HARMONIC INC
Form 10-Q
August 08, 2017
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-Q

(Mark One)
ýQuarterly report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the Quarterly Period Ended June 30, 2017

¨Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
Commission File No. 000-25826

HARMONIC INC.
(Exact name of registrant as specified in its charter)

Delaware	77-0201147
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

4300 North First Street
San Jose, CA 95134
(408) 542-2500
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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 ý No ¨
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ý 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” and “smaller reporting company” in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	¨		Accelerated filer	ý
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 ý
The number of shares of the registrant's Common Stock, $.001 par value, outstanding on July 31, 2017 was 81,272,292.

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PART I
FINANCIAL INFORMATION
ITEM 1. FINANCIAL STATEMENTS
HARMONIC INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited, in thousands, except per share data)

	June 30, 2017	December 31, 2016
ASSETS		
Current assets:		
Cash and cash equivalents	$52,885	$55,635
Short-term investments	—	6,923
Accounts receivable, net	60,427	86,765
Inventories	35,130	41,193
Prepaid expenses and other current assets	24,318	26,319
Total current assets	172,760	216,835
Property and equipment, net	31,624	32,164
Goodwill	240,570	237,279
Intangibles, net	25,317	29,231
Other long-term assets	37,745	38,560
Total assets	$508,016	$554,069
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Other debts and capital lease obligations, current	$7,130	$7,275
Accounts payable	31,322	28,892
Income taxes payable	1,349	1,166
Deferred revenue	55,165	52,414
Accrued and other current liabilities	50,272	55,150
Total current liabilities	145,238	144,897
Convertible notes, long-term	105,935	103,259
Other debts and capital lease obligations, long-term	9,292	13,915
Income taxes payable, long-term	2,996	2,926
Deferred tax liabilities, long-term	258	—
Other non-current liabilities	16,716	18,431
Total liabilities	280,435	283,428
Commitments and contingencies (Note 18)		
Stockholders' equity:		
Preferred stock, $0.001 par value, 5,000 shares authorized; no shares issued or outstanding	—	—
Common stock, $0.001 par value, 150,000 shares authorized; 80,669 and 78,456 shares issued and outstanding at June 30, 2017 and December 31, 2016, respectively	81	78
Additional paid-in capital	2,260,886	2,254,055
Accumulated deficit	(2,030,384)	(1,976,222)
Accumulated other comprehensive loss	(3,002)	(7,270)
Total stockholders' equity	227,581	270,641
Total liabilities and stockholders' equity	$508,016	$554,069

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

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HARMONIC INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited, in thousands, except per share data)

	Three months ended		Six months ended	
	June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Revenue:				
Product	$50,190	$77,413	$100,594	$135,057
Services	32,125	32,158	64,664	56,346
Total net revenue	82,315	109,571	165,258	191,403
Cost of revenue:				
Product	32,005	44,049	58,107	71,238
Services	16,495	14,482	32,928	28,471
Total cost of revenue	48,500	58,531	91,035	99,709
Total gross profit	33,815	51,040	74,223	91,694
Operating expenses:				
Research and development	27,055	26,507	51,937	50,070
Selling, general and administrative	32,625	36,516	67,256	69,386
Amortization of intangibles	780	4,232	1,554	6,597
Restructuring and related charges	777	1,903	2,056	4,515
Total operating expenses	61,237	69,158	122,803	130,568
Loss from operations	(27,422)	(18,118)	(48,580)	(38,874)
Interest expense, net	(2,680)	(2,651)	(5,270)	(5,072)
Other (expense) income, net	(819)	332	(1,330)	323
Loss on impairment of long-term investment	—	—	—	(1,476)
Loss before income taxes	(30,921)	(20,437)	(55,180)	(45,099)
Provision for income taxes	579	242	347	760
Net loss	$(31,500)	$(20,679)	$(55,527)	$(45,859)
Net loss per share:				
Basic and diluted	$(0.39)	$(0.27)	$(0.69)	$(0.59)
Shares used in per share calculation:				
Basic and diluted	80,590	77,342	80,203	77,168

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

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HARMONIC INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(Unaudited, in thousands)

	Three months ended		Six months ended	
	June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Net loss	$(31,500)	$(20,679)	$(55,527)	$(45,859)
Other comprehensive income (loss) before tax:				
Change in unrealized gain (loss) on cash flow hedges:				
Unrealized (loss) gain arising during the period	—	(165)	—	158
Loss reclassified into earnings	—	22	—	100
	—	(143)	—	258
Change in unrealized gain (loss) on available-for-sale securities:				
Unrealized (loss) gain arising during the period	(114)	(49)	(613)	30
Loss reclassified into earnings	—	—	—	1,476
	(114)	(49)	(613)	1,506
Change in foreign currency translation adjustments	3,994	(2,611)	4,883	(677)
Other comprehensive income (loss) before tax	3,880	(2,803)	4,270	1,087
Less: Provision for (benefit from) income taxes	—	5	2	23
Other comprehensive income (loss), net of tax	3,880	(2,808)	4,268	1,064
Total comprehensive loss	$(27,620)	$(23,487)	$(51,259)	$(44,795)

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

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HARMONIC INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited, in thousands)

	Six months ended	
	June 30, 2017	July 1, 2016
Cash flows from operating activities:		
Net loss	$(55,527)	$(45,859)
Adjustments to reconcile net loss to net cash used in operating activities:		
Amortization of intangibles	4,144	8,322
Depreciation	7,139	7,737
Stock-based compensation	7,387	5,862
Amortization of discount on convertible debt and issuance cost	2,676	2,417
Restructuring, asset impairment and loss on retirement of fixed assets	228	1,687
Amortization of non-cash warrant	416	—
Loss on impairment of long-term investment	—	1,476
Deferred income taxes, net	(38)	38
Provision for excess and obsolete inventories	5,094	5,203
Allowance for doubtful accounts and returns	3,274	697
Other non-cash adjustments, net	189	144
Changes in operating assets and liabilities, net of effects of acquisition:		
Accounts receivable	23,479	(16,000)
Inventories	2,912	3,158
Prepaid expenses and other assets	5,933	(4,148)
Accounts payable	1,434	2,168
Deferred revenue	1,308	25,956
Income taxes payable	228	(122)
Accrued and other liabilities	(7,662)	(7,029)
Net cash provided by (used in) operating activities	2,614	(8,293)
Cash flows from investing activities:		
Acquisition of business, net of cash acquired	—	(72,989)
Proceeds from maturities of investments	3,106	12,842
Proceeds from sales of investments	3,792	—
Purchases of property and equipment	(5,943)	(7,708)
Net cash provided by (used in) investing activities	955	(67,855)
Cash flows from financing activities:		
Payment of convertible debt issuance costs	—	(582)
Proceeds from other debts and capital leases	164	5,972
Repayment of other debts and capital leases	(6,650)	(6,524)
Proceeds from common stock issued to employees	2,117	3,737
Payment of tax withholding obligations related to net share settlements of restricted stock units	(2,726)	(1,034)
Net cash (used in) provided by financing activities	(7,095)	1,569
Effect of exchange rate changes on cash and cash equivalents	776	(95)
Net decrease in cash and cash equivalents	(2,750)	(74,674)
Cash and cash equivalents at beginning of period	55,635	126,190
Cash and cash equivalents at end of period	$52,885	$51,516

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

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HARMONIC INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

NOTE 1: BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES
Basis of Presentation
The accompanying unaudited condensed consolidated financial statements, in the opinion of management, include all adjustments (consisting only of normal recurring adjustments) which Harmonic Inc. ("Harmonic," or the "Company") considers necessary for a fair statement of the results of operations for the interim periods covered and the consolidated financial condition of the Company at the date of the balance sheets. This Quarterly Report on Form 10-Q should be read in conjunction with the Company's audited consolidated financial statements contained in the Company's Annual Report on Form 10-K, which was filed with the Securities and Exchange Commission on March 3, 2017 (the "2016 Form 10-K"). The interim results presented herein are not necessarily indicative of the results of operations that may be expected for the full fiscal year ending December 31, 2017, or any other future period. The Company's fiscal quarters are based on 13-week periods, except for the fourth quarter, which ends on December 31.
The condensed consolidated financial statements include the accounts of the Company and its subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation. The year-end condensed balance sheet was derived from audited financial statements, but does not include all disclosures required by accounting principles generally accepted in the United States of America ("U.S. GAAP").
On February 29, 2016, the Company completed the acquisition of Thomson Video Networks ("TVN"). TVN is now a part of the Company's Video segment and its results of operations are included in the Company's Condensed Consolidated Statements of Operations beginning March 1, 2016. During the fourth quarter of 2016, the Company completed the accounting for this business combination.

Use of Estimates
The preparation of the condensed consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.
Significant Accounting Policies

The Company's significant accounting policies are described in Note 2 to its audited Consolidated Financial Statements included in the 2016 Form 10-K. There have been no significant changes to these policies during the six months ended June 30, 2017 other than those disclosed in Note 2, "Standards Implemented".

NOTE 2: RECENT ACCOUNTING PRONOUNCEMENTS
New standards to be implemented

In May 2014, the Financial Accounting Standards Board ("FASB") issued a new standard, Accounting Standards Update ("ASU") No. 2014-09, Revenue from Contracts with Customers, as amended, which will supersede nearly all existing revenue recognition guidance. Under ASU 2014-09, an entity is required to recognize revenue upon transfer of promised goods or services to customers in an amount that reflects the expected consideration received in exchange for those goods or services. ASU No. 2014-09 defines a five-step process in order to achieve this core principle, which may require the use of judgment and estimates, and also requires expanded qualitative and quantitative disclosures relating to the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers, including significant judgments and estimates used.

The FASB has issued several amendments to the new standard, including clarification on accounting for licenses of intellectual property and identifying performance obligations. The amendments include ASU No. 2016-08, Revenue

from Contracts with Customers (Topic 606)-Principal versus Agent Considerations, which was issued in March 2016, and clarifies the implementation guidance for principal versus agent considerations in ASU 2014-09, and ASU No. 2016-10, Revenue from Contracts with Customers (Topic 606)-Identifying Performance Obligations and Licensing, which was issued in April 2016, and amends the guidance in ASU No. 2014-09 related to identifying performance obligations and accounting for licenses of

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intellectual property. The new standard permits adoption either by using (i) a full retrospective approach for all periods presented in the period of adoption or (ii) a modified retrospective approach with the cumulative effect of initially applying the new standard recognized at the date of initial application and providing certain additional disclosures. The new standard is effective for annual reporting periods beginning after December 15, 2017, with early adoption permitted for annual reporting periods beginning after December 15, 2016. The Company does not plan to early adopt, and accordingly, it will adopt the new standard effective January 1, 2018.

The Company currently plans to adopt using the modified retrospective approach. However, a decision regarding the adoption method has not been finalized at this time. The Company’s final determination will depend on a number of factors, such as the significance of the impact of the new standard on its financial results, system readiness, including that of software procured from third-party providers, and its ability to accumulate and analyze the information necessary to assess the impact on prior period financial statements, as necessary.

The Company is in the initial stages of its evaluation of the impact of the new standard on its accounting policies, processes, and system requirements. The Company has made and will continue to make investments in systems to enable timely and accurate reporting under the new standard. While the Company continues to assess all potential impacts under the new standard, there is the potential for significant impacts to the timing of recognition of software licenses with undelivered features and professional services revenue related to service contracts with acceptance terms as well as contract acquisition costs, both with respect to the amounts that will be capitalized as well as the period of amortization.

Under current industry-specific software revenue recognition guidance, the Company has historically concluded that it did not have vendor-specific objective evidence (“VSOE”) of fair value of the undelivered features relating to delivered software licenses, and accordingly, it has deferred entire revenue for such software licenses until the delivery of features. Professional services included in arrangements with acceptances have also been recognized on receipt of acceptance. The new standard, which does not retain the concept of VSOE, requires an evaluation of whether the undelivered features are distinct performance obligations and, therefore, should be separately recognized when delivered compared to the timing of delivery of software license. Professional services will generally be recorded as services are provided. Depending on the outcome of the Company’s evaluation, the timing of when revenue is recognized could change for future features and professional services under the new standard.

As part of the Company’s preliminary evaluation, it has also considered the impact of the guidance in ASC 340-40, Other Assets and Deferred Costs; Contracts with Customers, and the interpretations of the FASB Transition Resource Group for Revenue Recognition (“TRG”) from their November 7, 2016 meeting with respect to capitalization and amortization of incremental costs of obtaining a contract. As a result of this new guidance, the Company is currently assessing if it will need to capitalize any costs of obtaining the contract, including additional sales commissions. Under the Company’s current accounting policy, it expenses the commission costs immediately as incurred.

While the Company continues to assess the potential impacts of the new standard, including the areas described above, the Company does not know or cannot reasonably estimate quantitative information related to the impact of the new standard on its financial statements at this time.

In January 2016, the FASB issued an accounting standard update which requires equity investments to be measured at fair value with changes in fair value recognized in net income and simplifies the impairment assessment of equity investments without readily determinable fair values by requiring a qualitative assessment to identify impairment. The accounting standard update also updates certain presentation and disclosure requirements. This accounting standard update will be effective for the Company beginning in the first quarter of fiscal 2018 and early adoption is permitted. The Company is currently evaluating the impact of this accounting standard update on its consolidated financial statements.

In February 2016, the FASB amended the existing accounting standard for lease accounting. Under this guidance, lessees and lessors should apply a “right-of-use” model in accounting for all leases (including subleases) and eliminate the concept of operating leases and off-balance sheet leases. This new leases standard requires a modified retrospective transition approach for all leases existing at, or entered into after, the date of initial application, with an option to use certain transition relief. The new standard will be effective for the Company beginning in the first quarter of fiscal 2019 and early adoption is permitted. The Company is currently evaluating the methods and impact of adopting this new leases standard on its consolidated financial statements.

In June 2016, the FASB issued new guidance that changes the impairment model for most financial assets and certain other instruments. For trade receivables and other instruments, the Company will be required to use a new forward-looking “expected loss” model. Additionally, credit losses on available-for-sale debt securities should be recorded through an allowance for credit

losses limited to the amount by which fair value is below amortized cost. The new guidance will be effective for the Company beginning in the first quarter of fiscal 2019 and early adoption is permitted. The Company is currently evaluating the impact of adopting this new accounting guidance on its consolidated financial statements.

In August 2016, the FASB issued an accounting standard update that addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice. This accounting standard update will be effective for the Company beginning in the first quarter of fiscal 2018 and early adoption is permitted. The Company is currently evaluating the methods and impact of adopting the new accounting standard on its consolidated financial statements.

In November 2016, the FASB issued an accounting standard update which requires companies to include restricted cash and restricted cash equivalents in its cash and cash equivalent balances in the statement of cash flows. Transfers between cash, cash equivalents, restricted cash, and restricted cash equivalents are no longer presented in the statement of cash flows. The new guidance requires a reconciliation of the totals in the statement of cash flows to the related captions. This accounting standard update will be effective for the Company beginning in the first quarter of fiscal 2018 and early adoption is permitted. The adoption of this new guidance is not expected to have a material impact on the Company’s consolidated financial statements.

In January 2017, the FASB issued an accounting standard update to simplify the test for goodwill impairment. It removes Step 2 of the goodwill impairment test and requires the assessment of fair value of individual assets and liabilities of a reporting unit to measure goodwill impairments. Goodwill impairment will now be the amount by which a reporting unit's carrying value exceeds its fair value. The accounting standard update will be effective for the Company beginning in the first quarter of fiscal 2020 on a prospective basis, and early adoption is permitted. The Company is currently evaluating the impact of adopting this new accounting guidance on its consolidated financial statements.

In March 2017, the FASB issued a new accounting standard to improve the presentation of net periodic pension cost and net periodic post-retirement benefit cost. This new standard will be effective for the Company beginning in the first quarter of fiscal 2018 and early adoption is permitted. The Company is currently evaluating the impact of adopting this new accounting guidance on its consolidated financial statements.

In May 2017, the FASB issued a new accounting standard to clarify when to account for a change to the terms or conditions for a share-based payment award as a modification. It requires modification accounting only if the fair value, the vesting condition or the classification of the award changes as a result of the change in terms or conditions. This new standard will be effective for the Company beginning in the first quarter of fiscal 2018 and early adoption is permitted. The Company is currently evaluating the impact of adopting this new accounting guidance on its consolidated financial statements.

Standards Implemented

In February 2015, the FASB issued an accounting standard update that changes the analysis that a reporting entity must perform to determine whether it should consolidate certain types of legal entities. The accounting standard update became effective for the Company beginning in the first quarter of fiscal 2017. The application of this accounting standard update did not have any impact on the Company's Consolidated Balance Sheet or Statement of Operations upon adoption.

In July 2015, the FASB issued an accounting standard update that requires inventory to be measured at the lower of cost and net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. The Company adopted this accounting standard update beginning in the first quarter of fiscal 2017 and the adoption did not have a material impact on its

consolidated financial statements.

In March 2016, the FASB issued an accounting standard update to clarify the requirements for assessing whether contingent call (put) options that can accelerate the payment of principal on debt instruments are clearly and closely related to their debt hosts. An entity performing the assessment under the amendments is required to assess the embedded call (put) options solely in accordance with the four-step decision sequence. The Company adopted this accounting standard update beginning in the first quarter of fiscal 2017 and the adoption did not have any impact on its consolidated financial statements.

In March 2016, the FASB issued an accounting standard update for the accounting of share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities and classification on the statement of cash flows. The new standard eliminated the requirement to report excess tax benefits and certain tax deficiencies related to share-based payment transactions as additional paid-in capital. It also removes the requirement to delay recognition of a windfall tax benefit until it reduces current taxes payable. Under the new guidance, the benefit will be recorded when it arises, subject to normal valuation allowance considerations. The Company adopted this new accounting standard beginning in the first quarter of fiscal 2017 using a modified-retrospective transition method and recorded a cumulative effect of $4.6 million of

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additional gross deferred tax asset associated with shared-based payment and an offsetting valuation allowance of the same amount, therefore resulting in no net impact to the Company's beginning retained earnings. Prior to January 1, 2017, stock-based compensation expense was recorded net of estimated forfeitures in the Company's condensed consolidated statements of operations and, accordingly, was recorded for only those stock-based awards that the Company expected to vest. Upon the adoption of this accounting standard update, effective January 1, 2017, the Company changed its accounting policy to account for forfeitures as they occur. The change was applied on a modified retrospective approach with a cumulative effect adjustment of $69,000 to retained earnings as of January 1, 2017 (which increased the accumulated deficit). The implementation of this accounting standard update has no impact to the Company's condensed statement of cash flows because the Company does not have any excess tax benefits from share-based compensation because its tax provision is primarily under full valuation allowance. No prior periods were recast as a result of this change in accounting policy.

In October 2016, the FASB issued an accounting standard update which requires companies to recognize the income tax consequences of all intra-entity sales of assets other than inventory when they occur. As a result, a reporting entity would recognize the tax expense from the sale of the asset in the seller's tax jurisdiction when the transfer occurs, even though the pre-tax effects of that transaction are eliminated in consolidation. Any deferred tax asset that arises in the buyer's jurisdiction would also be recognized at the time of the transfer. The Company early adopted this accounting standard update during the first quarter of fiscal 2017 on a modified retrospective approach and recorded a cumulative-effect adjustment of $1.4 million to the retained earnings as of January 1, 2017 (which reduced the accumulated deficit). Correspondingly, in the first quarter of fiscal 2017, the Company recognized an additional $1.1 million of net deferred tax assets, after netting with $2.1 million of valuation allowance, and write off the remaining $0.3 million of unamortized tax expenses deferred under the previous guidance to provision for income taxes in the first quarter of fiscal 2017.

In January 2017, the FASB issued an accounting standard update to clarify the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The definition of a business affects many areas of accounting including acquisitions, disposals, goodwill and consolidation. The guidance will be effective for the Company beginning in the first quarter of fiscal 2018 on a prospective basis, and early adoption is permitted. The adoption of this new guidance is not expected to have a material impact on the Company's consolidated financial statements.

NOTE 3: BUSINESS ACQUISITION

On February 29, 2016, the Company, through its wholly-owned subsidiary Harmonic International AG, completed its acquisition of 100% of the share capital and voting rights of TVN, a global leader in advanced video compression solutions headquartered in Rennes, France, for a final purchase price of $82.5 million in cash. The Company believes that its acquisition of TVN has strengthened, and will continue to strengthen, the Company's competitive position in the video infrastructure market as well as to enhance the depth and scale of the Company's research and development and service and support capabilities in the video arena.

During the fourth quarter of 2016, the Company completed the accounting for this business combination. The final TVN purchase price has been allocated to tangible and intangible assets acquired and liabilities assumed on the basis of their respective estimated fair values on the acquisition date. The Company's allocation of TVN purchase consideration is as follows (in thousands):

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Assets:	
Cash and cash equivalents	$6,843
Accounts receivable, net	14,933
Inventories	3,462
Prepaid expenses and other current assets	2,412
Property and equipment, net	9,942
French R&D tax credit receivables (1)	26,421
Other long-term assets	2,134
Total assets	$66,147
Liabilities:	
Other debts and capital lease obligations, current	8,362
Accounts payable	12,494
Deferred revenue	2,504
Accrued and other current liabilities	18,365
Other debts and capital lease obligations, long-term	16,087
Other non-current liabilities	6,467
Deferred tax liabilities	2,126
Total liabilities	$66,405
Goodwill	41,670
Intangibles	41,100
Total purchase consideration	$82,512

(1) See Note 8, "Balance Sheet Components-Prepaid expenses and other current assets" for more information on French R&D tax credit receivables.

The following table presents details of the intangible assets acquired through this business combination (in thousands, except years):

	Estimated Useful Life (in years)	Fair Value
Backlog	6 months	$3,600
Developed technology	4 years	21,700
Customer relationships	5 years	15,200
Trade name	4 years	600
		$41,100

The goodwill is not expected to be deductible for income tax purposes but the intangibles assets acquired are expected to be deductible for income tax purposes in certain jurisdictions. Both goodwill and intangibles assets acquired are assigned to the Company's video reporting unit.

Acquisition- and integration-related expenses

As a result of the TVN acquisition, the Company incurred acquisition-and integration-related expenses and the amounts are summarized in the table below (in thousands):

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	Acquisition-related		Integration-related			
	Three months ended	Six months ended	Three months ended		Six months ended	
	July 1, 2016		June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Product cost of revenue	$ —	$ —	$—	$433	$342	$491
Research and development	—	—	—	500	7	550
Selling, general and administrative	885	3,321	467	1,585	2,268	2,137
Total acquisition- and integration-related expenses	$ 885	$ 3,321	$467	$2,518	$2,617	$3,178

These costs consisted of acquisition-related costs which include outside legal, accounting and other professional services as well as integration-related costs which include incremental costs resulting from the TVN acquisition that are not expected to generate future benefits once the integration is fully consummated. These costs are expensed as incurred. The Company expects to continue to have some TVN integration-related costs throughout the remainder of 2017, primarily outside legal and advisory fees relating to re-organization of TVN's legal entities.

Pro Forma Financial Information

The following unaudited pro forma summary presents consolidated information of the Company as if the acquisition of TVN had occurred on January 1, 2015, the beginning of the comparable prior annual period. The unaudited pro forma combined results are provided for illustrative purpose only and are not indicative of the Company's actual consolidation results.

The pro forma adjustments primarily relate to the amortization of acquired intangibles and interest expense related to financing arrangements. In addition, the unaudited pro forma net loss for the three and six months ended July 1, 2016 was adjusted to exclude $6.5 million of acquisition- and integration- related expenses, respectively. These adjustments exclude the income tax impact.

	Six months ended July 1, 2016
(in millions, except per share amounts)	
Net revenue	$200.1
Net loss	(40.3)
Net loss per share-basic and diluted	$(0.52)

NOTE 4: SHORT-TERM INVESTMENTS

As of June 30, 2017, the Company has no short-term investments. The following table summarizes the Company's short-term investments as of December 31, 2016 (in thousands):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
As of December 31, 2016				

Corporate bonds	$ 6,928	$ —	$ (5)	$ 6,923
Total short-term investments	$ 6,928	$ —	$ (5)	$ 6,923

The Company’s short-term investments as of December 31, 2016 had maturities of less than one year. These available-for-sale investments are presented as “Current Assets” in the Condensed Consolidated Balance Sheets as they were available for current operations. Realized gains and losses from the sale of investments were not material for the three and six months ended June 30, 2017 and July 1, 2016.

The Company’s investments in equity securities of other privately and publicly held companies were $3.8 million and $4.4 million as of June 30, 2017 and December 31, 2016, respectively, and such investments were considered as long-term investments and

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were included in “Other long-term assets” in the Condensed Consolidated Balance Sheet. (See Note 5, “Investments in Other Equity Securities” for additional information).

