

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, DC 20549

**FORM 10-Q**

(Mark One)

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

For the quarterly period ended March 31, 2020

OR

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

Commission File Number: 001-37956

**XPERI CORPORATION**

(Exact Name of Registrant as Specified in Its Charter)

**Delaware**  
(State or Other Jurisdiction of  
Incorporation or Organization)

3025 Orchard Parkway, San Jose, California  
(Address of Principal Executive Offices)

**81-4465732**  
(I.R.S. Employer  
Identification No.)

95134  
(Zip Code)

(408) 321-6000

(Registrant's Telephone Number, Including Area Code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock (par value \$0.001 per share)	XPER	Nasdaq Global Select Market

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

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

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

Large accelerated filer  Accelerated filer   
Non-accelerated filer  Smaller reporting company   
Emerging growth company

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

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

The number of shares outstanding of the registrant's common stock as of April 28, 2020 was 50,534,837.

XPERI CORPORATION  
FORM 10-Q — QUARTERLY REPORT  
FOR THE QUARTER ENDED MARCH 31, 2020  
TABLE OF CONTENTS

	<u>Page</u>	
<b><u>PART I</u></b>		
Item 1.	<a href="#"><u>Financial Statements (unaudited)</u></a>	
	<a href="#"><u>Condensed Consolidated Statements of Cash Flows – Three Months Ended March 31, 2020 and 2019</u></a>	3
	<a href="#"><u>Condensed Consolidated Balance Sheets – March 31, 2020 and December 31, 2019</u></a>	4
	<a href="#"><u>Condensed Consolidated Statements of Operations – Three Months Ended March 31, 2020 and 2019</u></a>	5
	<a href="#"><u>Condensed Consolidated Statements of Comprehensive Income (Loss) – Three Months Ended March 31, 2020 and 2019</u></a>	6
	<a href="#"><u>Condensed Consolidated Statements of Equity – Three Months Ended March 31, 2020 and 2019</u></a>	7
	<a href="#"><u>Notes to Condensed Consolidated Financial Statements</u></a>	8
Item 2.	<a href="#"><u>Management’s Discussion and Analysis of Financial Condition and Results of Operations</u></a>	26
Item 3.	<a href="#"><u>Quantitative and Qualitative Disclosures About Market Risk</u></a>	37
Item 4.	<a href="#"><u>Controls and Procedures</u></a>	37
<b><u>PART II</u></b>		
Item 1.	<a href="#"><u>Legal Proceedings</u></a>	39
Item 1A.	<a href="#"><u>Risk Factors</u></a>	41
Item 2.	<a href="#"><u>Unregistered Sales of Equity Securities and Use of Proceeds</u></a>	62
Item 3.	<a href="#"><u>Defaults Upon Senior Securities</u></a>	62
Item 4.	<a href="#"><u>Mine Safety Disclosures</u></a>	62
Item 5.	<a href="#"><u>Other Information</u></a>	62
Item 6.	<a href="#"><u>Exhibits</u></a>	63
	<a href="#"><u>Signatures</u></a>	64

PART I – FINANCIAL INFORMATION

Item 1. Financial Statements

**XPERI CORPORATION**  
**CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(in thousands)  
(unaudited)

	Three Months Ended	
	March 31, 2020	March 31, 2019
<b>Cash flows from operating activities:</b>		
Net income (loss)	\$ 18,785	\$ (25,430)
Adjustments to reconcile net income (loss) to net cash from operating activities:		
Depreciation of property and equipment	1,729	1,668
Amortization of intangible assets	22,509	25,459
Stock-based compensation expense	7,987	7,623
Deferred income taxes	(2,064)	(14,689)
Allowance for credit losses	1,944	(204)
Other	1,354	1,068
Changes in operating assets and liabilities:		
Accounts receivable	(8,318)	(11,545)
Unbilled contracts receivable, net	(6,022)	47,262
Other assets	(739)	697
Accounts payable	(760)	(991)
Accrued and other liabilities	(5,212)	(16,795)
Deferred revenue	1,451	(302)
Net cash from operating activities	<u>32,644</u>	<u>13,821</u>
<b>Cash flows from investing activities:</b>		
Purchases of property and equipment	(688)	(858)
Proceeds from sales of investments	3,345	—
Proceeds from maturities of investments	8,500	9,490
Net cash from investing activities	<u>11,157</u>	<u>8,632</u>
<b>Cash flows from financing activities:</b>		
Dividend paid	(10,036)	(9,822)
Repayment of debt	—	(50,000)
Proceeds from exercise of stock options	1	253
Proceeds from employee stock purchase program	3,232	3,111
Repurchase of common stock	(3,144)	(3,131)
Net cash from financing activities	<u>(9,947)</u>	<u>(59,589)</u>
Net increase (decrease) in cash and cash equivalents	33,854	(37,136)
Cash and cash equivalents at beginning of period	74,551	113,625
Cash and cash equivalents at end of period	<u>\$ 108,405</u>	<u>\$ 76,489</u>
<b>Supplemental disclosure of cash flow information:</b>		
Interest paid	<u>\$ 3,637</u>	<u>\$ 6,044</u>
Income taxes paid, net of refunds	<u>\$ 5,637</u>	<u>\$ 5,599</u>

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

**XPERI CORPORATION**  
**CONDENSED CONSOLIDATED BALANCE SHEETS**  
(in thousands, except for par value)  
(unaudited)

	March 31, 2020	December 31, 2019
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 108,405	\$ 74,551
Available-for-sale debt securities, at fair value (amortized cost and allowance for credit losses of \$33,932 and \$0, respectively, at March 31, 2020)	33,677	45,802
Equity securities	390	1,124
Accounts receivable, net of allowance for credit losses of \$2,510 and \$566 respectively	30,835	24,177
Unbilled contracts receivable	126,679	121,826
Other current assets	13,507	13,735
Total current assets	313,493	281,215
Long-term unbilled contracts receivable	27,557	26,672
Property and equipment, net	31,836	32,877
Operating lease right-of-use assets	16,455	17,786
Intangible assets, net	209,766	232,275
Long-term deferred tax assets	3,675	3,660
Goodwill	385,784	385,784
Other assets	68,643	67,676
Total assets	\$ 1,057,209	\$ 1,047,945
<b>LIABILITIES AND EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 3,890	\$ 4,650
Accrued legal fees	1,917	1,316
Accrued liabilities	35,284	41,433
Deferred revenue	2,171	720
Total current liabilities	43,262	48,119
Long-term deferred tax liabilities	29,585	29,735
Long-term debt, net	335,293	334,679
Noncurrent operating lease liabilities	12,345	13,414
Other long-term liabilities	75,073	76,898
Total liabilities	495,558	502,845
Commitments and contingencies (Note 14)		
Xperi stockholders' equity:		
Preferred stock: \$0.001 par value; 10,000 shares authorized and no shares issued and outstanding	—	—
Common stock: \$0.001 par value; 150,000 shares authorized; 64,716 and 63,622 shares issued, respectively, and 50,530 and 49,620 shares outstanding, respectively	65	64
Additional paid-in capital	779,500	768,284
Treasury stock at cost: 14,186 and 14,002 shares of common stock at each period end, respectively	(371,845)	(368,701)
Accumulated other comprehensive loss	(327)	(53)
Retained earnings	157,617	148,317
Total Xperi stockholders' equity	565,010	547,911
Noncontrolling interest	(3,359)	(2,811)
Total equity	561,651	545,100
Total liabilities and equity	\$ 1,057,209	\$ 1,047,945

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

**XPERI CORPORATION**  
**CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS**  
(in thousands, except per share amounts)  
(unaudited)

	<b>Three Months Ended</b>	
	<b>March 31, 2020</b>	<b>March 31, 2019</b>
<b>Revenue:</b>		
Royalty and license fees	\$ 117,665	\$ 56,567
Total revenue	<u>117,665</u>	<u>56,567</u>
<b>Operating expenses:</b>		
Cost of revenue	1,584	2,207
Research, development and other related costs	29,139	27,039
Selling, general and administrative	37,803	30,569
Amortization expense	22,509	25,459
Litigation expense	2,103	1,290
Total operating expenses	<u>93,138</u>	<u>86,564</u>
Operating income (loss)	24,527	(29,997)
Interest expense	(4,251)	(6,685)
Other income and expense, net	565	2,302
Income (loss) before taxes	20,841	(34,380)
Provision for (benefit from) income taxes	2,056	(8,950)
Net income (loss)	<u>\$ 18,785</u>	<u>\$ (25,430)</u>
Less: net loss attributable to noncontrolling interest	(551)	(347)
Net income (loss) attributable to Xperi	<u>\$ 19,336</u>	<u>\$ (25,083)</u>
<b>Income (loss) per share attributable to Xperi:</b>		
Basic	\$ 0.39	\$ (0.51)
Diluted	\$ 0.39	\$ (0.51)
Weighted average number of shares used in per share calculations-basic	<u>49,945</u>	<u>48,721</u>
Weighted average number of shares used in per share calculations-diluted	<u>50,199</u>	<u>48,721</u>

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

**XPERI CORPORATION**  
**CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)**  
(in thousands)  
(unaudited)

	<b>Three Months Ended</b>	
	<b>March 31, 2020</b>	<b>March 31, 2019</b>
Net income (loss)	\$ 18,785	\$ (25,430)
Other comprehensive income (loss):		
Net unrealized gains (losses) on available-for-sale debt securities, net of tax	(274)	178
Other comprehensive income (loss)	(274)	178
Comprehensive income (loss)	18,511	(25,252)
Less: comprehensive income (loss) attributable to noncontrolling interest	(551)	(347)
Comprehensive income (loss) attributable to Xperi	<u>\$ 19,062</u>	<u>\$ (24,905)</u>

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

**XPERI CORPORATION**  
**CONDENSED CONSOLIDATED STATEMENTS OF EQUITY**  
(in thousands)  
(unaudited)

	Total Xperi Stockholders' Equity								
	Common Stock		Additional Paid-In Capital	Treasury Stock		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Noncontrolling Interest	Total Equity
	Shares	Amount		Shares	Amount				
<b>Three Months Ended March 31, 2020</b>									
<b>Balance at January 1, 2020</b>	49,620	\$ 64	\$ 768,284	14,002	\$ (368,701)	\$ (53)	\$ 148,317	\$ (2,811)	\$ 545,100
Issuance of subsidiary shares to noncontrolling interest	—	—	(3)	—	—	—	—	3	—
Net income (loss)	—	—	—	—	—	—	19,336	(551)	18,785
Other comprehensive loss	—	—	—	—	—	(274)	—	—	(274)
Cash dividends paid on common stock (\$0.20 per share)	—	—	—	—	—	—	(10,036)	—	(10,036)
Issuance of common stock in connection with employee stock purchase plan	236	—	3,232	—	—	—	—	—	3,232
Issuance of restricted stock, net of shares canceled	858	1	—	—	—	—	—	—	1
Repurchases of common stock, shares exchanged	(184)	—	—	184	(3,144)	—	—	—	(3,144)
Stock-based compensation expense	—	—	7,987	—	—	—	—	—	7,987
<b>Balance at March 31, 2020</b>	<u>50,530</u>	<u>\$ 65</u>	<u>\$ 779,500</u>	<u>14,186</u>	<u>\$ (371,845)</u>	<u>\$ (327)</u>	<u>\$ 157,617</u>	<u>\$ (3,359)</u>	<u>\$ 561,651</u>

	Total Xperi Stockholders' Equity								
	Common Stock		Additional Paid-In Capital	Treasury Stock		Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Noncontrolling Interest	Total Equity
	Shares	Amount		Shares	Amount				
<b>Three Months Ended March 31, 2019</b>									
<b>Balance at January 1, 2019</b>	48,408	\$ 62	\$ 730,695	13,804	\$ (364,195)	\$ (328)	\$ 253,208	\$ (1,295)	\$ 618,147
Issuance of subsidiary shares to noncontrolling interest	—	—	22	—	—	—	—	(22)	—
Net loss	—	—	—	—	—	—	(25,083)	(347)	(25,430)
Other comprehensive income	—	—	—	—	—	178	—	—	178
Other (1)	—	—	—	—	—	—	(2,859)	—	(2,859)
Cash dividends paid on common stock (\$0.20 per share)	—	—	—	—	—	—	(9,822)	—	(9,822)
Issuance of common stock in connection with exercise of stock options	14	—	252	—	—	—	—	—	252
Issuance of common stock in connection with employee stock purchase plan	227	—	3,111	—	—	—	—	—	3,111
Issuance of restricted stock, net of shares canceled	698	1	—	—	—	—	—	—	1
Repurchases of common stock, shares exchanged	(138)	—	—	138	(3,131)	—	—	—	(3,131)
Stock-based compensation expense	—	—	7,623	—	—	—	—	—	7,623
<b>Balance at March 31, 2019</b>	<u>49,209</u>	<u>\$ 63</u>	<u>\$ 741,703</u>	<u>13,942</u>	<u>\$ (367,326)</u>	<u>\$ (150)</u>	<u>\$ 215,444</u>	<u>\$ (1,664)</u>	<u>\$ 588,070</u>

(1) Refer to "Note 1 – The Company and Basis of Presentation."

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

**XPERI CORPORATION**  
**NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**  
**(unaudited)**

**NOTE 1 – THE COMPANY AND BASIS OF PRESENTATION**

Xperi Corporation (the “Company”) licenses its innovative products, technologies and inventions to global electronics companies which, in turn, integrate the technologies into their own consumer electronics and semiconductor products. The Company’s technologies and inventions are widely adopted and used every day by millions of people. The Company’s audio technologies have shipped in billions of devices for the home, mobile and automotive markets. The Company’s imaging technologies have been embedded in billions of smartphones and other mobile devices. The Company’s semiconductor packaging and interconnect technologies have been licensed to more than 100 customers and have shipped in over 100 billion semiconductor chips.

The accompanying interim unaudited condensed consolidated financial statements as of March 31, 2020 and 2019, and for the three months then ended, have been prepared by the Company in accordance with generally accepted accounting principles (“GAAP”) in the United States (“U.S.”) for interim financial information. The amounts as of December 31, 2019 have been derived from the Company’s annual audited financial statements. Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. GAAP have been condensed or omitted in accordance with such rules and regulations. In the opinion of management, the accompanying unaudited condensed consolidated financial statements reflect all adjustments necessary (consisting of normal recurring adjustments) to state fairly the financial position of the Company and its results of operations and cash flows as of and for the periods presented. These financial statements should be read in conjunction with the annual audited financial statements and notes thereto as of and for the year ended December 31, 2019, included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2019, filed on February 18, 2020 (the “Form 10-K”).

The results of operations for the three months ended March 31, 2020 are not necessarily indicative of the results that may be expected for the full year ending December 31, 2020 or any future period and the Company makes no representations related thereto.

In the fourth quarter of 2018, the Company funded a new subsidiary, Perceive Corporation (“Perceive”), which was created to focus on delivering edge inference solutions. As a result of issuing new shares in Perceive to noncontrolling interests, the Company’s ownership interest in Perceive decreased to approximately 83% as of March 31, 2020. The operating results of Perceive have been consolidated in the Company’s condensed consolidated financial statements for all periods presented.

In the first quarter of 2019, the Company recorded an out-of-period adjustment to decrease current unbilled receivables and decrease retained earnings by \$2.9 million to correct an error that originated in the first quarter of 2018 in connection with its adoption of Accounting Standards Update (“ASU”) No. 2014-09 (Topic 606) “Revenue from Contracts with Customers.” The adjustment relates to an error in the Company’s interpretation of the payment terms of a contract entered into in a prior year. The Company determined that the error was not material to any of its prior annual and interim period financial statements, and the impact of correcting it is not considered to be material to the financial statements for the three months ended March 31, 2019.

On December 18, 2019, the Company entered into an Agreement and Plan of Merger and Reorganization (as amended on January 31, 2020, the “Merger Agreement”) with TiVo Corporation (“TiVo”) to combine in an all-stock merger of equals transaction (the “Mergers”). The Mergers are expected to close and become effective (the “Effective Time”) during the second quarter of 2020, subject to regulatory approvals, the approval by the shareholders of each company, and other customary closing conditions.

Subject to the terms and conditions of the Merger Agreement, each share of Company common stock (“Xperi Common Stock”) issued and outstanding immediately prior to the Effective Time, excluding any shares of Xperi Common Stock that are held in treasury, will be converted into the right to receive one share of common stock of the combined company and each share of TiVo common stock (“TiVo Common Stock”) issued and outstanding immediately prior to the Effective Time, excluding any shares of TiVo Common Stock that are held in treasury, will be converted into the right to receive 0.455 shares of common stock of the combined company. On a pro forma, fully diluted basis, it is expected that immediately following the Effective Time, Xperi stockholders will own approximately 46.5% of the combined company and TiVo stockholders will own approximately 53.5% of the combined company.

In connection with the Merger Agreement, the Company and TiVo obtained a debt commitment letter from Bank of America, N.A., Royal Bank of Canada, and Barclays Bank PLC to provide a senior secured first lien term loan B facility in an aggregate



principal amount of \$1,100 million (the “Debt Financing”), subject to the terms and conditions set forth therein. The proceeds from the Debt Financing may be used (i) to pay fees and expenses incurred in connection with the Mergers and the related transactions, (ii) to accomplish the refinancing of existing indebtedness of the Company and TiVo, and (iii) to the extent of any remaining amounts, for working capital and other general corporate purposes.

### ***Reclassification***

Certain reclassifications have been made to prior period balances in order to conform to the current period’s presentation.

## **NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

Except as noted below, there have been no significant changes in the Company’s significant accounting policies during the three months ended March 31, 2020, as compared to the significant accounting policies described in the Form 10-K.

### ***Use of Estimates***

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. The accounting estimates and assumptions that require management’s most significant, difficult, and subjective judgment include the estimation of licensees’ quarterly royalties prior to receiving the royalty reports, the collectability of accounts receivable, the fair value measurements of goodwill, other intangible assets and investments, the assessment of the recoverability of goodwill, the assessment of useful lives and recoverability of other intangible assets and long-lived assets, recognition and measurement of current and deferred income tax assets and liabilities, the assessment of unrecognized tax benefits and the valuation and recognition of stock-based compensation expense, and business combinations, among others. Actual results experienced by the Company may differ from management’s estimates.

The worldwide spread of the COVID-19 virus is expected to result in a global slowdown of economic activity which is likely to decrease demand for a broad variety of goods and services, while also disrupting sales channels, marketing activities and supply chains for an unknown period of time until the disease is contained. The Company expects this to have a negative impact on its revenue, billings and results of operations, the size and duration of which it is currently unable to predict. The Company anticipates that the impact of the COVID-19 virus will increase volatility and make the estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes more difficult, however, as of the date of issuance of the financial statements, the Company is not aware of any specific event or circumstance that would require it to update its estimates, judgments or revise the carrying value of its assets or liabilities. These estimates may change, as new events occur and additional information is obtained, and are recognized in the consolidated financial statements as soon as they become known.

### ***Recently Adopted Accounting Pronouncements***

In September 2016, the Financial Accounting Standards Board (“FASB”) issued ASU No. 2016-13, “*Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*” (“ASU 2016-13”), which introduces an approach based on expected losses to estimate credit losses on certain types of financial instruments. The current expected credit loss model is based on relevant information about past events, including historical experience, current conditions and reasonable and supportable forecasts that affect collectability. Current expected credit losses, and subsequent adjustments, represent an estimate of lifetime expected credit losses that are recorded as an allowance deducted from the amortized cost of the financial instrument. The updated guidance also amends the other-than-temporary impairment model for available-for-sale debt securities by requiring the recognition of impairments for credit-related losses through an allowance and eliminating the length of time a security has been in an unrealized loss position as a consideration in the determination of whether a credit loss exists. On January 1, 2020, the Company adopted the new standard using a modified retrospective transition approach for the provisions related to application of the current expected credit loss model to financial instruments and using a prospective transition approach for the provisions related to credit losses on available-for-sale debt securities. The adoption of this standard did not have a material impact on the Company’s consolidated financial statements. For additional detail, refer to Note 3 – “*Revenue*.”

### ***Recent Accounting Pronouncements***

On December 18, 2019, FASB released ASU 2019-12, “*Simplifying the Accounting for Income Taxes*” (“ASU 2019-12”). The purpose of the update is to reduce the complexity pertaining to certain areas in accounting for income taxes. Key amendments from ASU 2019-12 include, but are not limited to, the accounting for hybrid tax regimes, step-up in tax basis goodwill in non-business combination transactions, intraperiod tax allocation exception to the incremental approach and interim period accounting for enacted changes in tax law. ASU 2019-12 is effective for the Company in the first quarter of the year ending

December 31, 2021. The Company is in the process of evaluating the impact of the adoption of this new standard on its consolidated financial statements.

### **NOTE 3 – REVENUE**

#### **Revenue Recognition**

The Company derives its revenue primarily from royalty and license fees for rights to use the Company's intellectual property and technologies ("IP"). Revenue is recognized upon transfer of control of promised products, services or IP rights to customers in an amount that reflects the consideration the Company expects to receive in exchange for those products, services or licensing of the IP rights.

Certain licensees have entered into fixed fee or minimum guarantee arrangements, whereby licensees pay a fixed fee for the right to incorporate the Company's technology in the licensee's products over the license term. In arrangements with a minimum guarantee, the fixed fee component corresponds to a minimum number of units or dollars that the customer must produce or pay, with additional per-unit fees for any units or dollars exceeding the minimum. In most cases, the customer pays the fixed license fee in specified installments over the license term. For both fixed fee and minimum guarantee agreements, the Company recognizes the full fixed fee as revenue at the beginning of the license term, when the licensee has the right to use the IP and begins to benefit from the license.

If the contract term of a fixed fee or minimum guarantee arrangement is longer than one year, the Company also considers the scheduled payment arrangements to determine whether a significant financing component exists. In general, if the payment arrangements extend beyond the initial twelve months of the contract, the Company treats a portion of the payments as a significant financing component. When the payments are expected to be received within one year or less, the Company does not adjust the promised amount of consideration for the effects of a financing component. The discount rate used for each arrangement reflects the rate that would be used in a separate financing transaction between the Company and the licensee at contract inception and takes into account the credit characteristics of the licensee and market interest rates as of the date of the agreement. As such, the amount of fixed fee revenue recognized at the beginning of the license term will be reduced by the calculated financing component. As payments are received from the licensee, the Company recognizes a portion of the financing component as interest income, reported as other income and expense in the Condensed Consolidated Statements of Operations.

