LITTELFUSE INC /DE Form 10-Q August 01, 2018	
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United States	
Securities and Exchange Commission	
Washington, D.C. 20549	
FORM 10-Q	
(Mark one)	
[X] QUARTERLY REPORT PURSUAL ACT OF 1934 For the Quarterly Period Ended Jun	NT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE
OR	
[] TRANSITION REPORT PURSUAL For the transition period from t	NT TO SECTION 13 or 15(d) OF THE SECURITIES ACT OF 1934 o
Commission file number 0-20388	
LITTELFUSE, INC.	
(Exact name of registrant as specified in	n its charter)
Delaware (State or other jurisdiction of incorporation or organization)	36-3795742 (I.R.S. Employer Identification No.)
8755 West Higgins Road, Suite 500 Chicago, Illinois (Address of principal executive offices)	60631 (ZIP Code)

Registrant's telephone number, including area code: 773-628-100	Registrant's	telephone	number.	including area	code:	773-628-	100
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S	ecurities	registered	pursuant to	Section	12(b) of the Act:

Name of Each Exchange

Title of Each Class On Which Registered

Common Stock, \$0.01 par value NASDAQ Global Select MarketSM

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 website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (Section 232.405 of this chapter) during the preceding 12 months (or for such shorter period that 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 a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act (Check one): Large accelerated filer [X] Accelerated filer [Non-accelerated filer [Smaller reporting company [Remerging growth company [Reme

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. Yes [] No []

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

As of July 27, 2018, the registrant had outstanding 25,080,569 shares of Common Stock, net of Treasury Shares.

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LITTELFUSE, INC. CONDENSED CONSOLIDATED BALANCE SHEETS

(in thousands)	June 30,	December 30,
(III thousands)	2018	2017
ASSETS		2017
Current assets:		
Cash and cash equivalents	\$408,147	\$429,676
Short-term investments	34	35
Trade receivables, less allowances (June 30, 2018 - \$34,724; December 30, 2017 -	260.444	102 (00
\$27,516)	260,444	182,699
Inventories	239,201	140,789
Prepaid income taxes and income taxes receivable	4,648	1,689
Prepaid expenses and other current assets	45,727	37,452
Total current assets	958,201	792,340
Property, plant, and equipment:		
Land	29,198	9,547
Buildings	118,432	86,599
Equipment	558,855	505,838
Accumulated depreciation and amortization	(367,730)	(351,407)
Net property, plant, and equipment	338,755	250,577
Intangible assets, net of amortization	390,052	203,850
Goodwill	832,227	453,414
Investments	31,326	10,993
Deferred income taxes	10,320	11,858
Other assets	27,113	17,070
Total assets	\$2,587,994	\$1,740,102
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	\$127,290	\$101,844
Accrued payroll	43,047	49,962
Accrued expenses	66,341	48,994
Accrued severance	1,049	1,459
Accrued income taxes	19,376	16,285
Current portion of long-term debt	10,060	6,250
Total current liabilities	267,163	224,794
Long-term debt, less current portion	687,538	489,361
Deferred income taxes	53,996	17,069
Accrued post-retirement benefits	33,210	18,742
Other long-term liabilities	76,067	62,580
Shareholders' equity:		
Common stock, par value \$0.01 per share: 34,000,000 shares authorized; shares issued, June 30, 2018–25,070,738; December 30, 2017 –22,713,198	253	229

Treasury stock, at cost: 475,061 and 439,598 shares, respectively	(48,336)	(41,294)
Additional paid-in capital	815,826	310,012
Accumulated other comprehensive income	(89,684)	(63,668)
Retained earnings	791,831	722,140
Littelfuse, Inc. shareholders' equity	1,469,890	927,419
Non-controlling interest	130	137
Total equity	1,470,020	927,556
Total liabilities and equity	\$2,587,994	\$1,740,102

See accompanying Notes to Condensed Consolidated Financial Statements.

LITTELFUSE, INC.