NOTE 5: INVESTMENTS IN OTHER EQUITY SECURITIES

From time to time, the Company may acquire certain equity investments for the promotion of business objectives and these investments are classified as long-term investments and included in “Other long-term assets” in the Condensed Consolidated Balance Sheet.

In 2014, the Company acquired a 3.3% interest in Vislink plc (“Vislink”), a U.K. public company listed on the AIM exchange in London, for $3.3 million. The investment in Vislink is being accounted for as a cost method investment as the Company does not have significant influence over the operational and financial policies of Vislink. Since the Vislink investment is also an available-for-sale security, its value is marked to market for the difference in fair value at period end. The carrying value of Vislink was $0.2 million and $0.8 million at June 30, 2017 and December 31, 2016, respectively. Vislink’s accumulated unrealized (loss) gain, net of taxes was $(0.3) million and $0.3 million at June 30, 2017 and December 31, 2016, respectively.

Beginning in late 2015 and continuing through 2016, Vislink’s stock price was below the Company’s cost basis for a prolonged period of time and based on the Company’s assessment, impairment charges of $1.5 million and $1.2 million for Vislink were recorded in the first and third quarter of 2016, respectively, reflecting the new reduced cost basis of the Vislink investment at September 30, 2016. As of December 31, 2016, Vislink’s stock price increased approximately 67% from the stock price as of September 30, 2016.

On February 3, 2017, Vislink (from thereon, referred to as Pebble Beach Systems) completed their disposal of its hardware division and changed its name to Pebble Beach Systems. On February 6, 2017, Pebble Beach Systems announced its financial results for fiscal 2016 which showed a significant increase in operating losses. As of June 30, 2017, Pebble Beach Systems’ stock price had declined 83% from the stock price as of December 31, 2016 and Pebble Beach System is currently seeking alternatives to maximize value for its shareholders, which could include a sale of the company. In view of Pebble Beach Systems’ potential sale opportunity, the Company determined that the decline in the fair value of Pebble Beach Systems’ investment is not considered permanent yet, and as a result, the $0.1 million loss in Vislink’s investment in the second quarter of 2017 was recorded to other comprehensive loss. The Company’s remaining maximum exposure to loss from the Pebble Beach Systems’ investment at June 30, 2017 was approximately $0.5 million, consisting of the carrying value of $0.2 million and the accumulated unrealized loss of $(0.3) million.

The assessment as to the nature of a decline in fair value is based on, among other things, the length of time and the extent to which the market value has been less than the Company’s cost basis; the financial condition and near-term prospects of the investment; and the Company’s intent and ability to retain the investment for a period of time sufficient to allow for any anticipated recovery in market value.

Unconsolidated Variable Interest Entities (“VIE”)

In 2014, the Company acquired an 18.4% interest in Encoding.com, Inc. (“EDC”), a video transcoding service company headquartered in San Francisco, California, for $3.5 million by purchasing EDC’s Series B preferred stock. EDC is considered a variable interest entity but the Company determined that it is not the primary beneficiary of EDC. As a result, EDC is accounted for as a cost method investment.

The Company determined that there were no indicators existing at June 30, 2017 that would indicate that the EDC investment was impaired. The Company’s maximum exposure to loss from the EDC’s investment at June 30, 2017 was limited to its investment cost of $3.6 million, including $0.1 million of transaction costs.

NOTE 6: DERIVATIVES AND HEDGING ACTIVITIES

The Company uses forward contracts to manage exposures to foreign currency exchange rates. The Company's primary objective in holding derivative instruments is to reduce the volatility of earnings and cash flows associated with fluctuations in foreign currency exchange rates and the Company does not use derivative instruments for trading purposes. The use of derivative instruments expose the Company to credit risk to the extent that the counterparties may be unable to meet their contractual obligations, as such, the potential risk of loss with any one counterparty is closely monitored by the Company.

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Derivatives Not Designated as Hedging Instruments (Balance Sheet Hedges)

The Company's balance sheet hedges consist of foreign currency forward contracts, mature generally within three months, are carried at fair value and are used to minimize the short-term impact of foreign currency exchange rate fluctuation on cash and certain trade and inter-company receivables and payables. Changes in the fair value of these foreign currency forward contracts are recognized in "Other expense, net" in the Condensed Consolidated Statement of Operations and are largely offset by the changes in the fair value of the assets or liabilities being hedged.

The locations and amounts of designated and non-designated derivative instruments' gains and losses reported in the Company's Accumulated Other Comprehensive Loss ("AOCI") and Condensed Consolidated Statements of Operations were as follows (in thousands):

	Financial Statement Location	Three months ended June 30, 2017	Three months ended July 1, 2016	Six months ended June 30, 2017	Six months ended July 1, 2016
Derivatives designated as hedging instruments:					
Loss in AOCI on derivatives (effective portion)	AOCI	$—	$(165)	$—	$158
Loss reclassified from AOCI into income (effective portion)	Cost of Revenue	$—	$(3)	$—	$(13)
	Operating Expense	—	(19)	—	(87)
	Total	$—	$(22)	$—	$(100)
Losses recognized in income on derivatives (ineffectiveness portion and amount excluded from effectiveness testing)	Other expense, net	$—	$(22)	$—	$(49)
Derivatives not designated as hedging instruments:					
Loss recognized in income	Other expense, net	$(53)	$(50)	$(185)	$(334)

The U.S. dollar equivalents of all outstanding notional amounts of foreign currency forward contracts are summarized as follows (in thousands):

	June 30, 2017	December 31, 2016
Derivatives not designated as hedging instruments:		
Purchase	$9,911	$4,056
Sell	$5,970	$11,157

The locations and fair value amounts of the Company's derivative instruments reported in its Condensed Consolidated Balance Sheets are as follows (in thousands):

	Balance Sheet Location	Asset Derivatives June 30, 2017	Asset Derivatives December 31, 2016	Balance Sheet Location	Derivative Liabilities June 30, 2017	Derivative Liabilities December 31, 2016
Derivatives not designated as hedging instruments:						
Foreign currency contracts	Prepaid expenses and other current assets	$118	$54	Accrued Liabilities	$64	$40
Total derivatives		$118	$54		$64	$40

Offsetting of Derivative Assets and Liabilities

The Company recognizes all derivative instruments on a gross basis in the Condensed Consolidated Balance Sheets. However, the arrangements with its counterparties allows for net settlement, which are designed to reduce credit risk by permitting net settlement with the same counterparty. As of June 30, 2017, information related to the offsetting arrangements was as follows (in thousands):

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	Gross Amounts of Derivatives	Gross Amounts of Derivatives Offset in the Condensed Consolidated Balance Sheets	Net Amounts of Derivatives Presented in the Condensed Consolidated Balance Sheets	Gross Amounts of Derivatives Not Offset in the Condensed Consolidated Balance Sheets		
				Financial Instrument	Cash Collateral Pledged	Net Amount
Derivative Assets	$ 118	—	$ 118	$ (11)	—	$ 107
Derivative Liabilities	$ 64	—	$ 64	$ (11)	—	$ 53

In connection with foreign currency derivatives entered in Israel, the Company's subsidiaries in Israel are required to maintain a compensating balance with their bank at the end of each month. The compensating balance arrangements do not legally restrict the use of cash and as of June 30, 2017, the total compensating balance maintained was $2.5 million.

NOTE 7: FAIR VALUE MEASUREMENTS

The applicable accounting guidance establishes a framework for measuring fair value and requires disclosure about the fair value measurements of assets and liabilities. This guidance requires the Company to classify and disclose assets and liabilities measured at fair value on a recurring basis, as well as fair value measurements of assets and liabilities measured on a nonrecurring basis in periods subsequent to initial measurement, in a three-tier fair value hierarchy as described below.

The guidance defines fair value as the exchange price that would be received for an asset or paid to transfer a liability, in the principal or most advantageous market for the asset or liability, in an orderly transaction between market participants on the measurement date.

Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. The guidance describes three levels of inputs that may be used to measure fair value:

- Level 1 — Observable inputs that reflect quoted prices for identical assets or liabilities in active markets.
- Level 2 — Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. The Company primarily uses broker quotes for valuation of its short-term investments. The forward exchange contracts are classified as Level 2 because they are valued using quoted market prices and other observable data for similar instruments in an active market.
- Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The carrying value of the Company's financial instruments, including cash equivalents, restricted cash, accounts receivable, accounts payable and accrued and other current liabilities, approximate fair value due to their short maturities.

The Company uses the market approach to measure fair value for its financial assets and liabilities. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities. The fair value of the Company's convertible notes is influenced by interest rates, the Company's stock price and stock market volatility. The estimated fair value of the Company's convertible notes based on a market approach was approximately $147.9 million and $143.5 million as of June 30, 2017 and December 31,

2016, respectively, and represents a Level 2 valuation. The Company's other debts and capital leases assumed from the TVN acquisition are classified within Level 2 because these borrowings are not actively traded and the majority of them have a variable interest rate structure based upon market rates currently available to the Company for debt with similar terms and maturities. Additionally, the Company considers the carrying amount of its capital lease obligations to approximate their fair value because the weighted average interest rate used to formulate the carrying amounts approximates current market rates. The other debts and capital leases outstanding as of June 30, 2017 were $16.4 million in the aggregate. (See Note 11, "Convertible Notes, Other debts and Capital Leases" for additional information). The fair value of the Company's liability for the TVN voluntary departure plan ("TVN VDP") as of June 30, 2017 of $7.2 million is classified within Level 3 because discount rates which are unobservable in the market were being used to measure the fair value of this liability. (See Note 10, "Restructuring and related Charges-TVN VDP" for additional information). The

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fair value of the TVN defined pension benefit plan liability of $4.8 million as of June 30, 2017 is disclosed in Note 12, “Employee Benefit Plans and Stock-based Compensation-TVN Retirement Benefit Plan.”
During the six months ended June 30, 2017, there were no nonrecurring fair value measurements of assets and liabilities subsequent to initial recognition.
The following table sets forth the fair value of the Company’s financial assets and liabilities measured at fair value on a recurring basis based on the three-tier fair value hierarchy (in thousands):

	Level 1	Level 2	Level 3	Total
As of June 30, 2017				
Cash equivalents				
Money market funds	$246	$—	$—	$246
Prepaids and other current assets				
Derivative assets	—	118	—	118
Other assets				
Long-term investment	192	—	—	192
Total assets measured and recorded at fair value	$438	$118	$—	$556
Accrued and other current liabilities				
Derivative liabilities	$—	$64	$—	$64
Accrued TVN VDP, current portion	—	—	3,915	3,915
Other non-current liabilities				
Accrued TVN VDP, long-term portion	—	—	3,247	3,247
Total liabilities measured and recorded at fair value	$—	$64	$7,162	$7,226

	Level 1	Level 2	Level 3	Total
As of December 31, 2016				
Cash equivalents				
Money market funds	$8,301	$—	$—	$8,301
Corporate bonds	—	6,923	—	6,923
Prepaids and other current assets				
Derivative assets	—	54	—	54
Other assets				
Long-term investment	809	—	—	809
Total assets measured and recorded at fair value	$9,110	$6,977	$—	$16,087
Accrued and other current liabilities				
Derivative liabilities	$—	$40	$—	$40
Accrued TVN VDP, current portion	—	—	6,597	6,597
Other non-current liabilities				
Accrued TVN VDP, long-term portion	—	—	3,053	3,053
Total liabilities measured and recorded at fair value	$—	$40	$9,650	$9,690

NOTE 8: BALANCE SHEET COMPONENTS

The following tables provide details of selected balance sheet components (in thousands):

	June 30, 2017	December 31, 2016
Accounts receivable, net:		
Accounts receivable	$66,892	$91,596
Less: allowances for doubtful accounts, returns and discounts	(6,465)	(4,831)
Total	$60,427	$86,765

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	June 30, 2017	December 31, 2016
Prepaid expenses and other current assets:		
Deferred cost of revenue	$5,615	$ 6,856
French R&D tax credits receivable[1]	6,277	5,895
Prepaid maintenance, royalty, rent, property taxes and value added tax	6,574	5,526
Prepaid customer incentive[2]	746	1,162
Restricted cash[3]	802	731
Other	4,304	6,149
Total	$24,318	$ 26,319

(1) The Company's acquired TVN subsidiary in France (the "TVN French Subsidiary") participates in the French Crédit d'Impôt Recherche ("CIR") program (the "R&D tax credits") which allows companies to monetize eligible research expenses. The R&D tax credits can be used to offset against income tax payable to the French government in each of the four years after being incurred, or if not utilized, are recoverable in cash. The amount of R&D tax credits recoverable are subject to audit by the French government. The R&D tax credit receivables at June 30, 2017 were approximately $24.3 million and are expected to be recoverable from 2018 through 2021 with $6.3 million reported under "Prepaid and other Current Assets" and $18.0 million reported under "Other Long-term Assets" on the Company's Condensed Consolidated Balance Sheets.
(2) On September 26, 2016, the Company issued a warrant to purchase shares of its common stock (the "Warrant") to Comcast pursuant to which Comcast may, subject to certain vesting provisions, purchase up to 7,816,162 shares of the Company's common stock subject to adjustment in accordance with the terms of the Warrant, for a per share exercise price of $4.76. The portion of the Warrant which vested on September 26, 2016 had a value of approximately $1.6 million and is deemed a customer incentive paid upfront and cumulatively, $0.9 million of this prepaid incentive has been recorded as a reduction to the Company's net revenues from Comcast. The remaining $0.7 million of this prepaid incentive is reported as an asset under "Prepaid expenses and other current assets" on the Company's Condensed Consolidated Balance Sheet as of June 30, 2017. The Company considers this asset to be recoverable based on the expectation of Comcast's future purchases of the pertinent products.
(3) The restricted cash balances are held as cash collateral security for certain bank guarantees. These restricted funds are invested in bank deposits and cannot be withdrawn from the Company's accounts without the prior written consent of the applicable secured party. Additionally, as of June 30, 2017, the Company recorded approximately $1.1 million of restricted cash for the bank guarantee associated with the TVN French Subsidiary's office building lease. This amount is reported under "Other Long-term Assets" on the Company's Condensed Consolidated Balance Sheets.

	June 30, 2017	December 31, 2016
Inventories:		
Raw materials	$9,179	$ 9,889
Work-in-process	1,789	2,318
Finished goods	11,643	17,776
Service-related spares	12,519	11,210
Total	$35,130	$ 41,193

	June 30, 2017	December 31, 2016
Property and equipment, net:		
Machinery and equipment	$86,841	$97,989
Capitalized software	32,639	34,519
Leasehold improvements	14,406	14,455

Furniture and fixtures	6,780	8,993
Property and equipment, gross	140,666	155,956
Less: accumulated depreciation and amortization	(109,042)	(123,792)
Total	$31,624	$32,164

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	June 30, 2017	December 31, 2016
Accrued Liabilities:		
Accrued employee compensation and related expenses	$17,671	$ 19,377
Accrued TVN VDP, current [1]	3,915	6,597
Accrued warranty	4,142	4,862
Customer deposits	3,848	4,537
Contingent inventory reserves	3,671	2,210
Accrued royalty payments	2,797	1,912
Others	14,228	15,655
Total	$50,272	$ 55,150

(1) See Note 10, “Restructuring and related charges-TVN VDP,” for additional information on the Company’s TVN VDP liabilities.

NOTE 9: GOODWILL AND IDENTIFIED INTANGIBLE ASSETS

Goodwill

Goodwill represents the difference between the purchase price and the estimated fair value of the identifiable assets acquired and liabilities assumed. Goodwill is allocated among and evaluated for impairment at the reporting unit level, which is defined as an operating segment or one level below an operating segment. The Company has two reporting units, Video and Cable Edge. The Company tests for goodwill impairment at the reporting unit level on an annual basis, or more frequently, if events or changes in circumstances indicate that the asset is more likely than not impaired. The Company’s annual goodwill impairment test is performed in the fiscal fourth quarter, with a testing date at the end of October.

During 2016, the Company recorded goodwill of $41.7 million for the TVN acquisition. Goodwill from the TVN acquisition is assigned to the Video reporting unit.

The changes in the carrying amount of goodwill by reportable segments for the six months ended June 30, 2017 were as follows (in thousands):

	Video	Cable Edge	Total
Balance as of December 31, 2016	$176,519	$60,760	$237,279
Foreign currency translation adjustment	3,261	30	3,291
Balance as of June 30, 2017	$179,780	$60,790	$240,570

Application of the goodwill impairment test requires judgment, including the identification of reporting units, assigning assets and liabilities to reporting units, assigning goodwill to reporting units, and determining the fair value of each reporting unit. Significant judgments required to estimate the fair value of reporting units include estimating future cash flows and determining appropriate discount rates, growth rates, an appropriate control premium and other assumptions. Changes in these estimates and assumptions could materially affect the determination of fair value for each reporting unit which could trigger impairment. If the Company’s assumptions and related estimates change in the future, or if the Company’s reporting structure changes or other events and circumstances change (e.g. such as a sustained decrease in the Company’s stock price), the Company may be required to record impairment charges in future periods. Any impairment charges that the Company may take in the future could be material to its results of operations and financial condition.

The Company performed its annual goodwill impairment review at October 31, 2016. Based on the impairment test performed, management concluded that goodwill was not impaired as the Video and Cable Edge reporting units had

estimated fair values in excess of their carrying value by approximately 67% and 123%, respectively. The Company has not recorded any impairment charges related to goodwill for any prior periods.

Intangible Assets

The following is a summary of intangible assets (in thousands):

	Weighted Average Remaining Life (Years)	June 30, 2017				December 31, 2016			
		Gross Carrying Amount	Accumulated Amortization		Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization		Net Carrying Amount
Developed core technology	2.7	$31,708	$ (17,807	)	$ 13,901	$31,707	$ (15,216	)	$ 16,491
Customer relationships/contracts	3.7	44,643	(33,641	)	11,002	44,384	(32,098	)	12,286
Trademarks and trade names	2.7	621	(207	)	414	573	(119	)	454
Maintenance agreements and related relationships	N/A	5,500	(5,500	)	—	5,500	(5,500	)	—
Order Backlog	N/A	3,011	(3,011	)	—	3,011	(3,011	)	—
Total identifiable intangibles		$85,483	$ (60,166	)	$ 25,317	$85,175	$ (55,944	)	$ 29,231

Amortization expense for the identifiable purchased intangible assets for the three and six months ended June 30, 2017 and July 1, 2016 was allocated as follows (in thousands):

	Three months ended		Six months ended	
	June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Included in cost of revenue	$1,295	$1,307	$2,590	$1,725
Included in operating expenses	780	4,232	1,554	6,597
Total amortization expense	$2,075	$5,539	$4,144	$8,322

The estimated future amortization expense of purchased intangible assets with definite lives is as follows (in thousands):

	Cost of Revenue	Operating Expenses	Total
Year ended December 31,			
2017 (remaining six months)	$ 2,590	$ 1,578	$4,168
2018	5,180	3,156	8,336
2019	5,180	3,156	8,336
2020	951	3,026	3,977
2021	—	500	500
Total future amortization expense	$ 13,901	$ 11,416	$25,317

NOTE 10: RESTRUCTURING AND RELATED CHARGES

The Company implemented several restructuring plans in the past few years. The goal of these plans was to bring operational expenses to appropriate levels relative to its net revenues, while simultaneously implementing extensive company-wide expense control programs.

The Company accounts for its restructuring plans under the authoritative guidance for exit or disposal activities. The restructuring and related charges are included in "Product cost of revenue" and "Operating expenses-restructuring and related charges" in the Condensed Consolidated Statements of Operations. The following table summarizes the restructuring and related charges (in thousands):

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	Three months ended		Six months ended	
	June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Restructuring and related charges in:				
Product cost of revenue	$278	$6	$786	$(23)
Operating expenses-Restructuring and related charges	777	1,903	2,056	4,515
Total restructuring and related charges	$1,055	$1,909	$2,842	$4,492

Harmonic 2016 Restructuring

In the first quarter of 2016, the Company implemented a new restructuring plan (the "Harmonic 2016 Restructuring Plan") to streamline the corporate organization, thereby reducing operating costs by consolidating duplicative resources in connection with the acquisition of TVN. The planned activities have primarily resulted, and will primarily result, in cash expenditures related to severance and related benefits and exiting certain operating facilities and disposing of excess assets. In the second quarter of 2016, the Company also initiated the TVN VDP in France to streamline the organization of the TVN French Subsidiary.

In 2016, the Company recorded an aggregate of $20.0 million of restructuring and related charges under the Harmonic 2016 Restructuring Plan, of which $2.2 million was primarily related to the Company exiting from an excess facility at its U.S. headquarters and the remaining $17.8 million was related to severance and benefits for the termination of 118 employees worldwide, including 83 employees in France who participated in the TVN VDP. (See details of TVN VDP described below). Additionally, the restructuring and related charges under the Harmonic 2016 Restructuring Plan in 2016 were partially offset by approximately $2.0 million of gain from TVN pension curtailment. For the employees who participated in the TVN VDP, their pension benefit is funded by the TVN VDP and, as a result, the TVN defined benefit pension plan was remeasured at December 31, 2016, which resulted in a non-cash curtailment gain. This gain was recorded as an offset to restructuring and related costs in 2016.

The Company also incurred $16.9 million of TVN acquisition- and integration-related expenses in 2016 and another $2.6 million in the six months ended June 30, 2017. The Company expects to continue to have some TVN integration-related costs throughout the remainder of 2017, primarily consisting of outside legal and advisory fees relating to the re-organization of TVN's legal entities. (See Note 3, "Business Acquisition," for additional information on TVN acquisition-and integration-related expenses).

In the three months ended June 30, 2017, the Company recorded $1.1 million of restructuring and related charges under the Harmonic 2016 Restructuring Plan, consisting of $0.7 million of TVN VDP charges and $0.4 million of severance for other employees. In the six months ended June 30, 2017, the Company recorded $2.8 million of restructuring and related charges under the Harmonic 2016 Restructuring Plan, consisting of $1.8 million of TVN VDP charges and $1.0 million of severance for other employees. During the six months ended June 30, 2017, 21 non-VDP employees worldwide were terminated.

TVN VDP

During 2016, the Company consulted and worked with the works council for the TVN French Subsidiary and applicable union representatives to establish a voluntary departure plan to enable French employees of TVN to voluntarily terminate with certain benefits. A total of 83 employees applied for the TVN VDP and were duly approved by the Company in the fourth quarter of 2016. The total TVN VDP costs, including severance, certain benefits and taxes, as well as administration costs, is estimated at approximately $15.3 million, in aggregate, at the inception of the plan and will be paid over a period of four years, based on the TVN VDP terms agreed with each employee. The total final payout to the employees may be different from the initial estimates depending on the final social charges imputed on each employee's total income and benefits received. The Company does not expect the final payout to be materially different from the initial estimates. The fair value of the total TVN VDP liability at inception was estimated to be approximately $14.8 million.

The Company accounts for these special termination benefits in accordance with ASC 712, “Compensation - Nonretirement Postemployment Benefits,” which requires that the special termination benefits be recognized as a liability and a loss beginning when an employee accepts the offer of voluntary termination and the amount can be reasonably estimated. Where an employee is required to work beyond a minimum statutory notice period, the cost of the special termination benefit is recognized as an expense over the employee’s remaining service period. Where the employee is not required to work beyond a minimum statutory notice period, the cost of the special termination benefit is recognized upon the date the employee accepts the offer of voluntary termination, provided that the amount of the benefit can be estimated. Out of the 83 employees who applied for TVN VDP, 11 of them are

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required to work beyond the minimum statutory notice period into 2017. Based on the application of the accounting guidance, the Company recorded $1.8 million and $13.1 million of TVN VDP costs in the first six months of 2017 and in the year ended 2016, respectively. Cumulatively, the Company had paid an aggregate of $8.4 million of TVN VDP costs, of which $3.5 million was paid in 2016 and $4.9 million was paid in 2017. The fair value of the TVN VDP liability balance at June 30, 2017 was $7.2 million.

The table below shows the estimated future payments for TVN VDP as of June 30, 2017 (in thousands):

Years ending December 31,	
2017 (remaining six months)	$2,349
2018	3,302
2019	1,651
2020	783
Total	$8,085

Excess Facility in San Jose, California

In January 2016, the Company exited an excess facility at its U.S. headquarters in San Jose, California and recorded $1.4 million in facility exit costs. The fair value of these liabilities is based on a net present value model using a credit-adjusted risk-free rate. The liability will be paid out over the remainder of the leased properties' terms, which continue through August 2020. As of the cease-use date, the fair value of this restructuring liability totaled $2.5 million. Offsetting these charges was an adjustment for deferred rent liability relating to this space of $1.1 million. In December 2016, as a result of a change in estimated sublease income, the restructuring liability was increased by $0.6 million.