For certain licensees, royalty revenues are generated based on a licensee's production or shipment of licensed products incorporating the Company's IP, technologies or software. Licensees with a per-unit arrangement pay a per-unit royalty for each product manufactured or sold, as set forth in its license agreement. Licensees generally report manufacturing or sales information in the quarter subsequent to when the production or shipment activity takes place. The Company estimates the royalties earned each quarter based on its forecast of manufacturing and sales activity incurred by its licensees in that quarter. Any differences between actual royalties owed by a licensee and the Company's quarterly estimate are recognized in the following quarter, when the licensee's royalty report is received. Estimating licensees' quarterly royalties prior to receiving the royalty reports requires the Company to make significant assumptions and judgments related to forecasted trends and growth rates used to estimate quantities shipped by customers, which could have a material impact on the amount of revenue it reports on a quarterly basis.

The Company actively monitors and enforces its IP, including seeking appropriate compensation from customers that have under-reported royalties owed under a license agreement and from third parties that utilize the Company's intellectual property without a license. As a result of these activities, the Company may, from time to time, recognize revenue from payments resulting from periodic compliance audits of licensees for underreporting royalties incurred in prior periods, as part of a settlement of a patent infringement dispute, or from legal judgments in a license dispute. These recoveries and settlements may cause revenue to be higher than expected during a particular reporting period and such recoveries may not occur in subsequent periods. The Company recognizes revenue from recoveries when a binding agreement has been executed and the Company concludes collection under that agreement is likely.

In some instances, the Company may enter into license agreements containing multiple performance obligations that include engineering services in addition to a technology or software license. For such arrangements where all components are capable of being distinct and accounted for as separate performance obligations, the Company allocates revenue to each performance obligation based on its relative standalone selling price. The Company generally determines standalone selling prices based on the prices ordinarily charged to customers, or in some cases by applying a reasonable cost-plus margin. The consideration for engineering services is recognized as the underlying performance obligations are satisfied. Generally, the Company satisfies performance obligations over time and therefore recognizes revenue over time by measuring the progress toward completion of the performance obligation at each reporting period.

From time to time, the Company enters into arrangements with licensees in which the Company pays consideration to the licensee. Such payments can take the form of marketing development funds or various rebate incentives. The Company typically accounts for consideration paid to its licensees as a reduction to the transaction price and revenue, unless the payment to the licensee is in exchange for a distinct good or service that the licensee transfers to the Company. In cases where the consideration paid to the licensee is variable, the Company estimates the variable consideration based on the terms of the arrangement and expectations of future outcomes. The Company recognizes the reduction to revenue when it recognizes revenue for transfer of control of promised products, services or IP rights to the licensee.

Revenue is recognized gross of withholding taxes that are remitted directly by the Company's licensees to a local tax authority.

For additional detail on the Company's revenue disaggregated by geographic location, refer to Note 15 – “*Segment and Geographic Information.*”

## **Contract Balances**

### ***Unbilled Contracts Receivable***

Timing of revenue recognition may differ significantly from the timing of invoicing to customers. Accounts receivable, net, includes amounts billed and currently due from customers. Unbilled contracts receivable represents unbilled amounts expected to be received from customers in future periods, where the revenue recognized to date (or cumulative adjustments to retained earnings in the initial period of adopting Topic 606) exceeds the amount billed, and right to payment is subject to the underlying contractual terms. Unbilled contracts receivable amounts may not exceed their net realizable value and are classified as long-term assets if the payments are expected to be received more than one year from the reporting date.

### ***Deferred Revenue***

Deferred revenue includes payments made by licensees for which the corresponding performance obligations have not yet been fully satisfied by the Company and typically arises where performance obligations are satisfied over time.

### **Allowance for Credit Losses**

The allowance for credit losses, which includes the allowance for accounts receivable and unbilled contracts receivable, represents the Company's best estimate of lifetime expected credit losses inherent in those financial assets. The Company's lifetime expected credit losses are determined using relevant information about past events, including historical experience, current conditions and reasonable and supportable forecasts that affect collectability. The Company monitors its credit exposure through ongoing credit evaluations of its customers' financial condition and limits the amount of credit extended when deemed necessary. In addition, the Company performs routine credit management activities such as timely account reconciliations, dispute resolution and payment confirmations and may employ collection agencies and legal counsel to pursue recovery of defaulted receivables.

The Company's long-term unbilled contracts receivable is derived from fixed-fee or minimum-guarantee arrangements, primarily with large well-capitalized companies. It is considered to be of high credit quality due to past collection history and the nature of the customers.

The following table presents the activity in the allowance for credit losses for the three months ended March 31, 2020 (in thousands):

	<b>Three Months Ended March 31, 2020</b>	
Beginning balance, prior to adoption of Topic 326	\$	566
Impact of adopting Topic 326		—
Provision for credit loss expense (1)		2,213
Recoveries/charged-off		(269)
Balance at end of period	<u>\$</u>	<u>2,510</u>

(1) The increase in provision for credit loss expense was based on assessment of current conditions including the COVID-19 pandemic and anticipation of delayed or delinquent payments on existing accounts receivable as a result of declining financial health and liquidity positions of certain of our customers.

## Additional Disclosures Under Topic 606

The following table presents additional revenue and contract disclosures (in thousands):

	Three Months Ended March 31,	
	2020	2019
Revenue recognized in the period from:		
Amounts included in deferred revenue at the beginning of the period	\$ 50	\$ 1,043
Performance obligations satisfied in previous periods (true ups, licensee reporting adjustments and settlements)*	\$ 47,511	\$ 1,165

\*True ups represent the differences between the Company's quarterly estimates of per unit royalty revenue and actual production/sales-based royalties reported by licensees in the following period. Licensee reporting adjustments represent corrections or revisions to previously reported per unit royalties by licensees, generally resulting from the Company's inquiries or compliance audits. Settlements represent resolutions of litigation during the period for past royalties owed pursuant to expired or terminated IP license agreements.

Remaining revenue under contracts with performance obligations represents the aggregate amount of the transaction price allocated to the performance obligations that are unsatisfied (or partially unsatisfied) under the Company's engineering services contracts. The Company's remaining revenue under contracts with performance obligations was as follows (in thousands):

	As of	
	March 31, 2020	December 31, 2019
Revenue from contracts with performance obligations expected to be satisfied in:		
One year or less	\$ 5,083	\$ 5,337
More than one year but less than two years	990	990
More than two years	345	345
Total	<u>\$ 6,418</u>	<u>\$ 6,672</u>

## Practical Expedients

The Company expenses sales commissions when incurred because the amortization period generally would have been one year or less. In addition, sales commissions have historically not been a significant expense and are not contemplated to be significant in the future. Sales commissions are recorded in selling, general and administrative expenses in the Condensed Consolidated Statements of Operations.

## NOTE 4 – COMPOSITION OF CERTAIN FINANCIAL STATEMENT CAPTIONS

Other current assets consisted of the following (in thousands):

	March 31, 2020	December 31, 2019
Prepaid income taxes	\$ 2,711	\$ 2,364
Prepaid expenses	7,263	8,802
Other	3,533	2,569
	<u>\$ 13,507</u>	<u>\$ 13,735</u>

Property and equipment, net, consisted of the following (in thousands):

	March 31, 2020	December 31, 2019
Equipment, furniture and other	\$ 32,969	\$ 32,504
Building and improvements	18,309	18,258
Land	5,300	5,300
Leasehold improvements	8,121	8,103
	<u>64,699</u>	<u>64,165</u>
Less: accumulated depreciation and amortization	(32,863)	(31,288)
	<u>\$ 31,836</u>	<u>\$ 32,877</u>

Depreciation and amortization expense for the three months ended March 31, 2020 and 2019 amounted to \$1.7 million and \$1.7 million, respectively.

**Other assets consisted of the following (in thousands):**

	March 31, 2020	December 31, 2019
Non-current income tax receivable	\$ 66,137	\$ 64,570
Other assets	2,506	3,106
	<u>\$ 68,643</u>	<u>\$ 67,676</u>

**Accrued liabilities consisted of the following (in thousands):**

	March 31, 2020	December 31, 2019
Employee compensation and benefits	\$ 11,885	\$ 18,404
Third-party royalties	4,523	6,165
Current portion of operating lease liabilities	5,536	5,845
Accrued expenses	8,152	7,930
Other	5,188	3,089
	<u>\$ 35,284</u>	<u>\$ 41,433</u>

**Other long-term liabilities consisted of the following (in thousands):**

	March 31, 2020	December 31, 2019
Long-term income tax payable	\$ 74,943	\$ 76,767
Other	130	131
	<u>\$ 75,073</u>	<u>\$ 76,898</u>

**Accumulated other comprehensive loss consisted of the following (in thousands):**

	March 31, 2020	December 31, 2019
Unrealized loss on available-for-sale debt securities, net of tax	\$ (327)	\$ (53)
	<u>\$ (327)</u>	<u>\$ (53)</u>

**Other income and expense, net, consisted of the following (in thousands):**

	Three Months Ended,	
	March 31, 2020	March 31, 2019
Interest income from significant financing components under Topic 606	\$ 975	\$ 1,866
Interest income from investments	485	600
Unrealized loss on marketable equity securities	(733)	(410)
Other income (expense)	(162)	246
	<u>\$ 565</u>	<u>\$ 2,302</u>

**NOTE 5 – FINANCIAL INSTRUMENTS**

The Company has investments in debt securities which include corporate bonds and notes, treasury and agency notes and bills, commercial paper, certificates of deposit, and in equity securities consisting of money market funds and common equity securities of a publicly traded Japanese company. The Company classifies its debt securities as available-for-sale (“AFS”), which are accounted for at fair value with credit related losses recognized as a provision for credit loss expense in its Condensed Consolidated Statements of Operations and all non-credit related unrealized gains and losses recognized in accumulated other comprehensive income or loss on the Condensed Consolidated Balance Sheets. Under ASU 2016-01 (Topic 321), equity securities are measured at fair value with unrealized gains and losses recognized in other income and expense, net, on the Condensed Consolidated Statements of Operations.

The following is a summary of marketable securities at March 31, 2020 and December 31, 2019 (in thousands):

	March 31, 2020				
	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Allowance for Credit Losses	Estimated Fair Values
<b>Marketable securities</b>					
Corporate bonds and notes	\$ 32,608	\$ 16	\$ (272)	\$ —	\$ 32,352
Commercial paper	1,324	1	—	—	1,325
<b>Total debt securities</b>	<u>33,932</u>	<u>17</u>	<u>(272)</u>	<u>—</u>	<u>33,677</u>
Money market funds	34,791	—	—	—	34,791
Marketable equity securities	3,405	—	(3,015)	—	390
<b>Total equity securities</b>	<u>38,196</u>	<u>—</u>	<u>(3,015)</u>	<u>—</u>	<u>35,181</u>
<b>Total marketable securities</b>	<u>\$ 72,128</u>	<u>\$ 17</u>	<u>\$ (3,287)</u>	<u>\$ —</u>	<u>\$ 68,858</u>
<b>Reported in:</b>					
Cash and cash equivalents					\$ 34,791
Available-for-sale debt securities					33,677
Equity securities					390
<b>Total marketable securities</b>					<u>\$ 68,858</u>

	December 31, 2019			
	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Values
<b>Marketable securities</b>				
Corporate bonds and notes	\$ 41,730	\$ 29	\$ (13)	\$ 41,746
Commercial paper	4,052	4	—	4,056
<b>Total debt securities</b>	<u>45,782</u>	<u>33</u>	<u>(13)</u>	<u>45,802</u>
Money market funds	2,601	—	—	2,601
Marketable equity securities	3,405	—	(2,281)	1,124
<b>Total equity securities</b>	<u>6,006</u>	<u>—</u>	<u>(2,281)</u>	<u>3,725</u>
<b>Total marketable securities</b>	<u>\$ 51,788</u>	<u>\$ 33</u>	<u>\$ (2,294)</u>	<u>\$ 49,527</u>
<b>Reported in:</b>				
Cash and cash equivalents				\$ 2,601
Available-for-sale debt securities				45,802
Equity securities				1,124
<b>Total marketable securities</b>				<u>\$ 49,527</u>

At March 31, 2020 and December 31, 2019, the Company had \$142.5 million and \$121.5 million, respectively, in cash, cash equivalents and short-term investments. These balances include \$73.6 million and \$72.0 million in cash held in operating accounts not included in the tables above at March 31, 2020 and December 31, 2019, respectively.

### Debt Securities

The gross realized gains and losses on sales of marketable debt securities were not significant during the three months ended March 31, 2020 and 2019, respectively.

Unrealized losses on marketable debt securities were \$0.3 million and \$0.1 million, net of tax, as of March 31, 2020 and December 31, 2019, respectively. The Company evaluated whether the decline in fair value has resulted from credit losses or other factors and concluded these amounts were related to temporary fluctuations in value of AFS securities and were due primarily to changes in interest rates and market conditions of the underlying securities. In addition, the contractual terms of those investments do not permit the issuer to settle the securities at a price less than the amortized cost bases of the investments. The Company does not intend to sell the investments and it is more likely than not that it will not be required to sell the investments before recovery of their amortized cost bases. For the three months ended March 31, 2020, the Company did not recognize a provision for credit loss expense related to its AFS debt securities. For the three months ended March 31, 2019, the Company did not record any impairment charges related to its AFS debt securities.

The following table summarizes the fair value and gross unrealized losses related to individual AFS debt securities at March 31, 2020 and December 31, 2019, which have been in a continuous unrealized loss position, aggregated by investment category and length of time (in thousands):

	Less Than 12 Months		12 Months or More		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
<b>March 31, 2020</b>						
Corporate bonds and notes	\$ 21,256	\$ (265)	\$ 3,995	\$ (7)	\$ 25,251	\$ (272)
<b>Total</b>	<u>\$ 21,256</u>	<u>\$ (265)</u>	<u>\$ 3,995</u>	<u>\$ (7)</u>	<u>\$ 25,251</u>	<u>\$ (272)</u>
	Less Than 12 Months		12 Months or More		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
<b>December 31, 2019</b>						
Corporate bonds and notes	\$ 20,031	\$ (10)	\$ 8,753	\$ (3)	\$ 28,784	\$ (13)
<b>Total</b>	<u>\$ 20,031</u>	<u>\$ (10)</u>	<u>\$ 8,753</u>	<u>\$ (3)</u>	<u>\$ 28,784</u>	<u>\$ (13)</u>

The estimated fair value of marketable debt securities by contractual maturity at March 31, 2020 is shown below (in thousands). Actual maturities may differ from contractual maturities because issuers may have the right to call or prepay obligations without call or prepayment penalties.

	Estimated Fair Value
Due in one year or less	\$ 23,548
Due in one to two years	10,129
<b>Total</b>	<u>\$ 33,677</u>

### Equity Securities

On September 19, 2018, the Company purchased seven million common shares of Onkyo Corporation (“Onkyo”), a publicly traded Japanese company and a long-standing customer of the Company, pursuant to the Capital Alliance Agreement (“Agreement”) entered into between the two parties on September 3, 2018. Upon making the investment, the Company held a 6.3% ownership interest in Onkyo. Due to changes in business expectations, the Company determined not to continue discussions on the business alliance. On July 5, 2019, the Company sold approximately 2.8 million shares of Onkyo stock and realized a gain of \$0.9 million. There were no sales of the Onkyo investment during the three months ended March 31, 2020 and 2019. The Company intends to sell the remaining shares over time depending on market conditions.

The Company recorded unrealized losses on its Onkyo investment of \$0.7 million and \$0.4 million during the three months ended March 31, 2020 and 2019, respectively. Cumulative unrealized losses on the investment amounted to \$3.0 million through March 31, 2020.

### Derivatives

From time to time, the Company may use derivative financial instruments to manage foreign currency exchange rate risk. The Company does not enter into derivative transactions for trading purposes. Cash flows from the derivative programs are classified as cash flows from operating activities in the Condensed Consolidated Statements of Cash Flows.

The Company’s derivative financial instruments consist of deliverable and non-deliverable foreign currency forward contracts, which are used primarily to hedge balance sheet and certain expenditure exposures. These instruments are generally short-term in nature, with typical maturities of less than one year, and are subject to fluctuations in foreign exchange rates. Fair values for derivative financial instruments are based on prices computed using third-party valuation models and are classified as Level 2 in accordance with the three-level hierarchy of fair value measurements. All significant inputs to the third-party valuation models are observable in active markets. Inputs include current market-based parameters such as forward rates, yield curves and credit default swap pricing. For additional information related to the three-level hierarchy of fair value measurements, see “Note 6 – Fair Value.”

Under the Company’s policy election, these derivatives are not designated as hedge instruments, which are measured and reported at fair value. Changes in the fair value of these undesignated derivatives are reported in other income and expense, net, on the Condensed Consolidated Statements of Operations. Realized losses and changes in the estimated fair value of the derivatives were not significant in the three months ended March 31, 2020 and 2019.

The notional and fair values of all derivative instruments were as follows (in thousands):

Undesignated derivatives (foreign exchange contracts)	March 31, 2020	December 31, 2019
<b>Assets</b>		
Other current assets	\$ 114	\$ —
<b>Total fair value</b>	<b>\$ 114</b>	<b>\$ —</b>
Total notional value	\$ 5,000	\$ —

#### NOTE 6 – FAIR VALUE

The Company follows the authoritative guidance for fair value measurement and the fair value option for financial assets and financial liabilities. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability, or an exit price, in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. The established fair value hierarchy requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. There are three levels of inputs that may be used to measure fair value:

*Level 1* Quoted prices in active markets for identical assets.

*Level 2* Observable market-based inputs or unobservable inputs that are corroborated by market data.

*Level 3* Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets. Level 3 assets and liabilities include financial instruments whose value is determined using pricing models, discounted cash flow methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant management judgment or estimation.

When applying fair value principles in the valuation of assets, the Company is required to maximize the use of quoted market prices and minimize the use of unobservable inputs. The Company calculates the fair value of its Level 1 and Level 2 instruments based on the exchange traded price of similar or identical instruments, where available, or based on other observable inputs. There were no significant transfers into or out of Level 1 or Level 2 that occurred between December 31, 2019 and March 31, 2020.

The following sets forth the fair value, and classification within the hierarchy, of the Company's assets required to be measured at fair value on a recurring basis as of March 31, 2020 (in thousands):

	Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Assets</b>				
Marketable securities				
Money market funds - equity securities (1)	\$ 34,791	\$ 34,791	\$ —	\$ —
Marketable equity securities (2)	390	390		
Corporate bonds and notes - debt securities (3)	32,352	—	32,352	—
Commercial paper - debt securities (3)	1,325	—	1,325	—
<b>Total Assets</b>	<b>\$ 68,858</b>	<b>\$ 35,181</b>	<b>\$ 33,677</b>	<b>\$ —</b>

- (1) Reported as cash and cash equivalents in the Condensed Consolidated Balance Sheet.
- (2) Reported as equity securities in the Condensed Consolidated Balance Sheet.
- (3) Reported as AFS debt securities in the Condensed Consolidated Balance Sheet.



The following sets forth the fair value, and classification within the hierarchy, of the Company's assets required to be measured at fair value on a recurring basis as of December 31, 2019 (in thousands):

	Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Assets</b>				
Marketable securities				
Money market funds - equity securities (1)	\$ 2,601	\$ 2,601	\$ —	\$ —
Marketable equity securities (2)	1,124	1,124	—	—
Commercial paper - debt securities (3)	4,056	—	4,056	—
Corporate bonds and notes - debt securities (3)	41,746	—	41,746	—
<b>Total Assets</b>	<b>\$ 49,527</b>	<b>\$ 3,725</b>	<b>\$ 45,802</b>	<b>\$ —</b>

(1) Reported as cash and cash equivalents in the Condensed Consolidated Balance Sheet.

(2) Reported as equity securities in the Condensed Consolidated Balance Sheet.

(3) Reported as AFS debt securities in the Condensed Consolidated Balance Sheet.

#### Financial Instruments Not Recorded at Fair Value on a Recurring Basis

The Company's long-term debt is carried at amortized cost and is measured at fair value on a quarterly basis for disclosure purposes. The carrying amounts and estimated fair values are as follows (in thousands):

	March 31, 2020		December 31, 2019	
	Carrying Amount	Estimated Fair Value	Carrying Amount	Estimated Fair Value
Long-term debt, net (1)	\$ 335,293	\$ 323,253	\$ 334,679	\$ 335,642

(1) Carrying amounts of long-term debt are net of unamortized debt issuance costs of \$8.7 million and \$9.3 million as of March 31, 2020 and December 31, 2019, respectively. See "Note 8 – Debt" for additional information.

The Company's long-term debt, net, is classified within Level 2. The fair value of the debt was estimated based on the quoted market prices for the same or similar issues.

#### NOTE 7 – ACQUISITION, GOODWILL AND IDENTIFIED INTANGIBLE ASSETS

On December 18, 2019, the Company entered into a merger agreement with TiVo in an all-stock merger of equals transaction. See "Note 1 – The Company and Basis of Presentation."

The Company's reporting units include the Product Licensing segment and the Semiconductor and IP Licensing segment. Of the carrying value of goodwill, approximately \$378.1 million was allocated to the Product Licensing segment and approximately \$7.7 million was allocated to the Semiconductor and IP Licensing segment as of March 31, 2020 and December 31, 2019.

During the first quarter of 2020, the COVID-19 pandemic rapidly spread globally and has created unprecedented disruptions in economic activity and financial markets. Due to resulting changes in macroeconomic conditions, industry outlook, and a meaningful decline in the Company's share price, indicators of potential goodwill impairment were identified. The Company proceeded with a quantitative interim goodwill impairment test as of March 31, 2020. Based on the quantitative assessment, the Company concluded that the fair value of the reporting units exceeded the carrying amount for both Product Licensing and Semiconductor and IP Licensing. As a result, no goodwill impairment charges were recognized in the three months ended March 31, 2020.

Identified intangible assets consisted of the following (in thousands):

	Average Life (Years)	March 31, 2020			December 31, 2019		
		Gross Assets	Accumulated Amortization	Net	Gross Assets	Accumulated Amortization	Net
Acquired patents / core technology	3-15	\$ 151,184	\$ (137,086)	\$ 14,098	\$ 151,184	\$ (135,952)	\$ 15,232
Existing technology	5-10	206,878	(139,590)	67,288	206,878	(130,890)	75,988
Customer contracts and related relationships	3-9	291,769	(186,173)	105,596	291,769	(174,741)	117,028
Trademarks/trade name	4-10	40,083	(17,299)	22,784	40,083	(16,056)	24,027
Non-competition agreements	1	2,231	(2,231)	—	2,231	(2,231)	—
Total intangible assets		<u>\$ 692,145</u>	<u>\$ (482,379)</u>	<u>\$ 209,766</u>	<u>\$ 692,145</u>	<u>\$ (459,870)</u>	<u>\$ 232,275</u>

Amortization expense for the three months ended March 31, 2020 and 2019 amounted to \$22.5 million and \$25.5 million, respectively.

