cash investing and financing activities:		
Interest paid	\$ 8,103	\$ 9,177
Operating lease payments	\$ 4,613	\$ —
Income taxes paid, net of refunds	\$ 1,500	\$ 2,057
Accrued purchases of plant and equipment	\$ 1,627	\$ 354
Operating lease right-of-use assets obtained in exchange for lease obligations	\$ 298	\$ —
Change in unrealized gain related to marketable securities, net of tax, included in Accumulated other comprehensive loss	\$ 42	\$ 2

See Accompanying Notes to Unaudited Consolidated Financial Statements.

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(unaudited)

The following summarizes the changes in total equity for the six month period ended June 29, 2019:

	Common Stock (\$01 par value)		Additional Paid- in capital	Accumulated deficit	Accumulated other comprehensive loss	Total
	Shares	Amount				
<i>(In thousands, except par value data)</i>						
Balances, December 29, 2018	129,728	\$ 1,297	\$ 736,274	\$ (476,783)	\$ (2,331)	\$ 258,457
Net income for the six months ended June 29, 2019	—	—	—	15,967	—	15,967
Unrealized gain related to marketable securities, net of tax	—	—	—	—	42	42
Recognized gain on redemption of marketable securities, previously unrealized	—	—	—	—	(53)	(53)
Translation adjustments, net of tax	—	—	—	—	86	86
Common stock issued in connection with the exercise of stock options, ESPP and vested RSUs, net of tax	2,808	28	12,995	—	—	13,023
Stock-based compensation related to stock options, ESPP and RSUs	—	—	7,655	—	—	7,655
Balances, June 29, 2019	132,536	\$ 1,325	\$ 756,924	\$ (460,816)	\$ (2,256)	\$ 295,177

The following summarizes the changes in total equity for the six month period ended June 30, 2018:

	Common Stock (\$01 par value)		Additional Paid- in capital	Accumulated deficit	Accumulated other comprehensive loss	Total
	Shares	Amount				
<i>(In thousands, except par value data)</i>						
Balances, December 30, 2017	123,895	\$ 1,239	\$ 695,768	\$ (477,862)	\$ (1,452)	\$ 217,693
Net income for the six months ended June 30, 2018	—	—	—	(26,175)	—	(26,175)
Unrealized loss related to marketable securities, net of tax	—	—	—	—	2	2
Recognized gain on redemption of marketable securities, previously unrealized	—	—	—	—	(1)	(1)
Translation adjustments, net of tax	—	—	—	—	(540)	(540)
Common stock issued in connection with the exercise of stock options, ESPP and vested RSUs, net of tax	1,718	17	5,023	—	—	5,040
Stock-based compensation related to stock options, ESPP and RSUs	—	—	7,200	—	—	7,200
Accounting method transition adjustment (1)	—	—	—	27,401	—	27,401
Balances, June 30, 2018	125,613	\$ 1,256	\$ 707,991	\$ (476,636)	\$ (1,991)	\$ 230,620

(1) As of the beginning of fiscal 2018, we adopted ASC 606, "Revenue from Contracts With Customers," using the modified retrospective transition method. As a result of this adoption, we recorded a cumulative-effect adjustment to Accumulated Deficit, as shown in the table above.

See Accompanying Notes to Unaudited Consolidated Financial Statements.

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (continued)
(unaudited)

The following summarizes the changes in total equity for the three month period ended June 29, 2019:

<i>(In thousands, except par value data)</i>	Common Stock (\$01 par value)		Additional Paid- in capital	Accumulated deficit	Accumulated other comprehensive loss	Total
	Shares	Amount				
Balances, March 30, 2019	131,905	\$ 1,319	\$ 751,506	\$ (469,375)	\$ (2,295)	\$ 281,155
Net income for the three months ended June 29, 2019	—	—	—	8,559	—	8,559
Translation adjustments, net of tax	—	—	—	—	39	39
Common stock issued in connection with the exercise of stock options, ESPP and vested RSUs, net of tax	631	6	1,449	—	—	1,455
Stock-based compensation related to stock options, ESPP and RSUs	—	—	3,969	—	—	3,969
Balances, June 29, 2019	132,536	\$ 1,325	\$ 756,924	\$ (460,816)	\$ (2,256)	\$ 295,177

The following summarizes the changes in total equity for the three month period ended June 30, 2018:

<i>(In thousands, except par value data)</i>	Common Stock (\$01 par value)		Additional Paid- in capital	Accumulated deficit	Accumulated other comprehensive loss	Total
	Shares	Amount				
Balances, March 31, 2018	124,311	\$ 1,243	\$ 701,713	\$ (456,413)	\$ (871)	\$ 245,672
Net income for the three months ended June 30, 2018	—	—	—	(20,223)	—	(20,223)
Unrealized loss related to marketable securities, net of tax	—	—	—	—	9	9
Translation adjustments, net of tax	—	—	—	—	(1,129)	(1,129)
Common stock issued in connection with the exercise of stock options, ESPP and vested RSUs, net of tax	1,302	13	3,878	—	—	3,891
Stock-based compensation related to stock options, ESPP and RSUs	—	—	2,400	—	—	2,400
Balances, June 30, 2018	125,613	\$ 1,256	\$ 707,991	\$ (476,636)	\$ (1,991)	\$ 230,620

See Accompanying Notes to Unaudited Consolidated Financial Statements.

LATTICE SEMICONDUCTOR CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(unaudited)

Note 1 - Basis of Presentation, and Updates to Accounting Policies

Lattice Semiconductor Corporation, a Delaware corporation, and its subsidiaries ("Lattice," the "Company," "we," "us," or "our") develop semiconductor technologies that we monetize through products, solutions, services, and licenses. Lattice was founded in 1983 and is headquartered in Hillsboro, Oregon.

Basis of Presentation and Use of Estimates

The accompanying Consolidated Financial Statements are unaudited and have been prepared by us in accordance with U.S. Generally Accepted Accounting Principles ("U.S. GAAP") and pursuant to the rules and regulations of the SEC. In our opinion, they include all adjustments, consisting only of normal recurring adjustments, necessary for the fair presentation of results for the interim periods. Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. GAAP have been condensed or omitted as permitted by the SEC's rules and regulations for interim reporting. These Consolidated Financial Statements should be read in conjunction with our audited financial statements and notes thereto included in our Annual Report on Form 10-K for the year ended December 29, 2018 ("2018 10-K").

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and judgments affecting the amounts reported in our consolidated condensed financial statements and the accompanying notes. The actual results that we experience may differ materially from our estimates.

We describe our accounting methods and practices in more detail in our 2018 10-K. Except for the impact of the adoption of Topic 842, there have been no other changes to the significant accounting policies, procedures, or general information described in our 2018 10-K that have had a material impact on our consolidated financial statements and related notes.

Updates to Accounting Policies

On December 30, 2018, the first day of our 2019 fiscal year, we adopted Accounting Standards Update ("ASU") No. 2016-02, *Leases* (Topic 842). See "[Note 7 - Leases](#)" for further information on our leases and our application of Topic 842.

Fiscal Reporting Period

We report based on a 52 or 53 week fiscal year ending on the Saturday closest to December 31. Our second quarter of fiscal 2019 and second quarter of fiscal 2018 ended on June 29, 2019 and June 30, 2018, respectively. All references to quarterly or six months ended financial results are references to the results for the relevant 13-week or 26-week fiscal period.

Concentrations of Risk

Distributors have historically accounted for a significant portion of our total revenue. Revenue attributable to distributors as a percentage of total revenue was 85% and 86% for the three months ended June 29, 2019 and June 30, 2018, respectively, and 82% and 87% for the six months ended June 29, 2019 and June 30, 2018, respectively. In the periods covered by this report, no end customer accounted for more than 10% of total revenue.

Distributors also account for a substantial portion of our net accounts receivable. At June 29, 2019 and December 29, 2018, our largest distributor accounted for 36% and 41%, respectively, and our second largest accounted for 35% and 23%, respectively, of net accounts receivable. A third distributor accounted for 11% of net accounts receivable at June 29, 2019, but accounted for less than 10% of net accounts receivable at December 29, 2018. No other distributor or end customer accounted for more than 10% of net accounts receivable at these dates.

Recently Issued Accounting Standards

In August 2018, the FASB issued ASU 2018-15, *Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40)*, which clarifies the accounting for implementation costs in cloud computing arrangements. This guidance is effective for interim and annual reporting periods beginning after December 15, 2019, and early adoption is permitted. We are currently assessing the impact of ASU 2018-15 on our consolidated financial statements and related disclosures.