The following table summarizes the activity in the Company's restructuring accrual related to the Harmonic 2016 Restructuring Plan during the six months ended June 30, 2017 (in thousands):

	Excess facilities	VDP (1)	Severance and benefits (2)	Total
Balance at December 31, 2016	$2,375	$9,650	$1,519	$13,544
Charges for 2016 Harmonic Restructuring Plan	48	1,777	973	2,798
Adjustments to restructuring provisions			44	44
Cash payments	(676)	(4,862)	(2,067)	(7,605)
Foreign exchange gain		597	31	628
Balance at June 30, 2017	1,747	7,162	500	9,409
Less: current portion (3)	(854)	(3,915)	(500)	(5,269)
Long-term portion (3)	$893	$3,247	$—	$4,140

(1) See discussion of the TVN VDP above for future estimated payments through 2020.

(2) The Company anticipates that the remaining severance and benefits accrual at June 30, 2017 will be fully paid in 2017.

(3) The current portion and long-term portion of the restructuring liability are reported under "Accrued and other current liabilities" and "Other non-current liabilities", respectively, on the Company's Condensed Consolidated Balance Sheets.

NOTE 11: CONVERTIBLE NOTES, OTHER DEBTS AND CAPITAL LEASES

4.00% Convertible Senior Notes

In December 2015, the Company issued $128.25 million aggregate principal amount of 4.0% unsecured convertible senior notes due December 1, 2020 (the "offering" or "Notes", as applicable) through a private placement with a financial institution. The Notes do not contain any financial covenants and the Company can settle the Notes in cash, shares of

common stock, or any combination thereof. The Notes can be converted under certain circumstances described below, based on an initial conversion rate of 173.9978 shares of common stock per $1,000 principal amount of Notes (which represents an initial conversion price of approximately $5.75 per share). Interest on the Notes is payable semiannually in arrears on June 1 and December 1 of each year.

Concurrent with the closing of the offering, the Company used $49.9 million of the net proceeds to repurchase 11.1 million shares of the Company's common stock from purchasers of the offering in privately negotiated transactions. In addition, the

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Company incurred approximately $4.1 million in debt issuance costs resulting in net proceeds to the Company of approximately $74.2 million, which was used to fund the TVN acquisition.
Prior to September 1, 2020, holders of the Notes may convert the Notes at their option only under the following circumstances: (1) during any fiscal quarter commencing after the fiscal quarter ending on April 1, 2016, if the last reported sale price of the Company's common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding fiscal quarter is greater than or equal to 130% of the conversion price of the Notes on each applicable trading day; (2) during the five business day period after any five consecutive trading day period (the " measurement period ") in which the trading price per $1,000 principal amount of Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of the Company's common stock and the conversion rate on each such trading day; or (3) upon the occurrence of specified corporate events. Commencing on September 1, 2020 until the close of business on the second scheduled trading day immediately preceding the maturity date, the Notes will be convertible in multiples of $1,000 principal amount regardless of the foregoing circumstances.
If a fundamental change occurs, holders of the Notes may require the Company to purchase all or any portion of their Notes for cash at a repurchase price equal to 100% of the principal amount of the Notes to be repurchased, plus any accrued and unpaid interest to, but excluding, the fundamental change repurchase date. In addition, if specific corporate events occur prior to the maturity date, the conversion rate may be increased for a holder who elects to convert the Notes in connection with such a corporate event.
In accounting for the issuance of the Notes, the Company separated the Notes into liability and equity components. The carrying amount of the liability component was calculated by measuring the fair value of a similar liability that does not have an associated convertible feature. The carrying amount of the equity component representing the conversion option was determined by deducting the fair value of the liability component from the initial proceeds of the Notes as a whole. The difference between the initial proceeds of the Notes and the liability component (the "debt discount") of $26.9 million is amortized to interest expense using the effective interest method over the term of the Notes. The equity component of the Notes is included in additional paid-in capital in the Condensed Consolidated Balance Sheets and is not remeasured as long as it continues to meet the conditions for equity classification.
In accounting for the transaction costs related to the issuance of the Notes, the Company allocated the total amount of $4.1 million to the liability and equity components using the same proportions as the proceeds from the Notes. Transaction costs attributable to the liability component were $3.2 million and were recorded as a direct deduction from the carrying amount of the debt liability in long-term liability in the Condensed Consolidated Balance Sheets and are being amortized to interest expense in the Condensed Consolidated Statements of Operations using the effective interest method over the term of the Notes. Transaction costs attributable to the equity component were $0.9 million and were netted with the equity component of the Notes in additional paid-in capital in the Condensed Consolidated Balance Sheets.
The following table presents the components of the Notes as of June 30, 2017 and December 31, 2016 (in thousands, except for years and percentages):

	June 30, 2017	December 31, 2016
Liability:		
Principal amount	$128,250	$128,250
Less: Debt discount, net of amortization	(19,914)	(22,302)
Less: Debt issuance costs, net of amortization	(2,401)	(2,689)
Carrying amount	$105,935	$103,259
Remaining amortization period (years)	3.4	3.9
Effective interest rate on liability component	9.94%	9.94%
Equity:		
Value of conversion option	$26,925	$26,925
Less: Equity issuance costs	(863)	(863)

Carrying amount	$26,062	$26,062

The following table presents interest expense recognized for the Notes (in thousands):

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	Three months ended		Six months ended	
	June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Contractual interest expense	$1,282	$1,282	$2,565	$2,565
Amortization of debt discount	1,214	1,098	2,388	2,157
Amortization of debt issuance costs	146	132	288	260
Total interest expense recognized	$2,642	$2,512	$5,241	$4,982

Other Debts and Capital Leases

In connection with the TVN acquisition, the Company assumed a variety of debt and credit facilities in France to satisfy the financing requirements of TVN operations. These arrangements are summarized in the table below (in thousands):

	June 30, 2017	December 31, 2016
Financing from French government agencies related to various government incentive programs [1]	$13,597	$17,930
Term loans [2]	1,369	1,400
Obligations under capital leases	1,456	1,860
Total debt obligations	16,422	21,190
Less: current portion	(7,130)	(7,275)
Long-term portion	$9,292	$13,915

(1) As of June 30, 2017, the Company's TVN French Subsidiary had an aggregate of $13.6 million of loans due to various financing programs of French government agencies, $10.8 million of which are related to loans backed by R&D tax credit receivables. As of June 30, 2017, the TVN French Subsidiary had an aggregate of $24.3 million of R&D tax credit receivables from the French government from 2018 through 2021. (See Note 8, "Balance Sheet Components-Prepaid expenses and other current assets," for more information). These tax loans have a fixed rate of 0.6%, plus EURIBOR 1 month + 1.3% and mature between 2018 through 2019. The remaining loans of $2.8 million at June 30, 2017 primarily relate to financial support from French government agencies for R&D innovation projects at minimal interest rates and these loans mature between 2020 through 2023.

(2) One of the term loans with a certain financial institution contains annual covenants that require the TVN French Subsidiary to maintain a minimum working capital balance and various other financial covenants and restrictions that limit the French Subsidiary's ability to incur additional indebtedness. The annual covenant is based on French statutory year-end results and the TVN French Subsidiary failed the 2016 covenant test primarily due to the Company's plan to integrate TVN's operations into other subsidiaries for tax planning and logistics purposes. In early 2017, the Company informed the financial institution of the 2016 covenant test results and was told by the financial institution to continue with the original payment schedule. The Company reported the entire loan balance with this financial institution under "Other debts and capital lease obligations, current" in the Condensed Consolidated Balance Sheets. The loan balance was approximately $0.4 million at both June 30, 2017 and December 31, 2016.

(3) The TVN French Subsidiary obtained advances under a credit line with BPI France against a pool of eligible receivables with recourse. There was no balance outstanding to BPI France as of June 30, 2017. This credit line expired in July 2017.

Future minimum repayments

The table below shows the future minimum repayments of debts and capital lease obligations for TVN as of June 30, 2017 (in thousands):

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Years ending December 31,	Capital lease obligations	Other Debt obligations
2017 (remaining six months)	$ 492	$ 673
2018	868	5,873
2019	69	6,782
2020	27	601
2021	—	489
Thereafter	—	548
Total	$ 1,456	$ 14,966

NOTE 12: EMPLOYEE BENEFIT PLANS AND STOCK-BASED COMPENSATION

Equity Award Plans

The Company’s stock benefit plans include the employee stock purchase plan and current active stock plans adopted in 1995 and 2002 as well as one stock plan in connection with an acquisition in 2010. See Note 13, “Employee Benefit Plans and Stock-based Compensation” of Notes to Consolidated Financial Statements in the 2016 Form 10-K for details pertaining to each plan.

The Company’s stockholders approved an amendment to the 1995 Stock Plan at the Company’s 2017 annual meeting of stockholders (the “2017 Annual Meeting”) which increased the number of shares of common stock reserved for issuance under the 1995 Stock Plan by 7,000,000 shares. The Company’s stockholders also approved an amendment to the 2002 Director Stock Plan at the 2017 Annual Meeting which increased the number of shares of common stock reserved for issuance under the 2002 Director Stock Plan by 400,000 shares.

The following table summarizes the Company’s stock option, restricted stock units (“RSUs”), performance-based stock awards (“PRSUs”) and market-based awards activities during the six months ended June 30, 2017 (in thousands, except per share amounts):

		Stock Options Outstanding		RSUs Outstanding*	
	Shares Available for Grant	Number of Shares	Weighted Average Exercise Price	Number of Units	Weighted Average Grant Date Fair Value
Balance at December 31, 2016	3,912	5,019	$ 6.01	3,864	$ 4.26
Authorized	7,400	—	—	—	—
Granted	(4,008)	30	5.10	2,651	5.46
Options exercised	—	(94)	3.06	—	
Shares released	—	—	—	(1,883)	3.92
Forfeited	1,584	(469)	6.13	(744)	4.96
Balance at June 30, 2017	8,888	4,486	$ 6.06	3,888	$ 5.11

* The preceding table includes PRSUs and market-based award activities during the six months ended June 30, 2017.

Performance-based awards (PRSUs)

In August 2016, the Company granted 898,533 shares of PRSUs to fund a portion of its 2016 incentive bonus payment obligations to its key executives and other eligible employees. From March 2017 through April 2017, the Company granted another 582,806 PRSUs to fund its first half 2017 incentive bonus payment obligations. The vesting of the PRSUs is based on the achievement of certain financial and non-financial operating goals of the Company and vesting occurs within three to six months from the grant date. Each quarterly period, the Company estimates the probability of the achievement of these performance goals and recognizes any related stock-based compensation expense. If the achievement of such performance goals is not probable, no compensation expense is recognized.

Market-based awards

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In the six months ended June 30, 2017, the Company granted 344,500 RSUs to its key executives and certain eligible employees that may vest during a three-year period as part of its long-term incentive program. The vesting conditions of these awards are tied to the market value of the Company's common stock. The fair value of these shares was estimated using a Monte-Carlo simulation.

The following table summarizes information about stock options outstanding as of June 30, 2017 (in thousands, except per share amounts and terms):

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Vested and expected to vest	4,389	$ 6.08	3.2	$ 2,045
Exercisable	3,497	6.33	2.7	1,079

The intrinsic value of options vested and expected to vest and exercisable as of June 30, 2017 is calculated based on the difference between the exercise price and the fair value of the Company’s common stock as of June 30, 2017. The intrinsic value of options exercised is calculated based on the difference between the exercise price and the fair value of the Company’s common stock as of the exercise date. The intrinsic value of options exercised during the three and six months ended June 30, 2017 was $24,000 and $0.2 million, respectively. The intrinsic value of options exercised during the three months and six months ended July 1, 2016 was minimal.

The following table summarizes information about RSUs and PRSUs outstanding as of June 30, 2017 (in thousands, except term):

	Number of Shares Underlying Restricted Stock Units	Weighted Average Remaining Vesting Period (Years)	Aggregate Fair Value
Vested and expected to vest	2,893	0.9	$ 15,190

The fair value of RSUs and PRSUs vested and expected to vest as of June 30, 2017 is calculated based on the fair value of the Company’s common stock as of June 30, 2017.

Employee Stock Purchase Plan (“ESPP”)

The Company’s stockholders approved an amendment to the 2002 Employee Stock Purchase Plan (the “ESPP”) at the 2017 Annual Meeting which increased the number of shares of common stock reserved for issuance under the ESPP by 1,500,000 shares. As of June 30, 2017, the number of shares of common stock available for issuance under the ESPP was 1,693,295. In the event that there are insufficient shares in the plan to fully fund the issuance, the available shares will be allocated across all participants based on their contributions relative to the total contributions received for the offering period.

Retirement Benefit Plan

As part of the TVN acquisition the Company assumed obligations under a defined benefit pension plan. The plan is unfunded and there are no contributions to the plan required by any laws or funding regulations, discretionary contributions or non-cash contributions expected to be made. The table below shows the components of net periodic benefit costs (in thousands):

	Three months ended	Six months ended

	June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Service cost	$55	$71	$110	$ 94
Interest cost	16	29	32	39
Recognized net actuarial loss	2	—	3	—
Net periodic benefit cost included in operating loss	$73	$100	$145	$ 133

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The present value of the Company's pension obligation as of June 30, 2017 was $4.8 million, of which $45,000 was reported under "Accrued and other liabilities" and $4.7 million was reported under "Other non-current liabilities" on the Company's Condensed Consolidated Balance Sheets. The present value of the Company's pension obligation as of December 31, 2016 was $4.3 million.

401(k) Plan

The Company has a retirement/savings plan for its U.S. employees, which qualifies as a thrift plan under Section 401(k) of the Internal Revenue Code. This plan allows participants to contribute up to the applicable Internal Revenue Code limitations under the plan. The Company has made discretionary contributions to the plan of 25% of the first 4% contributed by eligible participants, up to a maximum contribution per participant of $1,000 per year. The contributions for the six months ended June 30, 2017 and July 1, 2016 were $285,000 and $241,000, respectively.

Stock-based Compensation

The following table summarizes stock-based compensation expense for all plans (in thousands):

	Three months ended		Six months ended	
	June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Stock-based compensation in:				
Cost of revenue	$700	$424	$1,145	$651
Research and development expense	1,337	841	2,314	1,810
Selling, general and administrative expense	2,099	1,503	3,928	3,401
Total stock-based compensation in operating expense	3,436	2,344	6,242	5,211
Total stock-based compensation	$4,136	$2,768	$7,387	$5,862

As of June 30, 2017, the Company had approximately $16.5 million of unrecognized stock-based compensation expense related to unvested stock options and awards that are expected to be recognized over a weighted-average period of approximately 1.6 years.

Valuation Assumptions

The Company estimates the fair value of employee stock options and stock purchase rights under the ESPP using a Black-Scholes option valuation model. The value of the stock purchase rights under the ESPP consists of: (1) the 15% discount on the purchase of the stock; (2) 85% of the fair value of the call option; and (3) 15% of the fair value of the put option. The call option and put option were valued using the Black-Scholes option pricing model. At the date of grant, the Company estimated the fair value of each stock option grant and stock purchase right granted under the ESPP using the following weighted average assumptions:

	Employee Stock Options			
	Three months ended		Six months ended	
	June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Expected term (years)	4.30	4.30	4.30	4.30
Volatility	43 %	36 %	43 %	36 %
Risk-free interest rate	1.7 %	1.1 %	1.7 %	1.4 %
Expected dividends	0.0 %	0.0 %	0.0 %	0.0 %

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	ESPP Purchase Period Ending	
	July 3, 2017	June 30, 2016
Expected term (years)	0.49	0.5
Volatility	41 %	54 %
Risk-free interest rate	1.0 %	0.4 %
Expected dividends	0.0 %	0.0 %
Estimated weighted average fair value per share at purchase date	$1.40	$1.19

The expected term of the employee stock options represents the weighted-average period that the stock options are expected to remain outstanding. The computation of the expected term was determined based on historical experience of similar awards, giving consideration to the contractual terms of the stock-based awards, vesting schedules and expectations of future employee behavior. The expected term of the stock purchase rights under the ESPP represents the period of time from the beginning of the offering period to the purchase date. The Company uses its historical volatility for a period equivalent to the expected term of the options to estimate the expected volatility. The risk-free interest rate that the Company uses in the Black-Scholes option valuation model is based on U.S. Treasury zero-coupon issues with remaining terms similar to the expected term. The Company has never declared or paid any cash dividends and does not plan to pay cash dividends in the foreseeable future, and, therefore, used an expected dividend yield of zero in the valuation model.

Prior to January 1, 2017, stock-based compensation expense was recorded net of estimated forfeitures in the Company's condensed consolidated statements of operations and, accordingly, was recorded for only those stock-based awards that the Company expected to vest. Upon the adoption of the accounting standard update (ASU 2016-09, "Improvements to Employee Share-Based payments") issued by FASB, effective January 1, 2017, the Company changed its accounting policy to account for forfeitures as they occur. The change was applied on a modified retrospective approach with a cumulative effect adjustment of $69,000 to retained earnings as of January 1, 2017 (which increased the accumulated deficit).

The Company estimated the fair value of the market-based awards granted in March 2017 on the date of grant using a Monte Carlo simulation with the following assumptions: volatility 46.7%, risk-free interest rate 1.57% and dividend yield of 0%.

Total compensation cost recognized related to these market-based awards was approximately $368,000 and $415,000 for the three and six months ended June 30, 2017, respectively. As of June 30, 2017, $0.9 million of total unrecognized compensation cost related to these awards is expected to be recognized over a weighted-average period of approximately 0.71 years.

The weighted-average fair value per share of options granted was $1.85 and $1.07 for the three months ended June 30, 2017 and July 1, 2016, respectively. The weighted-average fair value per share of options granted was $1.85 and $0.97 for the six months ended June 30, 2017 and July 1, 2016, respectively.

The fair value of all stock options vested during the three months ended June 30, 2017 and July 1, 2016 was $0.4 million for each period. The fair value of all stock options vested during the six months ended June 30, 2017 and July 1, 2016 was $1.1 million and $1.4 million, respectively.

There were no realized tax benefits attributable to stock options exercised in jurisdictions where this expense is deductible for tax purposes for the three and six months ended June 30, 2017 and July 1, 2016, respectively.

The aggregate fair value of RSUs and PRSUs released during the three months ended June 30, 2017 and July 1, 2016 was $0.8 million and $0.5 million, respectively. The aggregate fair value of all RSUs and PRSUs released during the six months ended June 30, 2017 and July 1, 2016 was $7.4 million and $7.1 million, respectively.

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NOTE 13: INCOME TAXES

The Company reported the following operating results for the periods presented (in thousands):

	Three months ended		Six months ended	
	June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Loss before income taxes	$(30,921)	$(20,437)	$(55,180)	$(45,099)
Provision for income taxes	579	242	347	760
Effective income tax rate	(1.9)%	(1.2)%	(0.6)%	(1.7)%

The Company operates in multiple jurisdictions and its profits are taxed pursuant to the tax laws of these jurisdictions. The Company's effective income tax rate may be affected by changes in, or interpretations of tax laws and tax agreements in any given jurisdiction, utilization of net operating loss and tax credit carry forwards, changes in geographical mix of income and expense, and changes in management's assessment of matters such as the ability to realize deferred tax assets. The Company's effective tax rate varies from year to year primarily due to the absence of several onetime, discrete items that benefited or decremented the tax rates in the previous years.

The Company's effective income tax rate of (0.6)% for the six months ended June 30, 2017 was different from the U.S. federal statutory rate of 35%, primarily due to the Company's geographical income mix and favorable tax rates associated with certain earnings from operations in lower-tax jurisdictions, partially offset by the increase in the valuation allowance against U.S. federal, California and other state deferred tax assets and detriment from non-deductible stock-based compensation. In addition, in the first quarter of 2017, the Company was able to recognize a one-time tax benefit of approximately $1.2 million as a result of the merger of the Company's two subsidiaries in Israel, which was approved by the Israeli government in the first quarter of 2017. For the six months ended June 30, 2017, the discrete adjustments to the Company's tax expense were primarily withholding taxes and the accrual of interest on uncertain tax positions.

The Company's effective income tax rate of (1.7)% for the six months ended July 1, 2016 was different from the U.S. federal statutory rate of 35%, primarily due to favorable tax rates associated with certain earnings from operations in lower-tax jurisdictions, and the tax benefit from the realization of certain deferred tax assets as a result of the TVN acquisition, partially offset by the increase in the valuation allowance against U.S. federal, California and other state deferred tax assets, detriment from non-deductible stock-based compensation, non-deductible amortization of foreign intangibles, and the net of various discrete tax adjustments. For the six months ended July 1, 2016, the discrete adjustments to the Company's tax expense were primarily the accrual of interest on uncertain tax positions and withholding taxes as well as a true-up of the tax provision for certain foreign subsidiaries based on the tax returns filed.

The Company files U.S. federal and state, and foreign income tax returns in jurisdictions with varying statutes of limitations during which such tax returns may be audited and adjusted by the relevant tax authorities. The 2013 through 2016 tax years generally remain subject to examination by U.S. federal and most state tax authorities. In significant foreign jurisdictions, the 2007 through 2016 tax years generally remain subject to examination by their respective tax authorities. In 2016, the U.S. Internal Revenue Service concluded its examination of the Company's income tax return for the tax year 2012, which commenced in August 2015. In addition, a subsidiary of the Company was under audit for the 2012 and 2013 tax years, which commenced in 2015, by the Israel tax authority and concluded with no adjustment. If, upon the conclusion of an audit, the ultimate determination of taxes owed in the jurisdictions under audit is for an amount in excess of the tax provision the Company has recorded in the applicable period, the Company's overall tax expense, effective tax rate, operating results and cash flow could be materially and adversely impacted in the period of adjustment.

On July 27, 2015, the U.S. Tax Court issued an opinion in Altera Corp. v. Commissioner, 145 T.C. No.3 (2015) related to the treatment of stock-based compensation expense in an intercompany cost-sharing arrangement. A final decision was entered by the U.S. Tax Court on December 1, 2015. On February 19, 2016, the U.S. Internal Revenue Service filed a notice of appeal in Altera Corp. v. Commissioner, 145 T.C. No. 3 (2015), to the Ninth Circuit Court of Appeal. The Ninth Circuit will decide whether a regulation that mandates that stock-based compensation costs related to the intangible development activity of a qualified cost sharing arrangement (a "QCSA") must be included in the joint

cost pool of the QCSA (the “all costs rule”) is consistent with the arm’s length standard as set forth in Section 482 of the Internal Revenue Code. The Company concluded that no adjustment to the consolidated financial statements as of December 31, 2016 is appropriate at this time due to the uncertainties with respect to the ultimate resolution of this case.

The Company’s operations in Switzerland are subject to a reduced tax rate under the Switzerland tax holiday which requires various thresholds of investment and employment in Switzerland. The Company has met these various thresholds and the Switzerland tax holiday is effective through the end of 2018.

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As of June 30, 2017, the total amount of gross unrecognized tax benefits, including interest and penalties, was approximately $20.0 million, of which $3.1 million would affect the Company's effective tax rate if the benefits are eventually recognized. The remaining gross unrecognized tax benefit does not affect the Company's effective tax rate as it relates to positions that would be settled with tax attributes such as net operating loss carryforward or tax credits previously subject to a valuation allowance. The Company recognizes interest and penalties related to unrecognized tax positions in income tax expense. The Company had $0.5 million of gross interest and penalties accrued as of June 30, 2017. The Company will continue to review its tax positions and provide for, or reverse, unrecognized tax benefits as issues arise. As of June 30, 2017, the Company anticipates that the balance of gross unrecognized tax benefits will decrease up to approximately $2.4 million due to expiration of the applicable statutes of limitations over the next 12 months.

In March 2016, the FASB issued an accounting standard update for the accounting of share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities and classification on the statement of cash flows. The new standard eliminated the requirement to report excess tax benefits and certain tax deficiencies related to share-based payment transactions as additional paid-in capital. It also removes the requirement to delay recognition of a windfall tax benefit until it reduces current taxes payable. Under the new guidance, the benefit will be recorded when it arises, subject to normal valuation allowance considerations. The Company adopted this new accounting standard beginning in the first quarter of fiscal 2017 using a modified-retrospective transition method and recorded a cumulative effect of $4.6 million of additional gross deferred tax asset associated with shared-based payment and an offsetting valuation allowance of the same amount, therefore resulting in no net impact to the Company's beginning retained earnings.

In October 2016, the FASB issued an accounting standard update which requires companies to recognize the income tax consequences of all intra-entity sales of assets other than inventory when they occur. As a result, a reporting entity would recognize the tax expense from the sale of the asset in the seller's tax jurisdiction when the transfer occurs, even though the pre-tax effects of that transaction are eliminated in consolidation. Any deferred tax asset that arises in the buyer's jurisdiction would also be recognized at the time of the transfer. The Company early adopted this accounting standard update during the first quarter of fiscal 2017 on a modified retrospective approach and recorded a cumulative-effect adjustment of $1.4 million to the retained earnings as of January 1, 2017 (which reduced the accumulated deficit). Correspondingly, in the first quarter of fiscal 2017, the Company recognized an additional $1.1 million of net deferred tax assets, after netting with $2.1 million of valuation allowance, and write off the remaining $0.3 million of unamortized tax expenses deferred under the previous guidance to provision for income taxes in the first quarter of fiscal 2017.