As of March 31, 2020, the estimated future amortization expense of total intangible assets was as follows (in thousands):

2020 (remaining 9 months)	\$	66,285
2021		81,084
2022		32,645
2023		21,766
2024		5,462
Thereafter		2,524
	<u>\$</u>	<u>209,766</u>

#### NOTE 8 - DEBT

On December 1, 2016, in connection with the consummation of the acquisition of DTS, the Company entered into a Credit Agreement (the "Credit Agreement") by and among the Company, Royal Bank of Canada, as administrative agent and collateral agent, and the lenders party thereto. The Credit Agreement provided for a \$600.0 million seven-year term B loan facility (the "Term B Loan Facility") which matures on November 30, 2023. Upon the closing of the Credit Agreement, the Company borrowed \$600.0 million under the Term B Loan facility. Net proceeds were used on December 1, 2016, together with cash and cash equivalents, to finance the acquisition of DTS.

On January 23, 2018, the Company and the loan parties entered into an amendment to the Credit Agreement (the "Amendment"). In connection with the Amendment, the Company made a voluntary prepayment of \$100.0 million of the term loan outstanding under the Credit Agreement using cash on hand. The Amendment provided for, among other things, (i) a replacement of the outstanding initial term loan with the new tranche term B-1 loan (the "Amended Term B Loan") in a principal amount of \$494.0 million, (ii) a reduction of the interest rate margin applicable to such loan to (x) in the case of Eurodollar loans, 2.50% per annum and (y) in the case of base rate loans, 1.50% per annum, (iii) a prepayment premium of 1.00% in connection with any repricing transaction with respect to the Amended Term B Loan within six months of the closing date of the Amendment, and (iv) certain amendments to provide the Company with additional flexibility under the covenant governing restricted payments. Using cash on hand, the Company made three voluntary prepayments totaling \$150.0 million during 2019.

The Company's obligations under the Credit Agreement, as amended by the Amendment, continue to be guaranteed by substantially all of the Company's subsidiaries, and secured by substantially all of the assets of the Company and its subsidiaries. The Credit Agreement contains customary events of default, upon the occurrence of which, after any applicable grace period, the lenders will have the ability to accelerate all outstanding loans thereunder. The Credit Agreement contains customary representations and warranties and affirmative and negative covenants that, among other things, restrict the ability of the Company to create or incur certain liens, incur or guarantee additional indebtedness, merge or consolidate with other companies, transfer or sell assets and make restricted payments. The Company was in compliance with all requirements during the three months ended March 31, 2020.

At March 31, 2020, \$344.0 million was outstanding with an interest rate, including the amortization of debt issuance costs, of 4.9%. Interest is payable monthly. There were also \$8.7 million of unamortized debt issuance costs recorded as a reduction of the long-term portion of the debt. Interest expense was \$4.3 million and \$6.7 million for the three months ended March 31, 2020 and 2019, respectively. Amortized debt issuance costs, which were included in interest expense, amounted to \$0.6 million and \$0.6 million for the three months ended March 31, 2020 and 2019, respectively.

As of March 31, 2020, future minimum principal payments for long-term debt are summarized as follows (in thousands):

2020 (remaining 9 months)	\$	—
2021		—
2022		—
2023		344,000
2024		—
Thereafter		—
<b>Total</b>	<b>\$</b>	<b>344,000</b>

As disclosed in “Note 1 – *The Company and Basis of Presentation*,” in connection with the planned Mergers, the Company and TiVo intend to refinance each company’s debt on a combined basis upon closing of the transaction, which is currently expected in the second quarter of 2020. To meet this objective, the companies have secured \$1.1 billion of committed debt financing as described in “Note 1.”

#### NOTE 9 – NET INCOME (LOSS) PER SHARE

The following table sets forth the computation of basic and diluted shares (in thousands):

	Three Months Ended	
	March 31, 2020	March 31, 2019
<b>Denominator:</b>		
Weighted average common shares outstanding	49,945	48,721
Less: shares of restricted stock subject to repurchase	—	—
Total common shares-basic	49,945	48,721
<b>Effect of dilutive securities:</b>		
Options	3	—
Restricted stock awards and units	251	—
Total common shares-diluted	50,199	48,721

Basic net income (loss) per share is computed using the weighted average number of common shares outstanding during the period, excluding any unvested restricted stock awards that are subject to repurchase. Diluted net income (loss) per share is computed using the treasury stock method to calculate the weighted average number of common shares and, if dilutive, potential common shares outstanding during the period. Potential dilutive common shares include unvested restricted stock awards and units and incremental common shares issuable upon the exercise of stock options, less shares from assumed proceeds. The assumed proceeds calculation includes actual proceeds to be received from the employee upon exercise and the average unrecognized stock compensation cost during the period.

For the three months ended March 31, 2020, 2.1 million shares subject to stock options and restricted stock awards and units were excluded from the computation of diluted net income per share as they were anti-dilutive.

For the three months ended March 31, 2019, there was no difference in the weighted average number of common shares used for the calculation of basic and diluted loss per share as the effect of all potentially dilutive shares outstanding was anti-dilutive. A total of 2.1 million shares subject to stock options and restricted stock awards and units were excluded from the computation of diluted net loss per share for the three months ended March 31, 2019, because including them would have been anti-dilutive.

#### NOTE 10 – STOCKHOLDERS’ EQUITY

##### *Stock Repurchase Programs*

In August 2007, the Company’s Board of Directors (the “Board”) authorized a plan to repurchase the Company’s outstanding shares of common stock dependent on market conditions, share price and other factors. There were no repurchases during the three months ended March 31, 2020. The Company has repurchased a total of approximately 13,279,000 shares of common stock since inception of the plan, at an average price of \$26.25 per share for a total cost of \$348.6 million. The shares repurchased are recorded as treasury stock and are accounted for under the cost method. No expiration date has been specified for this plan. As of March 31, 2020, the total remaining amount available for repurchase was \$101.4 million.

## Stock Option Plans

### The 2003 Plan

As of March 31, 2020, there were approximately 0.9 million shares reserved for future grant under the Company's 2003 Equity Incentive Plan (the "2003 Plan").

A summary of the stock option activity is presented below (in thousands, except per share amounts):

	Options Outstanding	
	Number of Shares Subject to Options	Weighted Average Exercise Price Per Share
<b>Balance at December 31, 2019</b>	605	\$ 26.68
Options granted	—	—
Options exercised	—	—
Options canceled / forfeited / expired	(17)	22.05
<b>Balance at March 31, 2020</b>	<u>588</u>	<u>\$ 26.77</u>

### Restricted Stock Awards and Units

Information with respect to outstanding restricted stock awards and units as of March 31, 2020 is as follows (in thousands, except per share amounts):

	Restricted Stock and Restricted Stock Units			
	Number of Shares Subject to Time-based Vesting	Number of Shares Subject to Performance-based Vesting	Total Number of Shares	Weighted Average Grant Date Fair Value Per Share
<b>Balance at December 31, 2019</b>	2,371	554	2,925	\$ 25.99
Awards and units granted	1,007	—	1,007	\$ 10.75
Awards and units vested / earned	(754)	(104)	(858)	\$ 27.57
Awards and units canceled / forfeited	(11)	(134)	(145)	\$ 30.26
<b>Balance at March 31, 2020</b>	<u>2,613</u>	<u>316</u>	<u>2,929</u>	<u>\$ 20.07</u>

### Performance Awards and Units

Performance awards and units may be granted to employees or consultants based upon, among other things, the contributions, responsibilities and other compensation of the particular employee or consultant. The value and the vesting of such performance awards and units are generally linked to one or more performance goals or other specific performance goals determined by the Company, in each case on a specified date or dates or over any period or periods determined by the Company, and range from zero to 100 percent of the grant.

### Employee Stock Purchase Plans

As of March 31, 2020, there were approximately 815,000 shares reserved for grant under the Company's 2003 Employee Stock Purchase Plan (the "ESPP") and the International Employee Stock Purchase Plan (the "IESPP"), collectively.

## NOTE 11 – STOCK-BASED COMPENSATION EXPENSE

The effect of recording stock-based compensation expense for the three months ended March 31, 2020 and 2019 is as follows (in thousands):

	Three Months Ended	
	March 31, 2020	March 31, 2019
Research, development and other related costs	\$ 3,036	\$ 3,603
Selling, general and administrative	4,951	4,020
Total stock-based compensation expense	7,987	7,623
Tax effect on stock-based compensation expense	(1,000)	(1,315)
Net effect on net income (loss)	\$ 6,987	\$ 6,308

Stock-based compensation expense categorized by various equity components for the three months ended March 31, 2020 and 2019 is summarized in the table below (in thousands):

	Three Months Ended	
	March 31, 2020	March 31, 2019
Restricted stock awards and units	\$ 7,294	\$ 6,934
Employee stock purchase plan	690	621
Employee stock options	3	68
Total stock-based compensation expense	\$ 7,987	\$ 7,623

There were no options granted in the three months ended March 31, 2020 and 2019.

ESPP grants occur in February and August. The following assumptions were used to value the ESPP shares for these grants:

	February 2020	February 2019
Expected life (years)	2.0	2.0
Risk-free interest rate	1.4%	2.5%
Dividend yield	4.0%	5.4%
Expected volatility	45.8%	53.4%

## NOTE 12 – INCOME TAXES

For the three months ended March 31, 2020, the Company recorded an income tax expense of \$2.1 million on pretax income of \$20.8 million, which resulted in an effective tax rate of 9.9%. The income tax expense for the three months ended March 31, 2020 was primarily related to tax expense from operating income, increase in certain non-deductible expenses, shortfalls from stock-based compensation, increase in valuation allowance on certain deferred tax assets, and unrealized foreign exchange losses from the prior year Korea refund claim, offset by a deduction from foreign-derived intangible income and the release of unrecognized tax benefits due to lapse in statute of limitation.

For the three months ended March 31, 2019, the Company recorded an income tax benefit of \$9.0 million on a pretax loss of \$34.4 million, which resulted in an effective tax rate of 26.0%. The effective tax rate was primarily related to tax benefit from operating losses and the realization of certain tax credits, offset by foreign withholding taxes, certain non-deductible expenses, and shortfalls from stock-based compensation.

The Company's provision for income taxes is based on its worldwide estimated annualized effective tax rate, except for jurisdictions for which a loss is expected for the year and no benefit can be realized for those losses, and the tax effect of discrete items occurring during the period. The tax for jurisdictions for which a loss is expected and no benefit can be realized for the year is based on actual taxes and tax reserves for the quarter. The change from income tax benefit to income tax expense for the period ended March 31, 2020 as compared to the prior year is largely attributable to operating income, increase in certain non-deductible expenses and unrealized foreign exchange loss from the Korean refund claim partially offset by tax benefits from the release of unrecognized tax benefits due to lapse in statute of limitation.

During the fourth quarter of 2019, the Company filed a refund claim for foreign taxes previously withheld from licensees in Korea based on recent court rulings in Korea and other business factors. These previously withheld foreign taxes were claimed as a foreign tax credit in the U.S. As a result of the Company's refund claim, it recorded a non-current income tax receivable of \$65.2 million in income tax receivable, an unrecognized tax benefit of \$48.2 million in other long-term liabilities, and a reduction in deferred tax assets of \$17.0 million. The Company anticipates filing a refund claim for the 2020 year-to-date

Korean withholding taxes. During the first quarter of 2020, an additional non-current income tax receivable of \$4.8 million, an unrecognized tax benefit of \$2.4 million in other long-term liabilities, and a reduction in deferred tax assets of \$2.3 million were recorded. At March 31, 2020, the Company had recorded a cumulative unrealized foreign exchange loss of approximately \$3.9 million as a reduction in non-current income tax receivable.

As of March 31, 2020, unrecognized tax benefits were \$85.5 million (which is included in long-term deferred tax and other long-term liabilities on the Condensed Consolidated Balance Sheet), of which \$81.6 million would affect the effective tax rate if recognized. As of March 31, 2019, unrecognized tax benefits were \$33.7 million (which was included in long-term deferred tax and other long-term liabilities on the Condensed Consolidated Balance Sheet), of which \$21.3 million would affect the effective tax rate if recognized. The Company is unable to reasonably estimate the timing of the long-term payments or the amount by which the liability will increase or decrease.

It is the Company's policy to classify accrued interest and penalties related to unrecognized tax benefits in the provision for income taxes. For the three months ended March 31, 2020 and 2019, the Company recognized an insignificant amount of interest and penalties related to unrecognized tax benefits. Accrued interest and penalties were \$1.1 million and \$1.2 million as of March 31, 2020 and December 31, 2019, respectively.

At March 31, 2020, the Company's 2015 through 2018 tax years were open and subject to potential examination in one or more jurisdictions. In addition, in the U.S., any net operating losses or credits that were generated in prior years but not yet fully utilized in a year that is closed under the statute of limitations may also be subject to examination. The Company has submitted a withholding tax refund claim with the Korean authorities and the final outcome is not anticipated to be settled within the next twelve months.

#### NOTE 13 – LEASES

The Company leases office and research facilities and office equipment under operating leases which expire through 2028. The Company's leases have remaining lease terms of one year to nine years, some of which may include options to extend the leases for five years or longer, and some of which may include options to terminate the leases within one year or less. Leases with an initial term of 12 months or less are not recorded; expense for these leases is recognized on a straight-line basis over the lease term. Variable lease payments are expensed as incurred and are not included within the lease liability and right-of-use assets calculation. As a practical expedient, the Company elected, for all office and facility leases, not to separate nonlease components (e.g., common-area maintenance costs) from lease components (e.g., fixed payments including rent) and instead to account for each separate lease component and its associated non-lease components as a single lease component. As most of the leases do not provide an implicit rate, the Company generally, for purposes of discounting lease payments, uses its incremental borrowing rate based on the estimated rate of interest for collateralized borrowing over a similar term of the lease payments at commencement date.

Lease cost is summarized in the table below (in thousands):

	Three Months Ended	
	March 31, 2020	March 31, 2019
Operating lease cost (1)	\$ 2,181	\$ 1,951

(1) Includes short-term leases and variable lease costs, which were immaterial.

Other information related to leases was as follows (in thousands, except lease term and discount rate):

	Three Months Ended,	
	March 31, 2020	March 31, 2019
<b>Cash paid for amounts included in the measurement of lease liabilities:</b>		
Operating cash flows from operating leases	\$ 1,638	\$ 1,554
<b>ROU assets obtained in exchange for new lease liabilities:</b>		
Operating leases	\$ —	\$ 1,045

	March 31, 2020	December 31, 2019
<b>Weighted-average remaining lease term (years):</b>		
Operating leases	4.4	4.6
<b>Weighted-average discount rate:</b>		
Operating leases	5.7%	5.7%

Future minimum lease payments and related lease liabilities as of March 31, 2020 were as follows (in thousands):

	<b>Operating Leases</b>	
2020 (remaining 9 months)	\$	4,747
2021		4,558
2022		3,259
2023		3,235
2024		2,619
Thereafter		1,977
<b>Total lease payments</b>		<b>20,395</b>
Less: imputed interest (1)		(2,514)
<b>Present value of lease liabilities:</b>	<b>\$</b>	<b>17,881</b>
Less: current obligations under leases (accrued liabilities)		5,536
<b>Noncurrent operating lease liabilities</b>	<b>\$</b>	<b>12,345</b>

(1) Calculated using the interest rate for each lease.

*Note: Future minimum lease payments exclude short-term leases as well as payments to landlords for variable common area maintenance, insurance and real estate taxes.*

As of December 31, 2019, future minimum lease payments were as follows (in thousands):

	<b>Operating Leases</b>	
2020	\$	6,387
2021		4,558
2022		3,259
2023		3,235
2024		2,619
Thereafter		1,977
<b>Total lease payments</b>		<b>22,035</b>
Less: imputed interest		(2,776)
<b>Present value of lease liabilities:</b>	<b>\$</b>	<b>19,259</b>
Less: current obligations under leases (accrued liabilities)		5,845
<b>Noncurrent operating lease liabilities</b>	<b>\$</b>	<b>13,414</b>

## **NOTE 14 – COMMITMENTS AND CONTINGENCIES**

### ***Purchase and Other Commitments***

There have been no material changes to the Company's purchase and other commitments in the three months ended March 31, 2020. For detail, refer to "Note 15 – *Commitments and Contingencies*" in its Form 10-K for the year ended December 31, 2019.

### ***Leases***

The Company leases office and research facilities and office equipment under operating leases which expire at various dates through 2028. The terms of some of the Company's leases provide for rental payments on a graduated scale. Lease expense is recorded on a straight-line basis over the lease term. For further details, refer to "Note 13 – *Leases*."

## Contingencies

At each reporting period, the Company evaluates whether or not a potential loss amount or a potential range of loss is probable and reasonably estimable under the provisions of the authoritative guidance that addresses accounting for contingencies. The Company is currently unable to predict the final outcome of lawsuits to which it is a party and therefore cannot determine the likelihood of loss nor estimate a range of possible loss. An adverse decision in any of these proceedings could significantly harm the Company's business and consolidated financial position, results of operations or cash flows.

The Company and its subsidiaries are involved in litigation matters and claims in the normal course of business. In the past, the Company and its subsidiaries have litigated to enforce their respective patents and other intellectual property rights, to enforce the terms of license agreements, to protect trade secrets, to determine the validity and scope of the proprietary rights of others and to defend itself or its customers against claims of infringement or invalidity. The Company expects it or its subsidiaries will be involved in similar legal proceedings in the future, including proceedings regarding infringement of its patents, and proceedings to ensure proper and full payment of royalties by licensees under the terms of its license agreements.

The existing and any future legal actions may harm the Company's business. For example, legal actions could cause an existing licensee or strategic partner to cease making royalty or other payments to the Company, or to challenge the validity and enforceability of patents owned by the Company's subsidiaries or the scope of license agreements with the Company's subsidiaries, and could significantly damage the Company's relationship with such licensee or strategic partner and, as a result, prevent the adoption of the Company's other technologies by such licensee or strategic partner. Litigation could also severely disrupt or shut down the business operations of licensees or strategic partners of the Company's subsidiaries, which in turn would significantly harm ongoing relations with them and cause the Company to lose royalty revenue.

The costs associated with legal proceedings are typically high, relatively unpredictable, and not completely within the Company's control. These costs may be materially higher than expected, which could adversely affect the Company's operating results and lead to volatility in the price of its common stock. Whether or not determined in the Company's favor or ultimately settled, litigation diverts managerial, technical, legal, and financial resources from the Company's business operations. Furthermore, an adverse decision in any of these legal actions could result in a loss of the Company's proprietary rights, subject the Company to significant liabilities, require the Company to seek licenses from others, limit the value of the Company's licensed technology or otherwise negatively impact the Company's stock price or its business and consolidated financial position, results of operations or cash flows.

## NOTE 15 – SEGMENT AND GEOGRAPHIC INFORMATION

The Company reports its financial results within two reportable segments: (1) Product Licensing and (2) Semiconductor and IP Licensing. There are certain corporate overhead costs that are not allocated to these reportable segments because these operating amounts are not considered in evaluating the operating performance of the Company's business segments.

The Chief Executive Officer is also the Chief Operating Decision Maker ("CODM") as defined by the authoritative guidance on segment reporting.

The Product Licensing segment is comprised of the Company's audio and imaging businesses, which the Company licenses through the DTS, HD Radio, and IMAX Enhanced brands. These licenses typically include the delivery of software and/or hardware-based solutions to the Company's customers or to their suppliers. Product Licensing revenue is derived primarily from sales into the home, automotive and mobile markets.

The Semiconductor and IP Licensing segment includes the Company's Tessera, Invensas and Invensas Bonding Technologies subsidiaries, which license semiconductor packaging and interconnect technologies and associated IP. Semiconductor and IP Licensing revenue is derived from technology and IP licenses to semiconductor companies, foundries and packaging companies. The Company has a long history of developing and monetizing next-generation technologies, including chip-scale and multi-chip packaging solutions as well as low-temperature wafer and die bonding solutions. Today, the Company is actively developing and licensing 3D semiconductor packaging, interconnect and bonding solutions for semiconductors that are used in everyday products such as smartphones, tablets, and laptops as well as servers used in datacenters. The Company also provides engineering services to its customers to assist them in their evaluation and adoption of the Company's technologies including the transition into high volume production.



The Company does not identify or allocate assets by reportable segment, nor does the CODM evaluate reportable segments using discrete asset information. Reportable segments do not record inter-segment revenue and accordingly there are none to report. The Company does not allocate other income and expense to reportable segments. Although the CODM uses operating income to evaluate reportable segments, operating costs included in one segment may benefit other segments.

The following table sets forth the Company's segment revenue, operating expenses and operating income (loss) for the three months ended March 31, 2020 and 2019 (in thousands):

	Three Months Ended	
	March 31, 2020	March 31, 2019
<b>Revenue:</b>		
Product Licensing segment	\$ 55,942	\$ 44,567
Semiconductor and IP Licensing segment	61,723	12,000
Total revenue	<u>117,665</u>	<u>56,567</u>
<b>Operating expenses:</b>		
Product Licensing segment	45,166	45,757
Semiconductor and IP Licensing segment	10,169	10,238
Unallocated operating expenses (1)	37,803	30,569
Total operating expenses	<u>93,138</u>	<u>86,564</u>
<b>Operating income (loss):</b>		
Product Licensing segment	10,776	(1,190)
Semiconductor and IP Licensing segment	51,554	1,762
Unallocated operating expenses (1)	(37,803)	(30,569)
Total operating income (loss)	<u>\$ 24,527</u>	<u>\$ (29,997)</u>

- (1) Unallocated operating expenses consist primarily of selling, general and administrative expenses, such as administration, human resources, finance, information technology, corporate development and procurement. These expenses are not allocated because these amounts are not considered in evaluating the operating performance of the Company's business segments.