Note 2 - Net Income (Loss) per Share

Our calculation of the diluted share count includes the number of shares from our equity awards with market conditions or performance conditions that would be issuable under the terms of such awards at the end of the reporting period. The maximum number of shares issuable under the equity awards with a market condition are included in the diluted share count as of June 29, 2019, as the market condition would have been achieved at the highest level of vesting if measured as of the end of the reporting period. No shares related to the performance conditions are included in the diluted share count as of June 29, 2019, as vesting of these awards is contingent upon evaluation of the performance condition over two consecutive trailing four-quarter periods, which have not yet elapsed. See "[Note 9 - Stock-Based Compensation](#)" to our consolidated financial statements for further discussion of our equity awards with market conditions or performance conditions.

A summary of basic and diluted Net income (loss) per share is presented in the following table:

	Three Months Ended		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
<i>(in thousands, except per share data)</i>				
Net income (loss)	\$ 8,559	\$ (20,223)	\$ 15,967	\$ (26,175)
Shares used in basic Net income (loss) per share	132,206	124,843	131,599	124,460
Dilutive effect of stock options, RSUs, ESPP shares, and equity awards with a market condition or performance condition	5,015	—	4,534	—
Shares used in diluted Net income (loss) per share	137,221	124,843	136,133	124,460
Basic Net income (loss) per share	\$ 0.06	\$ (0.16)	\$ 0.12	\$ (0.21)
Diluted Net income (loss) per share	\$ 0.06	\$ (0.16)	\$ 0.12	\$ (0.21)

The computation of diluted Net income (loss) per share excludes the effects of stock options, Restricted Stock Units ("RSUs"), Employee Stock Purchase Plan ("ESPP") shares, and equity awards with a market condition or performance condition that are antidilutive, aggregating approximately the following number of shares:

	Three Months Ended		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
<i>(in thousands)</i>				
Stock options, RSUs, ESPP shares, and equity awards with a market condition or performance condition excluded as they are antidilutive	73	9,169	210	9,376

Stock options, RSUs, and ESPP shares that are antidilutive at June 29, 2019 could become dilutive in the future.

Note 3 - Revenue from Contracts with Customers

Disaggregation of revenue

The following tables provide information about revenue from contracts with customers disaggregated by major class of revenue and by geographical market, based on ship-to location of the end customer, where available, and ship-to location of distributor otherwise:

Major Class of Revenue

(In thousands)

	Three Months Ended		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
Product revenue - Distributors	86,627	88,790	164,099	174,747
Product revenue - Direct	11,469	9,504	25,609	18,656
Licensing and services revenue	4,200	4,421	10,679	7,935
Total revenue	102,296	102,715	200,387	201,338

Revenue by Geographical Market

(In thousands)

	Three Months Ended		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
Asia	76,845	77,899	145,856	149,820
Europe	12,585	12,162	24,795	24,304
Americas	12,866	12,654	29,736	27,214
Total revenue	102,296	102,715	200,387	201,338

Contract balances

Our contract assets are included in Prepaid expenses and other current assets on our Consolidated Balance Sheets, and the following table summarizes their activity during the first six months of fiscal 2019:

(In thousands)

Contract assets as of December 29, 2018	\$	9,143
Revenues recorded during the period		5,171
Transferred to Accounts receivable or collected		(1,885)
Contract assets as of June 29, 2019	\$	12,429

Contract liabilities are included in Account payable and accrued expenses on our Consolidated Balance Sheets, and the following table summarizes their activity during the first six months of fiscal 2019:

(In thousands)

Contract liabilities as of December 29, 2018	\$	1,614
Accruals for estimated future stock rotation and scrap returns		3,347
Less: Release of accruals for recognized stock rotation and scrap returns		(2,461)
Prepayment for products to be manufactured and delivered to the customer within six months		751
Contract liabilities as of June 29, 2019	\$	3,251

The impact to revenue from the release of accruals for recognized stock rotation and scrap returns was offset by the processing of return merchandise authorizations ("RMAs") totaling \$2.8 million, yielding a net revenue reduction of \$0.3 million for the first six months of 2019. We will recognize the revenue related to the prepayment contract liability when control of the product is transferred to the end customer and the performance obligation has been satisfied.

Other matters

We share HDMI royalties with the other HDMI Founders based on an allocation formula, which is reviewed periodically, generally every three years. However, a new agreement covering the period beginning January 1, 2018 is yet to be signed. HDMI royalties are considered variable consideration under the current revenue standard and recognized as royalty revenue as usage occurs. While a new royalty sharing agreement is being negotiated with the other Founders of the HDMI consortium for fiscal years 2019 and 2018, we are estimating our share of royalty revenues under an anticipated new agreement. The amount of estimated revenue related to HDMI that we have recognized to date is reflected above in the balance of our contract assets.

Note 4 - Balance Sheet Components

Short-Term Marketable Securities

Our Short-term marketable securities consisted of U.S. government agency obligations with maturities up to two years, which we carried at their fair value as Level 1 instruments in accordance with ASC 820, "Fair Value Measurements." We liquidated these investments in the first quarter of fiscal 2019. The following table summarizes the maturities of our formerly-held Short-term marketable securities at fair value.

(In thousands)

	June 29, 2019	December 29, 2018
Short-term marketable securities:		
Maturing within one year	\$ —	\$ 7,454
Maturing between one and two years	—	2,170
Total marketable securities	\$ —	\$ 9,624

Accounts Receivable

(In thousands)

	June 29, 2019	December 29, 2018
Accounts receivable	\$ 38,077	\$ 61,087
Less: Allowance for doubtful accounts	(184)	(197)
Accounts receivable, net of allowance for doubtful accounts	\$ 37,893	\$ 60,890

Inventories

<i>(In thousands)</i>	June 29, 2019	December 29, 2018
Work in progress	\$ 46,117	\$ 47,224
Finished goods	18,847	19,872
Total inventories	<u>\$ 64,964</u>	<u>\$ 67,096</u>

Property and Equipment – Geographic Information

Our Property and equipment, net by country at the end of each period was as follows:

<i>(In thousands)</i>	June 29, 2019	December 29, 2018
United States	\$ 33,370	\$ 27,353
China	1,871	2,360
Philippines	2,983	3,319
Taiwan	699	949
Japan	236	324
Other	434	578
Total foreign property and equipment, net	6,223	7,530
Total property and equipment, net	<u>\$ 39,593</u>	<u>\$ 34,883</u>

Accounts Payable and Accrued Expenses

Included in Accounts payable and accrued expenses in the Consolidated Balance Sheets are the following balances:

<i>(In thousands)</i>	June 29, 2019	December 29, 2018
Trade accounts payable	\$ 34,263	\$ 31,880
Liability for non-cancelable contracts	7,148	6,078
Restructuring	4,140	4,220
Other accrued expenses	6,516	9,585
Total accounts payable and accrued expenses	<u>\$ 52,067</u>	<u>\$ 51,763</u>

Note 5 - Long-Term Debt

On May 17, 2019, we entered into a Credit Agreement (the "Credit Agreement") with Wells Fargo Bank, National Association, as administrative agent, and other lenders. The Credit Agreement provides for a five-year secured term loan facility in an aggregate principal amount of \$175.0 million and a five-year secured revolving loan facility in an aggregate principal amount of up to \$75.0 million, along with other components and options, such as a letter of credit, swing line, or expansion of the revolver, currently not in use, which are more fully described in the Credit Agreement.

We used the \$175.0 million of term loan proceeds and an initial \$31.5 million revolving loan draw at closing to (i) repay the \$204.4 million obligation outstanding under our existing Credit Agreement (the "Existing Credit Agreement") with Jefferies Finance LLC, as administrative agent, and (ii) pay fees and expenses totaling \$2.1 million incurred in connection with the new Credit Agreement. The revolving loan may be used for working capital and general corporate purposes. With the repayment of our obligations under the Existing Credit Agreement, we wrote off the remaining unamortized balance of the related original issue discount and debt costs, which we recorded as a \$2.2 million loss on refinancing in Other (expense) income, net on our Consolidated Statements of Operations in the second quarter of fiscal 2019.

At our option, the term loan and the revolving loan (collectively, "long-term debt") accrue interest at a per annum rate based on either (i) the base rate plus a margin ranging from 0.25% to 1.00%, determined based on our total leverage ratio or (ii) the London Interbank Offered Rate ("LIBOR") for interest periods of 1, 2, 3 or 6 months plus a margin ranging from 1.25% to 2.00%, determined based on our total leverage ratio. The base rate is defined as the highest of (i) the federal funds rate, plus 0.50%, (ii) Wells Fargo Bank, National Association's prime rate or (iii) the LIBOR rate for a 1-month interest period plus 1.00%. As of June 29, 2019, the effective interest rate on the term loan was 4.34%, and the effective interest rate on the revolving loan was 4.65%. Additionally, we pay a commitment fee of 0.25% on the unused portion of the revolving loan.

