LATTICE SEMICONDUCTOR CORP
Form 10-Q
August 10, 2017

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q
(Mark One)

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

FOR THE QUARTERLY PERIOD ENDED JULY 1, 2017
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	93-0835214
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
111 SW Fifth Ave, Ste 700, Portland, OR	97204
(Address of principal executive offices)	(Zip Code)

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period as the registrant was required to submit and post such files). Yes [X] No [ ]

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting 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 [X]
Non-accelerated filer [ ] (Do not check if a smaller reporting company)	
	Smaller reporting company [ ]
	Emerging growth company [ ]

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

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

Number of shares of common stock outstanding as of August 7, 2017	122,971,647

Table of Contents

LATTICE SEMICONDUCTOR CORPORATION
QUARTERLY REPORT ON FORM 10-Q
TABLE OF CONTENTS

Table of Contents

Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These 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 “anticipates,” “believes,” “could,” “estimates,” “expects,” “intends,” “plans,” “predicts,” “projects,” “ “should,” “continue,” “ongoing,” “future,” “potential,” and similar words or phrases to identify forward-looking statements.

Examples of forward-looking statements include, but are not limited to, statements about: our transitions to newly adopted accounting standards; our strategies and beliefs regarding the markets we serve or may serve; growth opportunities and growth in markets we may serve; the advantages our products provide to our customers, including advanced features in an increasingly intense global technology market; our future product development and marketing plans; our intention to continually introduce new products and enhancements and reduce manufacturing costs; the anticipation that we will become increasingly dependent on revenue from newer products; our expectation of production volumes and the associated revenue stream for certain mobile handset providers; acceptance of our devices; our continued participation in consortia that develop and promote the High-Definition Multimedia Interface ("HDMI"), Mobile High-Definition Link ("MHL") and WirelessHD specifications, and our participation in other standard setting initiatives; the effect of termination of our agent functions regarding the HDMI consortium, related reduction in adopter fees, impairment charges and any other changes in the agreements relating to various intellectual property or standards consortia and their sharing of past or present fees or royalties; the likelihood of bankruptcy of certain distributors; our making significant future investments in research and development at approximately the percentage of revenue realized in the second quarter of fiscal 2017; the costs of making and developing various products; our expectation that we will continue to transition to increasingly smaller geometry process technologies and the difficulties in transitioning; our need and ability to maintain or develop successful foundry relationships to produce new products; the adequacy of assembly and test capacity commitments; the impact of products, customers and downward pressure on pricing and effects on gross margin; the expected cost and timing of our internal restructuring plans; our expectations regarding protection of and defenses to claims against our intellectual property; our defenses to claims and the finalization and settlement of litigation or administrative proceedings; the impact of our global tax structure and expectations regarding taxes and tax adjustments; our conclusion that we should maintain a valuation allowance against certain tax assets; our belief that we may recognize certain tax benefits during the next twelve months; our ability to forecast uncertain tax positions; our ability to forecast future sales and the relative product mix of those revenues; our expectation that we may consider acquisition opportunities to further extend our product or technology portfolios and further expand our product offerings; the impact of our adoption of new accounting pronouncements on our financial statements; our beliefs regarding the adequacy of our liquidity and facilities, our ability to meet our operating and capital requirements and obligations, and the sufficiency of our financial resources to meet our working capital needs through at least the next 12 months; our ability to implement a company-wide enterprise resource planning system; and any expectation that the closing conditions to the proposed acquisition of the outstanding shares of the Company by Canyon Bridge Acquisition Company, Inc. will be satisfied.

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 included global economic conditions and uncertainty, the concentration of our sales in the Mobile and Consumer and Communications and Computing end markets, particularly as it relates to the concentration of our sales in the Asia Pacific region, market acceptance and demand for our new products, our ability to license our intellectual property, any disruption of our distribution channels, the impact of competitive products and pricing, unexpected charges, delays or results relating to our restructuring plans, unexpected changes to our implementation of a company-wide enterprise resource planning system, the effect of the downturn in the economy on capital markets and credit markets, unanticipated taxation requirements or positions of the U.S. Internal Revenue Service, or unexpected impacts of recent accounting guidance. In addition, actual results are subject to other risks and uncertainties that relate more broadly to our overall business, including those more fully described herein and 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 “Risk Factors” in Item 1A of Part II of this Quarterly Report on Form 10-Q.

You should not unduly rely on forward-looking statements because our actual results could differ materially from those expressed in any forward-looking statements made by us. In addition, any forward-looking statement applies only as of the date on which it is made. We do not plan to, and undertake no obligation to, update any forward-looking statements to reflect events or circumstances that occur after the date on which such statements are made or to reflect the occurrence of unanticipated events.

Table of Contents

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited)

(In thousands, except per share data)	Three Months Ended July 1, 2017	Three Months Ended July 2, 2016	Six Months Ended July 1, 2017	Six Months Ended July 2, 2016
Revenue:				
Product	$83,168	$89,335	$175,837	$177,558
Licensing and services	10,969	9,874	22,887	18,163
Total revenue	94,137	99,209	198,724	195,721
Costs and expenses:				
Cost of product revenue	40,749	40,710	82,363	79,717
Cost of licensing and services revenue	2,179	73	4,320	474
Research and development	26,820	30,915	54,209	63,523
Selling, general, and administrative	21,938	23,005	45,843	46,613
Amortization of acquired intangible assets	8,737	8,311	17,251	17,032
Restructuring charges	1,576	2,568	1,642	7,999
Acquisition related charges	867	—	2,527	94
Total costs and expenses	102,866	105,582	208,155	215,452
Loss from operations	(8,729)	(6,373)	(9,431)	(19,731)
Interest expense	(4,656)	(5,062)	(10,224)	(10,022)
Other income, net	564	2,532	416	3,349
Loss before income taxes and equity in net loss of an unconsolidated affiliate	(12,821)	(8,903)	(19,239)	(26,404)
Income tax expense	47	4,539	565	6,439
Equity in net loss of an unconsolidated affiliate, net of tax	(154)	(368)	(493)	(678)
Net loss	$(13,022)	$(13,810)	$(20,297)	$(33,521)
Net loss per share, basic and diluted	$(0.11)	$(0.12)	$(0.17)	$(0.28)
Shares used in per share calculations, basic and diluted	122,390	119,445	122,095	119,125

See Accompanying Notes to Unaudited Consolidated Financial Statements.

Table of Contents

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(unaudited)

(In thousands)	Three Months Ended July 1, 2017	Three Months Ended July 2, 2016	Six Months Ended July 1, 2017	Six Months Ended July 2, 2016
Net loss	$(13,022)	$(13,810)	$(20,297)	$(33,521)
Other comprehensive loss:				
Unrealized (loss) gain related to marketable securities, net of tax	(28)	1	(71)	(27)
Reclassification adjustment for losses related to marketable securities included in other income, net of tax	30	36	200	38
Translation adjustment, net of tax	676	(678)	950	(441)
Change in actuarial valuation of defined benefit pension	(47)	141	(47)	141
Comprehensive loss	$(12,391)	$(14,310)	$(19,265)	$(33,810)

See Accompanying Notes to Unaudited Consolidated Financial Statements.

Table of Contents

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED BALANCE SHEETS
(unaudited)

(In thousands, except share and par value data)	July 1, 2017	December 31, 2016
ASSETS		
Current assets:		
Cash and cash equivalents	$74,416	$ 106,552
Short-term marketable securities	10,470	10,308
Accounts receivable, net of allowance for doubtful accounts	86,791	99,637
Inventories	78,479	79,168
Prepaid expenses and other current assets	18,421	19,035
Total current assets	268,577	314,700
Property and equipment, less accumulated depreciation of $131,858 at July 1, 2017 and $134,786 at December 31, 2016	49,356	49,481
Intangible assets, net of amortization	97,817	118,863
Goodwill	269,758	269,758
Deferred income taxes	379	372
Other long-term assets	11,394	13,709
Total assets	$697,281	$ 766,883
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued expenses (includes restructuring)	$67,945	$ 80,933
Accrued payroll obligations	7,971	9,865
Current portion of long-term debt	15,318	33,767
Deferred income and allowances on sales to sell-through distributors	24,915	32,257
Deferred licensing and services revenue	398	728
Total current liabilities	116,547	157,550
Long-term debt	286,979	300,855
Other long-term liabilities	34,990	38,048
Total liabilities	438,516	496,453
Contingencies (Note 15)	—	—
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; 122,730,000 shares issued and outstanding as of July 1, 2017 and 121,645,000 shares issued and outstanding as of December 31, 2016	1,227	1,216
Additional paid-in capital	688,259	680,315
Accumulated deficit	(427,597)	(406,945)
Accumulated other comprehensive loss	(3,124)	(4,156)
Total stockholders' equity	258,765	270,430
Total liabilities and stockholders' equity	$697,281	$ 766,883

See Accompanying Notes to Unaudited Consolidated Financial Statements.