A significant portion of the Company's revenue is derived from licensees headquartered outside of the U.S., principally in Asia, and it is expected that this revenue will continue to account for a significant portion of total revenue in future periods. The table below lists the geographic revenue for the periods indicated (in thousands):

	Three Months Ended			
	March 31, 2020		March 31, 2019	
Japan	\$ 51,322	44%	\$ 17,232	31%
Korea	27,583	23	17,503	31
U.S.	23,136	20	11,432	20
China	8,846	7	3,443	6
Europe and Middle East	4,448	4	4,000	7
Other	2,330	2	2,957	5
	<u>\$ 117,665</u>	<u>100%</u>	<u>\$ 56,567</u>	<u>100%</u>

For the three months ended March 31, 2020 and 2019, there were two customers and one customer, respectively, that accounted for 10% or more of total revenue. As of March 31, 2020 and December 31, 2019, there were two and three customers, respectively, that each accounted for 10% or more of total accounts receivable.

#### NOTE 16 - SUBSEQUENT EVENTS

On April 30, 2020, the Board declared a cash dividend of \$0.20 per share of common stock, payable on May 27, 2020 to the stockholders of record at the close of business on May 20, 2020.

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

*The following discussion should be read in conjunction with the attached unaudited condensed consolidated financial statements and notes thereto, and with our audited financial statements and notes thereto for the year ended December 31, 2019 found in the Form 10-K.*

*This Quarterly Report contains forward-looking statements, which are subject to the safe harbor provisions created by the Private Securities Litigation Reform Act of 1995. Words such as “expects,” “anticipates,” “plans,” “believes,” “seeks,” “estimates,” “could,” “would,” “may,” “intends,” “targets” and similar expressions or variations of such words are intended to identify forward-looking statements, but are not the exclusive means of identifying forward-looking statements in this Quarterly Report. The identification of certain statements as “forward-looking” is not intended to mean that other statements not specifically identified are not forward-looking. All statements other than statements about historical facts are statements that could be deemed forward-looking statements, including, but not limited to, statements that relate to our future revenue, product development, demand, acceptance and market share, growth rate, competitiveness, gross margins, levels of research, development and other related costs, expenditures, the outcome or effects of and expenses related to litigation and administrative proceedings related to our patents, our intent to enforce our intellectual property, our ability to license our intellectual property, tax expenses, cash flows, our ability to liquidate and recover the carrying value of our investments, our management's plans and objectives for our current and future operations, our plans for quarterly dividends and stock repurchases, the levels of customer spending or research and development activities, general economic conditions, and the sufficiency of financial resources to support future operations and capital expenditures.*

*Although forward-looking statements in this Quarterly Report reflect the good faith judgment of our management, such statements can only be based on facts and factors currently known by us. Consequently, forward-looking statements are inherently subject to risks, uncertainties, and changes in condition, significance, value and effect, including those discussed below under the heading “Risk Factors” within Part II, Item 1A of this Quarterly Report and other documents we file from time to time with the Securities and Exchange Commission (the “SEC”), such as our annual reports on Form 10-K, our quarterly reports on Form 10-Q and our current reports on Form 8-K. Such risks, uncertainties and changes in condition, significance, value and effect could cause our actual results to differ materially from those expressed herein and in ways not readily foreseeable. Readers are urged not to place undue reliance on these forward-looking statements, which speak only as of the date of this Quarterly Report and are based on information currently and reasonably known to us. We undertake no obligation to revise or update any forward-looking statements in order to reflect any event or circumstance that may arise after the date of this Quarterly Report. Readers are urged to carefully review and consider the various disclosures made in this Quarterly Report, which attempt to advise interested parties of the risks and factors that may affect our business, financial condition, results of operations and prospects.*

### Corporate Information

Our principal executive offices are located at 3025 Orchard Parkway, San Jose, California 95134. Our telephone number is (408) 321-6000. We maintain a website at [www.xperi.com](http://www.xperi.com). The reference to our website address does not constitute incorporation by reference of the information contained on this website.

Xperi, the Xperi logo, Tessera, the Tessera logo, DTS, the DTS logo, FotoNation, Invensas, the Invensas logo, BVA, ZiBond, DBI, DBI Ultra, DTS-*HD*, DTS Audio Processing, DTS:X Ultra, DTS Virtual:X, DTS Headphone:X, DTS Play-Fi, DTS:X, Perceive, Ergo, and HD Radio are trademarks or registered trademarks of Xperi Corporation or its affiliated companies in the U.S. and other countries. All other company, brand and product names may be trademarks or registered trademarks of their respective companies.

In this Quarterly Report, the “Company,” “we,” “us” and “our” refer to Xperi Corporation, which operates its business through its subsidiaries. Unless specified otherwise, the financial results in this Quarterly Report are those of the Company and its subsidiaries on a consolidated basis.

### Business Overview

Xperi is a publicly-traded technology company with headquarters in Silicon Valley and operations around the world. Through its operating subsidiaries, Xperi creates, develops and licenses innovative audio, imaging, semiconductor packaging and interconnect technologies. We have approximately 700 employees and 30 years of operating experience.

We license our innovative products, technologies and inventions to global electronics companies which, in turn, integrate the technologies into their own consumer electronics and semiconductor products. Our technologies and inventions are widely adopted and used every day by millions of people. Our audio technologies have shipped in billions of devices for the home,

mobile and automotive markets. Our imaging technologies have been embedded in billions of smartphones and other mobile devices. Our semiconductor packaging and interconnect technologies have been licensed to more than 100 customers and have shipped in over 100 billion semiconductor chips.

On December 18, 2019, we entered into a definitive agreement with TiVo to combine in an all-stock merger of equals transaction. The transaction will create a leading consumer and entertainment technology licensing business and one of the industry's largest intellectual property (IP) licensing platforms with a diverse portfolio of entertainment and semiconductor intellectual property. The transaction is expected to close and become effective during the second quarter of 2020, subject to regulatory approvals, the approval by the shareholders of each company, and other customary closing conditions. For further discussion on the planned Mergers, refer to "Item 1A. Risk Factors," and "Note 1 – The Company and Basis of Presentation" in the Notes to Condensed Consolidated Financial Statements.

The planned Mergers will result in material changes to the combined companies' balance sheet, results of operations and cash flows. Xperi and TiVo intend to refinance their existing indebtedness on a combined basis. We have obtained a debt commitment letter for an aggregate principal amount of \$1,100 million in debt financing in order to pay transaction expenses in connection with the planned merger and to refinance the existing indebtedness of the Company and TiVo. As a result, the combined company's debt balance will increase substantially following the planned merger. Additionally, our combined revenue, operating expenses, and cash from operations should all increase, resulting in the trends noted below in our "Results of Operations" to be altered going forward.

### **COVID-19 Impact**

In December 2019, a novel strain of coronavirus was reported to have surfaced in Wuhan, China, and has since spread to a number of other countries, including the United States. In March 2020, the World Health Organization declared coronavirus disease ("COVID-19") a pandemic. In an effort to protect the health and safety of our employees, we took proactive, aggressive action from the earliest signs of the outbreak to adopt social distancing policies at our locations around the world, including working from home, limiting the number of employees attending meetings, and suspending employee travel. In an effort to contain COVID-19 or slow its spread, governments around the world have also enacted various measures, including orders to close all business locations not deemed "essential," isolate people to their places of residence, and practice social distancing when engaging in essential activities. We anticipate that these actions and the resulting global economic impacts will negatively impact our consolidated financial results in the second quarter and in later periods of 2020. The impact to date has included significant volatility and a decline in demand in various markets and industries, particularly the automotive market, which will adversely impact our revenue and billings. In addition, we recorded an incremental provision for credit losses of approximately \$2.0 million due to heightened risk of nonpayment on existing accounts receivable as a result of the impaired financial condition and liquidity positions of certain of our customers.

We have been closely monitoring the COVID-19 pandemic and its impacts on our business, including legislation to mitigate the impact of COVID-19 such as the Coronavirus Aid, Relief, and Economic Security (CARES) Act which was enacted on March 27, 2020. More than half of our anticipated billings for 2020 are derived from fixed-fee and minimum-guarantee arrangements, primarily from large, well-capitalized customers which we believe somewhat mitigates the risks to our business. Although at present time we are unable to predict the full impact and duration of COVID-19 on our business, we are actively managing our financial expenditures in response to the current uncertainty. Further discussion of the potential impacts on our business from the COVID-19 pandemic is provided under Part II, *Item 1A – Risk Factors*.

### **Results of Operations**

We adopted the new accounting standard, ASU No. 2014-09 (Topic 606) "*Revenue from Contracts with Customers*" effective January 1, 2018, which had a material impact on the financial reporting of our operating results. The adoption of Topic 606 does not, however, impact billings or the cash flow from our contracts with customers. We expect to experience greater variability in quarterly revenue as a result of Topic 606 being applied to minimum guarantee and fixed fee licensing contracts. We place greater emphasis on billings and operating cash flows rather than revenue and net operating results to internally evaluate our financial performance.

#### *Revenue*

Our revenue is generated primarily from royalty and license fees. Revenue is recognized upon transfer of control of promised products, services or intellectual property and technologies ("IP") rights to customers in an amount that reflects the consideration that we expect to receive in exchange for those products, services or licensing of the IP rights.

Certain licensees have entered into fixed fee or minimum guarantee arrangements, whereby licensees pay a fixed fee for the right to incorporate our technology in the licensee's products over the license term. In arrangements with a minimum guarantee, the fixed fee component corresponds to a minimum number of units or dollars that the customer must produce or pay, with additional per-unit fees for any units or dollars exceeding the minimum. For these agreements, we recognize the full fixed fee as revenue at the beginning of the license term, when the licensee has the right to use the IP and begins to benefit from the license.

If the contract term of a fixed fee or minimum guarantee arrangement is longer than one year, we also consider the scheduled payment arrangements to determine whether a financing component exists. In general, if the payment arrangements extend beyond the initial twelve months of the contract, we treat a portion of the payments as a financing component. The discount rate used for each arrangement reflects the rate that would be used in a separate financing transaction between us and the licensee at contract inception, and takes into account the credit characteristics of the licensee and market interest rates as of the date of the agreement. As such, the amount of fixed fee revenue recognized at the beginning of the license term will be reduced by the calculated financing component. As payments are received from the licensee, we recognize a portion of the financing component through interest income.

For certain licensees, royalty revenue is generated based on a licensee's production or shipment of licensed products incorporating our IP, technologies or software. Licensees with a per-unit arrangement pay a per-unit royalty for each product manufactured or sold, as set forth in its license agreement. Licensees generally report manufacturing or sales information in the quarter subsequent to when such activity takes place. Under Topic 606, we estimate the royalties earned each quarter based on our forecast of manufacturing and sales activity incurred by our licensees in that quarter. Any differences between actual royalties owed by a licensee and our quarterly estimates are recognized in the following quarter, when the licensee's royalty report is received. Estimating licensees' quarterly royalties prior to receiving the royalty reports requires us to make significant assumptions and judgments related to forecasted trends and growth rates used to estimate quantities shipped by customers, which could have a material impact on the amount of revenue we report on a quarterly basis.

The timing of revenue recognition and the amount of revenue actually recognized for each type of revenue depends upon a variety of factors, including the specific terms of each arrangement, our ability to determine and allocate the transaction price to each separate performance obligation and the nature of our deliverables and obligations. In addition, our royalty revenue will fluctuate based on a number of factors such as: (a) the rate of adoption and incorporation of our technology by licensees; (b) the demand for products incorporating semiconductors that use our licensed technology; (c) the cyclicity of supply and demand for products using our licensed technology; (d) volume incentive pricing terms in licensing agreements that may result in significant variability in quarterly revenue recognition from customers and (e) the impact of economic downturns.

From time to time we enter into license agreements that have fixed expiration dates. Upon expiration of such agreements, we need to renew or replace these agreements in order to maintain our revenue base. We may not be able to continue licensing customers on terms favorable to us, under the existing terms or at all, which would in turn harm our results of operations.

In the past, we have engaged in litigation and arbitration proceedings to directly or indirectly enforce our intellectual property rights and the terms of our license agreements, including proceedings to ensure proper and full payment of royalties by our current licensees and by third parties whose products incorporate our intellectual property rights.

The following table presents our historical operating results for the periods indicated as a percentage of revenue:

	Three Months Ended	
	March 31, 2020	March 31, 2019
<b>Revenue:</b>		
Royalty and license fees	100%	100%
Total revenue	100	100
<b>Operating expenses:</b>		
Cost of revenue	1	4
Research, development and other related costs	25	48
Selling, general and administrative	32	54
Amortization expense	19	45
Litigation expense	2	2
Total operating expenses	79	153
Operating income (loss)	21	(53)
Interest expense	4	12
Other income and expense, net	(1)	(4)
Income (loss) before taxes	18	(61)
Provision for (benefit from) income taxes	2	(16)
Net income (loss)	16%	(45)%

Our royalty and license fees were as follows (in thousands, except for percentages):

	Three Months Ended		Increase/ (Decrease)	% Change
	March 31, 2020	March 31, 2019		
Royalty and license fees	\$ 117,665	\$ 56,567	\$ 61,098	108%

The \$61.1 million or 108% increase in revenue was driven primarily by a litigation settlement reached in March 2020, and secondarily by higher minimum guarantee (“MG”) revenue due to the timing and duration of MG contracts up for renewal and executed during the quarter.

Our billings were as follows (in thousands, except for percentages):

	Three Months Ended		Increase/ (Decrease)	% Change
	March 31, 2020	March 31, 2019		
Total billings	\$ 112,793	\$ 104,302	\$ 8,491	8%

The \$8.5 million or 8% increase in billings was due primarily to the payments from the aforementioned litigation settlement, partially offset by lower billings in other Semiconductor and IP Licensing agreements expiring at the end of 2019, and by lower Product Licensing billings.

With changes in revenue recognition due to the adoption of Topic 606 in 2018, we anticipate our revenue for 2020 will continue to be impacted due principally to our inability to record future billings as revenue in 2020 and later periods, where such revenue arises from minimum guarantee and fixed fee licensing contracts in place prior to adoption of Topic 606 on January 1, 2018. This accounting change will not impact billings or the cash flow from these contracts. Furthermore, we may experience greater variability in quarterly and annual revenue in future periods as a result of the revenue accounting treatment applied to future minimum guarantee and fixed fee licensing contracts. Management places greater emphasis on billings and cash flows rather than revenue and net operating results to internally evaluate our financial performance.

#### Cost of Revenue

Cost of revenue consists of royalties paid to third parties and direct compensation and related expenses to provide non-recurring engineering (“NRE”) services.

Cost of revenue for the three months ended March 31, 2020 was \$1.6 million, as compared to \$2.2 million for the three months ended March 31, 2019. The decrease was primarily due to lower NRE-related costs resulting from less NRE activity in the first quarter of 2020.

#### *Research, Development and Other Related Costs*

Research and development (“R&D”) is conducted primarily in-house and targets development of audio and image enhancement technologies, chip-scale, multi-chip and wafer level packaging, circuitry, 3D-IC architectures, wafer and die bonding technologies and machine learning. Research, development and other related costs include expenses associated with applications engineering necessary to port and integrate our technologies and products on third party silicon and into end devices. These costs consist primarily of compensation and related costs for personnel, engineering consulting expenses associated with new product and technology development, product commercialization, quality assurance and testing costs, as well as costs related to patent applications and examinations, product “tear downs” and reverse engineering, materials, supplies and equipment depreciation. All research, development and other related costs are expensed as incurred.

Research, development and other related costs for the three months ended March 31, 2020 were \$29.1 million, as compared to \$27.0 million for the three months ended March 31, 2019, an increase of \$2.1 million or 8%. The increase was primarily driven by increased headcount and personnel costs in Perceive Corporation (“Perceive”), an Xperi subsidiary focused on neural network edge inference solutions to deliver smarter products that understand their environment and respond intelligently.

We believe that a significant level of research and development expenses will be required for us to remain competitive in the future.

#### *Selling, General and Administrative*

Selling expenses consist primarily of compensation and related costs for sales and marketing personnel engaged in sales and licensee support, reverse engineering personnel and services, marketing programs, public relations, promotional materials, travel, trade show expenses, and stock-based compensation expense. General and administrative expenses consist primarily of compensation and related costs for general management, information technology, finance personnel, legal fees and expenses, facilities costs, stock-based compensation expense, and professional services. Our general and administrative expenses, other than facilities related expenses, are not allocated to other expense line items.

Selling, general and administrative expenses for the three months ended March 31, 2020 were \$37.8 million, as compared to \$30.6 million for the three months ended March 31, 2019, an increase of \$7.2 million or 24%. The increase was primarily driven by \$3.1 million of costs related to the planned Mergers, an increase of \$2.1 million in provision for credit loss expense due primarily to the COVID-19 impact, and an increase of \$1.3 million in sales/marketing promotion expense.

#### *Amortization Expense*

Amortization expense for the three months ended March 31, 2020 was \$22.5 million, as compared to \$25.5 million for the three months ended March 31, 2019, a decrease of \$3.0 million. The decrease was primarily attributable to certain intangible assets becoming fully amortized over the past twelve months.

With the acquisition of DTS in 2016, we anticipate that amortization expense will continue to be a significant expense since we acquired approximately \$479 million in intangible assets which will be amortized over the next several years. See “Note 7 – Acquisition, Goodwill and Identified Intangible Assets” in the Notes to Condensed Consolidated Financial Statements for additional information.

#### *Litigation Expense*

Litigation expense for the three months ended March 31, 2020 was \$2.1 million, as compared to \$1.3 million for the three months ended March 31, 2019, an increase of \$0.8 million. The increase was due principally to increased case activity during the quarter.

We expect that litigation expense may continue to be a material portion of our operating expenses in future periods, and may fluctuate between periods, because of planned or ongoing litigation, as described in Part II, Item 1 – *Legal Proceedings*, and because of litigation planned for or initiated from time to time in the future in order to enforce and protect our intellectual property and contract rights. We currently expect litigation expense to increase in 2020 as compared to 2019 based on expected case activity on matters currently outstanding.

Upon expiration of our customers' licenses, if those licenses are not renewed, litigation may become necessary to secure payment of reasonable royalties for the use of our patented technology. If we plan for or initiate such litigation, our future litigation expenses may increase.

#### *Stock-based Compensation Expense*

The following table sets forth our stock-based compensation expense for the three months ended March 31, 2020 and 2019 (in thousands):

	<b>Three Months Ended</b>	
	<b>March 31, 2020</b>	<b>March 31, 2019</b>
Research, development and other related costs	\$ 3,036	\$ 3,603
Selling, general and administrative	4,951	4,020
<b>Total stock-based compensation expense</b>	<b>\$ 7,987</b>	<b>\$ 7,623</b>

Stock-based compensation awards include employee stock options, restricted stock awards and units, and employee stock plan purchases. For the three months ended March 31, 2020, stock-based compensation expense was \$7.3 million, of which \$6.6 million related to restricted stock awards and units and \$0.7 million related to employee stock plan purchases. For the three months ended March 31, 2019, stock-based compensation expense was \$7.6 million, of which \$0.1 million related to employee stock options, \$6.9 million related to restricted stock awards and units and \$0.6 million related to employee stock plan purchases. The increase in stock-based compensation for the three months ended March 31, 2020 was due primarily to vesting of performance awards and units.

#### *Interest Expense*

Interest expense for the three months ended March 31, 2020 and 2019 was \$4.3 million and \$6.7 million, respectively. The decrease in interest expense in the three months ended March 31, 2020 was primarily a result of a lower average debt balance as compared to the comparable period in 2019, coupled with lower interest rates on our debt in the current quarter. Interest expense may increase in future periods if interest rates increase.

#### *Other Income and Expense, Net*

Other income and expense, net, for the three months ended March 31, 2020 was \$0.6 million, as compared to \$2.3 million for the three months ended March 31, 2019. Other income and expense, net, was lower in the first quarter of 2020 due principally to a decrease in interest income from financing components under Topic 606.

#### *Provision for Income Taxes*

For the three months ended March 31, 2020, we recorded an income tax expense of \$2.1 million on pretax income of \$20.8 million, which resulted in an effective tax rate of 9.9%. The income tax expense for the three months ended March 31, 2020 was primarily related to tax expense from operating income, increase in certain non-deductible expenses, shortfalls from stock-based compensation, increase in valuation allowance on certain deferred tax assets, and unrealized foreign exchange losses from the prior year Korea refund claim, offset by a deduction from foreign-derived intangible income and the release of unrecognized tax benefits due to lapse in statute of limitation.

For the three months ended March 31, 2019, we recorded an income tax benefit of \$9.0 million on a pre-tax loss of \$34.4 million, which resulted in an effective tax rate of 26.0%. The effective tax rate was primarily related to tax benefit from operational losses and the realization of certain tax credits, offset by foreign withholding taxes, certain non-deductible expenses, and shortfalls from stock-based compensation.

Our provision for income taxes is based on our worldwide estimated annualized effective tax rate, except for jurisdictions for which a loss is expected for the year and no benefit can be realized for those losses, and the tax effect of discrete items occurring during the period. The tax for jurisdictions for which a loss is expected and no benefit can be realized for the year is based on actual taxes and tax reserves for the quarter. The change from income tax benefit to income tax expense for the period ended March 31, 2020 as compared to the prior year is largely attributable to operating income, increase in certain non-deductible expenses and unrealized foreign exchange loss from the Korean refund claim, partially offset by tax benefits from the release of unrecognized tax benefits due to lapse in statute of limitation.

During the fourth quarter of fiscal 2019, we filed a refund claim for foreign taxes previously withheld from licensees in Korea based on recent court rulings in Korea and other business factors. These previously withheld foreign taxes were claimed as a

foreign tax credit in the U.S. As a result of our refund claim, we recorded a non-current income tax receivable of \$65.2 million in income tax receivable, an unrecognized tax benefit of \$48.2 million in other long-term liabilities, and a reduction in deferred tax assets of \$17.0 million. We anticipate filing a refund claim for the 2020 year-to-date Korean withholding taxes. During the first quarter of 2020, an additional non-current income tax receivable of \$4.8 million, an unrecognized tax benefit of \$2.4 million in other long-term liabilities, and a reduction in deferred tax assets of \$2.3 million were recorded. At March 31, 2020, we had recorded a cumulative unrealized foreign exchange loss of approximately \$3.9 million as a reduction in non-current income tax receivable.