The term loan is payable through a combination of (i) required quarterly installments of approximately \$4.4 million, and (ii) any payments due upon certain issuances of additional indebtedness and certain asset dispositions, with any remaining outstanding principal amount due and payable on the maturity date of the term loan. The revolving loan is payable at our discretion, with any remaining outstanding principal amount due and payable on the maturity date of the revolving loan.

In the first quarter of fiscal 2019, we made voluntary and mandatory principal payments totaling approximately \$26.9 million under the Existing Credit Agreement. In the second quarter of fiscal 2019, prior to entering into the new Credit Agreement, we made principal payments totaling approximately \$31.8 million under the Existing Credit Agreement, including a total of \$25.0 million in voluntary payments and \$6.8 million as a required excess cash flow payment. Following the closing of our new Credit Agreement, we made a total of \$15.0 million in voluntary payments on our long-term debt. As of June 29, 2019, we had approximately \$191.5 million outstanding under the Credit Agreement.

Subsequent to June 29, 2019, but before the filing date of this report, we committed to and made an additional \$25.0 million voluntary payment.

The Credit Agreement contains customary affirmative and negative covenants, including covenants limiting the ability of the Company to, among other things, incur debt, grant liens, undergo certain fundamental changes, make investments, make certain restricted payments, dispose of assets, enter into transactions with affiliates, and enter into burdensome agreements, in each case, subject to limitations and exceptions set forth in the Credit Agreement. We are also required to maintain compliance with a total leverage ratio and an interest coverage ratio, in each case, determined in accordance with the terms of the Credit Agreement. We were in compliance with all such covenants in all respects at June 29, 2019.

We account for the original issue discount and the debt issuance costs as a reduction to the carrying value of our long-term debt on our Consolidated Balance Sheets, and we amortize the discount and costs to Interest expense in our Consolidated Statements of Operations over the contractual term, using the effective interest method. We determine the Current portion of long-term debt as the sum of the required quarterly installments to be made over the next twelve months, reduced by the original issue discount and the debt issuance costs to be amortized over the next twelve months.

The fair value of our long-term debt approximates the carrying value, which is reflected in our Consolidated Balance Sheets as follows:

<i>(In thousands)</i>	June 29, 2019	December 29, 2018
Principal amount	\$ 191,500	\$ 263,033
Unamortized original issue discount and debt costs	(2,023)	(3,386)
Less: Current portion of long-term debt	(17,190)	(8,290)
Long-term debt, net of current portion	<u>\$ 172,287</u>	<u>\$ 251,357</u>

Interest expense related to our long-term debt was included in Interest expense on our Consolidated Statements of Operations as follows:

<i>(In thousands)</i>	Three Months Ended		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
Contractual interest	\$ 2,989	\$ 4,762	\$ 7,305	\$ 9,290
Amortization of debt issuance costs and discount	528	551	1,215	1,058
Total interest expense related to long-term debt	<u>\$ 3,517</u>	<u>\$ 5,313</u>	<u>\$ 8,520</u>	<u>\$ 10,348</u>

Expected future principal payments are based on the schedule of required quarterly installments, adjusted for known voluntary payments. As of June 29, 2019, expected future principal payments on our long-term debt was as follows:

Fiscal year	<i>(in thousands)</i>
2019 (remaining 6 months)	33,750
2020	17,500
2021	17,500
2022	17,500
2023	17,500
2024	87,750
	<u>\$ 191,500</u>

Note 6 - Restructuring

In April 2019, our management approved and executed an internal restructuring plan (the "Q2 2019 Sales Plan") which focused on a restructuring of the global sales organization through cancellation of certain contracts and a workforce reduction. Under this plan, we incurred approximately \$2.4 million of restructuring expense during the second quarter of fiscal 2019. We believe this amount approximates the total costs under the plan, subject to adjustments that may occur as the plan is fully implemented. We believe that the Q2 2019 Sales Plan will be substantially completed by the end of fiscal 2019.

In June 2018, our Board of Directors approved an internal restructuring plan (the "June 2018 Plan"), which included the discontinuation of our millimeter wave business and the use of certain assets related to our Wireless products, and a workforce reduction. Under this plan, we incurred approximately \$4.1 million of restructuring expense during the second quarter and first six months of fiscal 2018. We believe this amount approximates the total costs under the plan and that this plan is substantially complete.

In June 2017, our Board of Directors approved an internal restructuring plan (the "June 2017 Plan"), which included the sale of 100% of the equity of our Hyderabad, India subsidiary and the transfer of certain assets related to our Simplay Labs testing and certification business, a worldwide workforce reduction, and an initiative to reduce our infrastructure costs, including reconfiguring our use of certain leased properties. Under this initiative approved by the Board in 2017, we vacated 100% of our facility in Portland, Oregon in the first quarter of fiscal 2019. In the second quarter of fiscal 2019, we entered into a sublease agreement for this facility under terms that differed from those used originally in estimating the Restructuring charges for ceasing use of this space. Under the terms of the sublease agreement, we have recorded an additional \$0.7 million of Restructuring charges from ceasing use of this space, which includes approximately \$0.2 million of impairment of the operating lease right-of-use asset for this property. Under the June 2017 Plan, we incurred approximately \$0.7 million and \$0.3 million of expense during the second quarter of fiscal 2019 and fiscal 2018, respectively, and approximately \$2.0 million and \$1.3 million of expense during the six months ended June 29, 2019 and June 30, 2018, respectively. We have incurred approximately \$18.4 million of total expense incurred through June 29, 2019 under the June 2017 Plan. We expect the total cost of the June 2017 Plan to be approximately \$21.5 million to \$23.0 million and that it will be substantially completed by the end of fiscal 2019.

These expenses were recorded to Restructuring charges on our Consolidated Statements of Operations. The restructuring accrual balance is presented in Accounts payable and accrued expenses (includes restructuring) and in Other long-term liabilities on our Consolidated Balance Sheets. The following table displays the activity related to our restructuring plans:

<i>(In thousands)</i>	Severance & Related (1)	Lease Termination & Fixed Assets	Software Contracts & Engineering Tools (2)	Other (3)	Total
Accrued Restructuring at December 30, 2017	\$ 1,192	\$ 870	\$ 360	\$ 25	\$ 2,447
Restructuring charges	3,964	440	913	88	5,405
Costs paid or otherwise settled	(1,443)	(593)	(968)	(70)	(3,074)
Accrued Restructuring at June 30, 2018	<u>\$ 3,713</u>	<u>\$ 717</u>	<u>\$ 305</u>	<u>\$ 43</u>	<u>\$ 4,778</u>
Accrued Restructuring at December 29, 2018	\$ 1,814	\$ 8,630	\$ 218	\$ 18	\$ 10,680
Restructuring charges	615	2,140	—	1,712	4,467
Costs paid or otherwise settled	(2,178)	(3,042)	(218)	(56)	(5,494)
Accrued Restructuring at June 29, 2019	<u>\$ 251</u>	<u>\$ 7,728</u>	<u>\$ —</u>	<u>\$ 1,674</u>	<u>\$ 9,653</u>

(1) Includes employee relocation costs and accelerated stock compensation

(2) Includes cancellation of contracts, asset impairments, and accelerated depreciation on certain enterprise resource planning and customer relationship management systems

(3) Beginning in the second quarter of fiscal 2019, "Other" activity includes termination fees on the cancellation of certain contracts under the Q2 2019 Sales Plan

Note 7 - Leases

We adopted ASC 842, "Leases," effective on December 30, 2018, the first day of our 2019 fiscal year, using the modified retrospective transition method. The new standard requires lessees to record assets and liabilities on the balance sheet for all leases with terms longer than 12 months. We elected the "package of practical expedients" that would allow us to carryforward our historical lease classifications, not reassess historical contracts to determine if they contain leases, and not reassess the initial direct costs for any existing leases. We also elected the practical expedient to not separate lease and non-lease components. Concurrent with our adoption of Topic 842, we have early adopted ASU 2019-01, *Leases (Topic 842): Codification Improvements*, which grants disclosure relief for interim periods during the year in which a company adopts Topic 842.

Right-of-use ("ROU") assets represent our right to use an underlying asset for the lease term, and lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized on the commencement date of the lease based on the present value of lease payments over the lease term. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available on the commencement date in determining the present value of lease payments. At inception, we determine if an arrangement is a lease, if it includes options to extend or terminate the lease, and if it is reasonably certain that we will exercise the options. Lease cost, representing lease payments over the term of the lease and any capitalizable direct costs less any incentives received, is recognized on a straight-line basis over the lease term as lease expense. We have operating leases for corporate offices, sales offices, research and development facilities, storage facilities, and a data center.