Table of Contents

LATTICE SEMICONDUCTOR CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)

(In thousands)	Six Months Ended July 1, 2017	Six Months Ended July 2, 2016
Cash flows from operating activities:		
Net loss	$(20,297)	$(33,521)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation and amortization	30,497	32,352
Amortization of debt issuance costs and discount	1,354	659
Loss on sale or maturity of marketable securities	200	72
Gain on forward contracts	(26)	(4)
Stock-based compensation expense	6,772	7,798
(Gain) Loss on disposal of fixed assets	(61)	314
Gain on sale of business unit	(300)	(2,646)
Equity in net loss of an unconsolidated affiliate, net of tax	493	678
Changes in assets and liabilities:		
Accounts receivable, net	12,846	3,524
Inventories	689	(10,847)
Prepaid expenses and other assets	2,822	18
Accounts payable and accrued expenses (includes restructuring)	(13,554)	23,901
Accrued payroll obligations	(1,894)	574
Income taxes payable	(355)	(253)
Deferred income and allowances on sales to sell-through distributors	(7,342)	10,155
Deferred licensing and services revenue	(330)	(117)
Net cash provided by operating activities	11,514	32,657
Cash flows from investing activities:		
Proceeds from sales of and maturities of short-term marketable securities	7,200	11,960
Purchases of marketable securities	(7,420)	(2,944)
Capital expenditures	(7,035)	(10,102)
Proceeds from sale of business unit, net of cash sold	300	1,972
Cash paid for a non-marketable equity method investment	(1,000)	—
Cash paid for software licenses	(4,149)	(5,672)
Net cash used in investing activities	(12,104)	(4,786)
Cash flows from financing activities:		
Restricted stock unit withholdings	(1,748)	(1,427)
Proceeds from issuance of common stock	2,931	3,326
Repayment of debt	(33,679)	(3,404)
Net cash used in financing activities	(32,496)	(1,505)
Effect of exchange rate change on cash	950	(441)
Net (decrease) increase in cash and cash equivalents	(32,136)	25,925
Beginning cash and cash equivalents	106,552	84,606
Ending cash and cash equivalents	$74,416	$110,531
Supplemental cash flow information:		
Change in unrealized loss related to marketable securities, net of tax, included in Accumulated other comprehensive loss	$71	$27

Income taxes paid, net of refunds	$976	$4,864
Interest paid	$12,094	$9,264
Accrued purchases of plant and equipment	$2,216	$1,585

See Accompanying Notes to Unaudited Consolidated Financial Statements.

Table of Contents

LATTICE SEMICONDUCTOR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 1 - Basis of Presentation and Significant Accounting Policies

The accompanying Consolidated Financial Statements are unaudited and have been prepared by Lattice Semiconductor Corporation (“Lattice,” the “Company,” “we,” “us,” or “our”) pursuant to the rules and regulations of the Securities and Exchange Commission (“SEC”) and in our opinion include all adjustments, consisting only of normal recurring adjustments, necessary for the fair statement of results for the interim periods. Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP") have been condensed or omitted pursuant to such rules and regulations. 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 fiscal year ended December 31, 2016.

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 2017 and second quarter of fiscal 2016 ended on July 1, 2017 and July 2, 2016, 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.

Principles of Consolidation and Presentation

The accompanying Consolidated Financial Statements include the accounts of Lattice and its subsidiaries after the elimination of all intercompany balances and transactions.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts and classification of assets, such as marketable securities, accounts receivable, inventory, goodwill (including the assessment of reporting units), intangible assets, current and deferred income taxes, accrued liabilities (including restructuring charges and bonus arrangements), deferred income and allowances on sales to sell-through distributors, disclosure of contingent assets and liabilities at the date of the financial statements, amounts used in acquisition valuations and purchase accounting, and the reported amounts of product revenue, licensing and services revenue, and expenses during the fiscal periods presented. Actual results could differ from those estimates.

Cash Equivalents and Marketable Securities

We consider all investments that are readily convertible into cash and have original maturities of three months or less to be cash equivalents. Cash equivalents consist primarily of highly liquid investments in time deposits or money market accounts and are carried at cost. We account for marketable securities as available-for-sale investments, as defined by U.S. GAAP, and record unrealized gains or losses to Accumulated other comprehensive loss on our Consolidated Balance Sheets, unless losses are considered other than temporary, in which case, those are recorded directly to the Consolidated Statements of Operations and Statements of Comprehensive Loss. Deposits with financial institutions at times exceed Federal Deposit Insurance Corporation insurance limits.

Fair Value of Financial Instruments

We invest in various financial instruments, which may include corporate and government bonds, notes, and commercial paper. We value these instruments at their fair value and monitor our portfolio for impairment on a periodic basis. In the event that the carrying value of an investment exceeds its fair value and the decline in value is determined to be other than temporary, we would record an impairment charge and establish a new carrying value. We assess other than temporary impairment of marketable securities in accordance with Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) 820, “Fair Value Measurements and Disclosures.” The framework under the provisions of ASC 820 establishes three levels of inputs that may be used to measure fair value. Each level of input has different levels of subjectivity and difficulty involved in determining fair value.

Level 1 instruments generally represent quoted prices for identical assets or liabilities in active markets. Therefore, determining fair value for Level 1 instruments generally does not require significant management judgment, and the estimation is not difficult. Our Level 1 instruments consist of U.S. Government agency obligations, corporate notes and bonds, and commercial paper that are traded in active markets and are classified as Short-term marketable securities on our Consolidated Balance Sheets.

Table of Contents

Level 2 instruments include inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices for identical instruments in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. Our Level 2 instruments consist of certificates of deposit and foreign currency exchange contracts, entered into to hedge against fluctuation in the Japanese yen.

Level 3 instruments include unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. As a result, the determination of fair value for Level 3 instruments requires significant management judgment and subjectivity. We did not have any Level 3 instruments during the periods presented.

Foreign Exchange and Translation of Foreign Currencies

While our revenues and the majority of our expenses are denominated in U.S. dollars, we have international subsidiary and branch operations that conduct some transactions in foreign currencies, and we collect an annual Japanese consumption tax refund in yen. Gains or losses from foreign exchange rate fluctuations on balances denominated in foreign currencies are reflected in Other income, net. Realized and unrealized gains or losses on foreign currency transactions were not significant for the periods presented. We translate accounts denominated in foreign currencies in accordance with ASC 830, “Foreign Currency Matters,” using the current rate method under which asset and liability accounts are translated at the current rate, while stockholders' equity accounts are translated at the appropriate historical rates, and revenue and expense accounts are translated at average monthly exchange rates. Translation adjustments related to the consolidation of foreign subsidiary financial statements are reflected in Accumulated other comprehensive loss in Stockholders' equity.

Derivative Financial Instruments

We mitigate foreign currency exchange rate risk by entering into foreign currency forward exchange contracts, details of which are presented in the following table:

	July 1, 2017	December 31, 2016
Total cost of contracts for Japanese yen (thousands)	$1,005	$ 2,323
Number of contracts	1	2
Settlement month	June 2018	June 2017

Although these hedges mitigate our foreign currency exchange rate exposure from an economic perspective, they were not designated as "effective" hedges for accounting purposes and as such are adjusted to fair value through Other income, net, with gains of less than $0.1 million and approximately $0.2 million, respectively, for the fiscal quarters ended July 1, 2017 and December 31, 2016. We do not hold or issue derivative financial instruments for trading or speculative purposes.

Concentration Risk

Potential exposure to concentration risk may impact revenue, trade receivables, marketable securities, and supply of wafers for our products.

Customer concentration risk may impact revenue. The percentage of total revenue attributable to our top five end customers and largest end customer is presented in the following table:

	Three Months Ended		Six Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Revenue attributable to top five end customers	27%	20 %	32%	22 %
Revenue attributable to largest end customer	9 %	7 %	10%	6 %

No other end customer accounted for more than 10% of total revenue during these periods.

Sales through distributors have historically accounted for a significant portion of our total revenue. Revenue attributable to resale of products by sell-through distributors as a percentage of total revenue is presented in the following table:

	Three Months Ended		Six Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Revenue attributable to sell-through distributors	66%	59 %	63%	56 %

Table of Contents

Our two largest distributor groups also account for a substantial portion of our trade receivables. At July 1, 2017 and December 31, 2016, one distributor group accounted for 37% and 38%, respectively, and the other accounted for 30% and 24%, respectively, of gross trade receivables. No other distributor group or end customer accounted for more than 10% of gross trade receivables at these dates.

Concentration of credit risk with respect to trade receivables is mitigated by our credit and collection process, including active management of collections, credit limits, routine credit evaluations for essentially all customers, and secure transactions with letters of credit or advance payments where appropriate. We regularly review our allowance for doubtful accounts and the aging of our accounts receivable.