CONDENSED CONSOLIDATED STATEMENTS OF NET INCOME

(Unaudited)

	For the Three Months		For the Six Months	
	Ended		Ended	
(in thousands, except per share data)	June 30,	July 1,	June 30,	July 1,
(in thousands, except per share data)	2018	2017	2018	2017
Net sales	\$459,183	\$313,355	\$876,996	\$598,797
Cost of sales	290,196	180,747	558,386	352,539
Gross profit	168,987	132,608	318,610	246,258
Selling, general, and administrative expenses	73,244	53,438	150,758	100,139
Research and development expenses	22,748	12,729	45,288	24,881
Amortization of intangibles	13,373	6,171	25,371	12,115
Total operating expenses	109,365	72,338	221,417	137,135
Operating income	59,622	60,270	97,193	109,123
Interest expense	5,782	3,281	11,205	6,401
Foreign exchange loss (gain)	3,200	(558)	(7,354)	(2,115)
Other (income) expense, net	(1,678)	190	(3,621)	52
Income before income taxes	52,318	57,357	96,963	104,785
Income taxes	9,992	8,719	18,609	17,255
Net income	\$42,326	\$48,638	\$78,354	\$87,530
Income per share:				
Basic	\$1.69	\$2.13	\$3.18	\$3.84
Diluted	\$1.67	\$2.11	\$3.12	\$3.80
Weighted-average shares and equivalent shares outstanding:				
Basic	25,004	22,822	24,671	22,785
Diluted	25,401	23,023	25,086	23,005

See accompanying Notes to Condensed Consolidated Financial Statements.

LITTELFUSE, INC.

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(Unaudited)

	For the Three Months		For the Six Months	
(in the arrow do)	Ended June 30,	July 1,	Ended June 30,	July 1,
(in thousands)	2018	2017	2018	2017
Net income Other comprehensive income (loss):	\$42,326	\$48,638	\$78,354	\$87,530
Pension and postemployment liability adjustments (net of tax expense (benefit) of \$42 and \$23 for the three months ended 2018 and 2017, and (\$18) and \$55 for the six months ended 2018 and 2017, respectively)	590	(19	402	(200)
Pension and postemployment reclassification adjustments (net of tax expense (benefit) of (\$5) and \$28 for the three months ended 2018 and 2017, and (\$11) and \$64 for the six months ended 2018 and 2017, respectively)	176	(80	361	(181)
Unrealized gain (loss) on investments	_	(472) -	475
Foreign currency translation adjustments	(16,708)	,	(16,984)	
Comprehensive income	\$26,384	\$44,485	\$62,133	\$89,004

See accompanying Notes to Condensed Consolidated Financial Statements.

LITTELFUSE, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(Unaudited)

	For the Six Ended	Months
(in thousands)	June 30, 2018	July 1, 2017
Operating activities		
Net income	\$78,354	\$87,530
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	24,431	18,575
Amortization of intangibles	25,371	12,115
Provision for bad debts	(2)	1,895
Deferred revenue	1,921	
Non-cash inventory charges	36,927	
Impairment charges	1,125	
Loss on sale of property, plant, and equipment	780	593
Stock-based compensation	15,883	8,590
Unrealized gain on investments	(3,311)	
Deferred income taxes	2,434	1,514
Changes in operating assets and liabilities:		
Accounts receivables	(33,481)	(32,039)
Inventories	(1,502)	(8,739)
Accounts payable	13,684	7,985
Accrued expenses (including post-retirement)	3,773	3,912
Accrued payroll and severance	(13,745)	(13,190)
Accrued taxes	(6,411)	515
Prepaid expenses and other	(5,316)	4,317
Net cash provided by operating activities	140,915	93,573
Investing activities		
Acquisitions of businesses, net of cash acquired	(310,487)	(14,172)
Proceeds from maturities of short-term investments	_	3,739
Decrease in entrusted loan	_	2,416
Purchases of property, plant, and equipment	(40,315)	(28,278)
Proceeds from sale of property, plant, and equipment	68	178
Net cash used in investing activities	(350,734)	(36,117)
Financing activities		
Proceeds of revolving credit facility	60,000	
Proceeds of term loan	75,000	
Net proceeds from senior notes payable	175,000	125,000

Payments of term loan	(40,025)	(3,125)
Payments of revolving credit facility	(60,000)	(112,500)
Net proceeds (payments) related to stock-based award activities	5,568	(2,074)
Payments of entrusted loan	_	(2,416)
Debt issuance costs	(878)	(1)
Cash dividends paid	(18,458)	(14,963)
Net cash provided by (used in) financing activities	196,207	(10,079)
Effect of exchange rate changes on cash and cash equivalents	(7,917)	(608)
Increase (decrease) in cash and cash equivalents	(21,529)	46,769
Cash and cash equivalents at beginning of period	429,676	275,124
Cash and cash equivalents at end of period	\$408,147	\$321,893
Supplemental disclosure of non-cash investing activities:		
Fair value of commitment to purchase non-controlling interest of Monolith	\$ —	\$9,000

See accompanying Notes to Condensed Consolidated Financial Statements.