Our leases have remaining lease terms of 1 to 8 years, some of which include options to extend the leases for up to 5 years, and some of which include options to terminate the leases within 1 year. The exercise of lease renewal options is at our sole discretion. When deemed reasonably certain of exercise, the renewal options are included in the determination of the lease term and lease payment obligation, respectively. For our leases that contain variable lease payments, residual value guarantees, or restrictive covenants, we have concluded that these inputs are not significant to the determination of the ROU asset and lease liability. For our operating leases, the weighted-average remaining lease term is 6.5 years and the weighted-average discount rate is 7.0% as of June 29, 2019.

Our adoption of Topic 842 resulted in the non-cash recognition of additional net ROU assets and lease liabilities of approximately \$29.9 million and \$32.3 million, respectively, as of December 30, 2018. The difference between these amounts resulted from an adjustment to the deferred rent balance existing under the prior guidance. Adoption of this standard did not materially affect our consolidated net earnings.

All of our facilities are leased under operating leases, which expire at various times through 2027. We recorded fixed operating lease expenses of \$1.9 million and \$3.9 million for the second quarter and first six months of fiscal 2019, respectively.

The following table presents the lease balance classifications within the Consolidated Balance Sheets and summarizes their activity during the first six months of fiscal 2019:

Operating lease right-of-use assets	<i>(in thousands)</i>
Balance as of December 29, 2018	—
Right-of-use assets recorded from adoption of ASC 842	29,893
Right-of-use assets obtained in exchange for new lease obligations during the period	298
Amortization of right-of-use asset during the period	(2,907)
Impairment of right-of-use asset on Portland, Oregon office (recorded in Restructuring charges)	(977)
Adjustments for present value and foreign currency effects	(215)
Balance as of June 29, 2019	<u>26,092</u>

Operating lease liabilities	<i>(in thousands)</i>
Balance as of December 29, 2018	—
Lease liabilities recorded from adoption of ASC 842	32,273
Lease liabilities incurred for new lease obligations during the period	298
Accretion of lease liabilities	999
Operating cash used by payments on lease liabilities	(4,613)
Adjustments for present value, foreign currency, and restructuring liability effects	(361)
Balance as of June 29, 2019	<u>28,596</u>
Less: Current portion of operating lease liabilities	(4,804)
Long-term operating lease liabilities, net of current portion	<u>23,792</u>

Maturities of operating lease liabilities as of June 29, 2019 are as follows:

Fiscal year	<i>(in thousands)</i>
2019 (remaining 6 months)	\$ 2,963
2020	7,082
2021	5,300
2022	4,461
2023	4,589
Thereafter	11,408
Total lease payments	<u>35,803</u>
Less: amount representing interest	(7,048)
Less: amount representing restructuring liability adjustments	\$ (159)
Total lease liabilities	<u>\$ 28,596</u>

Prior to 2019, the reporting of future minimum lease commitments included the lease obligations associated with previously restructured facilities. After adoption of Topic 842 for the first quarter of 2019, the lease obligations for previously restructured facilities were \$7.7 million and continued to be recorded in Other long-term liabilities on our Consolidated Balance Sheets.

Note 8 - Intangible Assets

On our Consolidated Balance Sheets at June 29, 2019 and December 29, 2018, Intangible assets, net are shown net of accumulated amortization of \$120.6 million and \$114.5 million, respectively.

We recorded amortization expense related to intangible assets on the Consolidated Statements of Operations as presented in the following table:

	Three Months Ended		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
<i>(In thousands)</i>				
Research and development	\$ 13	\$ 123	\$ 27	\$ 250
Amortization of acquired intangible assets	3,390	4,523	6,779	10,159
	<u>\$ 3,403</u>	<u>\$ 4,646</u>	<u>\$ 6,806</u>	<u>\$ 10,409</u>

During the second quarter of fiscal 2018, in addition to recurring amortization expense, we recorded an impairment charge relating to intangible assets of \$11.9 million in the Consolidated Statements of Operations as a result of the strategic decision to discontinue our millimeter wave business.

Note 9 - Stock-Based Compensation

Total stock-based compensation expense included in our Consolidated Statements of Operations is presented in the following table:

	Three Months Ended		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
<i>(In thousands)</i>				
Cost of products sold	\$ 327	\$ 196	\$ 529	\$ 433
Research and development	1,246	837	2,371	2,044
Selling, general, and administrative	2,396	1,367	4,755	4,723
Total stock-based compensation	<u>\$ 3,969</u>	<u>\$ 2,400</u>	<u>\$ 7,655</u>	<u>\$ 7,200</u>

Market-Based and Performance-Based Stock Compensation

In fiscal years 2019 and 2018, we granted various awards of RSUs with either a market condition or a performance condition to certain executives. We have not modified the conditions for the vesting of these awards, or our policy for valuing them, from that disclosed in "Note 17 - Stock-Based Compensation Plans" in our 2018 10-K. For these awards, we incurred stock compensation expense of approximately \$1.1 million and \$0.2 million in the second quarter of fiscal 2019 and fiscal 2018, respectively, and of approximately \$2.0 million and \$0.5 million in the first six months of fiscal 2019 and fiscal 2018, respectively, which is recorded as a component of total stock-based compensation expense.

The following table summarizes the activity for our awards with a market or performance condition during the first six months of fiscal 2019:

<i>(Shares in thousands)</i>	Unvested	Vested	Total
Balance, December 29, 2018	909	—	909
Granted	265	—	265
Canceled	(106)	—	(106)
Balance, June 29, 2019	<u>1,068</u>	<u>—</u>	<u>1,068</u>

Note 10 - Income Taxes

We are subject to federal and state income tax as well as income tax in the foreign jurisdictions in which we operate. For the second quarter of fiscal 2019 and fiscal 2018, we recorded an income tax expense of approximately \$0.2 million and \$1.3 million, respectively, and for the first six months of fiscal 2019 and fiscal 2018, we recorded an income tax expense of approximately \$0.4 million and \$1.9 million, respectively. Income taxes for the three and six month periods ended June 29, 2019 and June 30, 2018 represent tax at the federal, state, and foreign statutory tax rates adjusted for withholding taxes, changes in uncertain tax positions, changes in the U.S. valuation allowance, as well as other non-deductible items in the United States and foreign jurisdictions. The difference between the U.S. federal statutory tax rate of 21% and our effective tax rate for the three and six months ended June 29, 2019 resulted from foreign income and withholding taxes offset with release of uncertain tax positions due to lapsing of the statute of limitations. For the three and six months ended June 30, 2018, the difference resulted from an increase in the valuation allowance that offset expected tax benefit in the United States, foreign rate differential and withholding taxes, zero tax rate in Bermuda which resulted in no tax benefit for the pretax loss in Bermuda, and discrete benefit from the release of uncertain tax positions.

Through June 29, 2019, we continued to evaluate the valuation allowance position in the United States and concluded that we should maintain a full valuation allowance against the net federal and state deferred tax assets. In making this evaluation, we exercised significant judgment and considered estimates about our ability to generate revenue and taxable profits sufficient to offset expenditures in future periods within the U.S. It is reasonably possible that during the next twelve months, we will establish a sustained level of profitability in the U.S. As a result, we may reverse a significant portion of the valuation allowance recorded against our U.S. deferred tax assets. The reversal would result in an income tax benefit for the quarterly and annual fiscal period in which we release the valuation allowance. We will continue to evaluate both positive and negative evidence in future periods to determine if we should recognize more deferred tax assets. We do not have a valuation allowance in any foreign jurisdictions as we have concluded it is more likely than not we will realize the net deferred tax assets in future periods.

At June 29, 2019, it is reasonably possible that \$1.5 million of unrecognized tax benefits and \$0.1 million of associated interest and penalties could be recognized during the next twelve months. The \$1.6 million potential change would represent a decrease in unrecognized tax benefits, comprised of items related to tax filings for years that will no longer be subject to examination under expiring statutes of limitations.

Our liability for uncertain tax positions (including penalties and interest) was \$25.9 million and \$26.3 million at June 29, 2019 and December 29, 2018, respectively, and is recorded as a component of Other long-term liabilities on our Consolidated Balance Sheets. The remainder of our uncertain tax position exposure of \$24.8 million is netted against deferred tax assets.

We are not currently paying U.S. federal income taxes and do not expect to pay such taxes until we fully utilize our tax net operating loss ("NOL") and credit carryforwards. We expect to pay a nominal amount of state income tax. We are paying foreign income and withholding taxes, which are reflected in Income tax expense in our Consolidated Statements of Operations and are primarily related to the cost of operating offshore activities and subsidiaries. We accrue interest and penalties related to uncertain tax positions in Income tax expense.