Accounts receivable do not bear interest and are shown net of allowances for doubtful accounts of $9.3 million at both July 1, 2017 and December 31, 2016. During the third quarter of fiscal 2016, we received notice from one of our distributor groups that indicated a high likelihood of their bankruptcy. As a result, we recorded a full allowance on our accounts receivable, net of deferred revenue, from that distributor group, which accounts for $9.0 million of the allowance for doubtful accounts. Bad debt expense was negligible for the second quarter and first six months of both fiscal 2017 and fiscal 2016.

We place our investments primarily through one financial institution and mitigate the concentration of credit risk by limiting the maximum portion of the investment portfolio which may be invested in any one instrument. Our investment policy defines approved credit ratings for investment securities. Investments on-hand in marketable securities consisted primarily of money market instruments, “AA” or better corporate notes and bonds and commercial paper, and U.S. government agency obligations. See Note 3 for a discussion of the liquidity attributes of our marketable securities.

We rely on a limited number of foundries for our wafer purchases, including Fujitsu Limited, Seiko Epson Corporation, Taiwan Semiconductor Manufacturing Company, Ltd, and United Microelectronics Corporation. We seek to mitigate the concentration of supply risk by establishing, maintaining and managing multiple foundry relationships; however, certain of our products are sourced from a single foundry and changing from one foundry to another can have a significant cost.

Revenue Recognition and Deferred Income

Product Revenue

We sell our products directly to end customers, through a network of independent manufacturers' representatives, and indirectly through a network of independent sell-in and sell-through distributors. Distributors provide periodic data regarding the product, price, quantity, and end customer when products are resold, as well as the quantities of our products they still have in stock.

Revenue from sales to original equipment manufacturers ("OEMs") and sell-in distributors is generally recognized upon shipment. Reserves for sell-in stock rotations, where applicable, are estimated based primarily on historical experience and provided for at the time of shipment. Revenue from sales by our sell-through distributors is recognized at the time of reported resale. Under both types of revenue recognition, persuasive evidence of an arrangement exists, the price is fixed or determinable, title has transferred, collection of resulting receivables is reasonably assured, and there are no remaining customer acceptance requirements and no remaining significant performance obligations.

Orders from our sell-through distributors are initially recorded at published list prices; however, for a majority of our sales, the final selling price is determined at the time of resale and in accordance with a distributor price agreement. For this reason, we do not recognize revenue until products are resold by sell-through distributors to an end customer.

In certain circumstances, we allow sell-through distributors to return unsold products. At times, we protect our sell-through distributors against reductions in published list prices.

At the time of shipment to sell-through distributors, we (a) record accounts receivable at published list price since there is a legally enforceable obligation from the distributor to pay us currently for product delivered, (b) relieve inventory for the carrying value of goods shipped since legal title has passed to the distributor, and (c) record deferred revenue and deferred cost of sales in deferred income and allowances on sales to sell-through distributors in the liability section of our Consolidated Balance Sheets. Revenue and cost of sales to sell-through distributors are deferred until either the product is resold by the distributor or, in certain cases, return privileges terminate, at which time Revenue and Cost of products sold are reflected in Net loss, and Accounts receivable, net is adjusted to reflect the final selling price.

The components of Deferred income and allowances on sales to sell-through distributors are presented in the following table:

(In thousands)	July 1, 2017	December 31, 2016
Inventory valued at published list prices and held by sell-through distributors with right of return	$81,837	$ 86,218
Allowance for distributor advances	(45,130)	(37,090)
Deferred cost of sales related to inventory held by sell-through distributors	(11,792)	(16,871)
Total Deferred income and allowances on sales to sell-through distributors	$24,915	$ 32,257

Table of Contents

Licensing and Services Revenue

Our licensing and services revenue is comprised of revenue from our intellectual property ("IP") core licensing activity, patent monetization activities, and royalty and adopter fee revenue from our standards activities. These activities are complementary to our product sales and help us monetize our IP and accelerate market adoption curves associated with our technology and standards.

From time to time we enter into patent sale and licensing agreements to monetize and license a broad portfolio of our patented inventions. Such licensing agreements may include upfront license fees and ongoing royalties. The contractual terms of the agreements generally provide for payments of upfront license fees and/or royalties over an extended period of time. Revenue from such license fees is recognized when payments become due and payable as long as all other revenue recognition criteria are met, while revenue from royalties is recognized when reported to us by customers.

We enter into IP licensing agreements that generally provide licensees the right to incorporate our IP components into their products pursuant to terms and conditions that vary by licensee. Revenue earned under these agreements is classified as licensing and services revenue. Our IP licensing agreements generally include multiple elements, which may include one or more off-the-shelf or customized IP licenses bundled with support services covering a fixed period of time, generally one year. If the different elements of a multiple-element arrangement qualify as separate units of accounting, we allocate the total arrangement consideration to each element based on relative selling price.

Amounts allocated to off-the-shelf IP licenses are recognized at the time of sale provided the other conditions for revenue recognition have been met. Amounts allocated to the support services are deferred and recognized on a straight-line basis over the support period, generally one year. Certain licensing agreements provide for royalty payments based on agreed-upon royalty rates, which may be fixed or variable depending on the terms of the agreement. The amount of revenue we recognize is based on a specified time period or on the agreed-upon royalty rate multiplied by the reported number of units shipped by the customer.

From time to time, we enter into IP licensing agreements that involve significant modification, customization or engineering services. Revenues derived from these contracts are accounted for using the percentage-of-completion method or completed contract method. The completed contract method is used for contracts where there is a risk associated with final acceptance by the customer or for short-term contracts.

HDMI royalty revenue is determined by a contractual allocation formula agreed to by the Founders of the HDMI consortium. Evidence of an arrangement, as it relates to HDMI royalty revenue, is deemed complete when all of the Founders agree on the royalty sharing formula. The contractual allocation formula is subject to periodic adjustment, generally every three years. The most recent agreement expired on December 31, 2016 and a new agreement has not yet been entered into covering the period beginning January 1, 2017. As a result, the HDMI agent is unable to distribute the majority of the royalties collected to the Founders and, given the lack of evidence of an arrangement, we are unable to recognize all of the HDMI royalty revenue for the three and six months ended July 1, 2017.

We acted as the agent of the HDMI consortium until December 31, 2016. From time to time, as the agent, we performed audits on royalty reporting customers to ensure compliance. As a result of those compliance efforts, we entered into settlement agreements for the payment of unreported royalties. The contractual terms of those agreements provided for upfront payment of unreported royalties or payment over a period of time, generally not to exceed one year. Revenue from those arrangements was recognized when the agreement was executed by both parties, as long as price was fixed and determinable and collection was reasonably assured.

Property and Equipment

Property and equipment are stated at cost. Depreciation and amortization are computed using the straight-line method for financial reporting purposes over the estimated useful lives of the related assets, generally three to five years for equipment and software, one to three years for tooling, and thirty years for buildings and building space. Leasehold improvements are amortized over the shorter of the non-cancelable lease term or the estimated useful life of the assets. Upon disposal of property and equipment, the accounts are relieved of the costs and related accumulated depreciation and amortization, and resulting gains or losses are reflected in the Consolidated Statements of Operations for recognized gains and losses or in the Consolidated Balance Sheets for deferred gains and losses. Repair and maintenance costs are expensed as incurred.

Table of Contents

New Accounting Pronouncements

Recently Adopted Accounting Standards

In October 2016, the FASB issued ASU 2016-16, Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory. This update is intended to recognize the income tax consequences of intra-entity transfers of assets other than inventory when they occur by removing the exception to postpone recognition until the asset has been sold to an outside party. For public business entities, this guidance is effective for interim and annual periods beginning after December 15, 2017. Early adoption is permitted, and it is required to be applied on a modified retrospective basis through a cumulative-effect adjustment to the balance sheet as of the beginning of the fiscal year of adoption. We early adopted this accounting standard in the first quarter of fiscal 2017 and recorded a nominal amount to accumulated deficit based on the guidance, as detailed in Note 10.

Recently Issued Accounting Standards

In May 2014, the FASB issued Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. In August 2015, the FASB issued ASU 2015-14 deferring the effective date of ASU 2014-09 to periods beginning on or after December 15, 2017, with early adoption permitted for annual reporting periods beginning after December 15, 2016, and interim periods within that year. We intend to adopt ASU 2014-09 on December 31, 2017 which is the first day of our fiscal 2018. The new standard allows for two transition methods - (i) a full retrospective method applied to each prior reporting period presented, or (ii) a modified retrospective method applied with the cumulative effect of adoption recognized on December 31, 2017, the first day of our fiscal 2018. We currently anticipate adopting this guidance using the modified retrospective transition method, which would result in an adjustment to accumulated deficit for the cumulative effect of applying this guidance to contracts in process as of the adoption date. Under this approach, we would not restate the prior financial statements presented. This guidance requires us to provide additional disclosures of the amount by which each financial statement line item is affected in the current reporting period during 2018 as compared to the guidance that was in effect before the change, and an explanation of the reasons for significant changes.