NOTE 14: NET LOSS PER SHARE

The following table sets forth the computation of the basic and diluted net loss per share (in thousands, except per share amounts):

	Three months ended		Six months ended	
	June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Numerator:				
Net loss	$(31,500)	$(20,679)	$(55,527)	$(45,859)
Denominator:				
Weighted average number of common shares outstanding				
Basic and diluted	80,590	77,342	80,203	77,168
Net loss per share:				
Basic and diluted	$(0.39)	$(0.27)	$(0.69)	$(0.59)

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The diluted net loss per share is the same as basic net loss per share for the three and six months ended June 30, 2017 and July 1, 2016 because potential common shares are only considered when their effect would be dilutive. The following table sets forth the potential weighted common shares outstanding that were excluded from the computation of basic and diluted net loss per share calculations (in thousands):

	Three months ended		Six months ended	
	June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Stock options	4,614	5,428	4,753	5,488
RSUs	3,400	2,247	3,054	2,010
Stock purchase rights under the ESPP	578	652	385	355
Warrants [(1)]	782	—	782	—
Total	9,374	8,327	8,974	7,853

(1) On September 26, 2016, in connection with the execution of a product supply agreement pursuant to which an affiliate of Comcast Corporation (together with Comcast Corporation, "Comcast") may, in its sole discretion, purchase from the Company licenses to certain of the Company's software products, the Company granted Comcast a warrant to purchase shares of its common stock. (See Note 15, "Warrants" for additional information).

Also excluded from the table above are the Notes, which are convertible under certain conditions into an aggregate of 22,304,348 shares of common stock. (See Note 11, "Convertible Notes, Other Debts and Capital Leases" for additional information on the Notes). Since the Company's intent is to settle the principal amount of the Notes in cash, the treasury stock method is being used to calculate any potential dilutive effect of the conversion spread on diluted net income per share, if applicable. The conversion spread will have a dilutive impact on diluted net income per share when the Company's average market price of its common stock for a given period exceeds the conversion price of $5.75 per share.

NOTE 15: WARRANTS

On September 26, 2016, the Company issued a Warrant to Comcast pursuant to which Comcast may, subject to certain vesting provisions, purchase up to 7,816,162 shares of the Company's common stock subject to adjustment in accordance with the terms of the Warrant, for a per share exercise price of $4.76. Comcast may exercise the Warrant for cash or on a net share basis. The Warrant expires on September 26, 2023 or the prior consummation of a change of control of the Company.

Comcast's right to purchase 781,617 shares was vested as of the issuance date as an incentive to enter into the software license product supply agreement. Comcast's rights to purchase an additional 1,954,042 shares vest upon achievement of milestones that occur upon or prior to Comcast's election for enterprise license pricing for certain of the Company's software products. Such pricing would obligate Comcast to make certain total payments to the Company over the term of the product supply agreement. These rights are expected to vest in 2018. Comcast's rights to purchase an additional 1,172,425 shares vest when Comcast exceeds specified cumulative purchase amounts from the Company under the product supply agreement. Comcast's rights to purchase the remaining 3,908,081 shares vest in specified tranches at the earlier of Comcast's enterprise license pricing election (if completed by a certain date) or achievement of specified cumulative purchase amounts from the Company.

The $1.6 million value of the vested portion of the Warrant has been determined using the Black-Scholes option valuation model using the following assumptions: expected term of 7 years, volatility of 42%, risk-free interest rate of 1.4%, and expected dividends of 0.0%. The Warrant is considered indexed to the Company's common stock and classified as stockholders' equity based on its terms. Accordingly, the vested Warrant amount was included in

“Additional paid-in capital” on the Company’s Condensed Consolidated Balance Sheet and will not be remeasured in the future periods.

The Warrant is considered an incentive for Comcast to purchase certain of the Company’s products. Therefore the value of the Warrant will be recorded as a reduction in the Company’s net revenues to the extent such value does not exceed net revenues from pertinent sales to Comcast. The portion of the Warrant which vested on September 26, 2016 had a value of approximately $1.6 million and is deemed a customer incentive paid upfront and cumulatively, $0.9 million of this prepaid incentive has been recorded as a reduction to the Company’s net revenues from Comcast. The remaining $0.7 million of this prepaid incentive is reported as an asset under “Prepaid expenses and other current assets” on the Company’s Condensed Consolidated Balance Sheet as of June 30, 2017. The Company considers this asset to be recoverable based on the expectation of Comcast’s future purchases of the pertinent products.

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NOTE 16: STOCKHOLDERS' EQUITY

Accumulated Other Comprehensive Income (Loss) ("AOCI")

The components of AOCI, on an after-tax basis where applicable, were as follows (in thousands):

	Foreign Currency Translation Adjustments	Unrealized Gains (Losses) on Available-for-Sale Investments	Actuarial Loss	Total
Balance as of December 31, 2016	$ (7,267)	$ 276	$ (279)	$ (7,270)
Other comprehensive income (loss) before reclassifications	4,883	(613)	—	4,270
Provision for income taxes	—	(2)	—	(2)
Balance as of June 30, 2017	$ (2,384)	$ (339)	$ (279)	$ (3,002)

The effects of amounts reclassified from AOCI into the Condensed Consolidated Statement of Operations were as follows (in thousands):

	Three months ended		Six months ended	
	June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Losses on cash flow hedges from foreign currency contracts:				
Cost of revenue	$—	$(3)	$—	$(13)
Operating expenses	—	(19)	—	(87)
Total reclassifications from AOCI	$—	$(22)	$—	$(100)

As of June 30, 2017, there was no AOCI balance, and during the six months ended June 30, 2017, there were no reclassifications from AOCI, as there were no cash flow hedge contracts outstanding at June 30, 2017 and December 31, 2016.

Common Stock Repurchases

There were no stock repurchases during the year ended December 31, 2016. Our stock repurchase program expired on December 31, 2016. Further stock repurchases would require authorization from the Board.

NOTE 17: SEGMENT INFORMATION

Operating segments are defined as components of an enterprise that engage in business activities for which separate financial information is available and evaluated by the Company's Chief Operating Decision Maker (the "CODM"), which for Harmonic is its Chief Executive Officer, in deciding how to allocate resources and assess performance. Based on our internal reporting structure, the Company consists of two operating segments: Video and Cable Edge. The operating segments were determined based on the nature of the products offered. The Video segment sells video processing and production and playout solutions and services worldwide to broadcast and media companies, streaming new media companies, cable operators, and satellite and telecommunications (telco) Pay-TV service providers. The Cable Edge segment sells cable edge solutions and related services to cable operators globally.

On February 29, 2016, the Company completed its acquisition of 100% of the outstanding equity of TVN and assigned TVN to its Video operating segment.

The Company does not allocate amortization of intangibles, stock-based compensation, restructuring and related charges, TVN acquisition- and integration-related costs, and certain other non-recurring charges to the operating income for each segment because management does not include this information in the measurement of the performance of the operating segments. A measure of assets by segment is not applicable as segment assets are not included in the discrete financial information provided to the CODM.

The following tables provide summary financial information by reportable segment (in thousands):

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	Three months ended		Six months ended	
	June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Net revenue:				
Video	$73,379	$90,588	$147,721	$155,596
Cable Edge	8,936	18,983	17,537	35,807
Total consolidated net revenue	$82,315	$109,571	$165,258	$191,403
Operating loss:				
Video	$(8,947)	$518	$(14,783)	$(6,829)
Cable Edge	(7,411)	(498)	(13,491)	(2,351)
Total segment operating (loss) income	(16,358)	20	(28,274)	(9,180)
Unallocated corporate expenses	(4,853)	(9,831)	(8,775)	(15,510)
Stock-based compensation	(4,136)	(2,768)	(7,387)	(5,862)
Amortization of intangibles	(2,075)	(5,539)	(4,144)	(8,322)
Loss from operations	(27,422)	(18,118)	(48,580)	(38,874)
Non-operating expense, net	(3,499)	(2,319)	(6,600)	(6,225)
Loss before income taxes	$(30,921)	$(20,437)	$(55,180)	$(45,099)

NOTE 18: COMMITMENTS AND CONTINGENCIES

Leases

Future minimum lease payments under non-cancelable operating leases as of June 30, 2017 are as follows (in thousands):

Years ending December 31,	
2017 (remaining six months)	$6,759
2018	12,812
2019	10,980
2020	7,521
2021	2,166
Thereafter	8,586
Total	$48,824

Warranties

The Company accrues for estimated warranty costs at the time of product shipment. Management periodically reviews the estimated fair value of its warranty liability and records adjustments based on the terms of warranties provided to customers, historical and anticipated warranty claims experience, and estimates of the timing and cost of warranty claims. Activity for the Company’s warranty accrual, which is included in accrued and other current liabilities, is summarized below (in thousands):

	Three months ended		Six months ended	
	June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Balance at beginning of period	$4,585	$4,966	$4,862	$3,913
Balance assumed from TVN acquisition	—	—	—	1,012
Accrual for current period warranties	1,277	1,716	2,495	2,975
Changes in liability related to pre-existing warranties	—	(74)	—	(74)
Warranty costs incurred	(1,720)	(1,513)	(3,215)	(2,731)
Balance at end of period	$4,142	$5,095	$4,142	$5,095

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Purchase Obligations

The Company relies on a limited number of contract manufacturers and suppliers to provide manufacturing services for a substantial majority of its products. Obligations to purchase inventory and other commitments are generally expected to be fulfilled within one year. The Company had approximately $30.9 million of non-cancelable commitments to purchase inventories and other commitments as of June 30, 2017.

Standby Letters of Credit and Guarantees

The Company’s financial guarantees consisted of standby letters of credit and bank guarantees. As of June 30, 2017, the Company had $0.7 million of standby letters of credit outstanding primarily related to its credit card facility in Switzerland and, to a lesser extent, performance bond and state requirements imposed on employers. In addition, the Company had $1.9 million of bank guarantees outstanding as of June 30, 2017, of which $1.3 million was related to a building lease for the TVN French Subsidiary, $0.3 million was related to the building leases in Israel, and the remaining amount was mostly related to performance bonds issued to customers of the TVN French Subsidiary.

Indemnification

Harmonic is obligated to indemnify its officers and the members of its Board of Directors (the “Board”) pursuant to its bylaws and contractual indemnity agreements. Harmonic also indemnifies some of its suppliers and most of its customers for specified intellectual property matters pursuant to certain contractual arrangements, subject to certain limitations. The scope of these indemnities varies, but, in some instances, includes indemnification for damages and expenses (including reasonable attorneys’ fees). There have been no amounts accrued in respect of these indemnification provisions through June 30, 2017.

Legal proceedings

From time to time, the Company is involved in lawsuits as well as subject to various legal proceedings, claims, threats of litigation, and investigations in the ordinary course of business, including claims of alleged infringement of third-party patents and other intellectual property rights, commercial, employment, and other matters. The Company assesses potential liabilities in connection with each lawsuit and threatened lawsuits and accrues an estimated loss for these loss contingencies if both of the following conditions are met: information available prior to issuance of the financial statements indicates that it is probable that a liability has been incurred at the date of the financial statements and the amount of loss can be reasonably estimated. While certain matters to which the Company is a party specify the damages claimed, such claims may not represent reasonably probable losses. Given the inherent uncertainties of litigation, the ultimate outcome of these matters cannot be predicted at this time, nor can the amount of possible loss or range of loss, if any, be reasonably estimated.

In October 2011, Avid Technology, Inc. (“Avid”) filed a complaint in the United States District Court for the District of Delaware alleging that Harmonic’s MediaGrid product infringes two patents held by Avid. A jury trial on this complaint commenced on January 23, 2014 and, on February 4, 2014, the jury returned a unanimous verdict in favor of the Company, rejecting Avid’s infringement allegations in their entirety. On May 23, 2014, Avid filed a post-trial motion asking the court to set aside the jury’s verdict, and the judge issued an order on December 17, 2014, denying the motion. On January 5, 2015, Avid filed an appeal with respect to the jury’s verdict with the Federal Circuit, which was docketed on January 9, 2015, as Case No. 2015-1246. Avid filed its opening brief with respect to this appeal on March 24, 2015, the Company filed its response brief on May 7, 2015, and Avid filed its reply brief on June 16, 2015. Oral arguments were held on December 11, 2015. On January 29, 2016, the Federal Circuit issued an order vacating the verdict of noninfringement and remanding the case to the trial court for a new trial on infringement. On February 26, 2016, Harmonic filed a request for rehearing and rehearing en banc at the Federal Circuit. On March 31, 2016, the Federal Circuit denied the request for rehearing and rehearing en banc and a mandate issued on April 8, 2016. The court conducted a supplemental claim construction hearing on May 27, 2016 and issued a claim construction order on June 29, 2016. On June 17, 2016, Harmonic filed requests for ex parte reexaminations for the ’808 and ’309 patents with the United States Patent and Trademark Office (“USPTO”). The USPTO ordered reexamination of both the ’309 and ’808 patents in August 2016. A status conference was held with the District Court on February 23, 2017. On April 10, 2017, the USPTO issued a final office action rejecting the challenged claims of the ’309 patent and affirming all claims of the ’808 patent.

In June 2012, Avid served a subsequent complaint in the United States District Court for the District of Delaware alleging that the Company's Spectrum product infringes one patent held by Avid. The complaint seeks injunctive relief and unspecified damages. In September 2013, the U.S. Patent Trial and Appeal Board ("PTAB") authorized an inter partes review to be instituted as to claims 1-16 of the patent asserted in this second complaint. A hearing before the PTAB was conducted on May 20, 2014. On July 10, 2014, the PTAB issued a decision finding claims 1-10 invalid and claims 11-16 not invalid. The Company filed an appeal with respect to the PTAB's decision on claims 11-16 on September 11, 2014. The appeal was docketed with the Federal Circuit on October 22, 2014, as Case No. 2015-1072, and the Company filed its opening brief with

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respect to this appeal on January 29, 2015. Avid and PTAB each filed a response brief on April 27, 2015, and the Company filed a reply brief on May 28, 2015. Oral arguments were held on October 8, 2015. The Federal Circuit issued an order on March 1, 2016, affirming the PTAB's decision and a mandate issued on April 7, 2016.
On July 24, 2017, the court issued a scheduling order consolidating both cases and setting the trial date for November 6, 2017.
The Company is unable to predict the outcome of these lawsuits and therefore is unable to estimate an amount or range of any reasonably possible losses resulting from them. An unfavorable outcome on any litigation matter could require that the Company pay substantial damages, or, in connection with any intellectual property infringement claims, could require that the Company pay ongoing royalty payments or could prevent the Company from selling certain of its products. As a result, a settlement of, or an unfavorable outcome on, any of the matters referenced above or other litigation matters could have a material adverse effect on the Company's business, operating results, financial condition and cash flows.

NOTE 19: SUBSEQUENT EVENT
Harmonic 2017 Restructuring
In the third quarter of 2017, the Company committed to a new restructuring plan (the "Harmonic 2017 Restructuring Plan") to better align its operating costs with the continued decline in its net revenues. The restructuring activities under the Harmonic 2017 Restructuring Plan primarily include workforce reductions of the company worldwide. The estimated cost for the Harmonic 2017 Restructuring Plan is approximately $2.8 million. The restructuring activities under the Harmonic 2017 Restructuring Plan will commence in the third quarter of 2017 and are expected to continue into the fourth quarter of 2017.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS
The terms "Harmonic," "Company," "we," "us," "its," and "our," as used in this Quarterly Report on Form 10-Q (this "Form 1
refer to Harmonic Inc. and its subsidiaries and its predecessors as a combined entity, except where the context requires otherwise.
Some of the statements contained in this Form 10-Q are forward-looking statements that involve risk and uncertainties. The statements contained in this Form 10-Q that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, including, without limitation, statements regarding our expectations, beliefs, intentions or strategies regarding the future. In some cases, you can identify forward-looking statements by terminology such as, "may," "will," "should," "expects," "plans," "anticipates," "believes," "intends," "estimates," "predicts," "continue" or the negative of these terms or other comparable terminology. These forward-looking statements include, but are not limited to, statements regarding:

- developing trends and demands in the markets we address, particularly emerging markets;
- economic conditions, particularly in certain geographies, and in financial markets;
- new and future products and services;
- capital spending of our customers;
- our strategic direction, future business plans and growth strategy;
- industry and customer consolidation;
- expected demand for and benefits of our products and services;
- seasonality of revenue and concentration of revenue sources;
- expectations regarding the impact of our TVN acquisition;
- expectations regarding the change in TVN's business model;
- expectations regarding the impact of the Warrant issued to Comcast on our business;
- potential future acquisitions and dispositions;
- anticipated results of potential or actual litigation;

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- our competitive environment;
- the impact of governmental regulation;
- anticipated revenue and expenses, including the sources of such revenue and expenses;
- expected impacts of changes in accounting rules;
- expectations regarding the usability of our inventory and the risk that inventory will exceed forecasted demand;
- expectations and estimates related to goodwill and intangible assets and their associated carrying value;
- use of cash, cash needs and ability to raise capital; and
- the condition of our cash investments.

These statements are subject to known and unknown risks, uncertainties and other factors, any of which may cause our actual results to differ materially from those implied by the forward-looking statements. Important factors that may cause actual results to differ from expectations include those discussed in “Risk Factors” beginning on page 48 of this Form 10-Q. All forward-looking statements included in this Form 10-Q are based on information available to us on the date thereof, and we assume no obligation to update any such forward-looking statements.

OVERVIEW

We design, manufacture and sell versatile and high performance video infrastructure products and system solutions that enable our customers to efficiently create, prepare and deliver a full range of video and broadband services to consumer devices, including televisions, personal computers, laptops, tablets and smart phones.

We do business in three geographic regions: the Americas, EMEA, and APAC and operate in two segments, Video and Cable Edge. Our Video business sells video processing, production and playout solutions, and services worldwide to cable operators and satellite and telecommunications (telco) Pay-TV service providers, which we refer to collectively as “service providers,” and to broadcast and media companies, including streaming new media companies. Our Video business infrastructure solutions are delivered either through shipments of our products or as over-the-top (“OTT”) software-as-a-service (“SaaS”) subscriptions. Our Cable Edge business sells cable access solutions and related services, primarily to cable operators globally.

On February 29, 2016, through our wholly-owned subsidiary Harmonic International AG, we completed our acquisition of 100% of the share capital and voting rights of TVN for $82.5 million in cash. TVN, a global leader in advanced video compression solutions, is headquartered in Rennes, France. The TVN acquisition was primarily funded with cash proceeds from the issuance of the Notes in December 2015.

TVN is now a part of our Video segment and its results of operations are included in our Condensed Consolidated Statements of Operations beginning March 1, 2016. The acquisition of TVN is intended to strengthen our competitive position in the video infrastructure market as well as to enhance the depth and scale of our research and development and service and support capabilities in the video arena. We believe that the combined product portfolios, research and development teams and global sales and service personnel of Harmonic and TVN will allow us to accelerate innovation for our customers while leveraging greater scale to drive operational efficiencies. (See Note 3, “Business Acquisition,” of the notes to our Condensed Consolidated Financial Statements for additional information on the acquisition).

Historically, our revenue has been dependent upon capital spending in the cable, satellite, telco, broadcast and media industries, including streaming media. Our customers’ capital spending patterns are dependent on a variety of factors, including but not limited to: economic conditions in the U.S. and international markets; access to financing; annual budget cycles of each of the industries we serve; impact of industry consolidations; and customers suspending or reducing capital spending in anticipation of new products or new standards, new industry trends and/or technology shifts. If our product portfolio and product development plans do not position us well to capture an increased portion of the capital spending in the markets in which we compete, our revenue may decline. As we attempt to further diversify our customer base in these markets, we may need to continue to build alliances with other equipment

manufacturers, content providers, resellers and system integrators, managed services providers and software developers; adapt our products for new applications; take orders at prices resulting in lower margins; and build internal expertise to handle the particular operational, payment, financing and/or contractual demands of our customers, which could result in higher operating costs for us. Implementation issues with our products or those of other vendors have caused in the past, and may cause in the future, delays in project completion for our customers and delay our recognition of revenue.

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A majority of our revenue has been derived from relatively few customers, due in part to the consolidation of our service provider customers. Sales to our 10 largest customers during the three and six months ended June 30, 2017 accounted for approximately 30% and 25% of our net revenue, respectively, compared to 33% and 40%, respectively, for the corresponding periods in 2016. Although we are attempting to broaden our customer base by penetrating new markets and further expanding internationally, we expect to see continuing industry consolidation and customer concentration. During each of the three and six months ended June 30, 2017, as well as the corresponding periods in 2016, no customer accounted for more than 10% of our net revenue. The loss of any significant customer, any material reduction in orders by any significant customer, or our failure to qualify our new products with a significant customer could materially and adversely affect our operating results, financial condition and cash flows.

Our net revenue decreased $27.3 million, or 25%, in the three months ended June 30, 2017, compared to the corresponding period in 2016, due to a $17.2 million decrease in our Video segment revenue and a $10.1 million decrease in our Cable Edge segment revenue. Our net revenue decreased $26.1 million, or 14%, in the six months ended June 30, 2017, compared to the corresponding period in 2016, due to a $18.2 million decrease in our Cable Edge segment revenue and a $7.9 million decrease in our Video segment revenue. The decreases in our Video segment revenue in the three and six month periods were primarily due to the shift in demand from our legacy products sold to OTT SaaS subscriptions, and overall softer demand for legacy products. The decreases in our Cable Edge segment revenue in the three and six month periods were primarily due to continued weak demand for our legacy Cable Edge products due to technology transition in the industry from legacy EdgeQAM consumption used to deliver broadcast Pay-TV services to a new architecture that is capable of delivering converged video and IP data services. We do not expect Cable Edge net revenue to improve significantly until the fourth quarter of 2017, at the earliest.

Our Video segment customers continue to be cautious with investments in new technologies, such as next-generation IP architecture and Ultra HD. We believe a material and growing portion of the opportunities for our video business are linked to a migration by our customers to IP workflows and the distribution of linear and on-demand, OTT, and new mobile video services. We believe we are well positioned to address these opportunities as we continue to steadily transition our video business away from legacy and customized computing hardware to more software-centric solutions and services, including OTT SaaS subscription offerings, enabling video compression and processing through our VOS software platform running on standard off-the-shelf servers, data centers and in the cloud.

Our Cable Edge strategy is to become a major player in the approximately $2 billion converged cable access platform (“CCAP”) market by delivering innovative new DOCSIS 3.1 CMTS technology, which we refer to as CableOS. In the meantime, our Cable Edge segment is experiencing weaker demand as some of our customers have decreased spending on our legacy Cable Edge products as they prepare to make investments in new converged data and video DOCSIS 3.1 CMTS solutions. While these trends present near-term challenges for us, we believe we have made significant progress on the development of our DOCSIS 3.1 CMTS solutions and we began addressing this market opportunity with our first CableOS shipments in the fourth quarter of 2016.

To support our Cable Edge strategy and foster the further development and growth of this segment, in September 2016, we issued Comcast the Warrant to further incentivize them to purchase our products and adopt our technologies, particularly our CableOS software-based CCAP systems. Pursuant to the Warrant, Comcast may, subject to certain vesting provisions, purchase up to 7,816,162 shares of our common stock, for a per share exercise price of $4.76. Because the Warrant is considered an incentive for Comcast to purchase certain of the Company’s products, the value of the Warrant is recorded as a reduction in the Company’s net revenues to the extent such value does not exceed net revenues from pertinent sales to Comcast. (See Note 15, “Warrants,” of the Notes to our Condensed Consolidated Financial Statements for additional information).

As a result of the continued uncertainty regarding the timing of our customers’ investment decisions, we implemented restructuring plans, including the Harmonic 2017 Restructuring Plan, to bring our operating expenses more in line with net revenues, while simultaneously implementing an extensive Company-wide expense control program. (See Note 10, “Restructuring and Related Charges” and Note 19, “Subsequent Event” of the Notes to our Consolidated Financial Statements for additional information).

Our quarterly revenue has been, and may continue to be, affected by seasonal buying patterns. Typically, revenue in the first quarter of the year is seasonally lower than other quarters, as our customers often are still finalizing their annual budget and capital spending projections for the year. Further, we often recognize a substantial portion of our quarterly revenues in the last month of each quarter. We establish our expenditure levels for product development and other operating expenses based on projected revenue levels for a specified period, and expenses are relatively fixed in the short term. Accordingly, even small variations in timing of revenue, particularly from large individual transactions, can cause significant fluctuations in operating results in a particular quarter.