The need for a valuation allowance requires an assessment of both positive and negative evidence when determining whether it is more likely than not that deferred tax assets are recoverable. Such assessment is required on a jurisdiction-by-jurisdiction basis. In making such assessment, significant weight is given to evidence that can be objectively verified. After considering both positive and negative evidence to assess the recoverability of our net deferred tax assets, we determined that it was more likely than not that we would not realize certain federal, state and foreign deferred tax assets given the substantial amount of tax attributes that will remain unutilized to offset forecasted future tax liabilities. In the future, we may release valuation allowance and recognize certain deferred federal tax assets, deferred state tax assets or deferred tax assets of other foreign subsidiaries depending on achievement of future profitability in relevant jurisdictions, or implementing tax planning strategies that enable us to utilize deferred tax assets that would otherwise be unused. Any release of valuation allowance could have the effect of decreasing the income tax provision in the period the valuation allowance is released. We continue to monitor the likelihood that we will be able to recover our deferred tax assets, including those for which a valuation allowance is recorded. There can be no assurance that we will generate profits or implement tax strategies in future periods enabling us to fully realize our deferred tax assets. The timing of recording a valuation allowance or the reversal of such valuation allowance is subject to objective and subjective factors that cannot be readily predicted in advance. Adjustments could be required in the future if we conclude that it is more likely than not that deferred tax assets are not recoverable. A provision for a valuation allowance could have the effect of increasing the income tax provision in the period the valuation allowance is provided.

### **Segment Operating Results**

We operate in two reportable segments: (1) Product Licensing and (2) Semiconductor and IP Licensing. There are certain corporate overhead costs that are not allocated to these reportable segments because these operating amounts are not considered in evaluating the operating performance of our business segments.

The Chief Executive Officer is also the Chief Operating Decision Maker (“CODM”) as defined by the authoritative guidance on segment reporting.

The Product Licensing segment is comprised of our Audio and Imaging businesses, which we license through the DTS, HD Radio, and IMAX Enhanced brands. These licenses typically include the delivery of software and/or hardware-based solutions to our customers or to their suppliers. Product Licensing revenue is derived primarily from sales into the home, automotive and mobile markets.

The Semiconductor and IP Licensing segment includes our Tessera, Invensas and Invensas Bonding Technologies subsidiaries, which license semiconductor packaging and interconnect technologies and associated intellectual property. Semiconductor and IP Licensing revenue is derived from technology and IP licenses to semiconductor companies, foundries and packaging companies. We have a long history of developing and monetizing next-generation technologies, including chip-scale and multi-chip packaging solutions as well as low-temperature wafer and die bonding solutions. Today, we are actively developing and licensing 3D semiconductor packaging, interconnect and bonding solutions for semiconductors that are used in every day products such as smartphones, tablets, and laptops as well as servers used in datacenters. We also provide engineering services to our customers to assist them in their evaluation and adoption of our technologies including the transition into high volume production.

We do not identify or allocate assets by reportable segment, nor does the CODM evaluate reportable segments using discrete asset information. Reportable segments do not record inter-segment revenue and accordingly there are none to report. Although the CODM uses operating income to evaluate reportable segments, operating costs included in one segment may benefit other segments.



The following table sets forth our segments' revenue, operating expenses and operating income (loss) (in thousands):

	<b>Three Months Ended</b>	
	<b>March 31, 2020</b>	<b>March 31, 2019</b>
<b>Revenue:</b>		
Product Licensing segment	\$ 55,942	\$ 44,567
Semiconductor and IP Licensing segment	61,723	12,000
Total revenue	<u>117,665</u>	<u>56,567</u>
<b>Operating expenses:</b>		
Product Licensing segment	45,166	45,757
Semiconductor and IP Licensing segment	10,169	10,238
Unallocated operating expenses (1)	37,803	30,569
Total operating expenses	<u>93,138</u>	<u>86,564</u>
<b>Operating income (loss):</b>		
Product Licensing segment	10,776	(1,190)
Semiconductor and IP Licensing segment	51,554	1,762
Unallocated operating expenses (1)	(37,803)	(30,569)
Total operating loss	<u>\$ 24,527</u>	<u>\$ (29,997)</u>

(1) Unallocated operating expenses consist primarily of selling, general and administrative expenses, such as administration, human resources, finance, information technology, corporate development and procurement. These expenses are not allocated because these amounts are not considered in evaluating the operating performance of the Company's business segments.

The revenue and operating income amounts in this section have been presented on a basis consistent with GAAP applied at the segment level. Of our \$385.8 million in goodwill at March 31, 2020, approximately \$378.1 million is allocated to our Product Licensing reporting segment and approximately \$7.7 million is allocated to our Semiconductor and IP Licensing reporting segment.

For the three months ended March 31, 2020, the unallocated expenses were \$37.8 million compared to \$30.6 million for the three months ended March 31, 2019. The increase of \$7.2 million was primarily attributable to \$3.1 million of costs related to the planned Mergers, an increase of \$2.1 million in provision for credit loss expense due primarily to the COVID-19 impact, and an increase of \$1.3 million in sales/marketing promotion expense.

#### *Product Licensing Segment*

	<b>Three Months Ended</b>	
	<b>March 31, 2020</b>	<b>March 31, 2019</b>
<b>Revenue:</b>		
Royalty and license fees	\$ 55,942	\$ 44,567
Total revenue	<u>55,942</u>	<u>44,567</u>
<b>Operating expenses:</b>		
Cost of revenue	1,584	2,207
Research, development and other related costs	23,149	21,123
Litigation	210	245
Amortization	20,223	22,182
Total operating expenses	<u>45,166</u>	<u>45,757</u>
Total operating income	<u>\$ 10,776</u>	<u>\$ (1,190)</u>

Product Licensing revenue for the three months ended March 31, 2020 was \$55.9 million as compared to \$44.6 million for the three months ended March 31, 2019, an increase of \$11.3 million or 25%. The increase in revenue was driven by higher MG revenue due to the timing and duration of MG contracts up for renewal and executed during the quarter, partially offset by a decrease in royalty revenue from existing arrangements.

	<b>Three Months Ended</b>		<b>Increase/ (Decrease)</b>	<b>% Change</b>
	<b>March 31, 2020</b>	<b>March 31, 2019</b>		
Product Licensing billings	\$ 56,590	\$ 60,888	\$ (4,298)	(7)%

The decreases in billings were primarily driven by a decline in billings in the home market, due principally to an expected shift in product cycles in certain game consoles.

Due to adoption of Topic 606, we continue to expect greater variability in quarterly and annual revenue in our Product Licensing segment in future periods as a result of the revenue accounting treatment applied to minimum guarantee and fixed fee licensing contracts.

Operating expenses for the three months ended March 31, 2020 were \$45.2 million and consisted of cost of revenue of \$1.6 million, research, development and other related costs of \$23.1 million, litigation costs of \$0.2 million and amortization costs of \$20.2 million. The decrease of \$0.6 million in total operating expenses as compared to \$45.8 million for the three months ended March 31, 2019 was primarily driven by lower cost of revenue due to less NRE activity and lower amortization expense, partially offset by an increase in R&D cost due to increased headcount and personnel cost in the Perceive subsidiary. The lower amortization was attributable to certain intangible assets becoming fully amortized over the past twelve months.

Operating income for the three months ended March 31, 2020 was \$10.8 million compared to operating loss of \$1.2 million for the three months ended March 31, 2019, with the variance due to the reasons stated above.

#### *Semiconductor and IP Licensing Segment*

	<b>Three Months Ended</b>	
	<b>March 31, 2020</b>	<b>March 31, 2019</b>
<b>Revenue:</b>		
Royalty and license fees	\$ 61,723	\$ 12,000
<b>Total revenue</b>	<b>61,723</b>	<b>12,000</b>
<b>Operating expenses:</b>		
Research, development and other related costs	5,990	5,916
Litigation	1,893	1,045
Amortization	2,286	3,277
<b>Total operating expenses</b>	<b>10,169</b>	<b>10,238</b>
<b>Total operating income (loss)</b>	<b>\$ 51,554</b>	<b>\$ 1,762</b>

Semiconductor and IP Licensing segment revenue for the three months ended March 31, 2020 was \$61.7 million as compared to \$12.0 million for the three months ended March 31, 2019, an increase of \$49.7 million or 414%. The increase in revenue was driven primarily by a litigation settlement reached in March 2020.

	<b>Three Months Ended</b>		<b>Increase/ (Decrease)</b>	<b>% Change</b>
	<b>March 31, 2020</b>	<b>March 31, 2019</b>		
Semiconductor and IP Licensing billings	\$ 56,203	\$ 43,414	\$ 12,789	29%

The increase in billings was due primarily to the payments from the aforementioned litigation settlement, partially offset by lower billings in other Semiconductor and IP Licensing agreements expiring at the end of 2019.

Due to adoption of Topic 606, we anticipate Semiconductor and IP Licensing revenue for 2020 will continue to be significantly impacted due principally to our inability to record further billings as revenue in 2020 and later periods from minimum guarantee and fixed fee licensing contracts in place prior to the start of 2018. Further, we expect greater variability in quarterly and annual revenue in our Semiconductor and IP Licensing segment in future periods as a result of the revenue accounting treatment applied to minimum guarantee and fixed fee licensing contracts, which will necessitate recognizing revenue in the quarter a contract first becomes effective.

Operating expenses for the three months ended March 31, 2020 were \$10.2 million and consisted of research, development and other related costs of \$6.0 million, litigation costs of \$1.9 million and amortization costs of \$2.3 million. Operating expenses for the three months ended March 31, 2020 remained relatively constant as compared to the same period in 2019 as higher litigation costs during the first quarter of 2020 were offset by lower amortization. The lower amortization was attributable to certain intangible assets becoming fully amortized over the past twelve months.

We expect that litigation expense will continue to be a material portion of the Semiconductor and IP Licensing segment's operating expenses in future periods, and may fluctuate significantly in some periods, because of our ongoing legal actions, as

described in Part II, Item 1 - *Legal Proceedings*, and because we may become involved in other litigation from time to time in the future in order to enforce and protect our intellectual property and contract rights.

Operating income for the three months ended March 31, 2020 was \$51.6 million compared to operating income of \$1.8 million for the three months ended March 31, 2019, with the variance due to the reasons stated above.

### Liquidity and Capital Resources

(in thousands, except for percentages)	As of	
	March 31, 2020	December 31, 2019
Cash and cash equivalents	\$ 108,405	\$ 74,551
Short-term investments	34,067	46,926
Total cash, cash equivalents and short-term investments	\$ 142,472	\$ 121,477
Percentage of total assets	14%	12%

  

	Three Months Ended	
	March 31, 2020	March 31, 2019
Net cash from operating activities	\$ 32,644	\$ 13,821
Net cash from investing activities	\$ 11,157	\$ 8,632
Net cash from financing activities	\$ (9,947)	\$ (59,589)

Our primary sources of liquidity and capital resources are our operating cash flows and our investment portfolio. Cash, cash equivalents and short-term investments were \$142.5 million at March 31, 2020, an increase of \$21.0 million from \$121.5 million at December 31, 2019. This increase resulted primarily from \$32.6 million in cash generated from operations, which was partially offset by \$10.0 million in dividends paid. Cash and cash equivalents were \$108.4 million at March 31, 2020, an increase of \$33.8 million from \$74.6 million at December 31, 2019.

Cash flows provided by operations were \$32.6 million for the three months ended March 31, 2020, primarily due to our net income of \$18.8 million being further adjusted for non-cash items of depreciation of \$1.7 million, amortization of intangible assets of \$22.5 million, stock-based compensation expense of \$8.0 million and provision for credit loss expense of \$2.0 million. These increases were partially offset by a reduction of \$2.1 million in deferred income taxes and \$19.6 million in changes in operating assets and liabilities.

Cash flows provided by operations were \$13.8 million for the three months ended March 31, 2019, primarily due to our net loss of \$25.4 million being adjusted for non-cash items of depreciation of \$1.7 million, amortization of intangible assets of \$25.5 million, stock-based compensation expense of \$7.6 million and \$18.3 million in changes in operating assets and liabilities. These increases were partially offset by a reduction of \$14.7 million in deferred income taxes.

Net cash provided by investing activities was \$11.2 million for the three months ended March 31, 2020, primarily related to maturities and sales of securities of \$11.8 million, partially offset by \$0.7 million in capital expenditures.

Net cash provided by investing activities was \$8.6 million for the three months ended March 31, 2019, primarily related to maturities and sales of securities of \$9.5 million, partially offset by \$0.9 million in capital expenditures.

Net cash used in financing activities was \$9.9 million for the three months ended March 31, 2020 principally due to \$10.0 million in dividends paid and \$3.1 million in repurchases of common stock, partially offset by \$3.2 million in proceeds due to the issuance of common stock under our employee stock option programs and employee stock purchase plans.

Net cash used in financing activities was \$59.6 million for the three months ended March 31, 2019 principally due to \$50.0 million in a partial pay-down of debt principal, \$9.8 million in dividends paid and \$3.1 million in repurchases of common stock, partially offset by \$3.4 million in proceeds due to the issuance of common stock under our employee stock option programs and employee stock purchase plans.

The primary objectives of our investment activities are to preserve principal and to maintain liquidity while at the same time capturing a market rate of return. To achieve these objectives, we maintain a diversified portfolio of securities including money market funds and debt securities including corporate bonds and notes, municipal bonds and notes, commercial paper, treasury and agency notes and bills and certificates of deposit. We invest excess cash predominantly in high-quality investment grade debt securities with less than three years to maturity. Our marketable debt securities are classified as available-for-sale with credit losses recognized as a credit loss expense and non-credit related unrealized gains and losses, net of tax, recorded in

accumulated other comprehensive income or loss. The fair values for our securities are determined based on quoted market prices as of the valuation date and observable prices for similar assets. In the third quarter of 2018, we initiated an equity position in Onkyo Corporation (“Onkyo”), a publicly traded company listed on the JASDAQ market of the Tokyo Stock Exchange. Under Topic 321, we measure equity securities with readily determinable market value at fair value and recognize any changes in fair value in net income (loss). We recorded an unrealized loss of approximately \$0.7 million on this investment in the first quarter of 2020, and we have recorded cumulative unrealized losses of \$3.0 million since we made this investment. On July 5, 2019, we sold approximately 2.8 million shares of Onkyo stock (out of a total holding of 7.0 million shares), and we intend to sell the remaining shares over time depending on market conditions.

For available-for-sale debt securities in an unrealized loss position, we first assess whether we intend to sell, or it is more likely than not that we will be required to sell the security before recovery of its amortized cost basis. If either of the criteria regarding intent or requirement to sell is met, the security's amortized cost basis is written down to fair value through income. For debt securities available-for-sale that do not meet the aforementioned criteria, we evaluate whether the decline in fair value has resulted from credit losses or other factors. In making this assessment, we consider the extent to which fair value is less than amortized cost, any changes to the rating of the security by a rating agency, and adverse conditions specifically related to the security, among other factors. If this assessment indicates that a credit loss exists, the present value of cash flows expected to be collected from the security are compared to the amortized cost basis of the security. If the present value of cash flows expected to be collected is less than the amortized cost basis, a credit loss exists and an allowance for credit losses is recorded for the credit loss, limited by the amount that the fair value is less than the amortized cost basis. Any impairment that has not been recorded through an allowance for credit losses is recognized in accumulated other comprehensive income or loss. For the three months ended March 31, 2020, we did not recognize a provision for credit loss expense related to our AFS debt securities. For the three months ended March 31, 2019, we did not record any impairment charges related to our AFS debt securities.

On December 1, 2016, we entered into a Credit Agreement which provided for a \$600.0 million seven-year term B loan facility. The Term B Loan Facility matures on November 30, 2023. Upon the closing of the Credit Agreement, we borrowed \$600.0 million under the Term B Loan facility. These proceeds were used on December 1, 2016, together with cash and cash equivalents, to finance the acquisition of DTS. The obligations under the Credit Agreement are guaranteed by substantially all of our assets pursuant to the Security Agreement, dated December 1, 2016, among us, Royal Bank of Canada, as collateral agent, and the other pledgors party thereto. On January 23, 2018, we completed a repricing of our debt, reducing the borrowing rate by 75 basis points, and paid down \$100.0 million in principal balance. During 2019, we made three voluntary principal payments totaling \$150.0 million.

At March 31, 2020, \$344.0 million was outstanding under this loan facility with an interest rate, including amortization of debt issuance costs, of 4.9%. Interest is payable monthly. As the cumulative \$250.0 million prepayments of debt principal we made during 2018 and 2019 exceeded the minimum principal payment requirements, we expect to have no further principal payment requirements until maturity of the loan, subject to our expected achievement of a net leverage ratio, as defined in the loan agreement, below 2.0 at the end of each fiscal year end. Because the interest rate on the loan facility is variable, we are subject to variations in our cash flows based on changes in market interest rates.

In connection with the planned Mergers, Xperi and TiVo intend to refinance each company's debt on a combined basis upon closing of the transaction, which is currently expected in the second quarter of 2020. To meet this objective, we have secured \$1.1 billion of committed debt financing pursuant to a debt commitment letter (the “Commitment Letter”) dated December 18, 2019, from Bank of America, N.A. and Royal Bank of Canada. On January 3, 2020, Barclays Bank PLC was added as an additional initial lender and an additional joint lead arranger and joint bookrunner and was reallocated a portion of the debt commitments of Bank of America, N.A. and Royal Bank of Canada under the Commitment Letter.

In August 2007, our Board of Directors (the “Board”) authorized a plan to repurchase our outstanding shares of common stock dependent on market conditions, share price and other factors. As of March 31, 2020, the total amount available for repurchase under the plan was \$101.4 million. No expiration has been specified for this plan. Since the inception of the plan, and through March 31, 2020, we have repurchased approximately 13.3 million shares of common stock at a total cost of \$348.6 million at an average price of \$26.25. During the three months ended March 31, 2020, we made no stock repurchases.

Since March 2015, we have paid a quarterly dividend of \$0.20 per share. We anticipate that all quarterly dividends will be paid out of cash, cash equivalents and short-term investments.

From 2017 through the first quarter of 2020, we generated approximately \$484 million of cash flows from operating activities. While we expect to continue to generate cash flows from operating activities for the remainder of 2020, the COVID-19 pandemic presents significant uncertainties to the level of such cash flows as compared to prior years and as compared to our previous forecasts. Currently more than half of our anticipated billings for 2020 are derived from fixed-fee and minimum-guarantee arrangements, primarily from large, well-capitalized customers which we believe somewhat mitigates the risks to our

business. We are also taking actions to manage cash flows by reducing discretionary spending and other variable costs, delaying employee hiring, and closely monitoring receivables and payables.

We believe that based on current levels of operations and anticipated growth, our cash from operations, together with cash, cash equivalents and investments currently available, will be sufficient to fund our operations, debt service, dividends and stock repurchases and acquisition needs for at least the next twelve months. Poor financial results, unanticipated expenses, unanticipated acquisitions of technologies or businesses or unanticipated strategic investments could give rise to additional financing requirements sooner than we expect. There can be no assurance that equity or debt financing will be available when needed or, if available, that such financing will be on terms satisfactory to us and not dilutive to our then-current stockholders.

### **Contractual Cash Obligations**

Our operating lease obligations represent aggregate future minimum lease payments under non-cancelable facility and equipment operating leases. For our facilities leases, rent expense charged to operations differs from rent paid because of scheduled rent increases. Rent expense is calculated by amortizing total rental payments on a straight-line basis over the lease term. See “Note 13 – *Leases*” of the Notes to Condensed Consolidated Financial Statements for additional information.

As of March 31, 2020, we had accrued \$74.9 million of unrecognized tax benefits in long-term income taxes payable related to uncertain tax positions, which includes \$1.1 million of accrued interest. At this time, we are unable to reasonably estimate the timing of the long-term payments or the amount by which the liability will increase or decrease over time. If we are successful in receiving our Korean withholding tax refund of \$66.1 million, net of foreign exchange loss, then \$51.0 million of unrecognized tax benefit would be payable to the U.S. tax authorities.

See “Note 14 - *Commitments and Contingencies*” of the Notes to Condensed Consolidated Financial Statements for additional detail.

### **Off-Balance Sheet Arrangements**

As of March 31, 2020, we did not have any off-balance sheet arrangements as defined in Item 303(a)(4)(ii) of Regulation S-K.

### **Critical Accounting Policies and Estimates**

During the three months ended March 31, 2020, there were no significant changes in our critical accounting policies. See Note 2 – “*Summary of Significant Accounting Policies*” of the Notes to the Condensed Consolidated Financial Statements for additional detail. For a discussion of our critical accounting policies and estimates, see Part II, Item 7 – *Management’s Discussion and Analysis of Financial Condition and Results of Operations* in the Form 10-K.

### **Recent Accounting Pronouncements**

See “Note 2 - *Summary of Significant Accounting Policies*” of the Notes to Condensed Consolidated Financial Statements for a full description of recent accounting pronouncements including the respective expected dates of adoption.

### **Item 3. Quantitative and Qualitative Disclosures About Market Risk**

For a discussion of the Company’s market risk, see Part II, Item 7A – *Quantitative and Qualitative Disclosures About Market Risk* in the Form 10-K.

### **Item 4. Controls and Procedures**

Attached as exhibits to this Form 10-Q are certifications of Xperi Corporation’s Chief Executive Officer and Chief Financial Officer, which are required in accordance with Rule 13a-14 of the Exchange Act. This “Controls and Procedures” section includes information concerning the controls and controls evaluation referred to in the certifications and it should be read in conjunction with the certifications, for a more complete understanding of the topics presented.

### **Evaluation of Controls and Procedures**

Xperi Corporation maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports filed pursuant to the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s 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 for timely decisions

regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act as of the end of the period covered by this report (the evaluation date). Based on this evaluation, our principal executive officer and principal financial officer concluded as of the evaluation date that our disclosure controls and procedures were effective to provide reasonable assurance that the information relating to Xperi Corporation, including our consolidated subsidiaries, required to be disclosed in our SEC reports (i) is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and (ii) is accumulated and communicated to Xperi Corporation's management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

### **Change in Internal Control over Financial Reporting**

There has been no change in Xperi Corporation's internal control over financial reporting, as defined in Exchange Act Rules 13a-15(f) and 15d-15(f), during Xperi Corporation's most recent quarter that has materially affected, or is reasonably likely to materially affect, Xperi Corporation's internal control over financial reporting.

**Item 1. Legal Proceedings**

Other than to the extent the proceedings described below have concluded, we cannot predict the outcome of any of the proceedings described below. An adverse decision in any of these proceedings could significantly harm our business and our consolidated financial position, results of operations, and cash flows.