We have been executing against a project plan developed early in 2017 and believe that we are on schedule to be substantially complete with our implementation efforts by the first quarter of fiscal 2018. Key ongoing elements of our project plan include the quantification of the impacts of the standard to revenues, contract acquisition costs, income taxes and various balance sheet accounts, and the design and implementation of relevant internal controls. Based on our current assessment, we believe the most significant impact of the new standard will be to accelerate the timing of revenue recognition on product shipments to our sell-through distributors. Assuming all other revenue recognition criteria have been met, the new guidance would require us to recognize revenue and costs relating to such sales upon shipment to the distributor - subject to reductions for estimated reserves for price adjustments and returns - rather than upon the ultimate sale by the distributor to its end customer, as is our current practice. Revenue to our sell-through distributors accounted for 75% and 71% of our product revenue and 66% and 63% of our total revenue for the three and six months ended July 1, 2017, respectively, as compared to approximately 66% of product revenue and approximately 60% of total revenue during the year ended December 31, 2016.

In January 2016, the FASB issued ASU No. 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities, to mainly change the accounting for investments in equity securities and financial liabilities carried at fair value as well as to modify the presentation and disclosure requirements for financial instruments. The ASU is effective for interim and annual periods beginning after December 15, 2017, with early adoption permitted. Adoption of the ASU is retrospective with a cumulative adjustment to retained earnings or accumulated deficit as of the adoption date. We are currently evaluating the impact of ASU 2016-01 on our consolidated financial statements and related disclosures.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842), which requires that substantially all leases, including current operating leases, be recognized by lessees on their balance sheet as a right-of-use asset and corresponding lease liability. For public business entities, the standard is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early application is permitted for all entities. We are currently evaluating the impact of ASU 2016-02 on our consolidated financial statements and related disclosures.

In August 2016, the FASB issued ASU 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments. The new guidance is intended to reduce diversity in practice in how cash receipts and cash payments are classified in the statement of cash flows. For public business entities, this guidance will be effective for interim and annual periods beginning after December 15, 2017. Early adoption is permitted. We are currently evaluating the impact of ASU 2016-15 on our consolidated financial statements and related disclosures.

Table of Contents

In January 2017, the FASB issued ASU No. 2017-01, Clarifying the Definition of a Business, which narrows the existing definition of a business and provides a framework for evaluating whether a transaction should be accounted for as an acquisition (or disposal) of assets or a business. This update requires an entity to evaluate if substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or a group of similar identifiable assets; if so, the set of transferred assets and activities (collectively, the set) is not a business. To be considered a business, the set would need to include an input and a substantive process that together significantly contribute to the ability to create outputs. The standard also narrows the definition of outputs. The definition of a business affects areas of accounting such as acquisitions, disposals and goodwill. Under the new guidance, fewer acquired sets are expected to be considered businesses. For public business entities, this guidance is effective for interim and annual periods beginning after December 15, 2017. We are currently evaluating the impact of ASU 2017-01 on our consolidated financial statements and related disclosures.

In January 2017, the FASB issued ASU 2017-04, Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment, which simplifies the subsequent measurement of goodwill by eliminating step two from the goodwill impairment test. Under the new guidance, an entity will recognize an impairment charge for the amount by which the carrying value exceeds the fair value. This standard is effective for annual or any interim goodwill impairment tests in fiscal years beginning after December 15, 2019. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017 and requires a prospective transition method. We are currently evaluating the impact of ASU 2017-04 on our consolidated financial statements and related disclosures.

In May 2017, the FASB issued ASU 2017-09, Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting, which provides clarity on which changes to the terms or conditions of share-based payment awards require entities to apply the modification accounting provisions required in Topic 718. This standard is effective for all entities for annual reporting periods beginning after December 15, 2017, with early adoption permitted, including adoption in any interim period for which financial statements have not yet been issued. We are currently evaluating the impact of ASU 2017-09 on our consolidated financial statements and related disclosures.

Note 2 - Net Loss per Share

We compute basic net loss per share by dividing net loss by the weighted average number of common shares outstanding during the period. To determine diluted share count, we apply the treasury stock method to determine the dilutive effect of outstanding stock option shares, restricted stock units ("RSUs"), and Employee Stock Purchase Plan ("ESPP") shares. Our application of the treasury stock method includes, as assumed proceeds, the average unamortized stock-based compensation expense for the period and the impact of the pro forma deferred tax benefit or cost associated with stock-based compensation expense. When we are in a net loss position, we do not include dilutive securities as their inclusion would reduce the net loss per share.

A summary of basic and diluted net loss per share is presented in the following table:

	Three Months Ended		Six Months Ended	
(in thousands, except per share data)	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Basic and diluted net loss	$(13,022)	$(13,810)	$(20,297)	$(33,521)
Shares used in basic and diluted net loss per share	122,390	119,445	122,095	119,125
Basic and diluted net loss per share	$(0.11)	$(0.12)	$(0.17)	$(0.28)

The computation of diluted net loss per share excludes the effects of stock options, RSUs, and ESPP shares that are antidilutive, aggregating approximately the following number of shares:

(in thousands)	Three Months Ended		Six Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Stock options, RSUs, and ESPP shares excluded as they are antidilutive	6,000	7,579	5,946	7,781

Stock options, RSUs, and ESPP shares are considered antidilutive when the aggregate of exercise price and unrecognized stock-based compensation expense are greater than the average market price for our common stock during the period or when the Company is in a net loss position, as the effects would reduce the loss per share. Stock options, RSUs, and ESPP shares that are antidilutive at July 1, 2017 could become dilutive in the future.

Table of Contents

Note 3 - Marketable Securities

We classify our marketable securities as short-term based on their nature and availability for use in current operations. Our short-term marketable securities currently have contractual maturities of up to two years. The following table summarizes the remaining maturities of our marketable securities at fair value:

(In thousands)	July 1, 2017	December 31, 2016
Short-term marketable securities:		
Maturing within one year	$7,989	$ 10,308
Maturing between one and two years	2,481	—
Total marketable securities	$10,470	$ 10,308

The following table summarizes the composition of our marketable securities at fair value:

(In thousands)	July 1, 2017	December 31, 2016
Short-term marketable securities:		
Corporate and government bonds and notes, and commercial paper	$10,382	$ 10,230
Certificates of deposit	88	78
Total marketable securities	$10,470	$ 10,308

Note 4 - Fair Value of Financial Instruments

	Fair value measurements as of July 1, 2017				Fair value measurements as of December 31, 2016			
(In thousands)	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
Short-term marketable securities	$10,470	$10,382	$88	$ —	$10,308	$10,230	$78	$ —
Foreign currency forward exchange contracts, net	26	—	26	—	184	—	184	—
Total fair value of financial instruments	$10,496	$10,382	$114	$ —	$10,492	$10,230	$262	$ —

We invest in various financial instruments that may include corporate and government bonds and notes, commercial paper, and certificates of deposit. In addition, we enter into foreign currency forward exchange contracts to mitigate our foreign currency exchange rate exposure. We carry these instruments at their fair value in accordance with ASC 820, "Fair Value Measurements and Disclosures." The framework under the provisions of ASC 820 establishes three levels of inputs that may be used to measure fair value. Each level of input has different levels of subjectivity and difficulty involved in determining fair value, as summarized in Note 1. There were no transfers between any of the levels during the first six months of fiscal 2017 or 2016.

In accordance with ASC 320, “Investments-Debt and Equity Securities,” we recorded an unrealized loss of less than $0.1 million during each of the six months ended July 1, 2017 and July 2, 2016 on certain short-term marketable securities (Level 1 instruments), which have been recorded in accumulated other comprehensive loss. Future fluctuations in fair value related to these instruments that we deem to be temporary, including any recoveries of previous write-downs, would be recorded to accumulated other comprehensive loss. If we were to determine in the future that any further decline in fair value is other-than-temporary, we would record an impairment charge, which could have a material adverse effect on our operating results. If we were to liquidate our position in these securities, it is likely that the amount of any future realized gain or loss would be different from the unrealized gain or loss reported in accumulated other comprehensive loss.

Note 5 - Inventories

(In thousands)	July 1, 2017	December 31, 2016
Work in progress	$52,790	$ 50,688
Finished goods	25,689	28,480
Total inventories	$78,479	$ 79,168

Table of Contents

Note 6 - Goodwill

Goodwill represents the excess of the purchase price over the fair value of the underlying net tangible and intangible assets. Goodwill is not amortized, but is instead tested for impairment annually or more frequently if certain indicators of impairment are present. We do not expect goodwill impairment to be tax deductible for income tax purposes. No impairment charges relating to goodwill were recorded for the first six months of fiscal 2017 or fiscal 2016 as no indicators of impairment were present.

In the first quarter of 2016, we finalized our valuation and allocation of purchase price consideration related to the acquisition of Silicon Image, Inc. ("Silicon Image") resulting in $2.1 million of additional long-term liabilities related to an uncertain tax position with an equivalent revision to Goodwill, which is reflected in the Consolidated Balance Sheets for the period ended December 31, 2016.