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Notes to Condensed Consolidated Financial Statements

1. Summary of Significant Accounting Policies and Other Information

Nature of Operations

Littelfuse, Inc. and subsidiaries (the "Company") is a global leader in circuit protection products with advancing platforms in power control and sensor technologies, serving customers in the electronics, automotive, and industrial markets. With a diverse and extensive product portfolio of fuses, semiconductors, polymers, ceramics, relays and sensors, the Company works with its customers to build safer, more reliable and more efficient products for the connected world in virtually every market that uses electrical energy, ranging across consumer electronics, IT and telecommunication applications, industrial electronics, automobiles and other transportation, and heavy industrial applications. The Company has a network of global engineering centers and labs that develop new products and product enhancements, provides customer application support and test products for safety, reliability, and regulatory compliance.

Basis of Presentation

The Company's accompanying unaudited Condensed Consolidated Financial Statements have been prepared in accordance with U.S. Generally Accepted Accounting Principles ("GAAP") for interim financial information, the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, certain information and disclosures normally included in the consolidated balance sheets, statements of net income and comprehensive income and cash flows prepared in conformity with U.S. GAAP have been condensed or omitted as permitted by such rules and regulations, although the Company believes that the disclosures made are adequate to make the information not misleading. They have been prepared in accordance with accounting policies described in the Company's Annual Report on Form 10-K for the year ended December 30, 2017, which should be read in conjunction with the disclosures therein. In the opinion of management, all adjustments considered necessary for a fair presentation have been included and are of a normal, recurring nature. Operating results for interim periods are not necessarily indicative of annual operating results.

Revenue Recognition

Adoption

On December 31, 2017, the Company adopted new guidance on revenue from contracts with customers using the modified retrospective method. The adoption did not have a significant impact on the Company's consolidated financial statements.

Revenue Disaggregation

The following table disaggregates the Company's revenue by primary business units for the three and six months ended June 30, 2018:

For the three months ended June 30, 2018 ElectronicsAutomotive Industrial

(in thousands)

	Segment	Segment	Segment	Total
Electronics – Passive Products and Sensors	\$128,321	\$ —	\$ —	\$128,321
Electronics – Semiconductor	171,036			171,036
Passenger Car Products	_	63,581	_	63,581
Automotive Sensors		30,729		30,729
Commercial Vehicle Products		32,862		32,862
Industrial Products			32,654	32,654
Total	\$299,357	\$ 127,172	\$ 32,654	\$459,183

For the six months ended June 30, 2018 Electronics Automotive Industrial

(in thousands)

	Segment	Segment	Segment	Total
Electronics – Passive Products and Sensors	\$242,816	\$ —	\$ —	\$242,816
Electronics – Semiconductor	320,952			320,952
Passenger Car Products		127,160		127,160
Automotive Sensors		62,052		62,052
Commercial Vehicle Products		64,090		64,090
Industrial Products			59,926	59,926
Total	\$563,768	\$ 253,302	\$ 59,926	\$876,996

See Note 12, Segment Information for net sales by segment and countries.

Revenue Recognition

The Company recognizes revenue on product sales in the period in which the Company satisfies its performance obligation and control of the product is transferred to the customer. The Company's sales arrangements with customers are predominately short term in nature and generally provide for transfer of control at the time of shipment as this is the point at which title and risk of loss of the product transfers to the customer. At the end of each period, for those shipments where title to the products and the risk of loss and rewards of ownership do not transfer until the product has been received by the customer, the Company adjusts revenues and cost of sales for the delay between the time that the products are shipped and when they are received by the customer. The amount of revenue recorded reflects the consideration to which the Company expects to be entitled in exchange for goods and may include adjustments for customer allowance, rebates and price adjustments. The Company's distribution channels are primarily through direct sales and independent third-party distributors.

The Company has elected the practical expedient under ASC 340-40-25-4 to expense commissions when incurred as the amortization period of the commission asset the Company would have otherwise recognized is less than one year.

Revenue and Billing

The Company generally accepts orders from customers through receipt of purchase orders or electronic data interchange based on written sales agreements and purchasing contracts. Contract pricing and selling agreement terms are based on market factors, costs, and competition. Pricing is often negotiated as an adjustment (premium or discount) from the Company's published price lists. The customer is invoiced when the Company's products are shipped to them in accordance with the terms of the sales agreement. As the Company's standard payment terms are

less than one year, the Company has elected the practical expedient under ASC 606-10-32-18 to not assess whether a contract has a significant financing component. The Company also elected the practical expedient provided in ASC 606-10-25-18B to treat all product shipping and handling activities as fulfillment activities, and therefore recognize the gross revenue associated with the contract, inclusive of any shipping and handling revenue. This is similar to the Company's prior practice and therefore the effect of the new guidance is immaterial.