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CRITICAL ACCOUNTING POLICIES, JUDGMENTS AND ESTIMATES

Our unaudited condensed consolidated financial statements and the related notes included elsewhere in this report are prepared in accordance with U. S. GAAP. The preparation of these unaudited condensed consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Our critical accounting policies, judgments and estimates are disclosed in in our 2016 Annual Report on Form 10-K, as filed with the SEC.

ACCOUNTING PRONOUNCEMENTS

For a summary of recent accounting pronouncements applicable to our consolidated condensed financial statements see Note 2 to the Condensed Consolidated Financial Statements in Item 1, which is incorporated herein by reference.

RESULTS OF OPERATIONS

Net Revenue

The following table presents the breakdown of revenue by segment for the three and six months ended June 30, 2017 and July 1, 2016 (in thousands, except percentages):

	Three months ended				Six months ended			
	June 30, 2017	July 1, 2016	Q2 FY17 vs Q2 FY16		June 30, 2017	July 1, 2016	Q2 FY17 YTD vs Q2 FY16 YTD	
Segment:								
Video	$73,379	$90,588	$(17,209)	(19)%	$147,721	$155,596	$(7,875)	(5)%
Cable Edge	8,936	18,983	(10,047)	(53)%	17,537	35,807	(18,270)	(51)%
Total net revenue	$82,315	$109,571	$(27,256)	(25)%	$165,258	$191,403	$(26,145)	(14)%
Segment revenue as a % of total net revenue:								
Video	89%	83%			89%	81%		
Cable Edge	11%	17%			11%	19%		

The following table presents the breakdown of revenue by geographical region for the three and six months ended June 30, 2017 and July 1, 2016 (in thousands, except percentages):

	Three months ended				Six months ended			
	June 30, 2017	July 1, 2016	Q2 FY17 vs Q2 FY16		June 30, 2017	July 1, 2016	Q2 FY17 YTD vs Q2 FY16 YTD	
Geography:								
Americas	$40,611	$57,680	$(17,069)	(30)%	$78,517	$106,657	$(28,140)	(26)%
EMEA	24,953	33,456	(8,503)	(25)%	50,392	53,311	(2,919)	(5)%
APAC	16,751	18,435	(1,684)	(9)%	36,349	31,435	4,914	16%
Total net revenue	$82,315	$109,571	$(27,256)	(25)%	$165,258	$191,403	$(26,145)	(14)%
Regional revenue as a % of total net revenue:								
Americas	49%	53%			48%	56%		

EMEA	30 %	30 %	30 %	28 %
APAC	21 %	17 %	22 %	16 %

Our Video segment net revenue decreased 19% in the three months ended June 30, 2017, compared to the corresponding period in 2016, due to a $16.8 million decrease in video product revenue and a $0.4 million decrease in video service revenue. Our

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Video segment net revenue decreased 5% in the six months ended June 30, 2017, compared to the corresponding period in 2016, due to a $15.5 million decrease in video product revenue, offset in part by a $7.6 million increase in video service revenue. The decreases in our Video product revenue in the three and six month periods were primarily due to our customers' conversion to OTT SaaS subscriptions and overall softer demand for legacy products. The decrease in our Video segment net revenue in the six months ended June 30, 2017, was partially offset by higher revenue due to the inclusion of two more months of TVN post acquisition revenue in the six months ended June 30, 2017, compared to the six months ended July 1, 2016.
Our Cable Edge segment net revenue decreased 53% and 51%, respectively, in the three and six months ended June 30, 2017, respectively, compared to the corresponding periods in 2016. The decreases were primarily attributable to continuing eroding demand for legacy EdgeQAM technologies as some of our customers are deferring purchases as they plan migration to next generation DOCSIS 3.1 technologies and CCAP architectures. Several of our cable customers have started planning for the transition from DOCSIS 3.0 to DOCSIS 3.1 technologies, which will improve high speed data services and enable our customers' networks to adopt new CCAP architectures. We began shipping DOCSIS 3.1 technologies and the CCAP architecture in the fourth quarter of 2016 with the recent introduction of our next-generation CableOS system.
Net revenue in the Americas decreased 30% and 26% in the three and six months ended June 30, 2017, respectively, compared to the corresponding periods in 2016, primarily due to the pending transition to new DOCSIS 3.1 technologies and decreased demand for our Video products from both our service provider and broadcast and media customers primarily due to the shift from legacy products to OTT SaaS subscriptions.

EMEA net revenue decreased 25% and 5%, in the three and six months ended June 30, 2017, respectively, compared to the corresponding periods in 2016, primarily due to the shift from legacy products to OTT SaaS subscriptions and, to a lesser extent, decreased demand for our legacy Cable Edge products due to the service provider transition to our next generation CCAP architecture mentioned above.

APAC net revenue decreased 9% in the three months ended June 30, 2017 compared to the corresponding period in 2016, primarily due to timing of customer investments in video infrastructure. APAC net revenue increased 16% in the six months ended June 30, 2017, compared to the corresponding period in 2016, primarily due to strong demand for our video infrastructure products and services in the first quarter of 2017, which was also driven by timing of our customers' investment cycles.

Gross Profit

The following table presents the gross profit and gross profit as a percentage of net revenue ("gross margin") for the three and six months ended June 30, 2017 and July 1, 2016 (in thousands, except percentages):

	Three months ended				Six months ended			
	June 30, 2017	July 1, 2016	Q2 FY17 vs Q2 FY16		June 30, 2017	July 1, 2016	Q2 FY17 YTD vs Q2 FY16 YTD	
Gross profit	$33,815	$51,040	$(17,225)	(34)%	$74,223	$91,694	$(17,471)	(19)%
As a percentage of net revenue ("gross margin")	41.1 %	46.6 %	(5.5)%		44.9 %	47.9 %	(3.0)%	

Our gross margins are dependent upon, among other factors, achievement of cost reductions, mix of software sales, product mix, customer mix, product introduction costs, and price reductions granted to customers.
Gross margin decreased 5.5% and 3.0% in the three and six months ended June 30, 2017, respectively, compared to the corresponding periods in 2016, primarily due to lower service margins and higher inventory obsolescence charges for our legacy broadcast video inventory due to reduced demand. These unfavorable margin impacts were offset in part by a $1.2 million decrease in inventory obsolescence charge for our older Cable Edge product lines in the six months ended June 30, 2017, compared to the corresponding period last year.

Research and Development

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The following table presents the research and development expenses and the expenses as a percentage of net revenue for the three and six months ended June 30, 2017 and July 1, 2016 (in thousands, except percentages):

	Three months ended				Six months ended			
	June 30, 2017	July 1, 2016	Q2 FY17 vs Q2 FY16		June 30, 2017	July 1, 2016	Q2 FY17 YTD vs Q2 FY16 YTD	
Research and development	$27,055	$26,507	$548	2%	$51,937	$50,070	$1,867	4%
As a percentage of net revenue	32.9 %	24.2 %			31.4 %	26.2 %		

Our research and development expenses consist primarily of employee salaries and related expenses, contractors and outside consultants, supplies and materials, equipment depreciation and facilities costs, all associated with the design and development of new products and enhancements of existing products.

Research and development expenses in the three months ended June 30, 2017 increased 2%, compared to the corresponding period in 2016, primarily due to higher engineering expenses as a result of a shift in the timing of reimbursement for engineering spend by one of our customers, offset in part by a decrease in employee compensation costs primarily due to workforce reductions.

Research and development expenses in the six months ended June 30, 2017 increased 4%, compared to the corresponding period in 2016, primarily due to the inclusion of two more months of post-acquisition TVN research and development expenses in the six months ended June 30, 2017, as well as higher engineering expenses for CableOS product development.

Our TVN French Subsidiary participates in the French CIR program which allows companies to monetize eligible research expenses. We recognize R&D tax credits receivable from the French government for spending on innovative research and development as an offset to research and development expenses.

Selling, General and Administrative

The following table presents the selling, general and administrative expenses and the expenses as a percentage of net revenue for the three and six months ended June 30, 2017 and July 1, 2016 (in thousands, except percentages):

	Three months ended				Six months ended			
	June 30, 2017	July 1, 2016	Q2 FY17 vs Q2 FY16		June 30, 2017	July 1, 2016	Q2 FY17 YTD vs Q2 FY16 YTD	
Selling, general and administrative	$32,625	$36,516	$(3,891)	(11)%	$67,256	$69,386	$(2,130)	(3)%
As a percentage of net revenue	39.6 %	33.3 %			40.7 %	36.3 %		

Selling, general and administrative expenses in the three months ended June 30, 2017 decreased 11%, compared to the corresponding period in 2016, primarily due to higher TVN acquisition- and integration-related expense incurred in the second quarter of 2016. (See Note 3, “Business Acquisition,” for additional information on TVN acquisition- and integration-related expenses).

Selling, general and administrative expenses in the six months ended June 30, 2017 decreased 3%, compared to the corresponding period in 2016, primarily due to higher TVN acquisition- and integration-related expense incurred in the first six months of 2016. This increase was offset in part by the inclusion of two more months of post-acquisition TVN selling, general and administrative expenses in the six months ended June 30, 2017 .

Segment Operating Income (Loss)

The following table presents a breakdown of operating income (loss) by segment for the three and six months ended June 30, 2017 and July 1, 2016 (in thousands, except percentages):

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	Three months ended				Six months ended			
	June 30, 2017	July 1, 2016	Q2 FY17 vs Q2 FY16		June 30, 2017	July 1, 2016	Q2 FY17 YTD vs Q2 FY16 YTD	
Video	$(8,947)	$518	$(9,465)	(1,827)%	$(14,783)	$(6,829)	$(7,954)	116%
Cable Edge	(7,411)	(498)	(6,913)	1,388 %	(13,491)	(2,351)	(11,140)	474%
Total segment operating income (loss)	$(16,358)	$20	$(16,378)	(81,890)%	$(28,274)	$(9,180)	$(19,094)	208%
Segment operating income (loss) as a % of segment revenue ("operating margin"):								
Video	(12)%	1 %	(13)%		(10)%	(4)%	(6)%	
Cable Edge	(83)%	(3)%	(80)%		(77)%	(7)%	(70)%	

Video segment operating margin decreased 13% and 6%, in the three and six months ended June 30, 2017, respectively, compared to the corresponding periods in 2016, primarily due to a 19% and a 5% decrease in Video segment revenue in the three and six months ended June 30, 2017, respectively, compared to the corresponding periods in 2016, resulting in higher supply chain and manufacturing costs as a percentage of revenue, as well as lower service margins and higher inventory obsolescence charges for our legacy broadcast video inventory due to reduced demand.

Cable Edge segment operating margin decreased from 80% and 70% in the three and six months ended June 30, 2017, respectively, compared to the corresponding periods in 2016, primarily due to a 53% and a 51% decrease in Cable Edge segment revenue in the three and six months ended June 30, 2017, respectively, compared to the corresponding periods in 2016, as well as higher research and development expenses for CableOS development in 2017. These unfavorable operating margin impacts were offset in part by a $1.2 million decrease in inventory obsolescence charge for our older Cable Edge product lines in the six months ended June 30, 2017, compared to the corresponding period last year.

The following table presents a reconciliation of total segment operating income (loss) to consolidated loss before income taxes (in thousands):

	Three months ended		Six months ended	
	June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Total segment operating (loss) income	$(16,358)	$20	$(28,274)	$(9,180)
Unallocated corporate expenses	(4,853)	(9,831)	(8,775)	(15,510)
Stock-based compensation	(4,136)	(2,768)	(7,387)	(5,862)
Amortization of intangibles	(2,075)	(5,539)	(4,144)	(8,322)
Loss from operations	(27,422)	(18,118)	(48,580)	(38,874)
Non-operating expense, net	(3,499)	(2,319)	(6,600)	(6,225)
Loss before income taxes	$(30,921)	$(20,437)	$(55,180)	$(45,099)

Unallocated Corporate Expenses

We do not allocate amortization of intangibles, stock-based compensation, restructuring and related charges, TVN acquisition- and integration-related costs, and certain other non-recurring charges to the operating income for each segment because our management does not include this information in the measurement of the performance of the operating segments.

Amortization of Intangibles

The following table presents the amortization of intangible assets charged to operating expenses and the expense as a percentage of net revenue for the three and six months ended June 30, 2017 and July 1, 2016 (in thousands, except percentages):

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	Three months ended			Six months ended		
	June 30, 2017	July 1, 2016	Q2 FY17 vs Q2 FY16	June 30, 2017	July 1, 2016	Q2 FY17 YTD vs Q2 FY16 YTD
Amortization of intangibles	$780	$4,232	$(3,452)(82)%	$1,554	$6,597	$(5,043)(76)%
As a percentage of net revenue	0.9 %	3.9 %		0.9 %	3.4 %	

The decrease in amortization of intangibles expense in the three and six months ended June 30, 2017, compared to the corresponding periods in 2016, was primarily due to certain purchased tangible assets from prior business acquisition becoming fully amortized.

Restructuring and related Charges

We implemented several restructuring plans in the past few years. The goal of these plans was to bring operational expenses to appropriate levels relative to our net revenues, while simultaneously implementing extensive company-wide expense control programs.

We account for our restructuring plans under the authoritative guidance for exit or disposal activities. The restructuring and related charges are included in “Product cost of revenue” and “Operating expenses-restructuring and related charges” in the Condensed Consolidated Statement of Operations. The following table summarizes the restructuring and related charges (in thousands):

	Three months ended		Six months ended	
	June 30, 2017	July 1, 2016	June 30, 2017	July 1, 2016
Restructuring and related charges in:				
Product cost of revenue	$278	$6	$786	$(23)
Operating expenses-Restructuring and related charges	777	1,903	2,056	4,515
Total restructuring and related charges	$1,055	$1,909	$2,842	$4,492

Harmonic 2016 Restructuring

In the first quarter of 2016, we implemented a new restructuring plan to streamline the corporate organization, thereby reducing operating costs by consolidating duplicative resources in connection with the acquisition of TVN. The planned activities have primarily resulted, and will primarily result, in cash expenditures related to severance and related benefits and exiting certain operating facilities and disposing of excess assets. In the second quarter of 2016, as part of our Harmonic 2016 Restructuring Plan, we also initiated the TVN VDP to streamline the organization of our TVN French Subsidiary.

In 2016, we recorded an aggregate of $20.0 million of restructuring and related charges under the Harmonic 2016 Restructuring Plan, of which $2.2 million is primarily related to our exiting from an excess facility at our U.S. headquarters and the remaining $17.8 million is related to severance and benefits for the termination of 118 employees worldwide, including 83 employees in France who participated in the TVN VDP. (See details of TVN VDP described below). Additionally, the restructuring and related charges under the Harmonic 2016 Restructuring Plan were partially offset by approximately $2.0 million of gain from TVN pension curtailment. For the employees who participated in the TVN VDP, their pension benefit is funded by the TVN VDP and as a result, the TVN defined benefit pension plan was remeasured at December 31, 2016, which resulted in a non-cash curtailment gain. This gain was recorded as an offset to restructuring and related costs in 2016.

We also incurred $16.9 million of TVN acquisition- and integration-related expenses in 2016 and another $2.6 million in the six months ended June 30, 2017. We expect to continue to have some TVN integration-related costs throughout the remainder of 2017 primarily outside legal and advisory fees relating to the re-organization of TVN’s legal entities

(See Note 3, “Business Acquisition,” for additional information on TVN acquisition-and integration-related expenses). In the three months ended June 30, 2017, we recorded $1.1 million of restructuring and related charges under the Harmonic 2016 Restructuring Plan, consisting of $0.7 million TVN VDP charges and $0.4 million of severance for other employees. In the six months ended June 30, 2017, we recorded $2.8 million of restructuring and related charges under the Harmonic 2016 Restructuring Plan, consisting of $1.8 million TVN VDP charges and $1.0 million of severance for other employees. During the six months ended June 30, 2017, 21 non-VDP employees worldwide were terminated.

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TVN VDP

During 2016, we consulted and worked with the works council for the TVN French Subsidiary and applicable union representatives to establish a voluntary departure plan to enable French employees of TVN to voluntarily terminate with certain benefits. A total of 83 employees applied for the TVN VDP and were duly approved by us in the fourth quarter of 2016. The total TVN VDP costs, including severance, certain benefits and taxes, as well as administration costs, is estimated at approximately $15.3 million, in aggregate, at the inception of the plan and will be paid over a period of four years, based on the TVN VDP terms agreed with each employee. The total final payout to the employees may be different from the initial estimates depending on the final social charges imputed on each employee's total income and benefits received. We do not expect the final payout to be materially different from the initial estimates. The fair value of the total TVN VDP liability at inception was estimated to be approximately $14.8 million.

We account for these special termination benefits in accordance with ASC 712, "Compensation - Nonretirement Postemployment Benefits," which requires that the special termination benefits be recognized as a liability and a loss beginning when an employee accepts the offer of voluntary termination and the amount can be reasonably estimated. Where an employee is required to work beyond a minimum statutory notice period, the cost of the special termination benefit is recognized as an expense over the employee's remaining service period. Where the employee is not required to work beyond a minimum statutory notice period, the cost of the special termination benefit is recognized upon the date the employee accepts the offer of voluntary termination, provided that the amount of the benefit can be estimated. Out of the 83 employees who applied for TVN VDP, 11 of them are required to work beyond the minimum statutory notice period into 2017. Based on the application of the accounting guidance, we recorded $1.8 million and $13.1 million of TVN VDP costs in the first six months of 2017 and in the year ended 2016, respectively. Cumulatively, we had paid an aggregate of $8.4 million of TVN VDP costs, of which $3.5 million was paid in 2016 and $4.9 million was paid in 2017. The fair value of the TVN VDP liability balance at June 30, 2017 was $7.2 million.

The table below shows the estimated future payments for TVN VDP as of June 30, 2017 (in thousands):

Years ending December 31,	
2017 (remaining six months)	$2,349
2018	3,302
2019	1,651
2020	783
Total	$8,085

Excess Facility in San Jose, California

In January 2016, we exited an excess facility at our U.S. headquarters in San Jose, California and recorded $1.4 million in facility exit costs. The fair value of these liabilities is based on a net present value model using a credit-adjusted risk-free rate. The liability will be paid out over the remainder of the leased properties' terms, which continue through August 2020. As of the cease-use date, the fair value of this restructuring liability totaled $2.5 million. Offsetting these charges was an adjustment for deferred rent liability relating to this space of $1.1 million. In December 2016, as a result of a change in estimated sublease income, the restructuring liability was increased by $0.6 million.

Harmonic 2017 Restructuring

In the third quarter of 2017, we committed to a new restructuring plan to better align our operating costs with the continued decline in our net revenues. The restructuring activities under the Harmonic 2017 Restructuring Plan include workforce reductions worldwide and will commence in the third quarter of 2017 and are expected to continue into the fourth quarter of 2017. The estimated cost for this plan is approximately $2.8 million.

Interest Expense, Net

Interest expense, net was $2.7 million for each of the three months ended June 30, 2017 and July 1, 2016. Interest expense, net was $5.3 million and $5.1 million for the six months ended June 30, 2017 and July 1, 2016, respectively. Interest expense, net increased in the three and six months ended June 30, 2017 primarily due to increased amortization of discount and issuance costs for the Notes issued in December 2015.

Other (Expense) Income, Net

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Other expense, net was $0.8 million for the three months ended June 30, 2017, compared to other income, net of $0.3 million, for the three months ended July 1, 2016. Other expenses, net was $1.3 million for the six months ended June 30, 2017, compared to other income, net of $0.3 million for the six months ended July 1, 2016.

Our other (expense) income, net is primarily comprised of foreign exchange gains and losses on cash, accounts receivable and intercompany balances denominated in currencies other than the functional currency of the reporting entity. Our foreign currency exposure is primarily driven by the fluctuations in the foreign currency exchanges rates of the Euro, British pound, Japanese yen and Israeli shekels. The increase in other expense, net in the three and six months ended June 30, 2017, compared to the corresponding periods in 2016, was primarily related to unfavorable foreign exchange impact resulting from the volatility of the Euro against the U.S. dollars on the inter-company balances.

To mitigate the volatility related to fluctuations in foreign exchange rates, we may enter into various foreign currency forward contracts. See "Foreign Currency Exchange Risk" under Item 3 of this Quarterly Report on Form 10-Q for additional information.

Loss on Impairment of Long-term Investment

Beginning in late 2015 and continuing through 2016, Vislink's stock price was below its cost basis for a prolonged period of time. Based on our assessment, we recorded a $1.5 million and $1.2 million impairment charges in the first and third quarter of 2016, respectively, reflecting the new reduced cost basis of the Vislink investment at September 30, 2016. As of December 31, 2016, Vislink's stock price increased approximately 67% from the stock price as of September 30, 2016.

On February 3, 2017, Vislink (from thereon, referred to as Pebble Beach Systems) completed the disposal of its hardware division and changed its name to Pebble Beach Systems. On February 6, 2017, Pebble Beach Systems announced its financial results for fiscal 2016 which showed a significant increase in operating loss. As of June 30, 2017, Pebble Beach System's stock price had declined 83% from the stock price as of December 31, 2016 and Pebble Beach System is currently seeking alternatives to maximize value of its shareholders, which could include a sale of the company. In view of Pebble Beach System's potential sale opportunity, we determined that the decline in the fair value of Pebble Beach Systems' investment is not considered permanent yet, and as a result, a $0.1 million loss in Vislink's investment in the second quarter of 2017 was recorded to other comprehensive loss. Our remaining maximum exposure to loss from the Pebble Beach Systems' investment at June 30, 2017 was approximately $0.5 million, consisting of the carrying value of $0.2 million and the accumulated unrealized loss of $0.3 million.

Income Taxes

The following table presents the provision for income taxes and the effective income tax rate for the three and six months ended June 30, 2017 and July 1, 2016 (in thousands, except percentages):

	Three months ended				Six months ended			
	June 30, 2017	July 1, 2016	Q2 FY17 vs Q2 FY16		June 30, 2017	July 1, 2016	Q2 FY17 YTD vs Q2 FY16 YTD	
Provision for income taxes	$579	$242	$337	139%	$347	$760	$(413)	(54)%
Effective income tax rate	(1.9)%	(1.2)%			(0.6)%	(1.7)%		

Our effective tax rate generally differs from the U.S. federal statutory rate of 35% due to favorable tax rates associated with certain earnings from our operations in lower tax jurisdictions throughout the world. In addition, our effective tax rates vary in each period primarily due to specific one-time, discrete items that affected the tax rate in the respective

period.

Our effective income tax rate of (0.6)% for the six months ended June 30, 2017 was different from the U.S. federal statutory rate of 35%, primarily due to our geographical income mix and favorable tax rates associated with certain earnings from operations in lower-tax jurisdictions, partially offset by the increase in the valuation allowance against U.S. federal, California and other state deferred tax assets and detriment from non-deductible stock-based compensation. In addition, in the first quarter of 2017, we were able to recognize a one-time tax benefit of approximately $1.2 million as a result of the merger of our two subsidiaries in Israel which was approved by the Israeli government in the first quarter of 2017. For the six months ended June 30, 2017, the discrete adjustments to our tax expense were primarily withholding taxes and the accrual of interest on uncertain tax positions.

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Our effective income tax rate of (1.7)% for the six months ended July 1, 2016 was different from U.S. federal statutory rate of 35% primarily due to favorable tax rates associated with certain earnings from operations in lower-tax jurisdictions, and the tax benefit from the realization of certain deferred tax assets as a result of the TVN acquisition, partially offset by the increase in the valuation allowance against U.S. federal, California and other state deferred tax assets, detriment from non-deductible stock-based compensation, non-deductible amortization of foreign intangibles, and the net of various discrete tax adjustments. For the six months ended July 1, 2016, the discrete adjustments to our tax expense were primarily the accrual of interest on uncertain tax positions withholding taxes and a true-up of the tax provision for certain foreign subsidiaries based on the tax returns filed.

Liquidity and Capital Resources

As of June 30, 2017, our principal sources of liquidity consisted of cash and cash equivalents of $52.9 million, net accounts receivable of $60.4 million and borrowings from the capital markets as well as financing from French government agencies. We assumed certain debts as a result of the TVN acquisition which were primarily related to long-term financing arrangements with French government agencies, and to a lesser extent, financing obtained from other financing institutions and the aggregate balances of these debts was $16.4 million as of June 30, 2017. Our principal uses of cash will include repayments of debt and related interest, purchases of inventory, payroll, restructuring expenses and TVN acquisition- and integration-related expenses and other operating expenses related to the development, marketing of our products, purchases of property and equipment and other contractual obligations for the foreseeable future. We believe that our cash and cash equivalents of $52.9 million at June 30, 2017 will be sufficient to fund our principal uses of cash for at least the next 12 months. However, if our expectations are incorrect, we may need to raise additional funds to fund our operations, to take advantage of unanticipated strategic opportunities or to strengthen our financial position. In the future, we may enter into other arrangements for potential investments in, or acquisitions of, complementary businesses, services or technologies, which could require us to seek additional equity or debt financing. Additional funds may not be available on terms favorable to us or at all.