The goodwill balance of approximately $269.8 million at both July 1, 2017 and December 31, 2016 is comprised of approximately $44.8 million from prior acquisitions combined with the approximately $237.6 million from the acquisition of Silicon Image, reduced by the fiscal 2015 goodwill impairment charge of approximately $12.7 million.

Note 7 - Intangible Assets

In connection with our acquisitions of Silicon Image in March 2015 and SiliconBlue in December 2011 we recorded identifiable intangible assets related to developed technology, customer relationships, licensed technology, patents, and in-process research and development based on guidance for determining fair value under the provisions of ASC 820, "Fair Value Measurements and Disclosures." Additionally, during fiscal 2015, we licensed additional third-party technology.

On our Consolidated Balance Sheets, intangible assets are shown net of accumulated amortization of $93.8 million and $78.5 million at July 1, 2017 and December 31, 2016, respectively.

During the first quarter of fiscal 2017, we sold a portfolio of patents that had been acquired from Silicon Image. As a result of this transaction, intangible assets, net of amortization was reduced by approximately $3.5 million on our Consolidated Balance Sheets.

We monitor the carrying value of our intangible assets for potential impairment and test the recoverability of such assets annually during the fourth quarter and whenever events or changes in circumstances indicate that their carrying amounts may not be recoverable. No impairment charges related to intangible assets were recorded for the first six months of either fiscal 2017 or fiscal 2016 as no indicators of impairment were present.

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	
(In thousands)	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Research and development	$141	$187	$314	$373
Amortization of acquired intangible assets	8,737	8,311	17,251	17,032
	$8,878	$8,498	$17,565	$17,405

Note 8 - Equity Method Investment

During fiscal 2015, we purchased a series of preferred stock ownership interests in a privately-held company that designs human-computer interaction technology for total consideration of $5.0 million. This gross investment constituted a 22.7% ownership interest. As a result of the ownership interest and after considering the level of our participation in the management of and interaction with the investee, we determined that we have the ability to exert significant influence over the investee. Accordingly, we have accounted for the investment by the equity method and have recognized our proportionate share of the investee's operating results in the Consolidated Statements of Operations.

In the third quarter of fiscal 2016, we made an additional investment of $1.0 million via a convertible debt instrument, bringing our gross investment in the investee to $6.0 million. We have determined that this additional investment is an in-substance common stock and has been included in our equity method accounting.

In the second quarter of fiscal 2017, we advanced the investee $1.0 million through a short-term instrument. As this investment is due and payable in the fourth quarter of fiscal 2017, it is included in prepaid expenses and other current assets in our Consolidated Balance Sheet.

Table of Contents

Applying the equity method, the proportionate share of the investee's net loss that we have recognized in the Consolidated Statements of Operations is presented in the following table:

(In thousands)	Three Months Ended		Six Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Equity in net loss of an unconsolidated affiliate, net of tax	$(154)	$(368)	$(493)	$(678)

Through July 1, 2017, we have reduced the value of our investment by approximately $2.4 million, representing our cumulative proportionate share of the privately-held company's net loss accumulated to that date. The net balance of our investment included in other long-term assets in the Consolidated Balance Sheets is detailed in the following table:

(In thousands)	Total
Balance at December 31, 2016	$4,049
Equity in net loss of an unconsolidated affiliate, net of tax	(493)
Balance at July 1, 2017	$3,556

Note 9 - Accounts Payable and Accrued Expenses

Included in accounts payable and accrued expenses are the following balances:

(In thousands)	July 1, 2017	December 31, 2016
Trade accounts payable	$39,591	$ 37,800
Liability for non-cancelable contracts	5,073	5,744
Payable to members of the MHL and HDMI consortia*	115	9,698
Other accrued expenses	23,166	27,691
Total accounts payable and accrued expenses	$67,945	$ 80,933

* As an agent of the MHL consortium, we administer royalty reporting and distributions to the members of this consortium.
This excludes amounts payable to us, and is payable quarterly based on collections from MHL customers. Our role as the
agent of the HDMI consortium terminated on January 1, 2017 and, therefore, the balance as of July 1, 2017 is due to MHL
consortium members only.

Note 10 - Changes in Stockholders' Equity and Accumulated Other Comprehensive Loss

(In thousands)	Common stock	Additional Paid-in capital	Accumulated deficit	Accumulated other comprehensive loss	Total
Balances, December 31, 2016	$ 1,216	$680,315	$(406,945)	$ (4,156)	$270,430
Net loss for the six months ended July 1, 2017	—	—	(20,297)	—	(20,297)
Unrealized loss related to marketable securities, net of tax	—	—	—	(71)	(71)
Recognized loss on redemption of marketable securities, previously unrealized	—	—	—	200	200
Translation adjustments, net of tax	—	—	—	950	950
	11	1,172	—	—	1,183

Common stock issued in connection with the exercise of stock options, ESPP and vested RSUs, net of tax					
Stock-based compensation expense related to stock options, ESPP and RSUs	—	6,772	—	—	6,772
Defined benefit pension, net of actuarial losses	—	—	—	(47)	(47)
Accounting method transition adjustment	—	—	(355)	—	(355)
Balances, July 1, 2017	$ 1,227	$ 688,259	$ (427,597)	$ (3,124)	$ 258,765

In the first quarter of fiscal 2017, we early adopted ASU 2016-16, Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory. This guidance is required to be applied on a modified retrospective basis through a cumulative-effect adjustment to the balance sheet as of the beginning of the fiscal year of adoption. As a result of this adoption, we recorded a nominal amount to accumulated deficit, as detailed in the table above.

Note 11 - Income Taxes

For the three months ended July 1, 2017 and July 2, 2016, we recorded an income tax provision of less than $0.1 million and $4.5 million, respectively. For the six months ended July 1, 2017 and July 2, 2016, we recorded an income tax provision of approximately $0.6 million and $6.4 million, respectively. The income tax provision for the three and six months ended July 1, 2017 represents 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 35% and our negative effective tax rates for the three and six months ended July 1, 2017 is primarily due to a valuation allowance increase that offsets the otherwise expected tax benefit from the pretax loss in the United States, and to the zero tax rate in Bermuda which results in no tax benefit for the pretax loss in Bermuda.

Through July 1, 2017, we evaluated the existing valuation allowance position in the United States and concluded that we should continue to maintain a valuation allowance against our federal and state deferred tax assets. We will continue to evaluate both positive and negative evidence in future periods to determine if we should recognize more deferred tax assets. We don't have a valuation allowance in any foreign jurisdictions as it has been concluded it is more-likely-than-not that we will realize the net deferred tax assets in future periods.

We are subject to federal and state income tax as well as income tax in the various foreign jurisdictions in which we operate. Additionally, the years that remain subject to examination are 2013 for federal income taxes, 2012 for state income taxes, and 2010 for foreign income taxes, including years ending thereafter. However, to the extent allowed by law, the tax authorities may have the right to examine prior periods where net operating losses or tax credits were generated and carried forward, and make adjustments up to the amount of the net operating losses or credit carryforward amount.

Our income tax return for India is currently under examination for the fiscal year ended March 31, 2015. We are not under examination in any other jurisdiction.

We believe that it is reasonably possible that $1.6 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.

At December 31, 2016, we had U.S. federal net operating loss ("NOL") carryforwards (pretax) of approximately $367.0 million that expire at various dates between 2025 and 2036. We had state NOL carryforwards (pretax) of approximately $193.3 million that expire at various dates from 2017 through 2036. We also had federal and state credit carryforwards of $49.2 million and $56.7 million, respectively. Of the total $105.9 million credit carryforwards, $55.5 million do not expire. The remaining credits expire at various dates from 2017 through 2036.

Our liability for uncertain tax positions (including penalties and interest) was $27.8 million and $29.6 million at July 1, 2017 and December 31, 2016, 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 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 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 12 - Restructuring

In March 2015, our Board of Directors approved an internal restructuring plan (the "March 2015 Plan"), in connection with our acquisition of Silicon Image. The March 2015 Plan was designed to realize synergies from the acquisition by eliminating redundancies created as a result of combining the two companies. This included reductions in our worldwide workforce, consolidation of facilities, and cancellation of software contracts and engineering tools. The March 2015 Plan is substantially complete subject to certain remaining expected costs that we do not expect to be material and any changes in sublease assumptions should they occur, which will be expensed as incurred. Under this plan, approximately $0.4 million of credit and $2.4 million of expense was incurred during the three months ended July 1, 2017 and July 2, 2016, respectively, and approximately $0.1 million of credit and $5.9 million of expense was incurred during the six months ended July 1, 2017 and July 2, 2016, respectively. Approximately $20.5 million of total expense has been incurred through July 1, 2017 under the March 2015 Plan, and we expect the total cost to be approximately $21.0 million.