Ship and Debit Program

Some of the terms of the Company's sales agreements and normal business conditions provide customers (distributors) the ability to receive price adjustments on products previously shipped and invoiced. This practice is common in the industry and is referred to as a "ship and debit" program. This program allows the distributor to debit the Company for the difference between the distributors' contracted price and a lower price for specific transactions. Under certain circumstances (usually in a competitive situation or large volume opportunity), a distributor will request authorization for pricing allowances to reduce its price. When the Company approves such a reduction, the distributor is authorized to "debit" its account for the difference between the contracted price and the lower approved price. The Company establishes reserves for this program based on historic activity and actual authorizations for the debit and recognizes these debits as a reduction of revenue.

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Return to Stock

The Company has a return to stock policy whereby certain customers, with prior authorization from Littelfuse management, can return previously purchased goods for full or partial credit. The Company establishes an estimated allowance for these returns based on historic activity. Sales revenue and cost of sales are reduced to anticipate estimated returns.

Volume Rebates

The Company offers volume based sales incentives to certain customers to encourage greater product sales. If customers achieve their specific quarterly or annual sales targets, they are entitled to rebates. The Company estimates the projected amount of rebates that will be achieved by the customer and recognizes this estimated cost as a reduction to revenue as products are sold.

Recently Adopted Accounting Standards

In March 2017, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2017-07 "Compensation-Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Post-Retirement Benefit Cost," which changed the presentation of net periodic pension and post-retirement benefit cost (net benefit cost) within the Statement of Income. Under the previous guidance, net benefit cost was reported as an employee cost within operating income. The amendment required the bifurcation of net benefit cost, with the service cost component to be presented with other employee compensation costs in operating income while the other components will be reported separately outside of income from operations. ASU No. 2017-07 was effective for the first quarter of 2018 with the Company adopting the new standard on December 31, 2017.

In January 2016, the FASB issued ASU No. 2016-01, "Financial Instruments-Recognition and Measurement of Financial Assets and Financial Liabilities" which addressed certain aspects of the recognition, measurement, presentation and disclosure of financial instruments. The ASU requires the Company to recognize any changes in the fair value of certain equity investments in net income. Previously these changes were recognized in other comprehensive income ("OCI"). The Company adopted the new standard on December 31, 2017, on a modified retrospective basis, recognizing the cumulative effect as a \$9.8 million increase to retained earnings. As a result of the adoption of the new standard and change in fair value of our equity investments, for the six months ended June 30, 2018, the Company recognized an unrealized gain of \$2.8 million in Other (income) expense, net in the Condensed Consolidated Statements of Net Income.

In May 2014, the FASB issued ASU No. 2014-09, "Revenue from Contracts with Customers" (Topic 606) which supersedes the revenue recognition requirements in ASC 605, "Revenue Recognition." This ASU provides a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and will supersede most current revenue recognition guidance. The guidance permits two implementation approaches, one requiring retrospective application of the new standard with restatement of prior years and one requiring prospective application of the new standard with disclosure of results under old standards. The Company adopted the new standard on December 31, 2017 using the modified retrospective method, however, no adjustment to retained earnings was needed. The new guidance did not have a material effect on the Company's Condensed Consolidated Statements of Income. See the *Revenue Recognition* section above for further discussion.

In October 2016, the FASB issued ASU No. 2016-16, "Income Taxes" (Topic 740). This ASU update requires entities to recognize the income tax consequences of many intercompany asset transfers at the transaction date. The seller and buyer will immediately recognize the current and deferred income tax consequences of an intercompany transfer of an asset other than inventory. The tax consequences were previously deferred. The Company adopted the new standard on December 31, 2017 and it did not have a material impact.

Recently Issued Accounting Standards

In February 2016, the FASB issued ASU No. 2016-02, "Leases" (Topic 842). This ASU requires lessees to recognize, on the balance sheet, assets and liabilities for the rights and obligations created by leases of greater than twelve months. The accounting by lessors will remain largely unchanged. The ASU is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018, with early adoption permitted. Adoption will require a modified retrospective transition. The Company will adopt the standard in the first quarter of 2019. The Company has made progress on assessing the Company's portfolio of leases and compiling a central repository of all active leases. We are in the process of assessing the design of the future lease process and drafting a policy to address the new standard requirements. Key lease data elements are being evaluated including developing a methodology for determining the incremental borrowing rate across all countries where we have operations. While the Company has not yet completed its evaluation of the impact the new lease accounting standard will have on its Consolidated Financial Statements, the Company expects to recognize right of use assets and lease liabilities for its operating leases in the Consolidated Balance Sheet upon adoption.