**Merger Litigation**

On March 3, 2020, a lawsuit was filed by a purported stockholder of Xperi in connection with the proposed merger between TiVo and Xperi. The lawsuit was brought as a putative class action and is captioned *Jordan Rosenblatt v. TiVo Corporation, et al.*, No. 1:20-cv-00327 (D. Del. filed Mar. 3, 2020). The complaint names as defendants Xperi, XRAY-TWOLF HoldCo Corporation, XRAY Merger Sub Corporation, TWOLF Merger Sub Corporation, TiVo, and the TiVo Board. The complaint alleges violations of Section 14(a) of the Securities Exchange Act of 1934 (the “Exchange Act”) and Rule 14a-9 promulgated thereunder against the individual defendants and TiVo, and alleges a claim under Section 20(a) of the Exchange Act against the individual defendants and Xperi, because the joint proxy statement/prospectus filed on February 18, 2020 purportedly omitted or misrepresented material information regarding the proposed merger between TiVo and Xperi. The complaint seeks injunctive relief, rescission or rescissory damages, and an award of plaintiffs’ costs, including attorneys’ fees and expenses. The complaint also seeks dissemination of a registration statement that does not contain any untrue or misleading statements of material fact and a declaration that defendants violated the Exchange Act. Xperi believes the complaint is without merit and intends to vigorously defend against it.

**Tessera, Inc. v. Toshiba Corporation, Civil Action No. 5:15-cv-02543-BLF (N.D. Cal.)**

On May 12, 2015, Tessera, Inc. filed a complaint against Toshiba Corporation (“Toshiba”) in California Superior Court. Tessera, Inc.’s complaint alleges causes of action for breach of contract, breach of the implied covenant of good faith and fair dealing, and declaratory relief, generally alleging that Toshiba underpaid royalties and failed to cooperate with audits conducted pursuant to the parties’ license agreement.

On June 8, 2015, Toshiba removed the action to the U.S. District Court for the Northern District of California. On June 18, 2015, Toshiba filed its answer, affirmative defenses, and counterclaims to Tessera, Inc.’s complaint. Toshiba alleges counterclaims for declaratory judgment and breach of the implied warranty of good faith and fair dealing. The counterclaims seek, among other things, judicial determinations about the interpretation of the parties’ agreement, termination of the agreement, an accounting of the amount of alleged overpayments by Toshiba, restitution, and damages. On July 10, 2015, Tessera, Inc. filed its answer and affirmative defenses to Toshiba’s counterclaims. On March 17, 2016, Tessera, Inc. filed an amended complaint adding a claim for declaratory relief regarding a February 12, 2016 letter sent by Toshiba to Tessera, Inc. purporting to terminate the parties’ license agreement. On March 18, 2016, Toshiba filed its amended answer, affirmative defenses, and counterclaims. On April 4, 2016, Tessera, Inc. filed an answer to Toshiba’s amended counterclaims.

An initial summary judgment hearing on contract issues took place on September 22, 2016. On November 7, 2016, the Court entered an order granting Toshiba’s motion regarding the definition of “TCC,” and denying summary judgment on the other issues raised by the parties’ cross-motions. On December 6, 2016, Tessera, Inc. filed a motion pursuant to Federal Rule of Civil Procedure 54(b) seeking authorization to appeal the order and for a stay. On March 6, 2017, the Court granted the Rule 54(b) motion. The Court subsequently vacated the trial date and stayed the remainder of the district court proceedings.

On April 4, 2017, Tessera, Inc. filed a notice of appeal to the U.S. Court of Appeals for the Ninth Circuit. On November 21, 2018, the Ninth Circuit dismissed the appeal for lack of appellate jurisdiction and remanded the case to the district court for further proceedings.

On remand, the parties filed second round motions for summary judgment, and Toshiba filed a motion to strike two of Tessera's expert reports. On October 8, 2019, the Court granted Tessera's motion for summary judgment on Toshiba's counterclaim for a royalty refund. That counterclaim is now dismissed from the case. The Court also denied Toshiba's motion for summary judgment on all of Tessera's claims, and denied Toshiba's motion to strike Tessera's expert reports except to the extent that the reports contain legal opinions and expert testimony as to intent, motive, and state of mind.

The parties announced a settlement on March 10, 2020, and the case was dismissed with prejudice. This matter is now concluded.

#### **Invensas Corp., et al. v. NVIDIA Corp., Case No. 1:19-cv-00861-RGA (D. Del.)**

On May 8, 2019, Invensas Corporation and Tessera Advanced Technologies, Inc. filed a complaint against NVIDIA Corporation ("NVIDIA") in the U.S. District Court for the District of Delaware. The complaint alleges that NVIDIA infringes U.S. Patent Nos. 6,232,231, 6,849,946, 7,064,005, 6,317,333, and 5,666,046 and requests, among other things, that NVIDIA be ordered to pay compensatory damages in an amount no less than a reasonable royalty. NVIDIA answered the complaint on July 1, 2019 and subsequently moved to transfer the case to the U.S. District Court for the Northern District of California. The Court denied NVIDIA's motion to transfer on September 17, 2019. A *Markman* hearing is scheduled for September 14, 2020, and a jury trial is scheduled to begin on September 20, 2021.

#### **Confidential ICC Arbitration**

On January 9, 2020, FotoNation Ltd. and Tessera Technologies, Inc. filed a Request for Arbitration against a FotoNation customer (the "Respondent") in the International Court of Arbitration of the International Chamber of Commerce. The Request alleges that the Respondent breached an agreement to pay royalties under a technology agreement, and seeks damages and declaratory relief. The Respondent filed an answer on March 18, 2020.

#### **Inter Partes Review (IPR) Proceedings**

##### **U.S. Patent No. 5,666,046**

On February 14, 2020, NVIDIA Corporation filed a petition for *inter partes* review of U.S. Patent No. 5,666,046 (the "'046 patent") with the U.S. Patent Office's Patent Trial and Appeal Board ("PTAB"). The petition requests a determination that claims 20-22 of the '046 patent are unpatentable. The patent owner preliminary response is due on May 21, 2020.

##### **U.S. Patent No. 6,232,231**

On February 20, 2020, NVIDIA Corporation filed a petition for *inter partes* review of U.S. Patent No. 6,232,231 (the "'231 patent") with the PTAB. The petition requests a determination that claims 1-8 of the '231 patent are unpatentable. The patent owner preliminary response is due on June 5, 2020.

##### **U.S. Patent No. 6,849,946**

On February 20, 2020, NVIDIA Corporation filed a petition for *inter partes* review of U.S. Patent No. 6,849,946 (the "'946 patent") with the PTAB. The petition requests a determination that claims 16-22 of the '946 patent are unpatentable. The patent owner preliminary response is due on June 5, 2020.

##### **U.S. Patent No. 6,317,333**

On March 13, 2020, NVIDIA Corporation filed a petition for *inter partes* review of U.S. Patent No. 6,317,333 (the "'333 patent") with the PTAB. The petition requests a determination that claims 1-2 of the '333 patent are unpatentable. The patent owner preliminary response is due on June 18, 2020.



## Item 1A. Risk Factors

Our operations and financial results are subject to various risks and uncertainties, including those described below, that could adversely affect our business, financial condition, results of operations, cash flows, and the trading price of our common stock. We are providing the following information regarding updates to the previously disclosed risk factors in our Form 10-K.

### Risks Relating to the Mergers

As described in Note 1 - *“The Company and Basis of Presentation”* in the Notes to Condensed Consolidated Financial Statements, on December 18, 2019, Xperi and TiVo agreed, subject to the terms and conditions of the Merger Agreement, to effect a strategic combination of our respective businesses by: (i) forming XRAY-TWOLF HoldCo Corporation, a corporation organized under the laws of the State of Delaware and jointly owned by Xperi and TiVo (*“HoldCo”*), (ii) Xperi merging with a newly formed, wholly owned direct subsidiary of HoldCo, with Xperi surviving such merger as a direct wholly owned subsidiary of HoldCo (the *“Xperi Merger”*), and (iii) TiVo merging with a newly formed, wholly owned direct subsidiary of HoldCo, with TiVo surviving such merger as a direct, wholly owned subsidiary of HoldCo (the *“TiVo Merger”* and together with the Xperi Merger, the *“Mergers”*).

The risk factors below should be read in conjunction with the risk factors related to the Company’s operations set forth below and other information contained in this report. HoldCo has filed a registration statement on Form S-4 with the SEC that includes a joint proxy statement/prospectus relating to the Mergers. We urge you to read the registration statement on Form S-4 because it contains important information about the Mergers, including relevant risk factors.

**We may not be able to consummate our merger with TiVo, the consummation of such transaction may be delayed, or the parties may elect to terminate the Merger Agreement, which may disable or delay the business plans relating to the Mergers.**

The consummation of the Mergers is subject to the satisfaction of a number of customary closing conditions, including (i) the adoption of the Merger Agreement by the stockholders of each of Xperi and TiVo; (ii) the absence of governmental restraints or prohibitions preventing the consummation of the Mergers; (iii) subject to certain materiality exceptions, the accuracy of certain representations and warranties of each of Xperi and TiVo contained in the Merger Agreement and the compliance by each party with the covenants contained in the Merger Agreement; (iv) the receipt of certain opinions from legal counsel regarding the intended tax treatment of the Mergers; and (v) the absence of a material adverse effect with respect to each of Xperi and TiVo. We or TiVo may not be able to obtain such stockholder approval or satisfy such other conditions, in which case the consummation of the Mergers may be delayed or terminated. Moreover, the board of directors of either company may change its recommendation that stockholders approve the transaction, and the agreement may be terminated in certain circumstances if a competing offer for an alternative transaction is made, in which case the transaction would not close and termination fees may be payable. Upon termination of the Merger Agreement under certain circumstances, we may be obligated to pay TiVo a termination fee of \$44,000,000. Additionally, under specified circumstances, we or TiVo may be required to pay an expense reimbursement amount of \$10,000,000. If the Mergers are not consummated or are materially delayed for these or any other reason, the execution of the announced business plans for the Mergers, including the goal to create a unique entertainment platform for the discovery, delivery, and monetization of content, as well as an intellectual property licensing platform that spans a number of the largest addressable markets in entertainment content, consumer electronics, and semiconductors, would be disabled or delayed. In such event, our business and operations, and our stock price, may be adversely affected.

**There can be no assurance that the expected benefits of the Mergers will occur or be fully or timely realized.**

The success of the Mergers will depend, in part, on the combined company’s ability to successfully combine our business with the business of TiVo. The combination of two independent businesses is a complex, costly and time consuming process, and the management of the combined company may face significant challenges in implementing such integration, including, without limitation:

- difficulties integrating TiVo’s product technologies with our product technologies in a manner that creates technical synergies or that yields new or improved product applications in targeted markets;
- failure to timely realize the projected cost savings or operating synergies as a result of the Mergers;
- costs and strain on resources arising from attempts at integrating the businesses;
- difficulties integrating the operations and personnel of the two companies into unified operations, organization, and human resources programs, and the risk that key employees could be lost;

- failure to accurately forecast and communicate the long-term value or profitability of either business, including as a result of any failure to implement the business strategy for the Mergers;
- adverse pricing trends or inability to achieve economies of scale as a result of the Mergers;
- failure to maintain relationships with existing customers of the two companies, including customers who may be unfamiliar with Xperi or see themselves as being in conflict with the Xperi intellectual property business;
- failure of the market to adopt new products or technologies developed as a result of the integration of Xperi's and TiVo's businesses; and
- inability to manage growth resulting from the Mergers, including a failure to improve and expand management, systems, financial controls, a failure to expand, train and manage the combined employee base, or a failure to meet demand and quality standards required by Xperi's and TiVo's existing and potential customers and licensees.

Some of these factors will be outside of the control of management and any one of them could result in increased costs and diversion of management's time and energy, as well as decreases in the amount of expected revenues which could materially impact the company's business, financial conditions and results of operations. If the combined company is not able to adequately address integration challenges, the combined company may be unable to integrate successfully our and TiVo's operations or to realize the anticipated benefits of the transactions. In addition, the actual integration may result in additional and unforeseen expenses, and the anticipated benefits of the integration plan may not be realized. Actual growth and cost savings, if achieved, may be lower and may take longer to achieve than anticipated.

**We will be subject to business uncertainties and contractual restrictions until the Mergers are consummated.**

Uncertainty about the effect of the Mergers on employees, suppliers, customers, distributors, licensors and licensees as well as licenses, contracts and other agreements, particularly for which the Mergers could be deemed a "change-in-control" under the applicable terms and conditions may have an adverse effect on Xperi, TiVo, and consequently the combined company. Changes to existing business relationships, including termination or modification, could negatively affect Xperi and/or TiVo's revenues, earnings and cash flow, as well as the market price of Xperi Common Stock. These uncertainties may impair each party's ability to attract, retain and motivate key personnel until the consummation of the Mergers, and could cause suppliers, customers and others that deal with the parties to seek to change existing business relationships with them. Retention of employees could be challenging during the pendency of the Mergers due to uncertainty about their future roles. If key employees depart because of issues related to the uncertainty and difficulty of integration or a desire not to remain with the businesses, the combined company's business following the consummation of the Mergers could be negatively impacted. Further, no assurance can be given that the combined company will be able to attract or retain key management personnel and other key employees of Xperi and TiVo to the same extent that Xperi and TiVo have previously been able to attract or retain their employees.

**We expect to incur substantial transaction-related costs in connection with the Mergers.**

We expect to incur significant costs, expenses, and fees for professional services and other transaction costs in connection with the transaction. The substantial majority of these costs will be non-recurring expenses relating to the Mergers, including costs relating to integration. These costs could adversely affect our financial condition and results of operations prior to the Mergers and of the combined company following the Mergers.

**The Mergers could expose the combined company to liabilities and claims that we or TiVo have not previously experienced.**

Upon closing of the Mergers, our combination with TiVo could increase the risk that the combined company becomes subject to claims of infringement of third-party intellectual property rights. We do not have prior experience in content aggregation and discovery technologies in which third parties may hold a substantial body of patents and other intellectual property rights. Moreover, the risks of third-party infringement claims could be heightened by the combined company's need to engage in enforcement activities with respect to Xperi's existing patents, as Xperi's existing or potential licensees may seek to assert infringement claims against the TiVo business in response to enforcement activities relating to Xperi's existing patents. Competitors of TiVo would not be subject to such heightened risk of third-party claims, and such claims could adversely affect the combined company's business as well as impair its enforcement ability and licensing revenues.

**The Mergers may not help to rationalize Xperi's and TiVo's disparate business operations. The combined company may dispose of or discontinue product lines, technologies, assets or operations, whether existing or acquired, if they do not fit into the strategic vision or meet forecasted results. Moreover, the potential separation of the combined companies' product and licensing businesses may not be achieved.**

We believe that TiVo's business includes operations that are complementary to both our audio and imaging product and licensing operations and our semiconductor packaging, interconnect, and other patent licensing activities. However, future efforts by the combined company to rationalize Xperi's and TiVo's disparate business operations could result in the combined company's management to refocus on certain business operations while disinvesting in others. We intend to integrate each company's respective product and licensing businesses and operate them as separate product and licensing business units in order to facilitate a potential separation of these units at a later date. Additionally, as business strategy and product markets continue to evolve, the combined company may dispose, discontinue, or divest product lines or business divisions. Disposing or discontinuing existing product lines or business divisions, or separating business units, provides no assurance that operating expenses will be reduced or will not cause the combined company to incur material charges associated with such decision. Furthermore, the disposition or discontinuance of an existing product line or business division, or separation or spinoff of a business unit, entails various risks, including the risk of not being able to obtain a purchaser, or, if obtained, the purchase price may not be equal to at least the net asset book value for the product line or business unit, or the value that investors place on it as reflected in Xperi's stock price or the stock price of the combined company. The combined company may not be able to achieve any separation of the combined companies' product and licensing businesses despite our current consideration of such a separation. Other risks of such actions include adversely affecting employee morale, managing the expectations of, and maintaining good relations with, customers of disposed or discontinued product lines or business divisions, which could prevent selling other products to them. The combined company may also incur other significant liabilities and costs associated with disposal or discontinuance of product lines or business divisions, or separation of business units, including employee severance costs, relocation expenses, and impairment of lease obligations and long-lived assets. The effects of such actions may adversely impact business operations and the financial condition of the combined company.

**Litigation challenging the Merger Agreement may prevent the Mergers from being consummated at all or within the expected timeframe.**

Various lawsuits have been filed against us and TiVo, challenging our planned Mergers, as described under Part II, Item 1 – "*Legal Proceedings*." Such lawsuits seek, among other things, to enjoin consummation of the Mergers. One of the conditions to the consummation of the Mergers is the absence of any injunctions prohibiting or restraining the Mergers. If any plaintiff is successful in its efforts, then the combination of our business with TiVo may not be consummated at all or within the expected timeframe.

## Risks Relating to Our Business

**The effects of health epidemics, including the recent global coronavirus pandemic, have led to periods of significant volatility in various markets and industries and has adversely impacted, and could continue to adversely affect, our business, results of operations, and financial condition.**

Our business and results of operations could be adversely affected by health epidemics, including the recent coronavirus pandemic. In December 2019, a novel strain of coronavirus, SARS-CoV-2, causing a disease referred to as COVID-19, was reported to have surfaced in Wuhan, China. Since then, coronavirus has spread to many countries worldwide, including the United States.

In March 2020, the World Health Organization declared the coronavirus to be a pandemic. Given the ongoing and dynamic nature of the circumstances, it is difficult to predict the impact of the coronavirus outbreak on our businesses, and there is no guarantee that we will be able to address the adverse impacts of the coronavirus fully. The impact to date has included periods of significant volatility in various markets and industries. We anticipate that the volatility will have an adverse impact on our customers and on our business, financial condition and results of operations. In particular, the automotive market, as well as other industries that include our customers, have been and may continue to be impacted by the coronavirus outbreak and/or other events beyond our control, and further volatility could have an additional negative impact on these industries, customers, and our business.

In addition, recent actions by United States federal, state and foreign governments to address the coronavirus outbreak, including travel bans and school, business and entertainment venue closures, may also have a significant adverse effect on the markets in which we conduct our businesses. The extent of impacts resulting from the coronavirus outbreak and other events beyond our control will depend on future developments, which are highly uncertain and cannot be predicted, including new information which may emerge concerning the severity of the coronavirus outbreak and actions taken to contain the coronavirus or its impact, among others.

In addition, the coronavirus outbreak could result in business disruption to us, and if we are unable to recover from such a business disruption on a timely basis, our business and financial conditions would be adversely affected. Further, the planned Mergers and efforts to integrate the businesses of Xperi and TiVo, and any contemplated business separation transaction, may also be delayed and adversely affected by the coronavirus outbreak, and become more costly. Each of Xperi, TiVo and the combined company may also incur additional costs to remedy damages caused by such disruptions, which could adversely affect their financial condition and results of operations.

There can be no assurance that the global coronavirus pandemic will not have a material and adverse impact on our business, operating results and financial condition. Even after the coronavirus outbreak has subsided, we may continue to experience material and adverse impact on our business, operating results and financial condition as a result of its global economic impact, including any recession that has occurred or may occur in the future. The ultimate impact of the coronavirus pandemic or a similar health epidemic is highly uncertain and subject to change. We do not yet know the full extent of potential delays or impacts on our applicable business, operations or the global economy.

**Our revenue and billings have been concentrated and we anticipate that our revenue and billings will continue to be concentrated in a limited number of customers. If we lose any of these customers, or these customers do not pay us, our revenue and billings could decrease substantially.**

We have earned a significant amount of our revenue from a limited number of customers. For the quarter ended March 31, 2020, there were two customers that accounted for 10% or more of total revenue. For the quarter ended March 31, 2020, there were three customers that accounted for 10% or more of total billings. We expect that a significant portion of our billings and revenue will continue to come from a limited number of customers for the foreseeable future. If we lose any of these customers, or these customers do not pay us, our billings and revenue could decrease substantially. In addition, historically a significant portion of our recurring billings were the result of structured payment terms in connection with the settlement of litigation matters. If we are unable to replace the billings from an expiring license or at the end of structured payment terms of a settlement agreement with similar billings from other customers, our revenue and billings could be adversely impacted as compared to periods prior to such expiration or the end of such payment terms.

**We enter into license agreements that have fixed expiration dates and if, upon expiration or termination, we are unable to renew or replace such license agreements on terms favorable to us, our results of operations could be harmed.**

We enter into license agreements that have fixed expiration dates. Upon expiration of such agreements we need to renew or replace these agreements in order to maintain our royalty base. If we are unable to replace the royalties from an expiring

license, either through a renewal or with similar royalties from other customers, our results of operations could be adversely impacted as compared to periods prior to such expiration.

Furthermore, we may not be able to continue licensing customers on terms favorable to us, under the existing terms or at all, which would harm our results of operations. While we have expanded our licensable technology portfolio through internal development and patents purchased from third parties, there is no guarantee that these measures will lead to continued royalties. If we fail to continue to do business with our current licensees, our business would be materially adversely affected.

**The success of our patent licensing business is dependent on the quality of our patent assets and our ability to create and implement new technologies or expand our licensable technology through acquisitions.**

We derive a significant portion of our billings from patent licenses and royalties, including structured settlement payments. The success of our patent licensing business depends on our ability to continue to develop and acquire high quality patents. We devote significant resources to developing new technologies and to sourcing and acquiring patents to address the evolving needs of the semiconductor and the consumer and communication electronics industries, and we must continue to do so in the future to remain competitive. Developments in our technologies are inherently complex and require long development cycles and a substantial investment before we can determine their commercial viability. Moreover, competition for acquiring high quality patents is intense and there is no assurance that we can continue to acquire such patents on favorable terms. We may not be able to develop and market new or improved technologies, or to develop or acquire high quality patents, in a timely or commercially acceptable fashion. Furthermore, our acquired and developed patents will expire in the future. Our current U.S. issued patents expire at various times through 2038. We need to develop or acquire successful innovations and obtain royalty-generating patents on those innovations before our current patents expire, and our failure to do so would significantly harm our business, financial position, results of operations and cash flows.