Note 11 - Contingencies

Legal Matters

On or about December 19, 2018, Steven A.W. De Jaray, Perienne De Jaray and Darrell R. Oswald (collectively, the "Plaintiffs") commenced an action against the Company and several unnamed defendants in the Multnomah County Circuit Court of the State of Oregon, in connection with the sale of certain products by the Company to the Plaintiffs in or around 2008. The Plaintiffs allege that we violated The Lanham Act, engaged in negligence and fraud by failing to disclose to the Plaintiffs the export-controlled status of the subject parts. The Plaintiffs seek damages of \$138 million, treble damages, and other remedies. In January 2019, we removed the action to the United States District Court for the District of Oregon. At this stage of the proceedings, we do not have an estimate of the likelihood or the amount of any potential exposure to the Company; however, we believe that these claims are without merit and intend to vigorously defend the action.

From time to time, we are exposed to certain asserted and unasserted potential claims. Periodically, we review the status of each significant matter and assess its potential financial exposure. If the potential loss from any claim or legal proceeding is considered probable and a range of possible losses can be estimated, we then accrue a liability for the estimated loss. Legal proceedings are subject to uncertainties, and the outcomes are difficult to predict. Because of such uncertainties, accruals are based only on the best information available at the time. As additional information becomes available, we reassess the potential liability related to pending claims and litigation and may revise estimates.

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

The following discussion should be read along with the unaudited consolidated financial statements and notes thereto included in Item 1 of this Quarterly Report on Form 10-Q, as well as the audited consolidated financial statements and notes thereto and Management's Discussion and Analysis of Financial Condition and Results of Operations in our 2018 10-K.

Overview

Lattice Semiconductor Corporation and its subsidiaries ("Lattice," the "Company," "we," "us," or "our") develop semiconductor technologies that we monetize through products, solutions, design services, and licenses.

Lattice is the low power programmable leader. We solve customer problems across the network, from the Edge to the Cloud, in the growing communications, computing, industrial, automotive, and consumer markets. Our technology, long-standing relationships, and commitment to world-class support enables our customers to create a smart, secure, and connected world.

Lattice has focused its strategy on programmable logic and is building differentiated products based on low power, small size, and ease of use. Our R&D team is optimizing to deliver products at a faster cadence, particularly system solutions for high-growth applications such as Edge Artificial Intelligence ("Edge AI"), 5G infrastructure, platform security, and factory automation. Our Sales team is using our position in top Original Equipment Manufacturers ("OEMs") to drive multi-generation design wins and leveraging distribution to grow our broad customer base.

Critical Accounting Policies and Use of Estimates

Critical accounting policies are those that are both most important to the portrayal of a company's financial condition and results, and that require management's most difficult, subjective, and complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain.

Other than our updated policies related to accounting for leases (more fully described in "[Note 7 - Leases](#)" of this report), management believes that there have been no significant changes to the items that we disclosed as our critical accounting policies and estimates in Management's Discussion and Analysis of Financial Condition and Results of Operations in our 2018 10-K.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and judgments affecting the amounts reported in our consolidated condensed financial statements and the accompanying notes. The actual results that we experience may differ materially from our estimates.

Results of Operations

Key elements of our Consolidated Statements of Operations, including as a percentage of revenue, are presented in the following table:

(In thousands)	Three Months Ended				Six Months Ended			
	June 29, 2019		June 30, 2018		June 29, 2019		June 30, 2018	
Revenue	\$ 102,296	100.0%	\$ 102,715	100.0%	\$ 200,387	100.0%	\$ 201,338	100.0%
Gross margin	60,038	58.7	50,248	48.9	117,690	58.7	106,769	53.0
Research and development	19,377	18.9	21,081	20.5	39,042	19.5	44,022	21.9
Selling, general and, administrative	19,759	19.3	21,068	20.5	40,540	20.2	48,111	23.9
Amortization of acquired intangible assets	3,390	3.3	4,523	4.4	6,779	3.4	10,159	5.0
Restructuring charges	3,126	3.1	4,376	4.3	4,467	2.2	5,405	2.7
Acquisition related charges	—	—	864	0.8	—	—	1,531	0.8
Impairment of intangible assets	—	—	11,900	11.6	—	—	11,900	5.9
Income (loss) from operations	<u>\$ 14,386</u>	<u>14.1%</u>	<u>\$ (13,564)</u>	<u>(13.2)%</u>	<u>\$ 26,862</u>	<u>13.4%</u>	<u>\$ (14,359)</u>	<u>(7.1)%</u>

Revenue by End Market

We sell our products globally in three primary groups of end markets: Communications and Computing, Industrial and Automotive, and Consumer. We also provide Intellectual Property licensing and services to these end markets.

We anticipate future revenue growth due to multiple market segment drivers, including:

- Communications and computing: 5G infrastructure deployments, cloud and enterprise servers, and client computing platforms,
- Industrial and automotive: industrial Internet of Things ("IoT"), factory automation, and automotive electronics,
- Consumer: smart home and prosumer.

Our Licensing and Services end market includes revenue from the licensing of our Intellectual Property ("IP"), the collection of certain royalties, patent sales, the revenue related to our participation in consortia and standard-setting activities, and services. While Licensing may be associated with multiple markets, Licensing and services revenue is reported as a separate end market as it has characteristics that differ from other categories, most notably its higher gross margin.

The end market data below is derived from data provided to us by our distributors and end customers. With a diverse base of customers who may manufacture end products spanning multiple end markets, the assignment of revenue to a specific end market requires the use of estimates and judgment. Therefore, actual results may differ from those reported. We recognize certain revenue for which end customers and end markets are not yet known. We assign this revenue first to a specific end market using historical and anticipated usage of the specific products, if possible, and allocate proportionally to the end markets if we cannot identify a specific end market.

The following are examples of end market applications for the periods presented:

<u>Communications and Computing</u>	<u>Industrial and Automotive</u>	<u>Consumer</u>	<u>Licensing and Services</u>
Wireless	Security and Surveillance	Cameras	IP Royalties
Wireline	Machine Vision	Displays	Adopter Fees
Data Backhaul	Industrial Automation	Wearables	IP Licenses
Server Computing	Robotics	Televisions	Patent Sales
Client Computing	Automotive	Home Theater	
Data Center Computing	Drones		
Data Storage			

The composition of our revenue by end market is presented in the following table:

(In thousands)	Three Months Ended				Six Months Ended			
	June 29, 2019		June 30, 2018		June 29, 2019		June 30, 2018	
Communications and Computing	\$ 39,876	39%	\$ 29,514	29%	\$ 75,429	38%	\$ 57,653	29%
Industrial and Automotive	38,861	38	44,480	43	75,174	38	84,744	42
Consumer	19,359	19	24,300	24	39,105	19	51,006	25
Licensing and Services	4,200	4	4,421	4	10,679	5	7,935	4
Total revenue	\$ 102,296	100%	\$ 102,715	100%	\$ 200,387	100%	\$ 201,338	100%

Revenue from the Communications and Computing end market increased by 35% for the second quarter of fiscal 2019 compared to the second quarter of fiscal 2018 and increased by 31% for the first six months of fiscal 2019 compared to the first six months of fiscal 2018 primarily due to demand increases for server and client computing products, as well as for products used in 5G wireless infrastructure.

Revenue from the Industrial and Automotive end market decreased by 13% for the second quarter of fiscal 2019 compared to the second quarter of fiscal 2018 and decreased by 11% for the first six months of fiscal 2019 compared to the first six months of fiscal 2018 due to broad market decreases in the Industrial end market.

Revenue from the Consumer end market decreased by 20% for the second quarter of fiscal 2019 compared to the second quarter of fiscal 2018 and decreased by 23% for the first six months of fiscal 2019 compared to the first six months of fiscal 2018 primarily due to decreased demand for mobile phone related products.

Revenue from the Licensing and Services end market is subject to variability between periods in the amount of royalties that we are entitled to receive. Licensing and services revenue decreased by 5% for the second quarter of fiscal 2019 compared to the second quarter of fiscal 2018 and increased by 35% for the first six months of fiscal 2019 compared to the first six months of fiscal 2018 due primarily to variability in HDMI royalty revenue.

We share HDMI royalties with the other HDMI Founders based on an allocation formula, which is reviewed periodically, generally every three years. However, a new agreement covering the period beginning January 1, 2018 is yet to be signed. While a new royalty sharing agreement is being negotiated with the other Founders of the HDMI consortium for fiscal years 2019 and 2018, we are estimating our share of royalty revenues under an anticipated new agreement.

Revenue by Geography

We assign revenue to geographies based on ship-to location of the end customer, where available, and based upon the location of the distributor to which the product was shipped otherwise.