In January 2018, the FASB released guidance on the accounting for tax on the global intangible low-taxed income ("GILTI") provisions of the 2017 U.S. Tax Cuts and Jobs Act (the "Tax Act"). The GILTI provisions impose a tax on foreign income in excess of a deemed return on tangible assets of foreign corporations. The guidance indicates that either accounting for deferred taxes related to GILTI inclusions or treating any taxes on GILTI inclusions as period cost are both acceptable methods subject to an accounting policy election. The Company has not yet completed its assessment and therefore has not yet elected an accounting policy.

In February 2018, the FASB issued ASU No. 2018-02 "Income Statement—Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income," which permits the reclassification of tax effects stranded in accumulated other comprehensive income to retained earnings as a result of the Tax Act. The standard also requires entities to disclose whether or not they elected to reclassify the tax effects related to the Tax Act as well as their policy for releasing income tax effects from accumulated other comprehensive income. The standard allows the option of applying either a retrospective adoption, meaning the standard is applied to all periods in which the effect of the Tax Act is recognized, or applying the amendments in the period of adoption, meaning an adjustment is made to shareholder's equity as of the beginning of the reporting period. ASU 2018-02 will be effective in the first quarter of 2019; however early adoption is permitted for interim and annual periods, including the reporting period in which the Tax Act was enacted. The Company is currently evaluating the impact of ASU 2018-02 on the Consolidated Financial Statements.

2. Acquisitions

The Company accounts for acquisitions using the acquisition method in accordance with ASC 805, "Business Combinations," in which assets acquired and liabilities assumed are recorded at fair value as of the date of acquisition. The operating results of the acquired business are included in the Company's Consolidated Financial Statements from the date of the acquisition.

IXYS Corporation

On January 17, 2018, the Company acquired IXYS Corporation ("IXYS"), a global pioneer in the power semiconductor and integrated circuit markets with a focus on medium to high voltage power control semiconductors across the industrial, communications, consumer and medical markets. IXYS has a broad customer base, serving more than 3,500 customers through its direct sales force and global distribution partners. The acquisition of IXYS is expected to accelerate the Company's growth across the power control market driven by IXYS's extensive power semiconductor portfolio and technology expertise. With IXYS, the Company will be able to diversify and expand its presence within industrial electronics markets, leveraging the strong IXYS industrial OEM customer base. The Company also expects to increase long-term penetration of its power semiconductor portfolio in automotive markets, expanding its global content per vehicle.

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Upon completion of the acquisition, at IXYS stockholders' election and subject to proration, each share of IXYS common stock, par value \$0.01 per share, owned immediately prior to the effective time was cancelled and extinguished and automatically converted into the right to receive: (i) \$23.00 in cash (subject to applicable withholding tax), without interest (referred to as the cash consideration), or (ii) 0.1265 of a share of common stock, par value \$0.01 per share, of Littelfuse (referred to as the stock consideration). IXYS stockholders received cash in lieu of any fractional shares of Littelfuse common stock that the IXYS stockholders would otherwise have been entitled to receive. Additionally, each outstanding option to purchase shares of IXYS common stock granted under an IXYS equity plan were assumed by Littelfuse and converted into an option to acquire (i) a number of shares of Littelfuse common stock equal to the number of shares of IXYS common stock subject to such option immediately prior to the effective time multiplied by 0.1265, rounded down to the nearest whole share, with (ii) an exercise price per share of Littelfuse common stock equal to the exercise price of such IXYS stock option immediately prior to the effective time divided by 0.1265, rounded up to the nearest whole cent.

Based on the \$207.5 per share opening price of Littelfuse common stock on January 17, 2018, the consideration IXYS stockholders received in exchange of their IXYS common stock in the acquisition had a value of \$814.8 million comprised of \$380.6 million of cash and \$434.2 million of Littelfuse stock. In addition to the consideration transferred related to IXYS common stock, the value of consideration transferred, and included in the purchase price, related to IXYS stock options that were converted to Littelfuse stock options, or cash settled, had a value of \$41.7 million. As a result, total consideration was valued at \$856.5 million.

The total purchase price of \$856.5 million has been allocated, on a preliminary basis, to assets acquired and liabilities assumed, as of the completion of the acquisition, based on preliminary estimated fair values. The purchase price allocation is preliminary because the evaluations necessary to assess the fair values of the net assets acquired are still in process. The primary areas that are not yet finalized relate to the completion of the valuations of certain acquired income tax assets and liabilities, including the impact of the adoption of the Tax Act. As a result, these allocations are subject to change during the purchase price allocation period as the valuations are finalized.