As of June 30, 2017, $39.6 million of the cash and cash equivalents balance was held in our foreign subsidiaries. At present, such foreign funds, after settling any intercompany balances owed to the U.S. parent company, are considered to be indefinitely reinvested in foreign countries to the extent of indefinitely reinvested foreign earnings. In the event funds from foreign operations, to the extent such funds are indefinitely reinvested foreign earnings, are needed to fund cash needs in the United States and if U.S. taxes have not already been previously accrued, we would be required to accrue and pay additional U.S. taxes in order to repatriate these funds.

In December 2015, we issued $128.25 million aggregate principal amount of the Notes. We incurred approximately $4.1 million of debt issuance cost. The Notes bear interest at a fixed rate of 4.00% per year, payable semiannually in arrears on June 1 and December 1 of each year, beginning on June 1, 2016 and mature on December 1, 2020. Concurrent with the issuance of the Notes, we used $49.9 million of the net proceeds from the Notes to repurchase 11.1 million shares of our common stock. The remaining net proceeds from the Notes were used to fund our acquisition of TVN, which was completed on February 29, 2016.

The table below sets forth selected cash flow data for the periods presented (in thousands):

	Six months ended	
	June 30, 2017	July 1, 2016
Net cash provided by (used in):		
Operating activities	$2,614	$(8,293)
Investing activities	955	(67,855)
Financing activities	(7,095)	1,569
Effect of foreign exchange rate changes on cash	776	(95)
Net decrease in cash and cash equivalents	$(2,750)	$(74,674)

Operating Activities

Net cash provided by operations increased $10.9 million in the six months ended June 30, 2017, compared to the corresponding period in 2016, primarily due to more cash being generated from net working capital, offset in part by a $12.7 million increase in net loss, after adjustments for non-cash items.

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We expect that cash provided by operating activities may fluctuate in future periods as a result of a number of factors, including fluctuations in our operating results, shipment linearity, accounts receivable collections performance, inventory and supply chain management, income tax reserves adjustments, and the timing and amount of compensation and other payments.

Investing Activities

Net cash used in investing activities decreased $68.8 million in the six months ended June 30, 2017, compared to the corresponding period in 2016, primarily due to the $73.0 million net cash paid for the TVN acquisition in the first six months of 2016.

Financing Activities

Net cash used in financing activities increased $8.7 million in the six months ended June 30, 2017, compared to the corresponding period in 2016, primarily due to lower proceeds from debt borrowings as well as higher payment of tax withholding obligations related to net share settlements of restricted stock in the first six months of 2017.

Contractual Obligations and Commitments

Future payments under contractual obligations and other commercial commitments, as of June 30, 2017 are as follows (in thousands):

	Payments due in each fiscal year				
	Total Amounts Committed	2017 (remaining six months)	2018 and 2019	2020 and 2021	Thereafter
Convertible debt	$128,250	$ —	$—	$128,250	$ —
Interest on convertible debt	17,955	2,565	10,260	5,130	—
Other debts	14,966	673	12,655	1,090	548
Capital Lease	1,456	492	937	27	—
Operating leases	48,824	6,759	23,792	9,687	8,586
Purchase commitments	30,852	28,148	2,704	—	—
Total contractual obligations	$242,303	$ 38,637	$50,348	$144,184	$ 9,134
Other commercial commitments:					
Standby letters of credit	$722	$ 14	$708	$—	$ —
Total commercial commitments	$722	$ 14	$708	$—	$ —

Off-Balance Sheet Arrangements

We did not have any off-balance sheet arrangements as of June 30, 2017.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk represents the risk of loss that may impact our operating results, financial position or liquidity due to adverse changes in market prices and rates. We are exposed to market risk because of changes in interest rates, foreign currency exchange rates, when other currencies held by our subsidiaries are measured against the U.S. dollar, and to changes in the value of financial instruments held by us.

Foreign Currency Exchange Risk

We market and sell our products and services through our direct sales force and indirect channel partners in North America, EMEA, APAC and Latin America. Accordingly, we are subject to exposure from adverse movements in foreign currency exchange rates, primarily the Euro, British pound and Japanese yen. Our U.S. dollar functional subsidiaries, which accounted for approximately 96% of our consolidated net revenue in the six months ended June 30, 2017, recorded net billings denominated in foreign currencies of approximately 20% of their net billings in the first six months of 2017, compared to 10% in the corresponding period in 2016. The increase was primarily due to

the acquisition of TVN which increased our foreign customer base. In addition, a portion of our operating expenses, primarily the cost of personnel to deliver technical support on

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our products and professional services, sales and sales support and research and development, are denominated in foreign currencies, primarily the Israeli shekels.
We use derivative instruments, primarily forward contracts, to manage exposures to foreign currency exchange rates and we do not enter into foreign currency forward contracts for trading purposes.

Derivatives Not Designated as Hedging Instruments (Balance Sheet Hedges)

We enter into forward currency contracts to hedge foreign currency denominated monetary assets and liabilities. These derivative instruments are marked to market through earnings each accounting period and mature generally within three months. Changes in the fair value of these foreign currency forward contracts are recognized in "Other expense, net" in the Condensed Consolidated Statement of Operations, net and are largely offset by the changes in the fair value of the underlying assets or liabilities being hedged.

The U.S. dollar equivalents of all outstanding notional amounts of foreign currency forward contracts are summarized as follows (in thousands):

	June 30, 2017	December 31, 2016
Derivatives not designated as hedging instruments:		
Purchase	$9,911	$ 4,056
Sell	$5,970	$ 11,157

Interest rate risk

Our exposure to market risk for changes in interest rates relates primarily to our investment portfolio of marketable investment securities and outstanding debt arrangements with variable rate interests.
As of June 30, 2017, our cash and cash equivalents totaled $52.9 million. We had $6.9 million of short-term investments at December 31, 2016 and these investments were sold during the first quarter of 2017. We had no short-term investments as of June 30, 2017.
As a result of the TVN acquisition, we assumed various debt instruments. The aggregate debt balance of such instruments at June 30, 2017 was $16.4 million, of which $1.5 million relates to obligations under capital leases with fixed interest rates. The remaining $14.9 million are debt instruments primarily financed by French government agencies, and to a lesser extent, term loans from other financing institutions. These debt instruments have maturities ranging from three to eight years; expiring from 2017 through 2023. A majority of the loans are tied to the 1 month EURIBOR rate plus spread. (See Note 11, "Convertible notes, Other Debts and Capital Leases" of the notes to our Condensed Consolidated Financial Statements for additional information). As of June 30, 2017, a hypothetical 1.0% increase in market interest rates on our debts subject to variable interest rate fluctuations would increase our interest expense by less than $0.3 million annually.
As of June 30, 2017, we had $128.25 million aggregate principal amount of the Notes outstanding, which have a fixed 4.0% coupon rate.

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ITEM 4. CONTROLS AND PROCEDURES

Evaluation of disclosure controls and procedures

We maintain “disclosure controls and procedures,” as such term is defined in Rule 13a-15(e) under the Exchange Act, that are designed to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating our disclosure controls and procedures, management recognized that disclosure controls and procedures, no matter how well conceived and operated, can provide only reasonable, and not absolute, assurance that the objectives of the disclosure controls and procedures are met. Additionally, in designing disclosure controls and procedures, our management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible disclosure controls and procedures. The design of any disclosure controls and procedures also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions.

Based on their evaluation as of the end of the period covered by this Form 10-Q, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective at a reasonable assurance level.

Changes in Internal Control over Financial Reporting

Our Chief Executive Officer and Chief Financial Officer evaluated the changes in our internal control over financial reporting that occurred during the quarterly period covered by this Form 10-Q. With effect from January 1, 2017, TVN is fully integrated into our overall internal control over financial reporting process. Based on their evaluation, it is concluded that there had been no change in our internal control over financial reporting during the quarter ended June 30, 2017 that have materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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PART II
OTHER INFORMATION
ITEM 1. LEGAL PROCEEDINGS
From time to time, we are involved in lawsuits as well as subject to various legal proceedings, claims, threats of litigation, and investigations in the ordinary course of business, including claims of alleged infringement of third-party patents and other intellectual property rights, commercial, employment, and other matters. While certain matters to which we are a party may specify the damages claimed, such claims may not represent reasonably possible losses. Given the inherent uncertainties of litigation, the ultimate outcome of these matters cannot be predicted at this time, nor can the amount of possible loss or range of loss, if any, be reasonably estimated.

In October 2011, Avid Technology, Inc. (“Avid”) filed a complaint in the United States District Court for the District of Delaware alleging that our MediaGrid product infringes two patents held by Avid. A jury trial on this complaint commenced on January 23, 2014 and, on February 4, 2014, the jury returned a unanimous verdict in favor of us, rejecting Avid’s infringement allegations in their entirety. On May 23, 2014, Avid filed a post-trial motion asking the court to set aside the jury’s verdict, and the judge issued an order on December 17, 2014, denying the motion. On January 5, 2015, Avid filed an appeal with respect to the jury’s verdict with the Federal Circuit, which was docketed on January 9, 2015, as Case No. 2015-1246. Avid filed its opening brief with respect to this appeal on March 24, 2015, we filed our response brief on May 7, 2015, and Avid filed its reply brief on June 16, 2015. Oral arguments were held on December 11, 2015. On January 29, 2016, the Federal Circuit issued an order vacating the verdict of noninfringement and remanding the case to the trial court for a new trial on infringement. On February 26, 2016, Harmonic filed a request for rehearing and rehearing en banc at the Federal Circuit. On March 31, 2016, the Federal Circuit denied the request for rehearing and rehearing en banc and a mandate issued on April 8, 2016. The court conducted a supplemental claim construction hearing on May 27, 2016 and issued a claim construction order on June 29, 2016. On June 17, 2016, we filed requests for ex parte reexaminations for the ’808 and ’309 patents with the United States Patent and Trademark Office (“USPTO”). The USPTO ordered reexamination of both the ’309 and ’808 patents in August 2016. A status conference was held with the District Court on February 23, 2017. On April 10, 2017, the USPTO issued a final office action rejecting the challenged claims of the ’309 patent and affirming all claims of the ’808 patent.

In June 2012, Avid served a subsequent complaint in the United States District Court for the District of Delaware alleging that our Spectrum product infringes one patent held by Avid. The complaint seeks injunctive relief and unspecified damages. In September 2013, the U.S. Patent Trial and Appeal Board (“PTAB”) authorized an inter partes review to be instituted as to claims 1-16 of the patent asserted in this second complaint. A hearing before the PTAB was conducted on May 20, 2014. On July 10, 2014, the PTAB issued a decision finding claims 1-10 invalid and claims 11-16 not invalid. We filed an appeal with respect to the PTAB’s decision on claims 11-16 on September 11, 2014. The appeal was docketed with the Federal Circuit on October 22, 2014, as Case No. 2015-1072, and we filed our opening brief with respect to this appeal on January 29, 2015. Avid and PTAB each filed a response brief on April 27, 2015, and we filed a reply brief on May 28, 2015. Oral arguments were held on October 8, 2015. The Federal Circuit issued an order on March 1, 2016, affirming the PTAB’s decision and a mandate issued on April 7, 2016.

On July 24, 2017, the court issued a scheduling order consolidating both cases and setting the trial date for November 6, 2017.

An unfavorable outcome on any litigation matters could require us to pay substantial damages, or, in connection with any intellectual property infringement claims, could require us to pay ongoing royalty payments or could prevent us from selling certain of our products. As a result, a settlement of, or an unfavorable outcome on, any of the matters referenced above or other litigation matters could have a material adverse effect on our business, operating results, financial condition and cash flows.

Our industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent and other intellectual property rights. From time to time, third parties have asserted, and may in the future assert, exclusive patent, copyright, trademark and other intellectual property rights against us or our customers. Such assertions arise in the normal course of our operations. The resolution of any such assertions and claims cannot be predicted with certainty.

ITEM 1A. RISK FACTORS

We depend on cable, satellite and telco, and broadcast and media industry capital spending for our revenue and any material decrease or delay in capital spending in any of these industries would negatively impact our operating results, financial condition and cash flows.

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Our revenue has been derived from worldwide sales to service providers and broadcast and media companies, as well as, more recently, emerging streaming media companies. We expect that these markets will provide our revenue for the foreseeable future. Demand for our products will depend on the magnitude and timing of capital spending by customers in each of these markets for the purpose of creating, expanding or upgrading their systems. These capital spending patterns are dependent on a variety of factors, including:

• the impact of general economic conditions, actual and projected;

• access to financing;

• annual capital spending budget cycles of each of the industries we serve;

• the impact of industry consolidation;

• customers suspending or reducing capital spending in anticipation of: (i) new standards, such as HEVC and DOCSIS 3.1; (ii) industry trends and technology shifts, such as virtualization, and (iii) new products, such as products based on our VOS software platform or the CCAP architecture, such as CableOS;

• federal, state, local and foreign government regulation of telecommunications, television broadcasting and streaming media;

• overall demand for communication services and consumer acceptance of new video and data technologies and services;

• competitive pressures, including pricing pressures;

• the impact of fluctuations in currency exchange rates; and

• discretionary end-user customer spending patterns.

In the past, specific factors contributing to reduced capital spending have included:

• weak or uncertain economic and financial conditions in the U.S. or one or more international markets;

• uncertainty related to development of digital video industry standards;

• delays in evaluations of new services, new standards and systems architectures by many operators;

• emphasis by operators on generating revenue from existing customers, rather than from new customers, through construction, expansion or upgrades;

• a reduction in the amount of capital available to finance projects of our customers and potential customers;

• proposed and completed business combinations and divestitures by our customers and the length of regulatory review of each;

• completion of a new system or significant expansion or upgrade to a system; and

• bankruptcies and financial restructuring of major customers.

In the past, adverse economic conditions in one or more of the geographies in which we offer our products have adversely affected our customers' capital spending in those geographies and, as a result, our business. During challenging economic times, and in tight credit markets, many customers may delay or reduce capital expenditures. This could result in reductions in revenue from our products, longer sales cycles, difficulties in collection of accounts receivable, slower adoption of new technologies and increased price competition. If global economic and market conditions, or economic conditions in the U.S., Europe or other key markets, deteriorate, we could experience a material and adverse effect on our business, results of operations, financial condition and cash flows. Additionally, since most of our international revenue is denominated in U.S. dollars, global economic and market conditions may impact currency exchange rates and cause our products to become

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relatively more expensive to customers in a particular country or region, which could lead to delayed or reduced capital spending in those countries or regions, thereby negatively impacting our business and financial condition.

In addition, industry consolidation has in the past constrained, and may in the future constrain or delay, capital spending by our customers. Further, if our product portfolio and product development plans do not position us well to capture an increased portion of the capital spending of customers in the markets on which we focus, our revenue may decline.

As a result of these capital spending issues, we may not be able to maintain or increase our revenue in the future, and our operating results, financial condition and cash flows could be materially and adversely affected.

The markets in which we operate are intensely competitive.

The markets for our products are extremely competitive and have been characterized by rapid technological change and declining average sales prices in the past. Our competitors in our Video business segment include vertically integrated system suppliers, such as Arris Group, Cisco Systems and Ericsson, and, in certain product lines, other companies including ATEME and Elemental Technologies (an Amazon Web Services company). With respect to production and playout products, competitors include Evertz Microsystems, EVS, Grass Valley (a Belden brand) and Imagine Communications. Our competitors in our Cable Edge business include Arris, Casa Systems and Cisco Systems.

Many of our competitors are substantially larger, or as a result of consolidation activity have become larger, and have greater financial, technical, marketing and other resources than we have, and have been in operation longer than we have. Consolidation in the industry has led to the acquisition of a number of our historic competitors over the last several years. For example, Motorola Home, BigBand Networks and C-Cor were acquired by Arris; NDS and Scientific Atlanta were acquired by Cisco Systems; Envivio and Tandberg Television were acquired by Ericsson; Elemental Technologies was acquired by Amazon; and Miranda Technologies and Grass Valley were acquired by Belden Inc.

In addition, some of our larger competitors have more long-standing and established relationships with domestic and foreign customers. Many of these large enterprises are in a better position to withstand any significant reduction in capital spending by customers in our markets. They often have broader product lines and market focus, and may not be as susceptible to downturns in a particular market. These competitors may also be able to bundle their products together to meet the needs of a particular customer, and may be capable of delivering more complete solutions than we are able to provide. To the extent large enterprises that currently do not compete directly with us choose to enter our markets by acquisition or otherwise, competition would likely intensify.

Further, some of our competitors that have greater financial resources have offered, and in the future may offer, their products at lower prices than we offer for our competing products or on more attractive financing or payment terms, which has in the past caused, and may in the future cause, us to lose sales opportunities and the resulting revenue or to reduce our prices in response to that competition. Also, some competitors that are smaller than we are have engaged in, and may continue to engage in, aggressive price competition in order to gain customer traction and market share. Reductions in prices for any of our products could materially and adversely affect our operating margins and revenue.

Additionally, certain customers and potential customers have developed, and may continue to develop, their own solutions that may cause such customers or potential customers to not consider our product offerings or to displace our installed products with their own solutions. The growing availability of open source codecs and related software, as well as new server chipsets that incorporate encoding technology, has, in certain respects, lowered the barriers to entry for the video processing industry. The development of solutions by potential and existing customers and the reduction

of the barriers to entry to enter the video processing industry could result in increased competition and adversely affect our results of operations and business.

If any of our competitors' products or technologies were to become the industry standard, our business could be seriously harmed. If our competitors are successful in bringing their products to market earlier than us, or if these products are more technologically capable than ours, our revenue could be materially and adversely affected.

We need to develop and introduce new and enhanced products in a timely manner to meet the needs of our customers and to remain competitive.

All of the markets we address are characterized by continuing technological advancement, changes in customer requirements and evolving industry standards. To compete successfully, we must continually design, develop, manufacture and sell new or enhanced products that provide increasingly higher levels of performance and reliability and meet our customers changing needs. However, we may not be successful in those efforts if, among other things, our products:

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- are not cost effective;
- are not brought to market in a timely manner;
- are not in accordance with evolving industry standards;
- fail to meet market acceptance or customer requirements; or
- are ahead of the needs of their markets.

We are currently developing and marketing products based on the latest video compression standards, such as HEVC, which provides significantly greater compression efficiency, thereby making more bandwidth available to operators. At the same time, we continue to devote development resources to enhance the existing AVC/H.264 compression of our products, which many of our customers continue to require. There can be no assurance that these efforts will be successful in the near future, or at all, or that our competitors will not take significant market share in encoding or transcoding.

We continue to focus our development efforts on key product solutions in our Video and Cable Edge businesses. Our VOS solution is a software-based, cloud-enabled platform that unifies the entire media processing chain, from ingest to delivery. We have launched a number of VOS-based product solutions and services, including Electra XVM, VOS Cloud and VOS360. In our Cable Edge business, we have launched and continue to develop our CableOS software-based CCAP systems, and we continue to develop, market and sell our NSG edgeQAM solutions.

Many of these products and initiatives are intended to integrate existing and new features and functions in response to shifts in customer demands in the relevant market, as well as to general technology trends (such as virtualized and cloud-based computing, and integrated QAM and CMTS functionality in CCAP-based products) that we believe will significantly impact our industry. The success of these significant and costly development efforts will be predicated, for certain products and initiatives, on the timing of market adoption of the new standards on which the resulting products are based, and for other products, the timing of customer adoption of our products and solutions, as well as our ability to timely develop the features and capabilities of our products and solutions. If new standards or some of our new products are adopted later than we predict or not adopted at all, or if adoption occurs earlier than we are able to deliver the applicable products or functionality, we risk spending significant research and development time and dollars on products or features that may never achieve market acceptance or that miss the customer demand window and thus do not produce the revenue that a timely introduction would have likely produced.

If we fail to develop and market new and enhanced products on a timely basis, our operating results, financial condition and cash flows could be materially and adversely affected.

Our CCAP-based product initiatives expose us to certain technology transition risks that may adversely impact our operating results, financial condition and cash flows.

In the last few years, the cable industry has begun to develop and promulgate the CCAP architecture for next-generation cable edge solutions, which combines edge QAM and CMTS functions in a single system in order to combine resources for video and data delivery. We believe our CableOS software-based CCAP systems, available as either a centralized or distributed remote PHY solution, will significantly reduce cable headend costs and increase operational efficiency, and are an important step in cable operators’ transition to all-IP networks. If we are unsuccessful in developing these capabilities in a timely manner, or are otherwise delayed in making such capabilities available to our customers, our business may be adversely impacted, particularly if our competitors develop and

market fully compliant products before we do.

We believe CCAP-based systems will, over time, replace and make obsolete current cable edge-QAM solutions, including our cable edge QAM products, as well as current CMTS solutions, which is a market our products have previously not addressed. If demand for our CCAP systems is weaker than expected, or sales of our CCAP-based systems do not adequately offset the expected decline in demand for our non-CCAP cable edge products, or the decline in demand for our non-CCAP cable edge products is more rapid and precipitous than expected, our near and long-term operating results, financial condition and cash flows could be adversely impacted. Further, in September 2016 we granted Comcast a warrant (the “Warrant”) to purchase shares of our common stock to further incentivize them to purchase our products and adopt our technologies, particularly our CableOS software-based CCAP solution. If Comcast does not adopt our CableOS system, or does so more slowly than we anticipate, we may be unable to realize the anticipated benefits of our relationship with Comcast and our business and operating results, financial condition and cash flows could be materially and adversely affected. Moreover, if a new or competitive

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architecture for next-generation cable edge solutions is promulgated that renders our CCAP-based systems obsolete, our business may be adversely impacted.

Our future growth depends on market acceptance of several broadband services, on the adoption of new broadband technologies, and on several other broadband industry trends.

Future demand for many of our products will depend significantly on the growing market acceptance of emerging broadband services, including digital video, VOD, Ultra HD, IP video services (particularly streaming to tablet computers, connected TVs and mobile devices) and very high-speed data services. The market demand for such emerging services is rapidly growing, with many custom or proprietary systems in use, which increases the challenge of delivering interoperable products intended to address the requirements of such services.

The effective delivery of these services will depend, in part, on a variety of new network architectures, standards and devices, such as:

• the adoption of cloud-native media processing architectures;

• the adoption of advanced video compression standards, such as next generation H.264 compression and HEVC;

• the CCAP architecture;

• fiber to the premises, or FTTP, networks designed to facilitate the delivery of video services by telcos;

• the greater use of protocols such as IP;

• the further adoption of bandwidth-optimization techniques, such as DOCSIS 3.0 and DOCSIS 3.1; and

• the introduction of new consumer devices, such as advanced set-top boxes, DVRs and network DVRs, connected TVs, tablet computers, and a variety of smart phone mobile devices.

If adoption of these emerging services and/or technologies is not as widespread or as rapid as we expect, or if we are unable to develop new products based on these technologies on a timely basis, our operating results, financial condition and cash flows could be materially and adversely affected.

Furthermore, other technological, industry and regulatory trends and requirements may affect the growth of our business.
These trends and requirements include the following:

• convergence, whereby network operators bundle video, voice and data services to consumers, including mobile delivery options;

• the increasing availability of traditional broadcast video content and video-on-demand on the Internet;

• adoption of high-bandwidth technology, such as DOCSIS 3.x, next generation LTE and FTTP;

• the use of digital video by businesses, governments and educational institutions;

• efforts by regulators and governments in the U.S. and internationally to encourage the adoption of broadband and digital technologies, as well as to regulate broadband access and delivery;

• consumer interest in higher resolution video such as Ultra HD or retina-display technologies on mobile devices;

• the need to develop partnerships with other companies involved in video infrastructure workflow and broadband services;

• the continued adoption of the television viewing behaviors of consumers in developed economies by the growing middle class across emerging economies;

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• the extent and nature of regulatory attitudes towards issues such as network neutrality, competition between operators, access by third parties to networks of other operators, local franchising requirements for telcos to offer video, and other new services, such as mobile video; and

• the outcome of disputes and negotiations between content owners and service providers regarding rights of service providers to store and distribute recorded broadcast content, which outcomes may drive adoption of one technology over another in some cases.

If we fail to recognize and respond to these trends, by timely developing products, features and services required by these trends, we are likely to lose revenue opportunities and our operating results, financial condition and cash flows could be materially and adversely affected.

We depend significantly on our international revenue and are subject to the risks associated with international operations, including those of our resellers, contract manufacturers and outsourcing partners, which may negatively affect our operating results.