The composition of our revenue by geography is presented in the following table:

(In thousands)	Three Months Ended				Six Months Ended			
	June 29, 2019		June 30, 2018		June 29, 2019		June 30, 2018	
Asia	\$ 76,845	75%	\$ 77,899	76%	\$ 145,856	73%	\$ 149,820	74%
Europe	12,585	12	12,162	12	24,795	12	24,304	12
Americas	12,866	13	12,654	12	29,736	15	27,214	14
Total revenue	\$ 102,296	100%	\$ 102,715	100%	\$ 200,387	100%	\$ 201,338	100%

Revenue from End Customers

In the periods covered by this report, no end customer accounted for more than 10% of total revenue, and we expect to continue to sell our products to a broad base of end customers.

Revenue from Distributors

Distributors have historically accounted for a significant portion of our total revenue. Revenue attributable to our primary distributors is presented in the following table:

	% of Total Revenue		% of Total Revenue	
	Three Months Ended		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
Arrow Electronics Inc.	29%	35%	26%	33%
Weikeng Group	30	25	29	26
All others	26	26	27	28
All distributors	85%	86%	82%	87%

Revenue attributable to distributors was essentially flat for the second quarter of fiscal 2019 compared to the second quarter of fiscal 2018, while revenue attributable to distributors decreased in the first six months of fiscal 2019 compared to the first six months of fiscal 2018 as the increased revenue recognized in fiscal 2018 on inventory held by distributors from the adoption of ASC 606, *Revenue from Contracts with Customers*, did not recur in fiscal 2019.

Gross Margin

The composition of our Gross margin, including as a percentage of revenue, is presented in the following table:

(In thousands)	Three Months Ended		Six Months Ended	
	June 29, 2019	June 30, 2018	June 29, 2019	June 30, 2018
Gross margin	\$ 60,038	\$ 50,248	\$ 117,690	\$ 106,769
Percentage of net revenue	58.7%	48.9%	58.7%	53.0%
Product gross margin %	56.9%	46.9%	56.4%	51.2%
Licensing and services gross margin %	100.0%	94.1%	100.0%	96.7%

For the second quarter and first six months of fiscal 2019 compared to the second quarter and first six months of fiscal 2018, Gross margin as a percentage of net revenue increased by 980 and 570 basis points, respectively.

A majority of this increase for both the quarterly and six-month periods resulted from non-recurrence in the current year of the \$8.3 million in specific inventory reserves taken in the second quarter of fiscal 2018 on products eliminated as a result of the discontinuation of our millimeter wave business. Gross margin also increased due to lower reserves in the current year periods resulting from lower inventory levels. Product gross margin improved as a result of cost reductions initiated in fiscal 2018 and realized in the first six months of fiscal 2019, and from pricing optimization programs, partially offset by less favorable product mix.

Additionally, Gross margin was favorably impacted by the relative mix between product revenue and licensing and services revenue. Licensing and services accounted for over 5% of total revenue in the first half of 2019 compared to less than 4% in the first half of 2018. Because of its higher margin, the licensing and services portion of our overall revenue can have a disproportionate impact on Gross margin and profitability.

We anticipate that Gross margin will improve as we drive multiple expansion strategies including pricing optimization, product cost improvements, and mix shift.

Operating Expenses

Research and Development Expense

The composition of our Research and development expense, including as a percentage of revenue, is presented in the following table:

(In thousands)	Three Months Ended			Six Months Ended		
	June 29, 2019	June 30, 2018	% change	June 29, 2019	June 30, 2018	% change
Research and development	\$ 19,377	\$ 21,081	(8)	\$ 39,042	\$ 44,022	(11)
Percentage of revenue	18.9%	20.5%		19.5%	21.9%	

Research and development expense includes costs for compensation and benefits, stock compensation, engineering wafers, depreciation, licenses, and outside engineering services. These expenditures are for the design of new products, IP cores, processes, packaging, and software to support new products.

We incur costs for the fabrication of masks used by our foundry partners to manufacture our products. Beginning the first quarter of fiscal 2019, we started to capitalize mask costs that we expect will be utilized in production manufacturing as our product development process has become more predictable and thus supports capitalization of the mask. The capitalized mask costs begin depreciating to Cost of product revenue once the products go into production. Depreciation is straight-lined over a three-year period, which is the expected useful life of the mask.

The decrease in Research and development expense for the second quarter and first six months of fiscal 2019 compared to the second quarter and first six months of fiscal 2018 was due mainly to the cost reductions realized from the discontinuation of our millimeter wave business and other restructuring actions including the consolidation of leased facilities. These savings were predominantly from headcount related expenses, including lower stock compensation expense, and from reductions in both depreciation and rent expense. Research and development expense also decreased for the comparative six-month periods as a result of our capitalization of mask costs in the current year.

We believe that a continued commitment to Research and development is essential to maintaining product leadership and providing innovative new product offerings and, therefore, we expect to continue to make significant future investments in Research and development. We anticipate that these expenses will be relatively flat as a percentage of revenue, but will increase in absolute dollars as revenue rises. Additionally, we expect to continue improving our Research and development expense efficiency through continued portfolio optimization and expanded investment in software and solutions.

Selling, General, and Administrative Expense

The composition of our Selling, general, and administrative expense, including as a percentage of revenue, is presented in the following table:

(In thousands)	Three Months Ended			Six Months Ended		
	June 29, 2019	June 30, 2018	% change	June 29, 2019	June 30, 2018	% change
Selling, general, and administrative	\$ 19,759	\$ 21,068	(6)	\$ 40,540	\$ 48,111	(16)
Percentage of revenue	19.3%	20.5%		20.2%	23.9%	

Selling, general, and administrative expense includes costs for compensation and benefits related to selling, general, and administrative employees, commissions, depreciation, professional and outside services, trade show, and travel expenses.

The decrease in Selling, general, and administrative expense for the second quarter of fiscal 2019 compared to the second quarter of fiscal 2018 is driven by the non-recurrence of one-time charges for sales events, as well as additional savings in the current year period resulting from previous restructuring actions. The decrease in Selling, general, and administrative expense for the first six months of fiscal 2019 compared to the first six months of fiscal 2018 is due mainly to the non-recurrence of certain one-time costs from our CEO retirement and transition in the prior year, including accelerated stock compensation, severance expense, and CEO search fees. Additional savings in the current year period resulted from previous restructuring actions, and from lower commissions and legal expenses.

Over time, we seek to reduce our Selling, general, and administrative expenses as a percentage of revenue through site consolidation, IT and infrastructure efficiency gains, greater leverage from low cost geographies, and operational leverage as revenue grows.

Amortization of Acquired Intangible Assets

The composition of our Amortization of acquired intangible assets, including as a percentage of revenue, is presented in the following table:

(In thousands)	Three Months Ended			Six Months Ended		
	June 29, 2019	June 30, 2018	% change	June 29, 2019	June 30, 2018	% change
Amortization of acquired intangible assets	\$ 3,390	\$ 4,523	(25)	\$ 6,779	\$ 10,159	(33)
Percentage of revenue	3.3%	4.4%		3.4%	5.0%	

The decrease in Amortization of acquired intangible assets for the second quarter and first six months of fiscal 2019 compared to the second quarter and first six months of fiscal 2018 is due to the end of the amortization period for certain intangibles and to the reduction of certain intangibles as a result of impairment charges in previous periods. We expect our quarterly Amortization of acquired intangible assets to remain at approximately the current amount through the first quarter of fiscal 2020, when the amortization period for most intangibles will end, reducing the quarterly expense by approximately 80%.

Restructuring Charges

The composition of our Restructuring charges, including as a percentage of revenue, is presented in the following table:

(In thousands)	Three Months Ended			Six Months Ended		
	June 29, 2019	June 30, 2018	% change	June 29, 2019	June 30, 2018	% change
Restructuring charges	\$ 3,126	\$ 4,376	(29)	\$ 4,467	\$ 5,405	(17)
Percentage of revenue	3.1%	4.3%		2.2%	2.7%	

Restructuring charges are comprised of expenses resulting from reductions in our worldwide workforce, consolidation of our facilities, removal of fixed assets from service, and cancellation of software contracts and engineering tools. Details of our restructuring plans and expenses incurred under them are more fully discussed in ["Note 6 - Restructuring"](#) of this report.

The decrease in restructuring expense in the second quarter and first six months of fiscal 2019 compared to the second quarter and first six months of fiscal 2018 was driven primarily by the higher headcount-related restructuring charges in the prior year periods, as compared to lower charges in the current period from the cease use of leased facilities and from termination fees on the cancellation of certain contracts.