The following table summarizes the purchase price allocation of the fair value of assets acquired and liabilities assumed in the IXYS acquisition:

(in thousands)	Purchase Price
	Allocation
Total purchase consideration:	
Cash, net of cash acquired	\$ 302,865
Cash settled stock options	3,622
Littelfuse stock	434,192
Converted stock options	38,109
Total purchase consideration	\$778,788

Allocation of consideration to assets acquired and liabilities assumed:

Current assets, net	\$ 155,959
Property, plant, and equipment	77,442
Intangible assets	212,720
Goodwill	382,317
Other non-current assets	31,570
Other non-current liabilities	(81,220)
	\$778,788

Included in IXYS's current assets, net was approximately \$49.1 million of receivables. All IXYS goodwill, other assets and liabilities were recorded in the Electronics segment and primarily reflected in the Americas and European geographic areas. The goodwill resulting from this acquisition consists largely of the Company's expected future product sales and synergies from combining IXYS's products and technology with the Company's existing electronics product portfolio. Goodwill resulting from the IXYS acquisition is not expected to be deductible for tax purposes.

Included in the Company's Condensed Consolidated Statements of Net Income for the three and six months ended June 30, 2018 are net sales of approximately \$100.2 million and \$186.5 million, respectively and a loss before income taxes of \$13.9 million and \$31.7 million, respectively since the January 17, 2018 acquisition of IXYS. The Company recognized approximately \$1.6 million and \$7.5 million of stock compensation expense related to IXYS stock options converted to Littelfuse stock options during the three and six months ended June 30, 2018, of which \$4.5 million was recognized immediately as it related to prior services periods.

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As required by purchase accounting rules, the Company recorded a \$36.9 million step-up of inventory to its fair value as of the acquisition date based on the preliminary valuation. The step-up was amortized as a non-cash charge to cost of goods sold during the first and second quarters of 2018, as the acquired inventory was sold, and reflected as other non-segment costs. During the three and six months ended June 30, 2018, the Company recognized a charge of \$19.0 million and \$36.9 million, respectively, for the amortization of this fair value inventory step-up.

During the three and six months ended June 30, 2018, the Company incurred approximately \$0.8 million and \$11.0 million, respectively, of legal and professional fees related to this acquisition which were primarily recognized as *selling, general, and administrative expenses*. These costs were reflected as other non-segment costs.

2017 Acquisitions

U.S. Sensor

On July 7, 2017, the Company acquired the assets of U.S. Sensor Corporation ("U.S. Sensor"). The acquisition purchase price of \$24.3 million, net of the finalization of an income tax gross up which was settled in the fourth quarter of 2017, was funded with available cash. The acquired business expands the Company's existing sensor portfolio in several key electronics and industrial end markets. U.S. Sensor manufactures a variety of high quality negative temperature coefficient thermistors as well as thermistor probes and assemblies. Product lines also include thin film platinum resistance temperature detectors ("RTDs") and RTD assemblies.

The following table summarizes the purchase price allocation of the fair value of assets acquired and liabilities assumed in the U.S. Sensor acquisition:

(in thousands)	Purchase Price
	Allocation
Total purchase consideration:	
Cash	\$ 24,340
Allocation of consideration to assets acquired and liabilities assumed:	
Current assets, net	\$ 4,635
Patented and unpatented technologies	1,090
Trademarks and tradenames	200
Non-compete agreement	50
Customer relationships	2,830

Goodwill	16,075
Current liabilities	(540)
	\$ 24,340

Included in U.S. Sensor's current assets, net was approximately \$1.5 million of receivables. All U.S. Sensor goodwill, other assets and liabilities were recorded in the Electronics segment and reflected in the United States geographic area. The goodwill resulting from this acquisition consists largely of the Company's expected future product sales and synergies from combining U.S. Sensor's products and technology with the Company's existing electronics product portfolio. Goodwill for the above acquisition is expected to be deductible for tax purposes.

As required by purchase accounting rules, the Company recorded a \$1.6 million step-up of inventory to its fair value as of the acquisition date based on the preliminary valuation. The step-up was amortized as a non-cash charge to cost of goods sold during the third quarter of 2017, as the acquired inventory was sold, and reflected as other non-segment costs.