**Our use of cash and substantial long-term borrowing to finance the DTS acquisition, and the refinancing of our indebtedness and that of TiVo's in connection with the Mergers, could limit future opportunities for our business, and could materially adversely affect our financial condition if we are unable to pay principal or interest on, or to refinance, such indebtedness.**

The DTS acquisition was financed with existing cash balances and a \$600 million secured term loan, with \$344 million remaining outstanding under the loan as of March 31, 2020. We have obtained a debt commitment letter for an aggregate principal amount of \$1,100 million in debt financing in order to pay transaction expenses in connection with the planned Mergers and to refinance the existing indebtedness of the Company and TiVo. As a result, our debt balance will increase substantially following the Mergers. The incurrence of this substantial long-term debt could limit our ability to make future acquisitions, investments and capital expenditures that may be necessary or desirable for the operation or expansion of our business. Moreover, our ability to service the principal and interest payments on such indebtedness will depend on our continuing ability to generate requisite cash flow from our existing and acquired business operations. The terms of our existing indebtedness include, and the terms of the refinancing will include, covenants that may limit our operating flexibility and create a risk of default if we are unable to meet financial ratios and other covenant requirements. While we made voluntary prepayments of \$100 and \$150 million of principal on our existing indebtedness in 2018 and 2019, respectively, we may be unable to generate sufficient cash flow to make principal and interest payments on this debt or on the refinanced debt in future periods, and in any event, we may be required to refinance the remaining indebtedness upon its maturity. We may be unable to refinance such indebtedness on favorable terms or at all. For example, a downgrade in our credit rating could make any such refinancing more difficult to secure on favorable terms. A default under, or inability to refinance, our indebtedness could substantially adversely affect our continuing financial viability, and could lead to insolvency, bankruptcy, and the reduction or elimination of stockholders' equity.

**Our variable rate indebtedness may expose us to interest rate risk, which could cause our debt costs to increase significantly.**

As of March 31, 2020, we had \$344.0 million of outstanding indebtedness that was subject to floating interest rates. Changes in economic conditions outside of our control could result in higher interest rates, thereby increasing our interest expense and reducing the funds available for capital investment, operations or other purposes. At March 31, 2020, a 1% increase in the effective interest rate on our outstanding debt throughout a one-year period would result in an annual increase in our interest expense of approximately \$3.4 million. Any significant increase in our interest expense could negatively impact our results of operations and cash flows and also our ability to pay dividends in the future. If the U.S. Federal Reserve raises its benchmark interest rate, any increases would likely impact the borrowing rate on our outstanding indebtedness, and increase our interest expense, comparably.

**We are or may become involved in litigation and administrative proceedings involving some of our patents; any adverse decisions, findings of non-infringement, or invalidation or limitation of the scope of our patents could significantly harm our business.**

We are currently involved in litigation involving some of our patents and may be involved in other such actions in the future. The parties in these legal actions often challenge the infringement, validity, scope, enforceability and/or ownership of our patents. In addition, in the past requests for reexamination or review have been filed in the U.S. Patent and Trademark Office (“PTO”) with respect to patent claims at issue in one or more of our litigation proceedings, and oppositions have been filed against us with respect to our patents in the European Patent Office (“EPO”). During a reexamination or review proceeding and upon completion of the proceeding, the PTO or EPO may leave a patent in its present form, narrow the scope of the patent, or cancel or find unpatentable some or all of the claims of the patent. For example, the PTO has issued several Official Actions rejecting or maintaining earlier rejections of many of the claims in some of our patents. From time to time we assert these patents and patent claims in litigation and administrative proceedings. If the PTO’s adverse rulings are upheld on appeal and some or all of the claims of the patents that are subject to reexamination are canceled, our business may be significantly harmed. In addition, counterparties to our litigation and administrative proceedings may seek and obtain orders to stay these proceedings based on rejections of claims in PTO reexaminations or review proceedings, and other courts or tribunals reviewing our legal actions could make findings adverse to our interests, even if the PTO actions are not final.

We cannot predict the outcome of any of these proceedings or the myriad procedural and substantive motions in these proceedings. If there is an adverse ruling in any legal or administrative proceeding relating to the infringement, validity, enforceability or ownership of any of our patents, or if a court or an administrative body such as the PTO limits the scope of the claims of any of our patents or concludes that they are unpatentable, we could be prevented from enforcing or earning future royalties from those patents, and the likelihood that customers will take new licenses and that current licensees will continue to agree to pay under their existing licenses could be significantly reduced. The resulting reduction in license fees and royalties could significantly harm our business, consolidated financial position, results of operations and cash flows, as well as the trading price of our common stock.

Regardless of the merits of any claim, the continued maintenance of these legal and administrative proceedings may result in substantial legal expenses and diverts our management’s time and attention away from our other business operations, which could significantly harm our business. Our enforcement proceedings have historically been protracted and complex. The time to resolution and complexity of our litigation, its disproportionate importance to our business compared to other companies, the propensity for delay in civil litigation, and the potential that we may lose particular motions as well as the overall litigation could all cause significant volatility in our stock price and have a material adverse effect on our business and consolidated financial position, results of operations, and cash flows.

**The timing of billings under our license and settlement agreements may cause fluctuations in our quarterly or annual financial results.**

From time to time we enter into license and settlement agreements that include pricing or payment terms that result in quarter-to-quarter or year-over-year fluctuations in our billings and cash flows. The effect of these terms may also cause our aggregate annual billings to grow less rapidly than annual growth in overall unit shipments in the applicable end market. Additionally, our customers may fail to pay, delay payment of or underpay what they owe to us under our license and settlement agreements, which may in turn require us to enforce our contractual rights through litigation, resulting in payment amounts and timing different than expected based on the terms of our license and settlement agreements. This also may cause our revenue, billings and cash flows to fluctuate on a quarter-to-quarter or year-over-year basis.

**We expect to continue to be involved in material legal proceedings to enforce or protect our intellectual property and contract rights, including material litigation with existing licensees or strategic partners, that could harm our business.**

From time to time, our efforts to obtain a reasonable royalty through our sales efforts do not result in the prospective customer agreeing to license our patents or our technology. In certain cases, we become involved in litigation to enforce our intellectual property rights, enforce the terms of our license agreements, determine the validity and scope of the proprietary rights of others, and defend against claims of infringement or invalidity. Our current legal actions, as described in Part I, Item 3 - *Legal Proceedings*, are examples of disputes and litigation that impact our business. If we are not able to reach agreement with customers or potential customers we may be involved in similar legal proceedings in the future, including proceedings to ensure proper and full payment of royalties by licensees under the terms of their license agreements.

Existing and any future legal actions may harm our business. For example, legal actions could cause an existing customer or strategic partner to cease making royalty or other payments to us, or to challenge the validity and enforceability of our patents or the scope of our license agreements, and could significantly damage our relationship with such customer or strategic partner and, as a result, prevent the adoption of our technologies and intellectual property by such customer or strategic partner.

Litigation could also severely disrupt or shut down the business operations of our customers or strategic partners, which in turn would significantly harm our ongoing relations with them and cause us to lose royalties. Moreover, the timing and results of any of our legal proceedings are not predictable and may vary in any individual proceeding. Further, our product licensing business could be subject to greater risk of claims of infringement of third-party intellectual property rights as a result of our IP licensing business. The risks of third-party infringement claims could be heightened by our need to engage in enforcement activities with respect to our existing patents, as our existing or potential licensees may seek to assert infringement claims against our DTS or other product businesses in response to our enforcement activities relating to our existing patents. Competitors of our product licensing business would not be subject to such heightened risk of third-party claims, and such claims could adversely affect our product licensing business as well as impair our enforcement ability and licensing royalties.

**The cost of litigation is typically very high and can be difficult to predict, and such high costs and unpredictability may negatively impact our financial results.**

From time to time we identify products that we believe infringe our patents. We seek to license the companies that design, make, use, import, sell, or offer for sale those products, but sometimes those companies are unwilling to enter into a license agreement. In those circumstances, we may elect to enforce our patent rights against those companies and products. Litigation stemming from these or other disputes could harm our relationships with those companies or other licensees, or our ability to gain new customers, who may postpone licensing decisions pending the outcome of the litigation or dispute, or who may, as a result of such litigation, choose not to adopt our technologies. In addition, these legal proceedings could be very expensive and may significantly reduce our profits.

In addition, from time to time our customers with existing license agreements dispute their obligations under such agreements, or we may dispute their reporting of royalties due under such agreements. In the past, customers have threatened to initiate litigation against us regarding our licensing royalty rate practices including our adherence to licensing on fair, reasonable, and non-discriminatory terms and potential antitrust claims.

The costs associated with legal proceedings are typically high, relatively unpredictable, and not completely within our control. These costs may be materially higher than expected, which could adversely affect our operating results and lead to volatility in the price of our common stock. Whether or not determined in our favor or ultimately settled, litigation diverts our managerial, technical, legal and financial resources from our business operations. Furthermore, an adverse decision in any of these legal actions could result in a loss of our proprietary rights, subject us to significant liabilities, require us to seek licenses from others, limit the value of our licensed technology or otherwise negatively impact our stock price or our business and consolidated financial position, results of operations and cash flows.

Even if we prevail in our legal actions, significant contingencies may exist to their settlement and final resolution, including the scope of the liability of each party, our ability to enforce judgments against the parties, the ability and willingness of the parties to make any payments owed or agreed upon, and the dismissal of the legal action by the relevant court, none of which are completely within our control. Parties that may be obligated to pay us royalties or damages, or that may otherwise be subject to a judgment, could become insolvent or decide to alter their business activities or corporate structure, which could affect our ability to collect royalties or damages from, or enforce a judgment against, such parties.

**Recent and proposed changes to U.S. patent laws, rules, and regulations may adversely impact our business.**

Our business relies in part on the uniform and historically consistent application of U.S. patent laws, rules, and regulations. There have been numerous recent administrative, legislative, and judicial changes and proposed changes to patent laws and rules that may have a significant impact on our ability to protect our technology and enforce our intellectual property rights. For example, there have been and may be bills introduced in the U.S. Congress relating to patent law that could adversely impact our business depending on the scope of any bills that may ultimately be enacted into law. As another example, the U.S. Supreme Court and lower courts have in recent years issued decisions that are not favorable to patent owners. Some of these changes or potential changes may not be advantageous for us and may make it more difficult to obtain adequate patent protection, or to enforce our patents against parties using them without a license or payment of royalties. These changes or potential changes could increase the costs and uncertainties surrounding the prosecution of our patent applications and the enforcement of our patent rights and could have a negative effect on our ability to license our patents and, therefore, on the royalties we can collect.

**Some of our license agreements may convert to fully paid-up licenses at the expiration of their terms, or upon certain milestones, and we may not receive royalties after that time.**

From time to time we enter into license agreements that automatically convert to fully paid-up licenses upon expiration or upon reaching certain milestones. We may not receive further royalties from customers for any licensed technology under those agreements if they convert to fully paid-up licenses because such customers will be entitled to continue using some, if not all,

of the relevant intellectual property or technology under the terms of the license agreements without further payment, even if relevant patents or technologies are still in effect. If we cannot find another source of royalties to replace the royalties from these license agreements converting to fully paid-up licenses, our results of operations following such conversion would be materially adversely affected.

**A significant amount of our royalty revenue and billings comes from a few end markets and products, and our business could be harmed if demand for these market segments or products declines.**

A significant portion of our royalties comes from the manufacture and sale of packaged semiconductor chips for DRAM, application-specific standard product semiconductors, application-specific integrated circuits, and memory. In addition, we derive substantial royalties from the incorporation of our technology into mobile devices, consumer products and computer hardware. If demand for semiconductors in any one or a combination of these market segments or products declines, our royalties may be reduced significantly and our business would be harmed.

**The long-term success of our business is dependent on a royalty-based business model, which is inherently risky.**

The long-term success of our business is dependent on future royalties paid to us by customers. Royalty payments under our licenses may be based, among other things, upon the number of electrical connections to the semiconductor chip in a package covered by our licensed technology, a percent of net sales, a rate per package, a per unit sold basis or a fixed quarterly amount. We are dependent upon our ability to structure, negotiate and enforce agreements for the determination and payment of royalties, as well as upon our customers' compliance with their agreements. We face risks inherent in a royalty-based business model, many of which are outside of our control, such as the following:

- the rate of adoption and incorporation of our technology by semiconductor manufacturers, assemblers, foundries, manufacturers of consumer and communication electronics, and the automotive and surveillance industry;
- the willingness and ability of materials and equipment suppliers to produce materials and equipment that support our licensed technology, in a quantity sufficient to enable volume manufacturing;
- the ability of our customers to purchase such materials and equipment on a cost-effective and timely basis;
- the length of the design cycle and the ability of us and our customers to successfully integrate certain of our imaging technologies into their integrated circuits;
- the demand for products incorporating semiconductors that use our licensed technology;
- the cyclical nature of supply and demand for products using our licensed technology;
- the impact of economic downturns; and
- the impact of poor financial performance of our customers.

**It is difficult for us to verify royalty amounts owed to us under our licensing agreements, and this may cause us to lose revenue and billings.**

The terms of our license agreements often require our customers to document their use of our technology and report related data to us on a quarterly basis. Although our license terms generally give us the right to audit books and records of our customers to verify this information, audits can be expensive, time consuming, and may not be cost justified based on our understanding of our customers' businesses, especially given the international nature of our customers. Our license compliance program audits certain customers to review the accuracy of the information contained in their royalty reports in an effort to decrease the likelihood that we will not receive the royalty to which we are entitled under the terms of our license agreements, but we cannot give assurances that such audits will be effective to that end.

**The markets for semiconductors and related products are highly concentrated, and we may have limited opportunities to license our technologies or sell our products.**

The semiconductor industry is highly concentrated in that a small number of semiconductor designers, foundries, and manufacturers account for a substantial portion of the purchases of semiconductor products generally, including our products and products incorporating our technologies. Continued consolidation in the semiconductor industry may increase this concentration. Accordingly, we expect that licenses of our technologies and sales of our products will be concentrated with a limited number of customers for the foreseeable future. As we develop and acquire new technologies and integrate them into our product line, we will need to establish new relationships to sell these products. Our financial results significantly depend on our success in establishing and maintaining relationships with, and effecting substantial sales to, these customers. Even if we



are successful in establishing and maintaining such relationships, our financial results will be dependent in large part on these customers' sales and business results.

**We make significant investments in new products and services that may not achieve technological feasibility or profitability or that may limit our growth.**

We have made and will continue to make significant investments in research, development, and marketing of new technologies, products and services, including audio, imaging, advanced semiconductor packaging, bonding, and interconnect technologies, as well as our Perceive subsidiary that recently announced a new hardware and software solution for high-performance inference at the edge. Investments in new technologies are speculative and technological feasibility may not be achieved. Commercial success depends on many factors including demand for innovative technology, availability of materials and equipment, selling price the market is willing to bear, competition and effective licensing or product sales. We may not achieve significant revenue or billings from new product and service investments for a number of years, if at all. Moreover, new technologies, products and services may not be profitable, and even if they are profitable, operating margins for new products and businesses may not be as high as the margins we have experienced historically or originally anticipated.

**Our substantial research and development investments may not translate into product market success, and could be jeopardized by our lack of relevant product experience, competition from other innovators with greater resources, dependence on third-party suppliers, and other factors.**

We have incurred, and expect to continue to incur, substantial research and development expenses through our Perceive subsidiary focused on delivering edge inference solutions. We do not have prior experience as a company in the development or marketing of similar hardware or software. We will need to continue to find and hire relevant personnel to advance this new business. Our Perceive subsidiary may be unable to develop or market products that generate material revenue or that recoup our past and ongoing research and development costs. We will be reliant on third parties for chip design and manufacturing, and we may be unable to obtain sources of supply at a competitive price, or at all. Moreover, the semiconductor industry is highly cyclical, and the specific product markets targeted by the platform may be cyclical as well. The timing of new product introductions from our Perceive subsidiary may not coincide with favorable parts of these cycles, increasing our risk of failure. In addition, chip technologies such as what we are developing are subject to extensive competition and a relentless pace of innovation. These new products could be copied or functionally surpassed by other designers, manufacturers, or innovators, some of whom may have far greater financial resources than the Company, and who may be able to develop products with greater capabilities or lower cost.

**We may not be able to evolve our audio and imaging technologies, products, and services, or develop new technologies, products, and services, that are acceptable to our customers or the evolving markets, and our customers may use technologies offered at lower cost by others.**

The markets for our audio and imaging technologies, products, and services are characterized by:

- rapid technological change and product obsolescence;
- new and improved product introductions;
- changing consumer demands;
- increasingly competitive product landscape; and
- evolving industry standards.

Our future success in our product licensing business depends upon our ability to enhance our existing technologies, products, and services and to develop enhanced and acceptable new technologies, products, and services on a timely basis. The development of enhanced and new audio and imaging technologies, products, and services is a complex and uncertain process requiring high levels of innovation, highly skilled engineering and development personnel, and the accurate anticipation of technological and market trends. We may not be able to accurately identify, develop, market, or support new or enhanced technologies, products, or services on a timely basis, if at all. Furthermore, our new imaging and audio technologies, products, and services may never gain market acceptance, and we may not be able to respond effectively to evolving consumer demands, technological changes, product announcements by competitors, or emerging industry standards. Any failure to respond to these changes or concerns would likely prevent our imaging and audio technologies, products, and services from gaining market acceptance or maintaining market share and could lead to our imaging and audio technologies, products, and services becoming obsolete.

Furthermore, the decision by a party dominant in the entertainment value chain to provide audio or imaging technology at very low or no cost could cause our customers and other manufacturers not to utilize our technologies or services in the future. Our customers may choose to use technologies that their own in-house audio or imaging engineering teams have developed, or in which they have an interest. Accordingly, our revenue or billings could decline if our customers choose not to incorporate our audio or imaging technologies in their products, or if they sell fewer products incorporating our audio or imaging technologies.

**Competing technologies may harm our business.**

We expect that our technologies will continue to compete with technologies of internal design groups at semiconductor manufacturers, assemblers, electronic component, foundries and system manufacturers. The internal design groups of these companies create their own semiconductor, packaging, audio and imaging solutions. If these internal design groups design around our patents or introduce unique solutions superior to our technology, they may not need to license our technology. These groups may design technology that is less expensive to implement or that enables products with higher performance or additional features. Many of these groups have substantially greater resources, greater financial strength and lower cost structures which may allow them to undercut our price. They also have the inherent advantage of access to internal corporate strategies, technology roadmaps and technical information. As a result, they may be able to bring alternative solutions to market more easily and quickly.

DTS audio technologies compete with other providers of audio products and services, with Dolby Laboratories as the primary competitor in high-definition audio processing. Dolby Laboratories enjoys certain competitive advantages in selling its digital multi-channel audio technology, having introduced such technology before we did, and having achieved mandatory standard status in product categories that we have not, including terrestrial digital TV broadcasts in the United States.

For our embedded image processing technologies such as Face Detection and our other products, our offerings compete with other image processing software vendors such as ArcSoft, Inc. as well as internal design groups of mobile phone and digital camera manufacturers providing similar technologies by employing different approaches.

In the future, our licensed technologies may also compete with other technologies that emerge. These other technologies may be less expensive and provide higher performance than our solutions. Companies with these competing technologies may also have greater resources. Technological change could render our technologies obsolete, and new, competitive technologies could emerge that achieve broad adoption and adversely affect the use of our technologies and intellectual property.

**If we do not successfully further develop and commercialize the technologies we acquire, or cultivate strategic relationships that expand our licensable portfolio, our competitive position could be harmed and our operating results adversely affected.**

We attempt to expand our licensable technology portfolio and technical expertise by further developing and acquiring new technologies or developing strategic relationships with others. These strategic relationships may include the right for us to sublicense technology and intellectual property to others. We may not be able to acquire or obtain rights to licensable technology and intellectual property in a timely manner or upon commercially reasonable terms. Even if we do acquire such rights, some of the technologies we invest in may be commercially unproven and may not be adopted or accepted by the industry. Moreover, our research and development efforts, and acquisitions and strategic relationships, may be futile if we do not accurately predict the future needs of the semiconductor, consumer and communication electronics, and consumer imaging and audio processing industries. Our failure to acquire new technologies that are commercially viable in the semiconductor, consumer and communication electronics, and consumer imaging and audio processing industries could significantly harm our business, financial position, results of operations and cash flows.

**The way we integrate internally developed and acquired technologies into our products and licensing programs may not be accepted by customers.**

We have devoted, and expect to continue to devote, considerable time and resources to developing, acquiring and integrating new and existing technologies into our products and licensing programs. However, if customers do not accept the way we have integrated our technologies, they may adopt competing solutions. In addition, as we introduce new products or licensing programs, we cannot predict with certainty if and when our customers will transition to those new products or licensing programs. Moreover, with respect to certain of our imaging technologies, even after we have signed a license agreement with a customer, we will often not see significant royalties from that customer until after such technologies have been successfully designed into the customer's integrated circuits, which can take 18 months or longer. If customers fail to accept new or upgraded products or licensing programs incorporating our technologies, our financial position, results of operations and cash flows could be adversely impacted.

**If we fail to protect and enforce our intellectual property rights, contract rights, and our confidential information, our business will suffer.**

We rely primarily on a combination of license, development and nondisclosure agreements and other contractual provisions, as well as patent, trademark, trade secret and copyright laws, to protect our technology and intellectual property. If we fail to protect our technology, intellectual property, or contract rights, our customers and others may seek to use our technology and intellectual property without the payment of license fees and royalties, which could weaken our competitive position, reduce our operating results and increase the likelihood of costly litigation. The growth of our business depends in large part on our ability to secure intellectual property rights in a timely manner, our ability to convince third parties of the applicability of our intellectual property rights to their products, and our ability to enforce our intellectual property rights.

In certain instances, we attempt to obtain patent protection for portions of our technology, and our license agreements typically include both issued patents and pending patent applications. If we fail to obtain patents in a timely manner or if the patents issued to us do not cover all of the inventions disclosed in our patent applications, others could use portions of our technology and intellectual property without the payment of license fees and royalties. For example, our business may suffer if we are unable to obtain patent protection in a timely manner from the PTO due to processing delays resulting from examiner turnover and a continuing backlog of patent applications.

We also rely on trade secret laws rather than patent laws to protect other portions of our proprietary technology. Trade secrets can be difficult to protect. The misappropriation of our trade secrets or other proprietary information could seriously harm our business. We protect our proprietary technology and processes, in part, through confidentiality agreements with our employees, consultants, suppliers and customers. We cannot be certain that these contracts have not been and will not be breached, that we will be able to timely detect unauthorized use or transfer of our technology and intellectual property, that we will have adequate remedies for any breach, or that our trade secrets will not otherwise become known or be independently discovered by competitors. If we fail to use adequate mechanisms to protect our technology and intellectual property, or if a court fails to enforce our intellectual property rights, our business will suffer. We cannot be certain that these protection mechanisms can be successfully asserted in the future or will not be invalidated or challenged.

Further, the laws and enforcement regimes of certain countries may not protect our technology and intellectual property to the same extent as do the laws and enforcement regimes of the U.S. In certain jurisdictions we may be unable to protect our technology and intellectual property adequately against unauthorized use, which could adversely affect our business.