Revenue derived from customers outside of the U.S. for the six months ended June 30, 2017 and July 1, 2016 represented approximately 62% and 54% of our revenue, respectively. Although no assurance can be given with respect to international sales growth in any one or more regions, we expect that international revenue will likely continue to represent, from year to year, a majority, and potentially increasing, percentage of our annual revenue for the foreseeable future. A significant percentage of our revenue is generated from sales to resellers, value-added resellers (“VARs”) and systems integrators, particularly in emerging market countries. Furthermore, a significant percentage of our employees are based in our international offices and locations, and most of our contract manufacturing occurs outside of the U.S. In addition, we outsource a portion of our research and development activities to certain third-party partners with development centers located in different countries, particularly Ukraine and India.

Our international operations, the international operations of our resellers, contract manufacturers and outsourcing partners, and our efforts to maintain and increase revenue in international markets are subject to a number of risks, which are generally greater with respect to emerging market countries, including the following:

• growth and stability of the economy in one or more international regions;

• fluctuations in currency exchange rates;

• changes in foreign government regulations and telecommunications standards;

• import and export license requirements, tariffs, taxes, economic sanctions, contractual limitations and other trade barriers;

• our significant reliance on resellers and others to purchase and resell our products and solutions, particularly in emerging market countries;

• availability of credit, particularly in emerging market countries;

• longer collection periods and greater difficulty in enforcing contracts and collecting accounts receivable, especially from smaller customers and resellers, particularly in emerging market countries;

• compliance with the U.S. Foreign Corrupt Practices Act (the “FCPA”), the U.K. Bribery Act and/or similar anti-corruption and anti-bribery laws, particularly in emerging market countries;

• the burden of complying with a wide variety of foreign laws, treaties and technical standards;

• fulfilling “country of origin” requirements for our products for certain customers;

• difficulty in staffing and managing foreign operations;

• business and operational disruptions or delays caused by political, social and economic instability and unrest, including risks related to terrorist activity, particularly in emerging market countries (e.g., recent significant civil, political and economic disturbances in Ukraine);

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• changes in economic policies by foreign governments, including the imposition and potential continued expansion of economic sanctions by the U.S. and the European Union on the Russian Federation;

• the effects and any resulting negative economic impact of the recent U.S. election or the U.K.'s referendum to exit the European Union; and

• business and economic disruptions and delays caused by outbreaks of disease, epidemics and potential pandemics.

We have certain international customers who are billed in their local currency, primarily the Euro, British pound and Japanese yen, which subjects us to foreign currency risk. In addition, a portion of our operating expenses relating to the cost of certain international employees, are denominated in foreign currencies, primarily the Israeli shekel, British pound, Euro, Singapore dollar, Chinese yuan and Indian rupee, although we do hedge against the Israeli shekel. Gains and losses on the conversion to U.S. dollars of accounts receivable, accounts payable and other monetary assets and liabilities arising from international operations may contribute to fluctuations in our operating results. Furthermore, payment cycles for international customers are typically longer than those for customers in the U.S. Unpredictable payment cycles could cause us to fail to meet or exceed the expectations of security analysts and investors for any given period.

Most of our international revenue is denominated in U.S. dollars, and fluctuations in currency exchange rates could cause our products to become relatively more expensive to customers in a particular country or region, leading to a reduction in revenue or profitability from sales in that country or region. The potential negative impact of a strong U.S. dollar on our business may be exacerbated by the significant devaluation of a number of foreign currencies. Also, if the U.S. dollar were to weaken against many foreign currencies, there can be no assurance that a weaker dollar would lead to growth in capital spending in foreign markets.

Our operations outside the U.S. also require us to comply with a number of U.S. and international regulations that prohibit improper payments or offers of payments to foreign governments and their officials and political parties for corrupt purposes. For example, our operations in countries outside the U.S. are subject to the FCPA and similar laws, including the U.K. Bribery Act. Our activities in certain emerging countries create the risk of unauthorized payments or offers of payments by one of our employees, consultants, sales agents or channel partners that could be in violation of various anti-corruption laws, even though these parties may not be under our control. Under the FCPA and U.K. Bribery Act, companies may be held liable for the corrupt actions taken by their directors, officers, employees, channel partners, sales agents, consultants, or other strategic or local partners or representatives. We have internal control policies and procedures with respect to FCPA compliance, have implemented FCPA training and compliance programs for our employees, and include in our agreements with resellers a requirement that those parties comply with the FCPA. However, we cannot provide assurances that our policies, procedures and programs will prevent violations of the FCPA or similar laws by our employees or agents, particularly in emerging market countries, and as we expand our international operations. Any such violation, even if prohibited by our policies, could result in criminal or civil sanctions against us.

The effect of one or more of these international risks could have a material and adverse effect on our business, financial condition, operating results and cash flows.

We purchase several key components, subassemblies and modules used in the manufacture or integration of our products from sole or limited sources, and we rely on contract manufacturers and other subcontractors.

Many components, subassemblies and modules necessary for the manufacture or integration of our products are obtained from a sole supplier or a limited group of suppliers. For example, we depend on two suppliers for certain

video encoding chips which are incorporated into several products. Our reliance on sole or limited suppliers, particularly foreign suppliers, and our reliance on contractors for manufacturing and installation of our products, involves several risks, including a potential inability to obtain an adequate supply of required components, subassemblies or modules; reduced control over costs, quality and timely delivery of components, subassemblies or modules; supplier discontinuation of components, subassemblies or modules we require; and timely installation of products. In addition, the result of the recent presidential election in the United States has created uncertainty regarding trade policies. Specifically, the new administration has suggested imposing tariffs or other restrictions on foreign imports. If any such tariffs are imposed on products or components that we import, including those obtained from a sole supplier or a limited group of suppliers, we could experience reduced revenues or may have to raise our prices, either of which could have an adverse effect on our business, financial condition and operating results.

These risks could be heightened during a substantial economic slowdown, because our suppliers and subcontractors are more likely to experience adverse changes in their financial condition and operations during such a period. Further, these risks could

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materially and adversely affect our business if one of our sole sources, or a sole source of one of our suppliers or contract manufacturers, is adversely affected by a natural disaster. While we expend resources to qualify additional component sources, consolidation of suppliers and the small number of viable alternatives have limited the results of these efforts. Managing our supplier and contractor relationships is particularly difficult during time periods in which we introduce new products and during time periods in which demand for our products is increasing, especially if demand increases more quickly than we expect.

Plexus Services Corp., which manufactures our products at its facilities in Malaysia, currently serves as our primary contract manufacturer, and currently provides us with a substantial majority, by dollar amount, of the products that we purchase from our contract manufacturers. Most of the products manufactured by our Israeli operations are outsourced to another third-party manufacturer in Israel. From time to time we assess our relationship with our contract manufacturers, and we do not generally maintain long-term agreements with any of our suppliers or contract manufacturers. Our agreement with Plexus has automatic annual renewals, unless prior notice is given by either party, and has been automatically renewed for a term expiring in October 2017.

Difficulties in managing relationships with any of our current contract manufacturers, particularly Plexus, that manufacture our products off-shore, or any of our suppliers of key components, subassemblies and modules used in our products, could impede our ability to meet our customers’ requirements and adversely affect our operating results. An inability to obtain adequate and timely deliveries of our products or any materials used in our products, or the inability of any of our contract manufacturers to scale their production to meet demand, or any other circumstance that would require us to seek alternative sources of supply, could negatively affect our ability to ship our products on a timely basis, which could damage relationships with current and prospective customers and harm our business and materially and adversely affect our revenue and other operating results. Furthermore, if we fail to meet customers’ supply expectations, our revenue would be adversely affected and we may lose sales opportunities, both short and long term, which could materially and adversely affect our business and our operating results, financial condition and cash flows. Increases, from time to time, in demand on our suppliers and subcontractors from our customers or from other parties have, on occasion, caused delays in the availability of certain components and products. In response, we may increase our inventories of certain components and products and expedite shipments of our products when necessary. These actions could increase our costs and could also increase our risk of holding obsolete or excess inventory, which, despite our use of a demand order fulfillment model, could materially and adversely affect our business, operating results, financial condition and cash flows.

The loss of one or more of our key customers, a failure to continue diversifying our customer base, or a decrease in the number of larger transactions could harm our business and our operating results.

Historically, a significant portion of our revenue has been derived from relatively few customers, due in part to the consolidation of the ownership of cable television and direct broadcast satellite system companies. Sales to our top 10 customers in the six months ended June 30, 2017 and July 1, 2016 accounted for approximately 25% and 34% of revenue, respectively. Although we have broadened our customer base by further penetrating new markets and expanding internationally, we expect to see continuing industry consolidation and customer concentration.

No customer accounted for more than 10% of our net revenue in the six months ended June 30, 2017 and July 1, 2016. Further consolidation in the cable industry could lead to additional revenue concentration for us. The loss of any significant customer, or any material reduction in orders from any other significant customer, or our failure to qualify our new products with any significant customer could materially and adversely affect, either long term or in a particular quarter, our operating results, financial condition and cash flows. Further, if Comcast does not increase its adoption of our technologies or purchases of our products in connection with the Warrant we issued to them in September 2016, or does so more slowly than we anticipate, we may be unable to realize the anticipated benefits of the Warrant and our operating results, financial condition and cash flows could be materially and adversely effected.

In addition, we are involved in most quarters in one or more relatively large individual transactions. A decrease in the number of the relatively larger individual transactions in which we are involved in any quarter could materially and adversely affect our operating results for that quarter.

As a result of these and other factors, we may be unable to increase our revenues from some or all of the markets we address, or to do so profitably, and any failure to increase revenues and profits from these customers could materially and adversely affect our operating results, financial condition and cash flows.

We rely on resellers, value-added resellers and systems integrators for a significant portion of our revenue, and disruptions to, or our failure to develop and manage our relationships with these customers or the processes and procedures that support them could adversely affect our business.

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We generate a significant percentage of our revenue through sales to resellers, VARs and systems integrators that assist us with fulfillment or installation obligations. We expect that these sales will continue to generate a significant percentage of our revenue in the future. Accordingly, our future success is highly dependent upon establishing and maintaining successful relationships with a variety of channel partners.

We generally have no long-term contracts or minimum purchase commitments with any of our reseller, VAR or system integrator customers, and our contracts with these parties do not prohibit them from purchasing or offering products or services that compete with ours. Our competitors may provide incentives to any of our reseller, VAR or systems integrator customers to favor their products or, in effect, to prevent or reduce sales of our products. Any of our reseller, VAR or systems integrator customers may independently choose not to purchase or offer our products. Many of our resellers, and some of our VARs and system integrators are small, are based in a variety of international locations, and may have relatively unsophisticated processes and limited financial resources to conduct their business. Any significant disruption of our sales to these customers, including as a result of the inability or unwillingness of these customers to continue purchasing our products, or their failure to properly manage their business with respect to the purchase of, and payment for, our products, could materially and adversely affect our business, operating results, financial condition and cash flows. In addition, our failure to continue to establish or maintain successful relationships with reseller, VAR and systems integrator customers could likewise materially and adversely affect our business, operating results, financial condition and cash flows.

We have made, and may continue to make, acquisitions, and any acquisition could disrupt our operations, cause dilution to our stockholders and materially and adversely affect our business, operating results, cash flows and financial condition.

As part of our business strategy, from time to time we have acquired, and we may continue to acquire, businesses, technologies, assets and product lines that we believe complement or expand our existing business. For example, on February 29, 2016, we announced the closing of our acquisition of TVN, which is headquartered in Rennes, France. Acquisitions involve numerous risks, including the following:

• unanticipated costs or delays associated with an acquisition;

• difficulties in the assimilation and integration of acquired operations, technologies and/or products;

• potential disruption of our business and the diversion of management’s attention from the regular operations of the business during the acquisition process;

• the challenges of managing a larger and more geographically widespread operation and product portfolio after the closing of the acquisition;

• potential adverse effects on new and existing business relationships with suppliers, contract manufacturers, resellers, partners and customers;

• compliance with regulatory requirements, such as local employment regulations and organized labor in France;

• risks associated with entering markets in which we may have no or limited prior experience;

• the potential loss of key employees of acquired businesses and our own business as a result of integration;

• difficulties in bringing acquired products and businesses into compliance with applicable legal requirements in jurisdictions in which we operate and sell products;

• impact of known potential liabilities or unknown liabilities, including litigation and infringement claims, associated with companies we acquire;

• substantial charges for acquisition costs or for the amortization of certain purchased intangible assets, deferred stock compensation or similar items;

• substantial impairments to goodwill or intangible assets in the event that an acquisition proves to be less valuable than the price we paid for it;

• difficulties in establishing and maintaining uniform financial and other standards, controls, procedures and policies;

• delays in realizing, or failure to realize, the anticipated benefits of an acquisition; and

• the possibility that any acquisition may be viewed negatively by our customers or investors or the financial markets.

Competition within our industry for acquisitions of businesses, technologies, assets and product lines has been, and is likely to continue to be, intense. As such, even if we are able to identify an acquisition that we would like to consummate, we may not be able to complete the acquisition on commercially reasonable terms or because the target chooses to be acquired by another company. Furthermore, in the event that we are able to identify and consummate any future acquisitions, we may, in each of those acquisitions:

• issue equity securities which would dilute current stockholders' percentage ownership;

• incur substantial debt to finance the acquisition or assume substantial debt in the acquisition;

• incur significant acquisition-related expenses;

• assume substantial liabilities, contingent or otherwise; or

• expend significant cash.

These financing activities or expenditures could materially and adversely affect our operating results, cash flows and financial condition or the price of our common stock. Alternatively, due to difficulties in the capital or credit markets at the time, we may be unable to secure capital necessary to complete an acquisition on reasonable terms, or at all. Moreover, even if we were to obtain benefits from acquisitions in the form of increased revenue and earnings per share, there may be a delay between the time the expenses associated with an acquisition are incurred and the time we recognize such benefits.

In addition to the risks outlined above, if we are unable to continue to achieve the objectives of our TVN acquisition, the anticipated benefits and potential synergies of the acquisition may not be realized fully or at all or may take longer to realize than expected. Any failure to timely realize these anticipated benefits would have a material adverse effect on our business, operating results and financial condition. Further, if we are unable to successfully receive payment of any significant portion of TVN's existing French R&D tax credit receivables from the French tax authority as expected, or are unable to successfully apply for or otherwise obtain the financial benefit of new French R&D tax credits in future years, our ability to achieve the anticipated benefits of the acquisition as well as our business, operating results and financial condition could be adversely affected.

As of June 30, 2017, we had approximately $240.6 million of goodwill recorded on our balance sheet associated with prior acquisitions. In the event we determine that our goodwill is impaired, we would be required to write down all or a portion of such goodwill, which could result in a material non-cash charge to our results of operations in the period in which such write-down occurs.

If we are unable to successfully address one or more of these risks, our business, operating results, financial condition and cash flows could be materially and adversely affected.

We may not be able to effectively manage our operations.

We have grown significantly, principally through acquisitions, and expanded our international operations. For example, upon the closing of our acquisition of TVN on February 29, 2016, we added 438 employees, most of whom

are based in France.

As of June 30, 2017, we had 839 employees in our international operations, representing approximately 63% of our worldwide workforce. Our ability to manage our business effectively in the future, including with respect to any future growth, our operation as both a hardware and increasingly software-centric business, the integration of any acquisition efforts such as our recent acquisition of TVN, and the breadth of our international operations, will require us to train, motivate and manage our employees successfully, to attract and integrate new employees into our overall operations, to retain key employees and to continue to improve and evolve our operational, financial and management systems. There can be no assurance that we will be successful in any of these efforts, and our failure to effectively manage our operations could have a material and adverse effect on our business, operating results, cash flows and financial condition.

We face risks associated with having outsourced engineering resources located in Ukraine.

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We outsource a portion of our research and development activities to a third-party partner with engineering resources located in Ukraine. Political, social and economic instability and unrest or violence in Ukraine, including the ongoing conflict with Russian-backed separatists or conflict with the Russian Federation directly, could cause disruptions to the business and operations of our outsourcing partner, which could slow or delay the development work our partner is undertaking for us. Instability, unrest or conflict could limit or prevent our employees from traveling to, from, or within Ukraine to direct and coordinate our outsourced engineering teams, or cause us to shift all or portions of the development work occurring in Ukraine to other locations or countries. The resulting delays could negatively impact our product development efforts, operating results and our business.

We face risks associated with having facilities and employees located in Israel.

As of June 30, 2017, we maintained facilities in Israel with a total of 179 employees, or approximately 13% of our worldwide workforce. Our employees in Israel engage in a number of activities, for both our Video and Cable Edge business segments, including research and development, product development, and supply chain management for certain product lines and sales activities.

As such, we are directly affected by the political, economic and military conditions affecting Israel. Any significant conflict involving Israel could have a direct effect on our business or that of our Israeli contract manufacturers, in the form of physical damage or injury, restrictions from traveling or reluctance to travel to from or within Israel by our Israeli and other employees or those of our subcontractors, or the loss of Israeli employees to active military duty. Most of our employees in Israel are currently obligated to perform annual reserve duty in the Israel Defense Forces, and approximately 10% of those employees were called for active military duty in 2016. In the event that more of our employees are called to active duty, certain of our research and development activities may be significantly delayed and adversely affected. Further, the interruption or curtailment of trade between Israel and its trading partners, as a result of terrorist attacks or hostilities, conflicts between Israel and any other Middle Eastern country or organization, or any other cause, could significantly harm our business. Additionally, current or future tensions or conflicts in the Middle East could materially and adversely affect our business, operating results, financial condition and cash flows.

Our operating results are likely to fluctuate significantly and, as a result, may fail to meet or exceed the expectations of securities analysts or investors, causing our stock price to decline.

Our operating results have fluctuated in the past and are likely to continue to fluctuate in the future, on an annual and a quarterly basis, as a result of several factors, many of which are outside of our control. Some of the factors that may cause these fluctuations include:

• the level and timing of capital spending of our customers in the U.S., Europe and in other markets;

• economic and financial conditions specific to each of the cable, satellite and telco, and broadcast and media industries, as well as general economic and financial market conditions, including any stemming from an unstable political environment in the United States or abroad as well as those resulting from regulatory or tax policy changes from the Trump administration;

• changes in market acceptance of and demand for our products or our customers' services or products;

• the timing and amount of orders, especially from large individual transactions and transactions with our significant customers;

• the mix of our products sold and the effect it has on gross margins;

• the timing of revenue recognition, including revenue recognition on sales arrangements and from transactions with significant service and support components, which may span several quarters;

• the timing of completion of our customers' projects;

• the length of each customer product upgrade cycle and the volume of purchases during the cycle;

• competitive market conditions, including pricing actions by our competitors;

• the level and mix of our domestic and international revenue;

• new product introductions by our competitors or by us;

• uncertainty in both the U.K. and the European Union due to the U.K.'s referendum to exit the European Union, which could adversely affect our results, financial condition and prospects;

• changes in domestic and international regulatory environments affecting our business;

• the evaluation of new services, new standards and system architectures by our customers;

• the cost and timely availability to us of components, subassemblies and modules;

• the mix of our customer base, by industry and size, and sales channels;

• changes in our operating and extraordinary expenses;

• the timing of acquisitions and dispositions by us and the financial impact of such transactions;

• impairment of our goodwill and intangibles;

• the impact of litigation, such as related litigation expenses and settlement costs;

• write-downs of inventory and investments;

• changes in our effective federal tax rate, including as a result of changes in our valuation allowance against our deferred tax assets, and changes in our effective state tax rates, including as a result of apportionment;

• changes to tax rules related to the deferral of foreign earnings and compliance with foreign tax rules;

• the impact of applicable accounting guidance on accounting for uncertainty in income taxes that requires us to establish reserves for uncertain tax positions and accrue potential tax penalties and interest; and

• the impact of applicable accounting guidance on business combinations that requires us to record charges for certain acquisition related costs and expenses and generally to expense restructuring costs associated with a business combination subsequent to the acquisition date.

The timing of deployment of our products by our customers can be subject to a number of other risks, including the availability of skilled engineering and technical personnel, the availability of third-party equipment and services, our customers' ability to negotiate and enter into rights agreements with video content owners that provide the customers with the right to deliver certain video content, and our customers' need for local franchise and licensing approvals.

We often recognize a substantial portion of our quarterly revenue in the last month of the quarter. We establish our expenditure levels for product development and other operating expenses based on projected revenue levels for a specified period, and expenses are relatively fixed in the short term. Accordingly, even small variations in the timing of revenue, particularly from relatively large individual transactions, can cause significant fluctuations in operating results in a particular quarter.

As a result of these factors and other factors, our operating results in one or more future periods may fail to meet or exceed the expectations of securities analysts or investors. In that event, the trading price of our common stock would likely decline.

Fluctuations in our future effective tax rates could affect our future operating results, financial condition and cash flows.

We are required to periodically review our deferred tax assets and determine whether, based on available evidence, a valuation allowance is necessary. The realization of our deferred tax assets, which are predominantly in the U.S., is dependent upon the generation of sufficient U.S. and foreign taxable income in the future to offset these assets. Based on our evaluation, a history of operating losses in recent years has led to uncertainty with respect to our ability to realize certain of our net deferred tax assets, and as a result we recorded a net increase in valuation allowance of $18.3 million and $3.1 million in 2016 and 2015, respectively, against U.S. net deferred tax assets. This increase in valuation allowance was offset partially by the release of $8.4 million of valuation allowance associated with TVN.

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The calculation of tax liabilities involves dealing with uncertainties in the application of complex global tax regulations. We recognize potential liabilities for anticipated tax audit issues in the U.S. and other tax jurisdictions based on our estimate of whether, and the extent to which, additional taxes will be due. In the event we determine that it is appropriate to create a reserve or increase an existing reserve for any such potential liabilities, the amount of the additional reserve is charged as an expense in the period in which it is determined. If payment of these amounts ultimately proves to be unnecessary, the reversal of the liabilities would result in tax benefits being recognized in the period when we determine the liabilities are no longer necessary. If the estimate of tax liabilities proves to be less than the ultimate tax assessment for the applicable period, a further charge to expense in the period such short fall is determined would result. Either such charge to expense could have a material and adverse effect on our operating results for the applicable period.

We continue to be in the process of expanding our international operations and staffing to better support our expansion into international markets. This expansion involves the implementation of an international structure that includes, among other things, an international support center in Europe, research and development cost sharing arrangements, and certain licenses and other contractual arrangements between us and our wholly-owned domestic and foreign subsidiaries. As a result of these changes, we anticipate that our consolidated pre-tax income will be subject to foreign tax at relatively lower tax rates when compared to the U.S. federal statutory tax rate and, as a consequence, our effective income tax rate is expected to be lower than the U.S. federal statutory rate.

Our future effective income tax rates could be adversely affected if tax authorities challenge our international tax structure or if the relative mix of U.S. and international income changes for any reason. Accordingly, there can be no assurance that our income tax rate will be less than the U.S. federal statutory rate in future periods.

We or our customers may face intellectual property infringement claims from third parties.

Our industry is characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent and other intellectual property rights. In particular, leading companies in the telecommunications industry have extensive patent portfolios. Also, patent infringement claims and litigation by entities that purchase or control patents, but do not produce goods or services covered by the claims of such patents (so-called “non-practicing entities” or “NPEs”), have increased rapidly over the last decade or so. From time to time, third parties, including NPEs, have asserted, and may assert in the future, patent, copyright, trademark and other intellectual property rights against us or our customers. Our suppliers and their customers, including us, may have similar claims asserted against them. A number of third parties, including companies with greater financial and other resources than us, have asserted patent rights to technologies that are important to us.

Any intellectual property litigation, regardless of its outcome, could result in substantial expense and significant diversion of the efforts of our management and technical personnel. An adverse determination in any such proceeding could subject us to significant liabilities and temporary or permanent injunctions and require us to seek licenses from third parties or pay royalties that may be substantial. Furthermore, necessary licenses may not be available on terms satisfactory to us, or at all. An unfavorable outcome on any such litigation matter could require that we pay substantial damages, could require that we pay ongoing royalty payments, or could prohibit us from selling certain of our products. Any such outcome could have a material and adverse effect on our business, operating results, financial condition and cash flows.

Our suppliers and customers may have intellectual property claims relating to our products asserted against them. We have agreed to indemnify some of our suppliers and most of our customers for patent infringement relating to our products. The scope of this indemnity varies, but, in some instances, includes indemnification for damages and expenses (including reasonable attorney’s fees) incurred by the supplier or customer in connection with such claims. If

a supplier or a customer seeks to enforce a claim for indemnification against us, we could incur significant costs defending such claim, the underlying claim or both. An adverse determination in either such proceeding could subject us to significant liabilities and have a material and adverse effect on our operating results, cash flows and financial condition.

We may be the subject of litigation which, if adversely determined, could harm our business and operating results.