Table of Contents

In September 2015, we implemented a further reduction of our worldwide workforce (the "September 2015 Reduction") separate from the March 2015 Plan. The September 2015 Reduction was designed to resize the company in line with the market environment and to better balance our workforce with the long-term strategic needs of our business. The September 2015 Reduction is substantially complete subject to certain remaining expected costs, which we do not expect to be material but which will be expensed as incurred. Under this reduction, approximately $0.5 million of credit and $0.2 million of expense were incurred during the three months ended July 1, 2017 and July 2, 2016, respectively, and approximately $0.7 million of credit and $2.1 million of expense was incurred during the six months ended July 1, 2017 and July 2, 2016, respectively. Approximately $7.2 million of total expense has been incurred through July 1, 2017 under the September 2015 Reduction, and we expect the total cost to be approximately $8.0 million.

In June 2017, our Board of Directors approved an additional internal restructuring plan (the "June 2017 Plan"), which resulted in the sale of our Hyderabad, India subsidiary and certain assets related to non-core businesses, a worldwide workforce reduction, and an initiative to reduce our infrastructure costs. These actions are part of an overall plan to achieve financial targets and to enhance our financial and competitive position by better aligning our revenue and operating expenses. Approximately $2.4 million of total expense has been incurred through July 1, 2017 under the June 2017 Plan, and we expect the total cost to be approximately $8.0 million to $19.0 million.

The approximately $2.4 million of expense related to the June 2017 Plan has been offset by credits from the March 2015 Plan and the September 2015 Reduction discussed above totaling approximately $0.8 million for both the second quarter and first six months of fiscal 2017, resulting in the net charge of approximately $1.6 million recorded to restructuring charges on our Consolidated Statements of Operations. The restructuring accrual balance is presented in accounts payable and accrued expenses (includes restructuring) on our Consolidated Balance Sheets.

The following table displays the combined activity related to the restructuring actions described above:

(In thousands)	Severance & related *	Lease Termination	Software Contracts & Engineering Tools **	Other	Total
Balance at January 2, 2016	$ 3,696	$ 1,005	$ 377	$ —	$ 5,078
Restructuring charges	1,878	2,234	1,931	1,956	7,999
Costs paid or otherwise settled	(4,406)	(1,402)	(2,111)	(1,940)	(9,859)
Balance at July 2, 2016	$ 1,168	$ 1,837	$ 197	$ 16	$ 3,218
Balance at December 31, 2016	$ 801	$ 1,036	$ 25	$ 12	$ 1,874
Restructuring charges	1,276	57	—	309	1,642
Costs paid or otherwise settled	(52)	(616)	(25)	(301)	(994)
Balance at July 1, 2017	$ 2,025	$ 477	$ —	$ 20	$ 2,522

* Includes employee relocation costs
**Includes cancellation of contracts, asset impairments, and accelerated depreciation on certain enterprise resource planning and customer
relationship management systems

Note 13 - Long-Term Debt

On March 10, 2015, we entered into a secured credit agreement (the "Credit Agreement") with Jefferies Finance, LLC and certain other lenders for purposes of funding, in part, our acquisition of Silicon Image. The Credit Agreement provided for a $350 million term loan (the "Term Loan") maturing on March 10, 2021 (the "Term Loan Maturity Date"). We received $346.5 million net of an original issue discount of $3.5 million and we paid debt issuance costs of

$8.3 million. The Term Loan bears variable interest equal to the one-month LIBOR as of July 1, 2017, subject to a 1.00% floor if necessary, plus a spread of 4.25%. The current effective interest rate on the Term Loan is 5.99%.

The Term Loan is payable through a combination of (i) quarterly installments of approximately $0.9 million, (ii) annual excess cash flow payments as defined in the Credit Agreement, which are due 95 days after the last day of our fiscal year, and (iii) any payments due upon certain issuances of additional indebtedness and certain asset dispositions, with any remaining outstanding principal amount due and payable on the Term Loan Maturity Date. The percentage of excess cash flow we are required to pay ranges from 0% to 75%, depending on our leverage and other factors as defined in the Credit Agreement. Currently, the Credit Agreement would require a 75% excess cash flow payment.

In the first quarter of fiscal 2017, we made a required additional principal payment of $9.9 million due to a sale of patents. In the second quarter of fiscal 2017, we made another required additional principal payment of $8.3 million due to a sale of patents, and a required annual excess cash flow payment of $13.7 million. Over the next twelve months, our principal payments will be comprised mainly of regular quarterly installments and a required annual excess cash flow payment.

Table of Contents

While the Credit Agreement does not contain financial covenants, it does contain informational covenants and certain restrictive covenants, including limitations on liens, mergers and consolidations, sales of assets, payment of dividends, and indebtedness. We were in compliance with all such covenants at July 1, 2017.
The original issue discount and the debt issuance costs have been accounted for as a reduction to the carrying value of the Term Loan on our Consolidated Balance Sheets and are being amortized to interest expense in our Consolidated Statements of Operations over the contractual term, using the effective interest method.

The fair value of the Term Loan approximates the carrying value, which is reflected in our Consolidated Balance Sheets as follows:

(In thousands)	July 1, 2017	December 31, 2016
Principal amount	$308,542	$ 342,221
Unamortized original issue discount and debt costs	(6,245)	(7,599)
Less: Current portion of long-term debt	(15,318)	(33,767)
Long-term debt	$286,979	$ 300,855

Interest expense related to the Term Loan was included in Interest expense on our Consolidated Statements of Operations as follows:

(In thousands)	Three Months Ended		Six Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Contractual interest	$4,167	$4,615	$8,710	$9,235
Amortization of debt issuance costs and discount	421	418	1,354	659
Total Interest expense related to the Term Loan	$4,588	$5,033	$10,064	$9,894

As of July 1, 2017, expected future principal payments on the Term Loan were as follows:

Fiscal year	(in thousands)
2017 (remaining 6 months)	$ 1,750
2018	17,527
2019	18,748
2020	81,093
2021	189,424
	$ 308,542

Note 14 - Stock-Based Compensation

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

(In thousands)	Three Months Ended		Six Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Cost of products sold	$180	$166	$408	$425
Research and development	1,299	1,468	3,149	3,927
Selling, general and administrative	1,450	1,608	3,215	3,446

Total stock-based compensation	$2,929	$3,242	$6,772	$7,798

We granted stock options with a market condition to certain executives in fiscal years 2015 and 2016. The options have a two year vesting and vest between 0% and 200% of the target amount, based on the Company's relative Total Shareholder Return (TSR) when compared to the TSR of a component of companies of the PHLX Semiconductor Sector Index over a two year period. TSR is a measure of stock price appreciation plus dividends paid, if any, in the performance period. The fair values of the options were determined and fixed on the date of grant using a lattice-based option-pricing valuation model, which incorporates a Monte-Carlo simulation, and considered the likelihood that we would achieve the market condition.

Of these grants with a market condition, approximately 596,600 were outstanding and unvested at December 31, 2016. In the first quarter of fiscal 2017, approximately 91,500 grants vested, and approximately 183,200 were canceled due to the expiration of the vesting period for the 2015 tranche. During the second quarter of fiscal 2017, approximately 9,200 vested options were exercised, while 28,000 unvested options were canceled due to termination. A total of approximately 376,200 stock options were

Table of Contents

outstanding as of July 1, 2017, which includes the approximately 82,300 that vested but were not exercised. We incurred stock compensation expense related to these market condition awards of less than $0.1 million and approximately $0.3 million in the second quarter and first six months, respectively, of fiscal 2017 and less than $0.1 million and approximately $0.2 million in the second quarter and first six months, respectively, of fiscal 2016.

Note 15 - Contingencies

Legal Matters

In February 2016, we filed a complaint against Technicolor SA and its affiliates in the United States District Court for the Northern District of California alleging that Technicolor had infringed on certain patents relating to the HDMI specification. Technicolor filed an answer to our complaint on April 11, 2016, which included various defenses to the alleged patent infringement. In November 2016, Technicolor amended its answer and asserted a counterclaim, alleging that the Company's action constituted a breach of the HDMI Founders Agreement to provide licenses on fair, reasonable and non-discriminatory terms. Technicolor seeks declaratory relief and compensation for the alleged breach. At this stage of the proceedings, we do not have an estimate of the likelihood or the amount of any financial consequences to us.

From time to time, we are exposed to certain other 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.

Note 16 - Segment and Geographic Information

Segment Information

As of July 1, 2017, Lattice had one operating segment: the core Lattice business, which includes IP and semiconductor devices. Qterics, a discrete software-as-a-service business unit, was previously an immaterial operating segment in the Lattice legal entity structure. In April 2016, we sold Qterics to an unrelated third party for net proceeds of $2.0 million, net of cash sold, resulting in a gain of $2.6 million. The gain was included in Other income, net in the Consolidated Statements of Operations in the period of sale. In the second quarter of fiscal 2017, we received a final escrow payment of $0.3 million related to the sale of Qterics, which was included as a gain in Other income, net in the Consolidated Statements of Operations for the current period.