Acquisition Related Charges

The composition of our Acquisition related charges, including as a percentage of revenue, is presented in the following table:

(In thousands)	Three Months Ended			Six Months Ended		
	June 29, 2019	June 30, 2018	% change	June 29, 2019	June 30, 2018	% change
Acquisition related charges	\$ —	\$ 864	(100)	\$ —	\$ 1,531	(100)
Percentage of revenue	—%	0.8%		—%	0.8%	

Acquisition related charges include legal and professional fees directly related to acquisitions.

For the second quarter and first six months of fiscal 2018, Acquisition related charges were entirely attributable to legal fees and outside services in connection with our proposed acquisition by Canyon Bridge Acquisition Company, Inc. Although the acquisition was terminated, we continued to incur certain residual legal charges directly related to this transaction. We do not expect any future costs related to this matter.

Impairment of Acquired Intangible Assets

The composition of our Impairment of acquired intangible assets, including as a percentage of revenue, is presented in the following table:

(In thousands)	Three Months Ended			Six Months Ended		
	June 29, 2019	June 30, 2018	% change	June 29, 2019	June 30, 2018	% change
Impairment of acquired intangible assets	\$ —	\$ 11,900	(100)	\$ —	\$ 11,900	(100)
Percentage of revenue	—%	11.6%		—%	5.9%	

In the second quarter of 2018, we made the strategic decision to discontinue our millimeter wave business, which included certain wireless technology intangible assets. We determined that this action constituted an impairment indicator related to certain of the developed technology intangible assets acquired in our acquisition of Silicon Image. Our assessment of the fair value of these intangible assets concluded that they had been fully impaired as of June 30, 2018, and we recorded an impairment charge of \$11.9 million in the Consolidated Statements of Operations. We do not believe that any future impairments of acquired intangible assets will be material.

Interest expense

Interest expense, including as a percentage of revenue, is presented in the following table:

(In thousands)	Three Months Ended			Six Months Ended		
	June 29, 2019	June 30, 2018	% change	June 29, 2019	June 30, 2018	% change
Interest expense	\$ (3,538)	\$ (4,968)	(29)	\$ (8,525)	\$ (10,082)	(15)
Percentage of revenue	(3.5)%	(4.8)%		(4.3)%	(5.0)%	

Interest expense is primarily related to our long-term debt, which is further discussed under the Credit Arrangements heading in the Liquidity and Capital Resources section, below. This interest expense is comprised of contractual interest and amortization of original issue discount and debt issuance costs based on the effective interest method.

The decrease in Interest expense for the second quarter and first six months of fiscal 2019 compared to the second quarter and first six months of fiscal 2018 was largely driven by the reduction in the principal balance of our long-term debt as a result of the additional principal payments made in the current and previous periods, coupled with the significant reduction in the effective interest rate on our long-term debt under the terms of the new Credit Agreement.

Other (expense) income, net

The composition of our Other (expense) income, net, including as a percentage of revenue, is presented in the following table:

(In thousands)	Three Months Ended			Six Months Ended		
	June 29, 2019	June 30, 2018	% change	June 29, 2019	June 30, 2018	% change
Other (expense) income, net	\$ (2,109)	\$ (348)	506	\$ (1,956)	\$ 206	(1,050)
Percentage of revenue	(2.1)%	(0.3)%		(1.0)%	0.1%	

For the second quarter and first six months of fiscal 2019 compared to the second quarter and first six months of fiscal 2018 the increased expense in Other (expense) income, net is driven primarily by the \$2.2 million loss on re-financing charge taken to write off the remaining unamortized balance of debt costs and original issue discount related to the long-term debt re-financed during the period.

Income Taxes

The composition of our Income tax expense is presented in the following table:

(In thousands)	Three Months Ended			Six Months Ended		
	June 29, 2019	June 30, 2018	% change	June 29, 2019	June 30, 2018	% change
Income tax expense	\$ 180	\$ 1,343	(87)	\$ 414	\$ 1,940	(79)

Our Income tax expense for the second quarters and first six months of fiscal 2019 and fiscal 2018 is composed primarily of foreign income and withholding taxes, partially offset by benefits resulting from the release of uncertain tax positions due to statute of limitation expirations that occurred in the respective periods. The decrease in expense in the second quarter and first six months of fiscal 2019 as compared to the second quarter and first six months of fiscal 2018 is primarily due to decreased foreign withholding taxes related to HDMI royalty distributions received in the current year periods.

We are not currently paying U.S. federal income taxes and do not expect to pay such taxes until we fully utilize our tax net operating loss and credit carryforwards. We expect to pay a nominal amount of state income tax. We are paying foreign income taxes, which are primarily related to withholding taxes on income from foreign royalties, foreign sales, and the cost of operating offshore research and development, marketing, and sales subsidiaries. It is reasonably possible that during the next twelve months, we will establish a sustained level of profitability in the U.S. As a result, we may reverse a significant portion of the valuation allowance recorded against our U.S. deferred tax assets. The reversal would result in an income tax benefit for the quarterly and annual fiscal period in which we release the valuation allowance. We accrue interest and penalties related to uncertain tax positions in income tax expense on our Consolidated Statements of Operations. The inherent uncertainties related to the geographical distribution and relative level of profitability among various high and low tax jurisdictions make it difficult to estimate the impact of the global tax structure on our future effective tax rate. Bermuda enacted the Economic Substance Act of 2018, effective January 2019, with a six-month transition period. We are currently analyzing this legislation in concert with the 2017 US tax reform in order to align our global tax structure more efficiently in the future.

The Tax Cuts and Jobs Act, enacted December 22, 2017, contains provisions that affect Lattice. The limitation on net interest expense may limit current deductibility of some of the interest on our debt, although this deduction may be carried forward for utilization in future years. Global Intangible Low-Taxed Income ("GILTI") results in additional U.S. taxable income due to non-U.S. sourced income. To the extent we are required to recognize additional taxable income under these provisions, we have approximately \$365 million in net operating loss carry forwards as of December 29, 2018 available for offset. Adoption of the territorial system concept will facilitate our ability to repatriate future foreign earnings without incurring additional U.S. tax. Base Erosion Anti-Abuse Tax ("BEAT") effectively requires U.S. companies with related non-U.S. persons to pay a minimum amount of U.S. tax and does not currently apply to us as we are below the \$500 million revenue threshold.

Liquidity and Capital Resources

The following sections discuss material changes in our financial condition from the end of fiscal 2018, including the effects of changes in our Consolidated Balance Sheets, and the effects of our credit arrangements and contractual obligations on our liquidity and capital resources.

We have historically financed our operating and capital resource requirements through cash flows from operations, and from the issuance of long-term debt to fund acquisitions. Cash provided by or used in operating activities will fluctuate from period to period due to fluctuations in operating results, the timing and collection of accounts receivable, and required inventory levels, among other things.

We believe that our financial resources will be sufficient to meet our working capital needs through at least the next 12 months. As of June 29, 2019, we did not have significant long-term commitments for capital expenditures. In the future, we may continue to consider acquisition opportunities to further extend our product or technology portfolios and further expand our product offerings. In connection with funding capital expenditures, completing acquisitions, securing additional wafer supply, or increasing our working capital, we may seek to obtain equity or additional debt financing, or advance purchase payments or similar arrangements with wafer manufacturers. We may also seek to obtain equity or additional debt financing if we experience downturns or cyclical fluctuations in our business that are more severe or longer than we anticipated when determining our current working capital needs. On May 17, 2019, we entered into a new Credit Agreement that is more fully discussed under the "Credit Arrangements" heading, below.

Cash, cash equivalents, and short-term marketable securities

<i>(In thousands)</i>	June 29, 2019	December 29, 2018	\$ Change
Cash and cash equivalents	\$ 122,636	\$ 119,051	\$ 3,585
Short-term marketable securities	—	9,624	(9,624)
Total Cash and cash equivalents and Short-term marketable securities	\$ 122,636	\$ 128,675	\$ (6,039)

As of June 29, 2019, we had total Cash, cash equivalents, and short-term marketable securities of \$122.6 million, of which approximately \$86.7 million in Cash and cash equivalents was held by our foreign subsidiaries. During the first quarter of fiscal 2019, we liquidated our Short-term marketable securities. We manage our global cash requirements considering, among other things, (i) available funds among our subsidiaries through which we conduct business, (ii) the geographic location of our liquidity needs, and (iii) the cost to access international cash balances. The repatriation of non-US earnings may require us to withhold and pay foreign income tax on dividends. This should not result in our recording significant additional tax expense as we have accrued expense based on current withholding rates. As of June 29, 2019, we could access all cash held by our foreign subsidiaries without incurring significant additional expense.