We may be subject to claims arising in the normal course of business. The costs of defending any litigation, whether in cash expenses or in management time, could harm our business and materially and adversely affect our operating results and cash flows. An unfavorable outcome on any litigation matter could require that we pay substantial damages, or, in connection with any intellectual property infringement claims, could require that we pay ongoing royalty payments or prohibit us from selling certain of our products. In addition, we may decide to settle any litigation, which could cause us to incur significant settlement costs. A settlement or an unfavorable outcome on any litigation matter could have a material and adverse effect on our business, operating results, financial condition and cash flows.

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We may sell one or more of our product lines, from time to time, as a result of our evaluation of our products and markets, and any such divestiture could adversely affect our continuing business and our expenses, revenues, results of operation, cash flows and financial position.

We periodically evaluate our various product lines and may, as a result, consider the divestiture of one or more of those product lines, and in the past have sold product lines. Any such divestiture could adversely affect our continuing business and expenses, revenues, results of operations, cash flows and financial position.

Divestitures of product lines have inherent risks, including the expense of selling the product line, the possibility that any anticipated sale will not occur, delays in closing any sale, the risk of lower-than-expected proceeds from the sale of the divested business, unexpected costs associated with the separation of the business to be sold from the seller's information technology and other operating systems, and potential post-closing claims for indemnification or breach of transition services obligations of the seller. Expected cost savings, which are offset by revenue losses from divested businesses, may also be difficult to achieve or maximize due to the seller's fixed cost structure, and a seller may experience varying success in reducing fixed costs or transferring liabilities previously associated with the divested business.

In order to manage our growth, we must be successful in addressing management succession issues and attracting and retaining qualified personnel.

Our future success will depend, to a significant extent, on the ability of our management to operate effectively, both individually and as a group. We must successfully manage transition and replacement issues that may result from the departure or retirement of members of our executive management. We cannot provide assurances that changes of management personnel in the future would not cause disruption to operations or customer relationships or a decline in our operating results.

We are also dependent on our ability to retain and motivate our existing highly qualified personnel, in addition to attracting new highly qualified personnel. Competition for qualified management, technical and other personnel is often intense, and we may not be successful in attracting and retaining such personnel. Competitors and others have in the past attempted, and are likely in the future to attempt, to recruit our employees. While our employees are required to sign standard agreements concerning confidentiality and ownership of inventions, we generally do not have employment contracts or non-competition agreements with any of our personnel. The loss of the services of any of our key personnel, the inability to attract or retain highly qualified personnel in the future or delays in hiring such personnel, particularly senior management and engineers and other technical personnel, could negatively affect our business and operating results. Furthermore, a certain portion of our personnel is comprised of foreign nationals whose ability to work for us depends on obtaining the necessary visas. Our ability to hire and retain foreign nationals, and their ability to remain and work in the United States, is affected by various laws and regulations, including limitations on the availability of visas. Changes in the laws or regulations affecting the availability of visas may adversely affect our ability to hire or retain key personnel and as a result may impair our operations.

We could be negatively affected as a result of a future proxy contest and the actions of activist stockholders.

If a proxy contest with respect to election of our directors is initiated in the future, or if other activist stockholder activities occur, our business could be adversely affected because:

• responding to a proxy contest and other actions by activist stockholders can be costly and time-consuming, disrupting our operations and diverting the attention of management and our employees;

• perceived uncertainties as to our future direction caused by activist activities may result in the loss of potential business opportunities, and may make it more difficult to attract and retain qualified personnel and business partners; and

• if individuals are elected to our Board with a specific agenda, it may adversely affect our ability to effectively and timely implement our strategic plans.

Our failure to adequately protect our proprietary rights and data may adversely affect us.

At June 30, 2017, we held 73 issued U.S. patents and 44 issued foreign patents, and had 84 patent applications pending. Although we attempt to protect our intellectual property rights through patents, trademarks, copyrights, licensing arrangements, maintaining certain technology as trade secrets and other measures, we can give no assurances that any patent, trademark, copyright or other intellectual property rights owned by us will not be invalidated, circumvented or challenged, that such

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intellectual property rights will provide competitive advantages to us, or that any of our pending or future patent applications will be issued with the scope of the claims sought by us, if at all. We can give no assurances that others will not develop technologies that are similar or superior to our technologies, duplicate our technologies or design around the patents that we own. In addition, effective patent, copyright and trade secret protection may be unavailable or limited in certain foreign countries in which we do business or may do business in the future.

We generally enter into confidentiality or license agreements with our employees, consultants, and vendors and our customers, as needed, and generally limit access to, and distribution of, our proprietary information. Nevertheless, we cannot provide assurances that the steps taken by us will prevent misappropriation of our technology. In addition, we have taken in the past, and may take in the future, legal action to enforce our patents and other intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others, or to defend against claims of infringement or invalidity. Such litigation could result in substantial costs and diversion of management time and other resources, and could materially and adversely affect our business, operating results, financial condition and cash flows.

Recently reported hacking attacks on government and commercial computer systems, particularly attacks sponsored by foreign governments or enterprises, raise the risks that such an attack may compromise, in a material respect, one or more of our computer systems and permit hackers access to our proprietary information and data. If such an attack does, in fact, allow access to or theft of our proprietary information or data, our business, operating results, financial condition and cash flows could be materially and adversely affected.

Our products include third-party technology and intellectual property, and our inability to acquire new technologies or use third-party technology in the future could harm our business.

In order to successfully develop and market certain of our planned products, we may be required to enter into technology development or licensing agreements with third parties. Although companies with technology useful to us are often willing to enter into technology development or licensing agreements with respect to such technology, we cannot provide assurances that such agreements may be negotiated on commercially reasonable terms, or at all. The failure to enter, or a delay in entering, into such technology development or licensing agreements, when necessary or desirable, could limit our ability to develop and market new products and could materially and adversely affect our business.

We incorporate certain third-party technologies, including software programs, into our products, and, as noted, intend to utilize additional third-party technologies in the future. In addition, the technologies that we license may not operate properly or as specified, and we may not be able to secure alternatives in a timely manner, either of which could harm our business. We could face delays in product releases until alternative technology can be identified, licensed or developed, and integrated into our products, if we are able to do so at all. These delays, or a failure to secure or develop adequate technology, could materially and adversely affect our business, operating results, financial condition and cash flows.

Our use of open source software in some of our products may expose us to certain risks.

Some of our products contain software modules licensed for use from third-party authors under open source licenses. Use and distribution of open source software may entail greater risks than use of third-party commercial software, as open source licensors generally do not provide warranties or other contractual protections regarding infringement claims or the quality of the code. Some open source licenses contain requirements that we make available source code for modifications or derivative works we create based upon the type of open source software we use. If we combine our proprietary software with open source software in a certain manner, we could, under certain of the open source licenses, be required to release the source code of our proprietary software to the public. This could allow our

competitors to create similar products with lower development effort and in less time and ultimately could result in a loss of product sales for us.

Although we monitor our use of open source closely, it is possible our past, present or future use of open source has triggered or may trigger the foregoing requirements. Furthermore, the terms of many open source licenses have not been interpreted by U.S. courts, and there is a risk that such licenses could be construed in a manner that could impose unanticipated conditions or restrictions on our ability to commercialize our products. In such event, we could be required to seek licenses from third parties in order to continue offering our products, to re-engineer our products or to discontinue the sale of our products in the event re-engineering cannot be accomplished on a timely basis, any of which could materially and adversely affect our operating results, financial condition and cash flows.

We are subject to import and export control and trade and economic sanction laws and regulations that could subject us to liability or impair our ability to compete in international markets.

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Our products are subject to U.S. export control laws, and may be exported outside the U.S. only with the required export license or through an export license exception, in most cases because we incorporate encryption technology into certain of our products. We are also subject to U.S. trade and economic sanction regulations which include prohibitions on the sale or supply of certain products and services to U.S. embargoed or sanctioned countries, governments, persons and entities. In addition, various countries regulate the import of certain technology and have enacted laws that could limit our ability to distribute our products, or could limit our customers' ability to implement our products, in those countries. Although we take precautions and have processes in place to prevent our products and services from being provided in violation of such laws, our products may have been in the past, and could in the future be, provided inadvertently in violation of such laws, despite the precautions we take. If we fail to comply with these laws, we and certain of our employees could be subject to civil or criminal penalties, including the possible loss of export privileges, monetary penalties, and, in extreme cases, imprisonment of responsible employees for knowing and willful violations of these laws. Additionally, our business and operating results be adversely affected through penalties, reputational harm, loss of access to certain markets, or otherwise.

In addition, we may be subject to customs duties that could have a significant adverse impact on our operating results or, if we are able to pass on the related costs in any particular situation, would increase the cost of the related product to our customers. As a result, the future imposition of significant increases in the level of customs duties or the creation of import quotas on our products in Europe or in other jurisdictions, or any of the limitations on international sales described above, could have a material adverse effect on our business, operating results, financial condition and cash flows. Further, some of our customers in Europe have been, or are being, audited by local governmental authorities regarding the tariff classifications used for importation of our products. Import duties and tariffs vary by country and a different tariff classification for any of our products may result in higher duties or tariffs, which could have an adverse impact on our operating results and potentially increase the cost of the related products to our customers.

We may need additional capital in the future and may not be able to secure adequate funds at all or on terms acceptable to us.

We have been engaged in the design, manufacture and sale of a variety of video products and system solutions since inception, which has required, and will continue to require, significant research and development expenditures.

We believe that our existing cash of approximately $52.9 million at June 30, 2017 will satisfy our cash requirements for at least the next 12 months. However, we may need to raise additional funds to take advantage of presently unanticipated strategic opportunities, satisfy our other cash requirements from time to time, or strengthen our financial position. Our ability to raise funds may be adversely affected by a number of factors, including factors beyond our control, such as weakness in the economic conditions in markets in which we sell our products and continued uncertainty in financial, capital and credit markets. There can be no assurance that equity or debt financing will be available to us on reasonable terms, if at all, when and if it is needed.

We may raise additional financing through public or private equity offerings, debt financings, or corporate partnership or licensing arrangements. To the extent we raise additional capital by issuing equity securities or convertible debt, our stockholders may experience dilution. To the extent that we raise additional funds through collaboration and licensing arrangements, it may be necessary to relinquish some rights to our technologies or products, or grant licenses on terms that are not favorable to us. To the extent we raise capital through debt financing arrangements, we may be required to pledge assets or enter into covenants that could restrict our operations or our ability to incur further indebtedness and the interest on such debt may adversely affect our operating results.

If adequate capital is not available, or is not available on reasonable terms, when needed, we may not be able to take advantage of acquisition or other market opportunities, to timely develop new products, or to otherwise respond to

competitive pressures.

Our operating results could be adversely affected by natural disasters affecting us or impacting our third-party manufacturers, suppliers, resellers or customers.

Our corporate headquarters is located in California, which is prone to earthquakes. We have employees, consultants and contractors located in regions and countries around the world. In the event that any of our business, sales or research and development centers or offices in the U.S. or internationally are adversely affected by an earthquake or by any other natural disaster, we may sustain damage to our operations and properties, which could cause a sustained interruption or loss of affected operations, and cause us to suffer significant financial losses.

We rely on third-party contract manufacturers for the production of our products. Any significant disruption in the business or operations of such manufacturers or of their or our suppliers could adversely impact our business. Our principal contract

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manufacturers and several of their and our suppliers and our resellers have operations in locations that are subject to natural disasters, such as severe weather, tsunamis, floods and earthquakes, which could disrupt their operations and, in turn, our operations.

In addition, if there is a natural disaster in any of the locations in which our significant customers are located, we face the risk that our customers may incur losses or sustained business interruption, or both, which may materially impair their ability to continue their purchase of products from us. Accordingly, natural disaster in one of the geographies in which we, or our third-party manufacturers, their or our suppliers or our customers, operate could have a material and adverse effect on our business, operating results, cash flows and financial condition.

Our business and industry are subject to various laws and regulations that could adversely affect our business, operating results, cash flows and financial condition.

Our business and industry are regulated under various federal, state, local and international laws. For example, we are subject to environmental regulations such as the European Union's Waste Electrical and Electronic Equipment (WEEE) and Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) directives and similar legislation enacted in other jurisdictions worldwide. Our failure to comply with these laws could result in our being directly or indirectly liable for costs, fines or penalties and third-party claims, and could jeopardize our ability to conduct business in such regions and countries. We expect that our operations will be affected by other new environmental laws and regulations on an ongoing basis. Although we cannot predict the ultimate impact of any such new laws and regulations, they would likely result in additional costs, and could require that we redesign or change how we manufacture our products, any of which could have a material and adverse effect on our operating results, financial condition and cash flows.

We are subject to the Sarbanes-Oxley Act of 2002 which, among other things, requires an annual review and evaluation of our internal control over financial reporting. If we conclude in future periods that our internal control over financial reporting is not effective or if our independent registered public accounting firm is unable to provide an unqualified attestation as of future year-ends, we may incur substantial additional costs in an effort to correct such problems, and investors may lose confidence in our financial statements, and our stock price may decrease in the short term, until we correct such problems, and perhaps in the long term, as well.

We are subject to requirements under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 that require us to conduct research, disclose, and report whether or not our products contain certain conflict minerals sourced from the Democratic Republic of Congo or its surrounding countries. The implementation of these requirements could adversely affect the sourcing, availability, and pricing of the materials used in the manufacture of components used in our products. In addition, we may incur certain additional costs to comply with the disclosure requirements, including costs related to conducting diligence procedures to determine the sources of conflict minerals that may be used or necessary to the production of our products and, if applicable, potential changes to products, processes or sources of supply as a consequence of such verification activities. It is also possible that we may face reputational harm if we determine that certain of our products contain minerals not determined to be conflict-free and/or we are unable to alter our products, processes or sources of supply to avoid such materials.

Changes in telecommunications legislation and regulations in the U.S. and other countries could affect our sales and the revenue we are able to derive from our products. In particular, "net neutrality" rules issued by the U.S. Federal Communications Commission (FCC) or regulations dealing with access by competitors to the networks of incumbent operators could slow or stop infrastructure and services investments or expansion by service providers. Increased regulation of our customers' pricing or service offerings could limit their investments and, consequently, revenue from our products. The impact of new or revised legislation or regulations could have a material adverse effect on our business, operating results, financial condition and cash flows.

Some anti-takeover provisions contained in our certificate of incorporation and bylaws, as well as provisions of Delaware law, could impair a takeover attempt.

We have provisions in our certificate of incorporation and bylaws that could have the effect of rendering more difficult or discouraging an acquisition deemed undesirable by our Board. These include provisions:

- authorizing blank check preferred stock, which could be issued with voting, liquidation, dividend and other rights superior to our common stock;

- limiting the liability of, and providing indemnification to, our directors and officers;

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• limiting the ability of our stockholders to call, and bring business before, special meetings;

• requiring advance notice of stockholder proposals for business to be conducted at meetings of our stockholders and for nominations of candidates for election to our Board;

• controlling the procedures for conducting and scheduling of Board and stockholder meetings; and

• providing the Board with the express power to postpone previously scheduled annual meetings and to cancel previously scheduled special meetings.

These provisions could delay hostile takeovers, changes in control of the Company or changes in our management. As a Delaware corporation, we are also subject to provisions of Delaware law, including Section 203 of the Delaware General Corporation law, which prevents some stockholders holding more than 15% of our outstanding common stock from engaging in certain business combinations without approval of the holders of substantially all of our outstanding common stock. Any provision of our certificate of incorporation or bylaws or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our common stock, and could also affect the price that some investors are willing to pay for our common stock.

The nature of our business requires the application of complex revenue and expense recognition rules and the current legislative and regulatory environment affecting generally accepted accounting principles is uncertain. Significant changes in current principles could affect our financial statements going forward and changes in financial accounting standards or practices may cause adverse, unexpected financial reporting fluctuations and harm our operating results. The accounting rules and regulations that we must comply with are complex and subject to interpretation by FASB, the SEC and various bodies formed to promulgate and interpret appropriate accounting principles. Recent actions and public comments from the FASB and the SEC have focused on the integrity of financial reporting and internal controls. In addition, many companies' accounting policies are being subject to heightened scrutiny by regulators and the public. Further, the accounting rules and regulations are continually changing in ways that could materially impact our financial statements. For example, in May 2014, the FASB issued Topic 606, as amended, which will supersede nearly all existing revenue recognition guidance. Although the new standard permits early adoption as early as the first quarter of 2017, the effective date of the new revenue standard is our first quarter of 2018. We do not plan to early adopt, and accordingly, we will adopt the new standard effective January 1, 2018. The new standard permits adoption either by using (i) a full retrospective approach for all periods presented in the period of adoption or (ii) a modified retrospective approach with the cumulative effect of initially applying the new standard recognized at the date of initial application and providing certain additional disclosures. We currently plan to adopt using the modified retrospective approach; however, a final decision regarding the adoption method has not been finalized at this time. Our final determination will depend on a number of factors such as the significance of the impact of the new standard on our financial results, system readiness, including that of software procured from third-party providers, and our ability to accumulate and analyze the information necessary to assess the impact on prior period financial statements, as necessary. While we continue to assess the potential impacts, under the new standards there is the potential for significant impacts to the accounting for software licenses with undelivered features and professional services revenue with acceptances, and contract acquisition costs, both with respect to the amounts that will be capitalized as well as the period of amortization. We cannot predict the impact of future changes to accounting principles or our accounting policies on our financial statements going forward, which could have a significant effect on our reported financial results, and could affect the reporting of transactions completed before the announcement of the change. In addition, if we were to change our critical accounting estimates, including those related to the recognition of license revenue and other revenue sources, our operating results could be significantly affected.

The conditional conversion feature of our convertible senior notes, if triggered, may adversely affect our financial condition and operating results.

In December 2015, we issued $128.25 million aggregate principal amount of 4.00% convertible senior notes due 2020 (the “Notes”) through a private placement with a financial institution. The Notes bear interest at 4.00% per annum, which is payable semiannually in arrears on June 1 and December 1 of each year, commencing June 1, 2016. In the event the conditional conversion feature of the Notes is triggered, holders of the Notes will be entitled to convert the Notes at any time during specified periods at their option. If one or more holders elect to convert their Notes, unless we elect to satisfy our conversion obligation by delivering solely shares of our common stock (other than paying cash in lieu of delivering any fractional share), we would be required to settle a portion or all of our conversion obligation through the payment of cash, which could adversely affect our liquidity. In addition, even if holders do not elect to convert their Notes, we could be required under applicable

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accounting rules to reclassify all or a portion of the outstanding principal of the Notes as a current rather than long-term liability, which would result in a material reduction of our net working capital.

The accounting method for convertible debt securities that may be settled in cash, such as the Notes, could have a material effect on our reported financial results.

In May 2008, FASB issued FASB Staff Position No. APB 14-1, “Accounting for Convertible Debt Instruments That May Be Settled in Cash Upon Conversion (Including Partial Cash Settlement)”, which has subsequently been codified as Accounting Standards Codification 470-20, Debt with Conversion and Other Options, which we refer to as ASC 470-20. Under ASC 470-20, an entity must separately account for the liability and equity components of the convertible debt instruments (such as the Notes) that may be settled entirely or partially in cash upon conversion in a manner that reflects the issuer’s economic interest cost. The effect of ASC 470-20 on the accounting for the Notes is that the equity component is required to be included in the additional paid-in capital section of stockholders’ equity on our consolidated balance sheet, and the value of the equity component would be treated as debt discount for purposes of accounting for the debt component of the Notes. As a result, we will be required to record a greater amount of non-cash interest expense in current and future periods presented as a result of the amortization of the discounted carrying value of the Notes to their face amount over the term of the Notes. We will report lower net income in our financial results because ASC 470-20 will require interest to include both the current period’s amortization of the debt discount and the instrument’s non-convertible interest rate, which could adversely affect our reported or future financial results, the trading price of our common stock and the trading price of the Notes.

In addition, under certain circumstances, convertible debt instruments (such as the Notes) that may be settled entirely or partly in cash are currently accounted for utilizing the treasury stock method, the effect of which is that the shares issuable upon conversion of the Notes are not included in the calculation of diluted earnings per share except to the extent that the conversion value of the Notes exceeds their principal amount. Under the treasury stock method, for diluted earnings per share purposes, the transaction is accounted for as if the number of shares of common stock that would be necessary to settle such excess, if we elected to settle such excess in shares, are issued. We cannot be sure that the accounting standards in the future will continue to permit the use of the treasury stock method or that circumstances would not change such that we would no longer be permitted to use the treasury stock method. If we are unable to use the treasury stock method in accounting for the shares issuable upon conversion of the Notes, then our diluted earnings per share would be adversely affected.

Our common stock price, and therefore the price of our Notes, may be extremely volatile, and the value of an investment in our stock may decline.

Our common stock price has been highly volatile. We expect that this volatility will continue in the future due to factors such as:

• general market and economic conditions;

• actual or anticipated variations in operating results;

• increases or decreases in the general stock market or to the stock prices of technology companies;

• announcements of technological innovations, new products or new services by us or by our competitors or customers;

• changes in financial estimates or recommendations by stock market analysts regarding us or our competitors;

• announcements by us or our competitors of significant acquisitions, dispositions, strategic partnerships, joint ventures or capital commitments;

• announcements by our customers regarding end user market conditions and the status of existing and future infrastructure network deployments;

• additions or departures of key personnel; and

• future equity or debt offerings or our announcements of these offerings.

In addition, in recent years, the stock market in general, and The NASDAQ Stock Market and the securities of technology companies in particular, have experienced extreme price and volume fluctuations. These fluctuations have often been unrelated

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or disproportionate to the operating performance of individual companies. These broad market fluctuations have in the past, and may in the future, materially and adversely affect our stock price, regardless of our operating results. In these circumstances, investors may be unable to sell their shares of our common stock at or above their purchase price over the short term, or at all.

Our stock price may decline if additional shares are sold in the market or if analysts drop coverage of or downgrade our stock.

Future sales of substantial amounts of shares of our common stock by our existing stockholders in the public market, or the perception that these sales could occur, may cause the market price of our common stock to decline. In addition, we issue additional shares upon exercise of stock options, including under our ESPP, and in connection with grants of RSUs on an ongoing basis. To the extent we do not elect to pay solely cash upon conversion of our Notes, we will also be required to issue additional shares of common stock upon conversion. Increased sales of our common stock in the market after exercise of outstanding stock options or grants of restricted stock units could exert downward pressure on our stock price. These sales also might make it more difficult for us to sell equity or equity-related securities in the future at a time and price we deem appropriate.

The trading market for our common stock relies in part on the availability of research and reports that third-party industry or securities analysts publish about us. If one or more of the analysts who do cover us downgrade our stock, our stock price may decline. If one or more of these analysts cease coverage of us, we could lose visibility in the market, which in turn could cause the liquidity of our stock and our stock price to decline.

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ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Our stock repurchase program expired on December 31, 2016. Further repurchases would require authorization from the Board.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

Exhibit Number	Exhibit Index
3.2	Amended and Restated Bylaws of Harmonic Inc.
10.1**(i)	Harmonic Inc. 2002 Employee Stock Purchase Plan, as amended and restated effective as of June 13, 2017
10.2**(i)	Harmonic Inc. 1995 Stock Plan, as amended and restated effective as of June 13, 2017
10.3**(i)	Harmonic Inc. 2002 Director Stock Plan, as amended and restated effective as of June 13, 2017
10.4**(ii)	Change of Control Severance Agreement between Harmonic Inc. and Sanjay Kalra, dated June 6, 2017
31.1	Section 302 Certification of Principal Executive Officer
31.2	Section 302 Certification of Principal Financial Officer
32.1*	Section 906 Certification of Principal Executive Officer
32.2*	Section 906 Certification of Principal Financial Officer
101	The following materials from Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, formatted in Extensible Business Reporting Language (XBRL) includes: (i) Condensed Consolidated Balance Sheets at June 30, 2017 and December 31, 2016, (ii) Condensed Consolidated Statements of Operations for the three and six months ended June 30, 2017 and July 1, 2016 (iii) Condensed Consolidated Statements of Comprehensive Loss for the three and six months ended June 30, 2017 and July 1, 2016, (iv) Condensed Consolidated Statements of Cash Flows for the three and six months ended June 30, 2017 and July 1, 2016, and (v) Notes to Condensed Consolidated Financial Statements.

* The certifications attached as Exhibits 32.1 and 32.2 that accompany this Quarterly Report on Form 10-Q, are deemed furnished and not filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of Harmonic Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Quarterly Report on Form 10-Q, irrespective of any general incorporation language contained in such filing.

** Indicates a management contract or compensatory plan or arrangement relating to executive officers or directors of the Company.

(i) Previously filed as an Exhibit to the Company's Registration Statement on Form S-8 dated June 22, 2017.

(ii) Previously filed as an Exhibit to the Company's Current Report on Form 8-K dated June 6, 2017.

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SIGNATURES

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

HARMONIC INC.

By: /s/ Sanjay Kalra
Sanjay Kalra
Chief Financial Officer
Date: August 8, 2017