Geographic Information

Our revenue by major geographic area, based on ship-to location, is presented in the following table:

	Three Months Ended				Six Months Ended			
(In thousands)	July 1, 2017		July 2, 2016		July 1, 2017		July 2, 2016	
Asia	$64,946	69 %	$67,655	68 %	$138,404	70 %	$133,167	68 %
Europe	10,579	11	14,729	15	21,659	11	30,738	16
Americas	18,612	20	16,825	17	38,661	19	31,816	16
Total revenue	$94,137	100%	$99,209	100%	$198,724	100%	$195,721	100%

We assign revenue to geographies based on the customer ship-to address at the point where revenue is recognized. In the case of sell-in distributors and OEM customers, revenue is typically recognized, and geography is assigned, when products are shipped to our distributor or customer. In the case of sell-through distributors, revenue is recognized when resale occurs and geography is assigned based on the customer location on the resale reports provided by the distributor.

There were no material changes to property and equipment by major geographic area as of July 1, 2017 as compared to December 31, 2016.

Note 17 - Subsequent Event

On July 27, 2017, we announced our agreement to sell certain assets, including our Hyderabad, India subsidiary and our Simplay Labs testing and certification business to Invecas, Inc. for the purchase price of $5.0 million, plus or minus cash net of agreed upon pre-close liabilities (the “Invecas Transaction”). The Invecas Transaction is subject to a number of closing conditions. In connection with the Invecas Transaction, approximately 150 employees in the U.S., China, and India, primarily working on HDMI and related products, will be offered employment by Invecas, Inc. or an affiliate. We are currently evaluating the impact of this transaction on our consolidated financial statements.

Table of Contents

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

Overview

Lattice Semiconductor (“Lattice,” the “Company,” “we,” “us,” or “our”) engages in smart connectivity solutions, providing intellectual property ("IP") and low-power, small form-factor devices that enable global customers to quickly deliver innovative and differentiated cost and power efficient products. Our broad end-market exposure extends from mobile devices and consumer electronics to industrial and automotive equipment, communications and computing infrastructure, and licensing. Lattice was founded in 1983 and is headquartered in Portland, Oregon.

Plan of Merger and Reorganization

On November 3, 2016, we entered into an Agreement and Plan of Merger (the “Merger Agreement”) with Canyon Bridge Acquisition Company, Inc., a Delaware corporation (“Parent”), and Canyon Bridge Merger Sub, Inc., a Delaware corporation and wholly owned subsidiary of Parent (“Merger Sub”), providing for the merger of Merger Sub with and into the Company (the “Merger”), with the Company surviving the Merger as a wholly owned subsidiary of Parent.

At the effective time of the Merger, each share of common stock, par value $0.01 per share, of the Company (the “Shares”) that is outstanding immediately prior to such time (other than (i) Shares owned by Parent, Merger Sub, the Company (including any Shares held in the treasury of the Company) or by any direct or indirect wholly owned subsidiary of Parent, Merger Sub or the Company, or (ii) Shares held by stockholders of the Company who have not voted in favor of the Merger and who are entitled to demand and properly demand their statutory rights of appraisal in accordance with the Delaware General Corporation Law) will be canceled and extinguished and automatically converted into the right to receive cash in an amount equal to $8.30 per share (without interest and subject to deduction for any required withholding tax).

Completion of the Merger is subject to various conditions, including the receipt of any required regulatory clearances related to the Merger from the Committee on Foreign Investment in the United States ("CFIUS") by September 30, 2017, which is the timeframe provided in the Merger Agreement. On June 9, 2017, to allow more time of review and discussion with CFIUS in connection with the Merger, the Company announced that it withdrew and re-filed the joint voluntary notice to CFIUS under the Defense Production Act of 1950, as amended.

Fiscal 2017 Transactions

In July 2017, we announced our agreement to sell certain assets, including our Simplay Labs testing and certification business to Invecas, Inc. for the purchase price of $5.0 million, plus or minus cash net of agreed upon pre-close liabilities (the “Invecas Transaction”). The Invecas Transaction is subject to a number of closing conditions. In connection with the Invecas Transaction, approximately 150 employees in the U.S., China, and India, primarily working on HDMI and related products, will be offered employment by Invecas, Inc. or an affiliate. This transaction is part of an overall plan to reduce operating expenses by approximately 10%, and to enhance our competitive position by better aligning our revenue and operating expenses.

Critical Accounting Policies and Estimates

Critical accounting policies are those that are both most important to the portrayal of a company's financial condition and results and 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. 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 Annual Report on form 10-K for the fiscal year ended December 31, 2016.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles ("U.S. GAAP") requires management to make estimates and assumptions that affect the reported amounts and classification of assets, such as marketable securities, accounts receivable, inventory, goodwill (including the assessment of reporting unit), intangible assets, current and deferred income taxes, accrued liabilities (including restructuring charges and bonus arrangements), deferred income and allowances on sales to sell-through distributors, disclosure of contingent assets and liabilities at the date of the financial statements, amounts used in acquisition valuations and purchase accounting, and the reported amounts of product revenue, licensing and services revenue, and expenses during the fiscal periods presented. Actual results could differ from those estimates.

Table of Contents

Results of Operations

Key elements of our Consolidated Statements of Operations are presented in the following table:

	Three Months Ended				Six Months Ended			
(In thousands)	July 1, 2017		July 2, 2016		July 1, 2017		July 2, 2016	
Revenue	$94,137	100.0 %	$99,209	100.0 %	$198,724	100.0 %	$195,721	100.0 %
Gross margin	51,209	54.4	58,426	58.9	112,041	56.4	115,530	59.0
Research and development	26,820	28.5	30,915	31.2	54,209	27.3	63,523	32.5
Selling, general and administrative	21,938	23.3	23,005	23.2	45,843	23.1	46,613	23.8
Amortization of acquired intangible assets	8,737	9.3	8,311	8.4	17,251	8.7	17,032	8.7
Restructuring charges	1,576	1.7	2,568	2.6	1,642	0.8	7,999	4.1
Acquisition related charges	867	0.9	—	—	2,527	1.3	94	—
Loss from operations	$(8,729)	(9.3)%	$(6,373)	(6.4)%	$(9,431)	(4.7)%	$(19,731)	(10.1)%

Revenue by End Market

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. Our Licensing and services end market includes revenue from the licensing of our IP, the collection of certain royalties, patent sales, the revenue related to our participation in consortia and standard-setting activities, and services. While Licensing products are primarily sold into the Mobile and Consumer market, Licensing and services revenue is reported separately as it has characteristics that differ from other categories, most notably its higher gross margin.

The following are examples of end market applications:

Communications and Computing	Mobile and Consumer	Industrial and Automotive	Licensing and Services
Wireless	Smartphones	Security and Surveillance	IP Royalties
Wireline	Cameras	Machine Vision	Adopter Fees
Data Backhaul	Displays	Industrial Automation	IP Licenses
Computing	Tablets	Human Machine Interface	Patent Sales
Servers	Wearables	Automotive	Testing Services
Data Storage	Televisions and Home Theater	Drones	

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

	Three Months Ended				Six Months Ended			
(In thousands)	July 1, 2017		July 2, 2016		July 1, 2017		July 2, 2016	
Communications and Computing	$27,039	29 %	$28,531	29 %	$57,049	29 %	$61,549	31 %
Mobile and Consumer	25,119	27	24,309	24	56,918	29	49,176	25
Industrial and Automotive	31,010	32	36,495	37	61,870	30	66,833	35
Licensing and Services	10,969	12	9,874	10	22,887	12	18,163	9
Total revenue	$94,137	100%	$99,209	100%	$198,724	100%	$195,721	100%

Revenue from the Communications and Computing end market decreased by 5% for the second quarter of fiscal 2017 compared to the second quarter of fiscal 2016, and decreased 7% for the first six months of fiscal 2017 compared to the first six months of fiscal 2016 as additional purchases by a certain large customer in Asia in the prior year periods did not recur in the current year periods.

Table of Contents

Revenue from the Mobile and Consumer end market increased 3% for the second quarter of fiscal 2017 compared to the second quarter of fiscal 2016, and increased 16% for the first six months of fiscal 2017 compared to the first six months of fiscal 2016. For both periods, the increase compared to respective prior year periods was predominately due to a significant increase in volume for a major mobile handset provider. The production volume for this mobile handset appears to have peaked in the fourth quarter of fiscal 2016, and we expect the associated revenue stream to decline in future quarters as the end product completes its lifecycle. These increases were substantially offset by declines in revenue from HDMI devices used in Digital Television ("DTV') and Home Theater related products and from MHL devices used in Mobile handsets.

Revenue from the Industrial and Automotive end market decreased approximately 15% for the second quarter of fiscal 2017 compared to the second quarter of fiscal 2016, and decreased 7% for the first six months of fiscal 2017 compared to the first six months of fiscal 2016. For both periods, this revenue decrease is primarily a reversing effect of the line item reduction and complex programmable logic device ("CPLD") conversion program, for which shipments predominately occurred in fiscal 2016 but did not recur in fiscal 2017.