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Monolith

In December 2015, the Company invested \$3.5 million in the preferred stock of Monolith Semiconductor Inc. ("Monolith"), a U.S. start-up Company developing silicon carbide technology, which represented approximately 12% of the common stock of Monolith on an as-converted basis. The Company accounted for its investment in Monolith under the cost method with any changes in value recorded in other comprehensive income. The value of the Monolith investment was \$3.5 million at December 31, 2016.

On February 28, 2017, pursuant to a Securities Purchase Agreement between the Company and the stockholders of Monolith ("Securities Purchase Agreement") and conditioned on Monolith achieving a product development milestone and other provisions, the Company acquired 62% of the outstanding common stock of Monolith for \$15 million. The Securities Purchase Agreement includes provisions whereby the Company will acquire the remaining outstanding stock of Monolith ("non-controlling interest") at a time or times based on Monolith meeting certain technical and sales targets. During the first quarter of 2018, Monolith met the next set of technical and sales targets. As a result, and pursuant to the Securities Purchase Agreement, in April 2018 the Company acquired an additional 19% of the outstanding common stock of Monolith for \$5 million, of which \$4 million was paid to the stockholders of Monolith. Consideration for the purchase of the remaining 19% outstanding common stock will be either \$0.5 million or \$5 million, based on Monolith meeting the remaining technical and sales targets, and will be paid no later than June 30, 2019.

The additional investment, in the first quarter of 2017, resulted in the Company gaining control of Monolith and was accounted for as a step-acquisition with the fair value of the original investment immediately before the acquisition estimated to be approximately \$3.5 million. As the fair value of the investment immediately prior to the transaction equaled the carrying value, there was no impact on the Company's Consolidated Statements of Net Income. As the Securities Purchase Agreement includes an obligation of the Company to mandatorily redeem the non-controlling interest for cash, the fair value of the non-controlling interest was recognized as a liability on the Company's Consolidated Balance Sheets. The original investment of \$3.5 million, additional cash consideration of \$14.2 million (net of cash acquired), and the non-cash consideration of the fair value of the commitment to purchase the non-controlling interest of \$9.0 million resulted in a purchase price of \$26.7 million. Changes in the fair value of the non-controlling interest are recognized in the Company's Consolidated Statements of Net Income.

Commencing March 1, 2017, Monolith was reflected as a consolidated subsidiary within the Company's Consolidated Financial Statements. Had the acquisition occurred as of January 1, 2017, the impact on the Company's consolidated results of operations would not have been material.

The following table summarizes the purchase price allocation of the fair value of assets acquired and liabilities assumed in the Monolith acquisition:

(in thousands)	Purchase Price
	Allocation
Total purchase consideration:	
Original investment	\$ 3,500
Cash, net of cash acquired	14,172
Non-cash, fair value of commitment to purchase non-controlling interest	9,000
Total purchase consideration	\$ 26,672
Allocation of consideration to assets acquired and liabilities assumed:	
Current assets, net	\$ 891
Property, plant, and equipment	789
Patented and unpatented technologies	6,720
Non-compete agreement	140
Goodwill	20,641
Current liabilities	(639)
Other non-current liabilities	(1,870)
	\$ 26,672

Included in Monolith's current assets, net was approximately \$0.7 million of receivables. All Monolith goodwill, other assets and liabilities were recorded in the Electronics segment and reflected in the United States geographic area. The goodwill resulting from this acquisition consists largely of the Company's expected future product sales and synergies from combining Monolith's products and technology with the Company's existing electronics product portfolio. Goodwill for the above acquisition is not expected to be deductible for tax purposes.

Pro Forma Results

The following table summarizes, on a pro forma basis, the combined results of operations of the Company and IXYS as though the acquisition had occurred as of January 1, 2017. The Company has not included pro forma results of operations for U.S. Sensor or Monolith as these results were not material to the Company. The pro forma amounts presented are not necessarily indicative of either the actual consolidated results had the IXYS acquisition occurred as of January 1, 2017 or of future consolidated operating results.

	For the Three Months Ended July 1,
(in thousands, except per share amounts)	
	2017
Net sales	\$396,897
Income before income taxes	40,312
Net income	37,442
Net income per share — basic	1.50
Net income per share — diluted	1.48
-	

	For the Six Months	
	Ended	
	June 30,	July 1,
(in thousands, except per share amounts)		
	2018	2017

	2018	2017
Net sales	\$893,709	\$765,710
Income before income taxes	134,227	51,546
Net income	106,247	55,043
Net income — basic	4.26	2.21
Net income — diluted	4.22	2.18

Pro forma results presented above primarily reflect the following adjustments:

		For the S	ix Months
	Months Ended	Ended	
(in thousands)	July 1,	June 30,	July 1,

	2017	2018	2017
Amortization(a)	\$(6,305)	\$5,185	\$(12,601)
Depreciation	139	_	278
Transaction costs ^(b)	_	9,976	(9,976)
Amortization of			
inventory	(14,771)	36,927	(36,927)
step-up(c)			
Stock	(767)	4,689	(5,780)
compensation(d)	(707)	4,009	(3,760)
Interest	(2,582)		(5,164)
expense(e)	(2,362)	_	(3,104)
Income tax			
impact of above	7,596	(13,329)	22,896
items			

(a) The

amortization adjustment for the six months ended June 30, 2018 primarily reflects the reduction of amortization expense in the period related to the Order backlog intangible asset. The Order backlog has a useful life of twelve months and will be fully

amortized in

the fiscal

2017 pro

forma results.

The

amortization

adjustment

for the three

and six

months ended

July 1, 2017

reflects incremental amortization resulting for the measurement of intangibles at their fair values. The transaction cost adjustments reflect the reversal of certain bank and attorney (b) fees from the six months ended June 30, 2018 and recognition of those fees during the six months ended July 1, 2017.

The amortization of inventory step-up adjustment reflects the reversal of the amount recognized during the six months ended June 30, 2018 and the

- (c) the recognition of the full amortization during the six months end July 1, 2017. The inventory step-up was amortized over five months as the inventory
- the inventory is sold. (d) The stock compensation adjustment reflects the reversal of the portion of stock compensation for IXYS stock options that were converted to Littelfuse stock options and expensed immediately during the six months ended June 30, 2018. The

adjustment for the six months ended July 1, 2017 reflect the incremental stock compensation for the converted stock options. The interest expense adjustment reflects incremental interest (e) expense related to financing of the transaction.

3. Inventories

The components of inventories at June 30, 2018 and December 30, 2017 are as follows:

(in thousands)	June 30,	December 30,
()	2018	2017
Raw materials	\$65,607	\$39,030
Work in process	81,448	27,454
Finished goods	92,146	74,305
Total	\$239,201	\$140,789

4. Goodwill and Other Intangible Assets

The amounts for goodwill and changes in the carrying value by segment for the six months ended June 30, 2018 are as follows:

(in thousands)	Electronics	Automotive	Industrial	Total
As of December 30, 2017	\$ 278,959	\$ 135,829	\$ 38,626	\$453,414
Additions(a)	382,317	_		382,317
Currency translation	(1,558)	(1,748)	(198)	(3,504)
As of June 30, 2018	\$ 659,718	\$ 134,081	\$ 38,428	\$832,227
The additions				
(a) resulted				
from the acquisitio	n			
of IXYS.				

The components of other intangible assets at June 30, 2018 are as follows:

	Weighted	Gross		
(in thousands, except weighted average useful life)	Average	Carrying	Accumulated	Net Book
	Useful Life	Value	Amortization	Value
Patents, licenses and software	10.6	\$192,326	\$ 67,528	\$124,798
Distribution network	12.6	44,001	33,567	10,434
Customer relationships, trademarks, and tradenames	18.1	311,333	63,326	248,007
Order backlog Total	1.0	12,420 \$560,080	5,607 \$ 170,028	6,813 \$390,052

During the six months ended June 30, 2018, the Company recorded additions to other intangible assets of \$212.7 million, related to the IXYS acquisition, the components of which were as follows:

	Weighted		
(in thousands, except weighted average useful life)	Average		
	Useful Life	Amount	
Patents, licenses and software	8.0	\$51,500	
Customer relationships, trademarks, and tradenames	17.2	148,800	
Order backlog	1.0	12,420	

Total \$212,720

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During the three and six months ended June 30, 2018 and July 1, 2017, the Company recorded amortization expense of \$13.4 million and \$6.2 million and \$25.4 million and \$12.1 million, respectively for intangible assets with definite lives.

Estimated annual amortization expense related to intangible assets with definite lives as of June 30, 2018 is as follows:

	Amount
(in thousands)	
2018	\$53,440
2019	40,511
2020	40,240
2021	38,457
2022	37,456
2023 and thereafter	206,466
Total	\$416,570

5. Debt

The carrying amounts of debt at June 30, 2018 and December 30, 2017 are as follows:

(in thousands)	June 30,	December 30,
	2018	2017
Revolving Credit Facility	\$ —	\$—
Term Loan	157,500	122,500
Euro Senior Notes, Series A due 2023	135,335	139,623
Euro Senior Notes, Series B due 2028	109,887	113,369
U.S. Senior Notes, Series A due 2022	25,000	