The net decrease in Cash, cash equivalents, and short-term marketable securities of \$6.0 million between December 29, 2018 and June 29, 2019 was primarily driven by cash flows from the following activities:

Operating activities — Cash provided by operating activities results from net income adjusted for certain non-cash items and changes in assets and liabilities. Cash provided by operating activities for the first six months of fiscal 2019 was \$66.5 million, an increase of \$56.9 million from the \$9.6 million of cash provided by operating activities for the first six months of fiscal 2018. This increase was driven by both improved operating performance, which contributed \$31.1 million of the increase, and by changes in working capital, which contributed \$25.8 million of the increase, primarily due to increased cash receipts associated with the timing of payments from customers. We are using this increased cash provided by operating activities to invest in our operations and to reduce our long-term debt.

Investing activities — Cash used by investing activities results from transactions related to short-term marketable securities, capital expenditures and payments for software licenses. The \$2.4 million of cash used by investing activities in the first six months of fiscal 2019 was \$12.8 million less than the \$15.2 million used by investing activities in the first six months of fiscal 2018 primarily due to \$16.8 million less cash used by short-term marketable securities offset by \$4.0 million more cash used for capital expenditures and software licenses. In the first six months of fiscal 2018, we made \$7.1 million in net purchases of short-term marketable securities, whereas we liquidated these investments in 2019 for \$9.7 million. The total \$12.1 million of cash used in the first six months of fiscal 2019 for capital expenditures and payments for software licenses was \$4.0 million greater than the \$8.1 million used in the first six months of fiscal 2018 due primarily to increased investments in test equipment and software enhancements.

Financing activities — Financing cash flows consist primarily of payments on and refinancing of our long term debt, proceeds from the exercise of options to acquire common stock, and tax payments related to the net share settlement of restricted stock units. In the first six months of fiscal 2019, we made principal payments totaling \$58.6 million on our previous loan. In May 2019, we entered into a new Credit Agreement and received \$206.5 million, which we used to pay off the \$204.4 million outstanding balance on our previous Credit Agreement. In connection with the new Credit Agreement, we paid \$2.1 million in debt issuance costs. Following the closing of our new Credit Agreement, we made a total of \$15.0 million in principal payments on our long-term debt, for a total of \$73.6 million in principal payments on our long-term debt in the first six months of fiscal 2019. With the increase in our stock price since the beginning of fiscal 2019, activity in our employee stock compensation plans has increased. Net cash flows of \$13.0 million were provided in the first six months of fiscal 2019 in relation to employee activity in our stock compensation plans, which is an increase of approximately \$8.0 million from the \$5.0 million provided in the first six months of fiscal 2018.

Accounts receivable, net

<i>(In thousands)</i>	June 29, 2019	December 29, 2018	Change
Accounts receivable, net	\$ 37,893	\$ 60,890	\$ (22,997)
Days sales outstanding - Overall	34	58	(24)

Accounts receivable, net as of June 29, 2019 decreased by approximately \$23.0 million, or 38%, compared to December 29, 2018. This decrease resulted primarily from improved timing of collections from major distributors, which also decreased the overall Days sales outstanding to 34 days at June 29, 2019 from 58 days at December 29, 2018.

Inventories

<i>(In thousands)</i>	June 29, 2019	December 29, 2018	Change
Inventories	\$ 64,964	\$ 67,096	\$ (2,132)
Days of inventory on hand	140	147	(7)

Inventories as of June 29, 2019 decreased \$2.1 million, or approximately 3%, compared to December 29, 2018 primarily due to a decline related to the ramp down of mature and aging products.

The Days of inventory on hand ratio compares the inventory balance at the end of a quarter to the cost of sales in that quarter. Our Days of inventory on hand decreased to 140 days at June 29, 2019 from 147 days at December 29, 2018. This decrease resulted from an increase in the cost of sales between the periods and a reduction of inventory levels.

Credit Arrangements

On May 17, 2019, we entered into our new Credit Agreement with Wells Fargo Bank, National Association, as administrative agent, and other lenders. The details of this new arrangement are more fully described in "[Note 5 - Long-Term Debt](#)" in the accompanying Notes to Consolidated Financial Statements.

As of June 29, 2019, we had no significant long-term purchase commitments for capital expenditures or existing used or unused credit arrangements beyond the secured revolving loan facility described above.

Contractual Cash Obligations

There have been no material changes to our contractual cash obligations outside of the ordinary course of business in the first six months of fiscal 2019, as summarized in Management's Discussion and Analysis of Financial Condition and Results of Operations in the Company's Annual Report on Form 10-K for the year ended December 29, 2018.

Off-Balance Sheet Arrangements

As of June 29, 2019, we did not have any off-balance sheet arrangements of the type described by Item 303(a)(4) of SEC Regulation S-K.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily a result of fluctuations in foreign currency exchange rates and interest rates. We assess these risks on a regular basis and have established policies that are designed to protect against the adverse effects of these and other potential exposures.

Foreign Currency Exchange Rate Risk

There have been no material changes to the foreign currency exchange rate risk previously disclosed in Part II, Item 7A, "Quantitative and Qualitative Disclosures About Market Risk," of our Annual Report on Form 10-K for the fiscal year ended December 29, 2018.

Interest Rate Risk

We are exposed to interest rate risk related to our indebtedness. At June 29, 2019, we had \$191.5 million outstanding under our Credit Agreement. A hypothetical increase in the one-month LIBOR by 1% (100 basis points) would increase our future interest expense by approximately \$0.5 million per quarter.

ITEM 4. CONTROLS AND PROCEDURES

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

In connection with the filing of this Form 10-Q, our management, including our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) as of the end of the period covered by this report. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls were effective as of the end of the period covered by this report.

Changes in Internal Control over Financial Reporting

There were no changes in our internal controls over financial reporting (as defined in Rules 13a - 15(f) and 15(d) - 15(f) under the Exchange Act) that occurred during the second quarter of fiscal 2019 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

The information set forth above under "Note 11 - Contingencies - Legal Matters" contained in the Notes to Consolidated Financial Statements is incorporated herein by reference.

ITEM 1A. Risk Factors

The risk factors associated with our business were previously described in Part I, Item 1A, "Risk Factors," in our Annual Report on Form 10-K for the fiscal year ended December 29, 2018. If any of these risks occur, our business, financial condition, operating results, and cash flows could be materially adversely affected. These risk factors are not the only risks facing our company. Additional risks and uncertainties not presently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition, and operating results. These factors, together with all of the other information in this Quarterly Report on Form 10-Q, including our unaudited condensed consolidated financial statements and related notes included elsewhere in this Quarterly Report on Form 10-Q, should be carefully considered before making an investment decision relating to our common stock.

ITEM 6. EXHIBITS

Exhibit Number	Description
10.1	Credit Agreement by and among Lattice Semiconductor Corporation, as borrower, the lenders from time to time party thereto and Wells Fargo Bank, National Association, as administrative agent. (Incorporated by reference to Exhibit 10.1 filed with the Company's Current Report on Form 8-K filed May 20, 2019).
10.2	Lattice Semiconductor Corporation 2013 Incentive Plan. (Incorporated by reference to Exhibit 99.1 filed with the Company's Registration Statement on Form S-8 filed June 25, 2019).
10.3	Lattice Semiconductor Corporation 2011 Non-Employee Director Equity Incentive Plan. (Incorporated by reference to Exhibit 99.2 filed with the Company's Registration Statement on Form S-8 filed June 25, 2019).
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended.
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended.
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
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 Labels Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

SIGNATURES

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

LATTICE SEMICONDUCTOR CORPORATION

(Registrant)

/s/ Sherri Luther

Sherri Luther

Chief Financial Officer

(Duly Authorized Officer and Principal Financial and Accounting Officer)

Date: August 2, 2019

CERTIFICATION

I, James Anderson, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Lattice Semiconductor Corporation;
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(s) 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(s) 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 2, 2019

/s/ James Anderson

James Anderson

Chief Executive Officer

CERTIFICATION

I, Sherri Luther, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Lattice Semiconductor Corporation;
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(s) 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(s) 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 2, 2019

/s/ Sherri Luther

Sherri Luther

Chief Financial Officer

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

In connection with the Quarterly Report of Lattice Semiconductor Corporation (the Company) on Form 10-Q for the quarter ended June 29, 2019 (the Report), I, James Anderson, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

A signed original of this written statement has been provided to the Company and will be retained by the Company and furnished to the SEC or its staff upon request.

/s/ James Anderson

James Anderson

Chief Executive Officer

Date: August 2, 2019

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

In connection with the Quarterly Report of Lattice Semiconductor Corporation (the Company) on Form 10-Q for the quarter ended June 29, 2019 (the Report), I, Sherri Luther, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

A signed original of this written statement has been provided to the Company and will be retained by the Company and furnished to the SEC or its staff upon request.

/s/ Sherri Luther

Sherri Luther

Chief Financial Officer

Date: August 2, 2019