Revenue from the Licensing and Services end market increased 11% for the second quarter of fiscal 2017 compared to the second quarter of fiscal 2016, and increased 26% for the first six months of fiscal 2017 compared to the first six months of fiscal 2016. For both periods, this increase was predominantly due to a patent sale transaction recognized in two installments of $10.0 million and $8.0 million in the first and second quarters, respectively, of fiscal 2017, substantially offset by lower revenue from HDMI licensing and adopter fees as a new royalty sharing agreement had not been finalized, and by the termination of our role as agent for HDMI. While a new royalty sharing agreement is being negotiated, the HDMI agent is collecting royalties but is unable to distribute a majority of the royalties to the Founders. Given the lack of evidence of an arrangement, we are unable to recognize all of the HDMI royalty revenue until a new royalty sharing agreement is fully executed. As a result, revenue attributable to HDMI licensing and adopter fees is down $5.0 million and $10.3 million, respectively, for the second quarter and first six months of fiscal 2017 relative to the comparable periods of fiscal 2016.

Revenue by Geography

We assign revenue to geographies based on customer ship-to address at the point where revenue is recognized. In the case of sell-in distributors and OEM customers, revenue is typically recognized, and geography is assigned, when products are shipped to our distributor or OEM customer. In the case of sell-through distributors, revenue is recognized when resale to the end customer occurs and geography is assigned based on the end customer location on the resale reports provided by the distributor. Both foreign and domestic sales are denominated in U.S. dollars.

The composition of our revenue by geography, based on ship-to location, is presented in the following table:

	Three Months Ended						Six Months Ended					
(In thousands)	July 1, 2017			July 2, 2016			July 1, 2017			July 2, 2016		
Asia	$64,946	69	%	$67,655	68	%	$138,404	70	%	$133,167	68	%
Europe	10,579	11		14,729	15		21,659	11		30,738	16	
Americas	18,612	20		16,825	17		38,661	19		31,816	16	
Total revenue	$94,137	100	%	$99,209	100	%	$198,724	100	%	$195,721	100	%

Revenue in Asia decreased 4% for the second quarter of fiscal 2017 compared to the second quarter of fiscal 2016, and increased 4% for the first six months of fiscal 2017 compared to the first six months of fiscal 2016. For both the second quarter and first six months of fiscal 2017 relative to the respective periods in fiscal 2016, Asia revenue was heavily affected by revenue from both the Mobile and Consumer and the Communications and Computing end markets. For the second quarter of fiscal 2017 relative to the second quarter of fiscal 2016, the Mobile and Consumer end market saw decreased revenue from DTV and Home Theater related devices in Japan, Korea, and, to a lesser extent, in China, which was substantially offset by increased handset content revenues in China and Taiwan. In the Communications and Computing end market, Asia revenue decreased due to reductions from a single large telecommunications customer in the region. For the first six months of fiscal 2017 relative to the first six months of fiscal 2016, the increase was predominantly due to a significant increase in volume for a major mobile handset provider. The production volume for this mobile handset began in the second half of fiscal 2016 and appears to have peaked in the fourth quarter of fiscal 2016, and we expect the associated revenue stream to decline in future quarters as the device completes its lifecycle. This was substantially offset by a significant decrease in Communications and Computing end market revenue from major telecommunications customers whose business was affected by government regulations and by conversion of materials from 200mm to 300mm wafers.

Revenue in Europe decreased 28% for the second quarter of fiscal 2017 compared to the second quarter of fiscal 2016, and decreased 30% for the first six months of fiscal 2017 compared to the first six months of fiscal 2016. For both periods, this revenue decrease is primarily a reversing effect of the line item reduction and CPLD conversion program, for which shipments predominately occurred in fiscal 2016 but did not recur in fiscal 2017.

Table of Contents

Revenue from the Americas increased 11% for the second quarter of fiscal 2017 compared to the second quarter of fiscal 2016, and increased 22% for the first six months of fiscal 2017 compared to the first six months of fiscal 2016. For both periods, this increase was predominantly due to a patent sale transaction recognized in two installments over the first and second quarters of fiscal 2017, partially offset by a reversing effect of the line item reduction and CPLD conversion program, for which shipments predominately occurred in fiscal 2016 but did not recur in fiscal 2017.

Revenue from End Customers

Our top five end customers constituted approximately 27% of our revenue for the second quarter of fiscal 2017, compared to approximately 20% for the second quarter of fiscal 2016. Our top five end customers constituted approximately 32% of our revenue for the first six months of fiscal 2017, compared to approximately 22% for the first six months of fiscal 2016.

Our largest end customer accounted for approximately 9% of total revenue in the second quarter of fiscal 2017 and 10% of total revenue in the first six months of fiscal 2017. Our largest end customer accounted for approximately 7% of total revenue in the second quarter of fiscal 2016 and approximately 6% of total revenue first six months of fiscal 2016. No other customers accounted for more than 10% of total revenue during these periods.

Revenue from Sell-Through Distributors

Sales through distributors have historically accounted for a significant portion of our total revenue. Revenue attributable to resale of products by our primary sell-through distributors is presented in the following table:

	% of Total Revenue		% of Total Revenue	
	Three Months Ended		Six Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Arrow Electronics Inc.	23%	28 %	22%	28 %
Weikeng Group	26	15	27	13
All others	17	16	14	15
All sell-through distributors	66%	59 %	63%	56 %

Revenue from sell-through distributors increased to 66% of total revenue in the second quarter of fiscal 2017 from 59% in the second quarter of fiscal 2016. Revenue from sell-through distributors increased to 63% of total revenue in the first six months of
fiscal 2017 from 56% in the first six months of fiscal 2016.

The increase on a percentage basis of revenue from sell-through distributors in both the second quarter and first six months of fiscal 2017 compared to the second quarter and first six months of fiscal 2016 was due primarily to volume for a major mobile handset provider through a sell-through distributor occurring in the second quarter and first six months of fiscal 2017 that had not been present in the respective periods of fiscal 2016. The production volume for this mobile handset appears to have peaked in the fourth quarter of fiscal 2016, and we expect the associated revenue stream to decline in future quarters as the end product completes its lifecycle.

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 July 1, 2017	July 2, 2016	Six Months Ended July 1, 2017	July 2, 2016
Gross margin	$51,209	$58,426	$112,041	$115,530
Percentage of net revenue	54.4 %	58.9 %	56.4 %	59.0 %
Product gross margin %	51.0 %	54.4 %	53.2 %	55.1 %
Licensing and services gross margin %	80.1 %	99.3 %	81.1 %	97.4 %

For the second quarter and first six months of fiscal 2017 compared to the second quarter and first six months of fiscal 2016, gross margin decreased, respectively, by 4.5 and 2.6 percentage points due to decreases in both product gross margin and licensing and services gross margin. The primary contributor to the 3.4 and 1.9 percentage point decreases for the respective periods in product gross margin was a change in overall sales mix, with increased revenue from the lower margin mobile and consumer end market combined with a reduction in sales for certain higher margin legacy product lines.

The primary contributor to the 19.2 and 16.3 percentage point decrease for the respective periods in licensing and services gross margin was due to the patent sale that was recognized in two installments during the first and second quarters of fiscal 2017.

Table of Contents

The costs associated with the patent sale, primarily the net book value of the patents acquired from Silicon Image, were greater than usual for this category and had a substantial impact on licensing and services gross margin.

Because of its higher margin, the licensing and services portion of our overall revenue can have a disproportionate impact on gross margin and profitability. For programmable and standard products, we expect that product, end market, and customer mix will subject our gross margin to fluctuation, while we expect downward pressure on average selling price to adversely affect our gross margin in the future. If we are unable to realize additional or sufficient product cost reductions in the future to balance changes in product and customer mix, we may experience degradation in our product gross margin.

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:

	Three Months Ended			Six Months Ended		
(In thousands)	July 1, 2017	July 2, 2016	% change	July 1, 2017	July 2, 2016	% change
Research and development	$ 26,820	$ 30,915	(13)	$ 54,209	$ 63,523	(15)
Percentage of revenue	28.5 %	31.2 %		27.3 %	32.5 %	
Mask costs included in Research and development	$ 897	$ 1,038	(14)	$ 1,060	$ 2,544	(58)

Research and development expense includes costs for compensation and benefits, stock compensation, development masks, 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.

The decrease in research and development expense for the second quarter of fiscal 2017 compared to the second quarter of fiscal 2016 is due mainly to the cost reductions realized from the restructuring actions and integration of operations undertaken since the acquisition of Silicon Image. These savings were predominantly from headcount reductions and site consolidations, along with lower bonus expense and reductions in mask costs, partially offset by higher IP insourcing expenses. The decrease in research and development expense for the first six months of fiscal 2017 compared to the first six months of fiscal 2016 is due mainly to the cost reductions realized from the restructuring actions and integration of operations undertaken since the acquisition of Silicon Image. These savings were predominantly from headcount reductions and site consolidations, along with reductions in mask costs and outside services.

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 at approximately the percentage of revenue realized in the second quarter of fiscal 2017.

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:

	Three Months Ended		Six Months Ended	
(In thousands)		% change		% change

	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Selling, general, and administrative	$			