**Our business may suffer if third parties assert that we violate their intellectual property rights.**

Third parties may claim that either we or our customers are infringing upon their intellectual property rights. Even if we believe that such claims are without merit, they can be time-consuming and costly to defend against and will divert management's attention and resources away from our business. Furthermore, third parties making such claims may be able to obtain injunctive or other equitable relief that could block our ability to further develop or commercialize some or all of our products or services in the U.S. and abroad. Claims of intellectual property infringement also might require us to enter into costly settlement or license agreements, pay costly damage awards, or defend or indemnify our customers against judgments, damages, or other losses. Even if we have an agreement that provides for a third party to indemnify us against such costs, the indemnifying party may be unable to perform its contractual obligations under the agreement. If we cannot or do not license the allegedly infringed intellectual property on reasonable terms, or need to substitute similar technology from another source, our business, financial position, results of operations and cash flows could suffer.

**Our licensing cycle is lengthy and costly, and our marketing, legal and sales efforts may be unsuccessful.**

We generally incur significant marketing, legal and sales expenses prior to entering into our license agreements, generating a license fee and establishing a royalty stream from each licensee. The length of time it takes to establish a new licensing relationship, and/or for our customers to incorporate certain of our technologies in their integrated circuits, can be 18 months or longer. As such, we may incur significant expenses in any particular period before any associated royalty or cash flow stream begins.

Our business incurs significant reverse engineering expenditures on products of potential licensees in order to prepare sales and marketing collateral. We employ intensive marketing and sales efforts to educate licensees, potential licensees and original equipment manufacturers about the benefits of our technologies. In addition, even if these companies adopt our technologies, they must devote significant resources to integrate fully our technologies into their operations. If our marketing and sales efforts are unsuccessful, then we may not be able to achieve widespread acceptance of our technology. In addition, ongoing litigation could impact our ability to gain new licensees which could have an adverse effect on our financial condition, results of operations and cash flows.

**If our licensees delay, refuse to or are unable to make payments to us due to financial difficulties or otherwise, or shift their licensed products to other companies to lower their royalties to us, our operating results and cash flows could be adversely affected.**

A number of companies in the semiconductor and consumer electronics industries face severe financial difficulties from time to time. As a result, there have been bankruptcies and restructuring of companies in these industries. Customers may face financial difficulties which may result in their inability to make payments to us in a timely manner, or at all. These risks may be heightened by operating and cash flow disruptions these companies face as a result of COVID-19. In addition, we have had a history of, and we may in the future experience, customers that delay or refuse to make payments owed to us under license or settlement agreements. Our customers may also merge with or may shift the manufacture of licensed products to companies that are not currently licensees to us. This could make the collection process complex and difficult, which could adversely impact our business, financial condition, results of operations and cash flows.

**Failure by the semiconductor industry to adopt our technology for the next generation high performance chips used in consumer electronics would significantly harm our business.**

To date, our technology has been used by several companies in high performance semiconductor chips, including DRAM. For example, semiconductor packaging, circuitry and processing using our technology is used for DDR3 and DDR4 DRAM and we currently have customers who are paying royalties for DRAM chips in advanced packages.

We anticipate that royalties from shipments of next-generation semiconductor chips using our technology may account for a significant percentage of our future royalties. If semiconductor manufacturers do not continue to use our technology for the next-generation chips and find viable alternative technologies for use with next-generation chips, or if we do not receive royalties from the next-generation chips that use our technology, our future financial performance and cash flows could be adversely affected.

Our technology may be too expensive for certain next-generation semiconductor manufacturers, which could significantly reduce the adoption rate of our technology in next-generation chips. Even if our technology is selected for at least some of these next-generation chips, there could be delays in the introduction of products utilizing these chips that could materially affect the amount and timing of any royalty payments that we receive. Other factors that could affect adoption of our technology for next-generation semiconductor products include delays or shortages of materials and equipment and the availability of testing services.

Similarly, our audio licensing royalties from consumer electronics product manufacturers depend, in large part, upon the availability of ICs that implement our technologies. IC manufacturers incorporate our audio technologies into these ICs, which are then incorporated into consumer electronics products. We do not manufacture these ICs, but rather depend upon IC manufacturers to develop, produce and then sell them to licensed consumer electronics product manufacturers. We do not control the IC manufacturers' decisions whether or not to incorporate our technologies into their ICs, and we do not control their product development or commercialization efforts. If these IC manufacturers are unable or unwilling to implement our technologies into their ICs, production is delayed, or if they sell fewer ICs incorporating our technologies, our operating results and cash flows could be adversely affected.

**The investment of our cash, cash equivalents and investments in marketable debt and equity securities is subject to risks which may cause losses and affect the liquidity of these investments.**

At March 31, 2020, we held approximately \$108.4 million in cash and cash equivalents and \$34.1 million in short-term investments. These investments include various financial securities such as corporate bonds and notes, municipal bonds and notes, commercial paper, treasury and agency notes and bills, and money market funds. Although we invest in high quality securities, ongoing financial events have at times adversely impacted the general credit, liquidity, market and interest rates for these and other types of debt securities. Recent financial market volatility resulting from the COVID-19 pandemic heightens the risk of a potential loss in the value of our investments. Changes in monetary policy by the Federal Reserve, government fiscal policies, and global economic and market conditions may adversely affect the value of our investment portfolio. While we have historically held our debt investments to maturity, we may in the future have a need to sell investments before their maturity dates, which could result in losses on the sale of those investments. For example, the DTS acquisition resulted in us liquidating a significant portion of our investments. In the third quarter of 2018, we initiated an equity position in Onkyo Corporation, a publicly traded company listed on the JASDAQ market of the Tokyo Stock Exchange. Upon making the investment, we held a 6.3% ownership interest in Onkyo, and as of March 31, 2020, we held an approximately 1.7% ownership interest. As of March 31, 2020, the market value of our remaining equity investment in Onkyo had decreased by approximately \$3.0 million since our initial investment. The financial market and monetary risks associated with our investment portfolio have and may in the future have a material adverse effect on our financial condition, results of operations or cash flows.

**Our intellectual property business operates in a highly cyclical industry, which is subject to significant downturns.**

The semiconductor and electronics industries in which our intellectual property business primarily operates have historically been cyclical and are characterized by wide fluctuations in product supply and demand. From time to time, these industries have experienced significant downturns, often in connection with, or in anticipation of, declining economic conditions, maturing product and technology cycles, and excess inventories. This cyclical nature could cause our operating results to decline from one period to the next. Our business depends, in part, upon the volume of production by our customers, which, in turn, depends upon the current and anticipated market demand for semiconductors and products that use semiconductors. Semiconductor manufacturers, foundries, and package assembly companies generally sharply curtail their spending during industry downturns, and historically have lowered their spending more than the decline in their revenue. As a result, our financial results have been, and will continue to be, impacted by the cyclical nature of the electronics industry. If we are unable to control our expenses adequately in response to lower royalties from our customers in such downturns, our results of operations and cash flows will be materially and adversely impacted.

**If we are unable to maintain a sufficient amount of content released in the DTS audio format, demand for the technologies, products, and services that we offer to consumer electronics product manufacturers may significantly decline, which would adversely impact our business and prospects.**

We expect to derive a significant percentage of our billings from the technologies, products, and services that we offer to manufacturers of consumer electronics products. We believe that demand for our audio technologies in growing markets for multi-channel and/or high resolution audio, including TVs, tablets, mobile phones, video game consoles, automobiles, and soundbars, will be based on the amount, quality, and popularity of content (such as movies, TV shows, music, and games) either released in the DTS audio format or capable of being coded and played in the DTS format. In particular, our ability to penetrate the growing markets in the network-connected space depends on the presence of streaming and downloadable content released in the DTS audio format. We generally do not have contracts that require providers of streaming and downloadable content to develop and release such content in a DTS audio format. Accordingly, our billings could decline if these providers elect not to incorporate DTS audio into their content or if they sell less content that incorporates DTS audio.

In addition, we may not be successful in maintaining existing relationships or developing new relationships with other existing or new content providers. As a result, we cannot assure you that a sufficient amount of content will be released in a DTS audio format to ensure that manufacturers continue offering DTS decoders in the consumer electronics products that they sell.

**Demand for our HD Radio technology may be insufficient to sustain projected growth.**

Demand for and adoption of HD Radio technology may not be sufficient for us to continue to increase the number of customers of our HD Radio system, which include IC manufacturers, manufacturers of broadcast transmission equipment, consumer electronics products manufacturers, component manufacturers, data service providers, manufacturers of specialized and test equipment and radio broadcasters.

Among other things, continuing and increased consumer acceptance of HD Radio technology will depend upon:

- the number of radio stations broadcasting digitally using HD Radio technology;
- the willingness of automobile manufacturers to include HD Radio receivers in their vehicles;
- the willingness of manufacturers to incorporate HD Radio technology into their products;
- the cost and availability of HD Radio enabled products; and
- the marketing and pricing strategies that we employ and that are employed by our customers and retailers.

Demand for HD Radio also may be impacted by declines in the automotive industry which historically has been cyclical and experienced downturns during declining economic conditions, and which is currently forecasting declines as a result of COVID-19.

If demand for HD Radio technology does not continue to increase as expected, we may not be able to increase our DTS royalties as projected.

**Our HD Radio technology may not remain competitive if we do not respond to changes in technology, standards and services that affect the radio broadcasting industry.**

The radio broadcasting industry is subject to technological change, evolving industry standards, regulatory restrictions and the emergence of other media technologies and services. Our HD Radio technology may not gain market acceptance over these other technologies. Various other audio technologies and services that have been developed and introduced include:

- internet streaming, cable-based audio programming and other digital audio broadcast formats;
- satellite delivered digital audio radio services that offer numerous programming channels;
- other digital radio competitors, such as Digital Radio Mondiale, or DAB; and
- growth in use of portable devices for storage and playback of audio content.

Competition arising from these or other technologies or potential regulatory change may have an adverse effect on the radio broadcasting industry or on our company and our financial condition and results of operations.

**If we are unable to further penetrate the streaming and downloadable content delivery markets and adapt our technologies for those markets, our royalties and ability to grow our audio business could be adversely impacted.**

Until recently, video and audio content was purchased and consumed primarily via optical disc-based media. The growth of the internet and network-connected device usage, along with the rapid advancement of online and mobile content delivery, has resulted in download and streaming services becoming mainstream with consumers in various parts of the world. We expect the shift away from optical disc-based media to streaming and downloadable content consumption to continue. If we fail to continue to penetrate the streaming and downloadable content delivery market, our audio business could suffer.

The services that provide content from the cloud are not generally governed by international or national standards and are thus free to choose any media format(s) to deliver their products and services. This freedom of choice on the part of online content providers could limit our ability to grow if such content providers do not incorporate our technologies into their services, which could affect demand for our technologies.

Furthermore, our inclusion in mobile and other network-connected devices may be less profitable for us than optical disc players. The online and mobile markets are characterized by intense competition, evolving industry standards and business and distribution models, disruptive software and hardware technology developments, frequent new product and service introductions, short product and service life cycles, and price sensitivity on the part of consumers, all of which may result in downward pressure on pricing. If we are unable to adequately and timely respond to the foregoing, our business and operating results could be adversely affected.

**Changes in financial accounting or taxation standards, rules, practices or interpretations may cause adverse unexpected revenue and expense fluctuations which may impact our reported results of operations.**

We prepare our consolidated financial statements in accordance with U.S. generally accepted accounting principles (GAAP). These principles are subject to interpretations by the SEC and various accounting bodies. In addition, we are subject to various taxation rules in many jurisdictions. The existing taxation rules are generally complex, frequently changing and subject to interpretation. Changes to taxation rules, changes to financial accounting standards, or any changes to the interpretations of these standards or rules may adversely affect our reported financial results or the way in which we conduct business. Recent accounting pronouncements and their estimated potential impact on our business are addressed in Note 2 - "*Summary of Significant Accounting Policies*" in the Notes to Condensed Consolidated Financial Statements.

In May 2014, the Financial Accounting Standards Board ("FASB") issued ASU 2014-09, "Revenue from Contracts with Customers" ("ASU 2014-09"), and since May 2014 the FASB has issued amendments to this new guidance, which collectively provide guidance for revenue recognition. ASU 2014-09 became effective for us beginning January 1, 2018 and we adopted the new standard under the modified retrospective approach. Under the new standard, the historical practice of many licensing companies of reporting revenue from per-unit royalty-based agreements one quarter in arrears is no longer accepted and instead companies must now estimate royalty-based revenue. This guidance significantly impacts our revenue recognition. First, we are no longer allowed to follow our past practice of recording per unit license revenue on a quarter lag basis, a practice precipitated by the lack of reliable estimates for such revenue. Estimating per unit royalty revenue prior to receiving the licensee's royalty report requires us to make significant assumptions and judgments and could cause significant fluctuations of royalty revenue on a quarterly basis. Second, we are now required to record all or a significant majority of revenue under our fixed fee and minimum guarantee license agreements when such agreements are effective rather than recording them over time as was our past practice and which generally aligned revenue more closely with the billing cycle and cash flows from such

agreements. While the changes in revenue recognition do not impact our cash flows, the impact on our Statement of Operations under the new accounting standard may impact how investors perceive our business which could materially impact the value of our common stock.

Our future effective tax rate may be affected by such factors as changes in tax laws, changing interpretation and new guidance related to the Tax Cuts and Jobs Act (“Tax Act”), withholding tax determinations by foreign tax authorities, the impact of accounting for stock-based compensation, the impact of accounting for business combinations, changes in the composition of global earnings, the expiration of statute of limitations, settlements of audits, changes in our domestic and international organization and changes in overall levels of income before tax.

**In order to measure our financial performance, we place greater emphasis on billings and operating cash flows rather than revenue and net operating results, and this emphasis may be misunderstood by investors or create a conflict with the financial measures typically used by investors.**

The adoption of ASU 2014-09 had a material impact on the timing of revenue recognition in our business. However, it had no impact on customer billings or the cash flow from our contracts with customers. Our management places greater emphasis on billings and operating cash flows rather than revenue and net operating results to evaluate our financial performance. Our financial performance may appear significantly different when measured by operating cash flows rather than net operating results. Because performance bonuses are measured utilizing on billings based metrics, such bonuses may be higher in years with lower net operating results, or lower in years with higher net operating results, which may confuse investors and analysts. Investors and analysts may place greater emphasis on measures of revenue and net operating results in evaluating the Company’s financial performance, notwithstanding management’s focus on billings and operating cash flows. Differences in perception of the Company’s financial performance could materially impact the price and volatility in the price of our common stock.

**Our effective tax rate depends on our ability to secure the tax benefits of our international corporate structure, on the application of the tax laws of various jurisdictions and on how we operate our business.**

Our international corporate structure and intercompany arrangements, including the manner in which we market, develop, use and license our intellectual property, fund our operations and structure transactions with our international subsidiaries, may result in the increase or reduction of our worldwide effective tax rate. Such international corporate structure and intercompany arrangements are subject to examination by the tax authorities of the jurisdictions in which we operate, including the United States. The application of the tax laws of these jurisdictions to our international business activities is subject to interpretation and depends on our ability to operate our business in a manner consistent with our corporate structure and intercompany arrangements. Moreover, such tax laws are subject to change. Tax authorities may disagree with our intercompany transfer pricing arrangements, including our transfer of intangibles, or determine that the manner in which we operate our business does not achieve the intended tax consequences. Additionally, current and future changes in the tax laws or interpretations may have an adverse effect on our international corporate structure and operations. For example, various levels of government and international organizations, such as the Organization for Economic Co-operation and Development (“OECD”) and the European Union (“EU”), increasingly focus on future tax reform that could change longstanding tax principles. Also, changes in the Korean tax law on royalties subject to withholding taxes from our Korean licensees may impact our financial results. An adverse determination by tax authorities or a change in tax laws could increase our worldwide effective tax rate and harm our financial position and results of operations.

**We have in the past recorded, and may in the future record, significant valuation allowances on our deferred tax assets, and the recording and release of such allowances may have a material impact on our results of operations.**

The need for a valuation allowance requires an assessment of both positive and negative evidence on a jurisdiction-by-jurisdiction basis when determining whether it is more likely than not that deferred tax assets are recoverable. In making such assessment, significant weight is given to evidence that can be objectively verified. New facts and circumstances, future financial results, and new guidance related to the Tax Act may require us to reevaluate our valuation allowance positions which could potentially affect our effective tax rate.

We continue to monitor the likelihood that we will be able to recover our deferred tax assets, including those for which a valuation allowance is recorded. There can be no assurance that we will generate profits in future periods enabling us to fully realize our deferred tax assets. The timing of recording a valuation allowance or the reversal of such valuation allowance is subject to objective factors that cannot be readily predicted in advance. Both the establishment of a valuation allowance and the reversal of a previously recorded valuation allowance may have a material impact on our financial results.

**The international nature of our business exposes us to financial and regulatory risks that may have a negative impact on our consolidated financial position, results of operations and cash flows, and we may have difficulty protecting our intellectual property in some foreign countries.**

We derive a significant portion of our royalties from licensees headquartered outside of the U.S. We also have operations outside of the U.S., including our research and development facilities in Ireland, Romania and the United Kingdom, to design, develop, test or market certain technologies. International operations are subject to a number of risks, including but not limited to the following:

- changes in trade protection laws, policies and measures, and other regulatory requirements affecting trade and investment;
- regulatory requirements and prohibitions that differ between jurisdictions;
- laws and business practices favoring local companies;
- withholding tax obligations on license royalties that we may not be able to offset fully against our U.S. tax obligations, including the further risk that foreign tax authorities may re-characterize license fees or increase tax rates, which could result in increased tax withholdings and penalties;
- security concerns, including crime, political instability, terrorist activity, armed conflict and civil or military unrest;
- differing employment practices, labor issues and business and cultural factors;
- less effective protection of intellectual property than is afforded to us in the U.S. or other developed countries; and
- limited infrastructure and disruptions, such as large-scale outages or interruptions of service from utilities or telecommunications providers.

Our intellectual property is also used in a large number of foreign countries. There are many countries in which we currently have no issued patents. In addition, effective intellectual property enforcement may be unavailable or limited in some foreign countries. It may be difficult for us to protect our intellectual property from misuse or infringement by other companies in these countries. We expect this to become a greater problem for us as our licensees increase their manufacturing and sales in countries which provide less protection for intellectual property. Our inability to enforce our intellectual property rights in some countries may harm our business, financial position, results of operations and cash flows.

**Deteriorating trade relations between the United States and China, other trade conflicts and barriers, economic sanctions, and national security protection policies could limit or prevent us from licensing our technology to certain existing or potential customers, or prevent such customers from doing business with us.**

The increased trade conflicts between the United States and its major trading partners, evidenced by trade restrictions such as tariffs, taxes, export controls, economic sanctions, and enhanced policies designed to protect national security, could adversely impact our revenue and billings. In particular, we have seen impacts on our business due to the increase in trade conflicts between the United States and China, although to date this impact has not been material. In the future, trade restrictions could limit or prevent us from licensing our technology to existing or potential customers. In May 2019, the United States Department of Commerce designated Huawei Technologies, a current customer of ours, to its “entity list,” which limits the ability of U.S. companies to export products and license technologies to Huawei. These export controls, as well as retaliatory controls and tariffs that China has imposed and is considering, could restrict our ability to do business with Huawei and other Chinese customers. Further United States government actions to protect domestic economic and security interests could lead to further restrictions. Moreover, growing trade conflicts and uncertainties can be expected to lead to decreased use of foreign-owned technologies in China and other countries, due to efforts by foreign governments and enterprises to find alternative sources of supply, to develop proprietary domestic technologies, and otherwise to reduce reliance on foreign technology sources. These trends could have a material adverse impact on our revenue and billings.



**Our business and operating results may be harmed if we are unable to manage growth in our business, if we undertake any restructuring activities or if we dispose of a business division or dispose of or discontinue any product lines.**

We have in the past expanded our operations, domestically and internationally, and may continue to do so through both internal growth and acquisitions. In December 2019, we announced plans to merge with TiVo, and we currently anticipate this merger being completed in the second quarter of 2020. In December 2016, we acquired DTS, resulting in our headcount more than doubling year over year. If our growth continues, it may place a significant strain on our management team and on our operational and financial systems, procedures, and controls. Our future success will depend, in part, upon the ability of our management team to manage any growth effectively, requiring our management to:

- recruit, hire, and train additional personnel;
- implement and improve our operational and financial systems, procedures, and controls;
- maintain our cost structure at an appropriate level based on the royalties, billings and cash we forecast and generate;
- manage multiple concurrent development projects; and
- manage operations in multiple time zones with different cultures and languages.

If we are unable to effectively manage our growth or we are unsuccessful in recruiting and retaining personnel, our business and operating results will be harmed. Moreover, if our planned Mergers, acquisitions or other growth initiatives do not prove to be profitable, we may undertake to restructure our business, including the disposition of a business division, or the disposition or discontinuance of a product line. Any restructuring, disposition or discontinuance would require substantial management time and attention and may divert management from other important work, and may result in significant liabilities and costs as described earlier.

**Disputes regarding our intellectual property may require us to defend or indemnify certain customers or licensees, the cost of which could adversely affect our business operations and financial condition.**

While we generally do not defend or indemnify our customers, some of our license agreements in our imaging and audio businesses provide limited defense and indemnities for certain actions brought by third parties against our customers, and some require us to provide technical support and information to a customer that is involved in litigation for using our technology. Our defense, indemnity and support obligations could result in substantial expenses. In addition to the time and expense required for us to defend, indemnify or supply such support to our customers, a customer's development, marketing and sales of licensed image or audio products could be severely disrupted or shut down as a result of litigation, which in turn could have a material adverse effect on our business operations, consolidated financial position, results of operations and cash flows.

**If we lose any of our key personnel or are unable to attract, train and retain qualified personnel, we may not be able to execute our business strategy effectively.**

Our success depends, in large part, on the continued contributions of our key management, engineering, sales, marketing, intellectual property, legal and finance personnel, many of whom are highly skilled and would be difficult to replace. None of our senior management, key technical personnel or key sales personnel are bound by written employment contracts to remain with us for a specified period. In addition, we do not currently maintain key-person life insurance covering our key personnel or have restrictions on their post-employment ability to solicit our employees, contractors or customers if key personnel voluntarily terminate their employment. The loss of any of our senior management or other key personnel could harm our ability to implement our business strategy and respond to the rapidly changing market conditions in which we operate. Our future success will depend to a significant extent on the ability of these executives to effectively drive execution of our business strategy, and on the ability of our management team to work together effectively.

Our success also depends on our ability to attract, train and retain highly skilled managerial, engineering, sales, marketing, legal and finance personnel and on the abilities of new personnel to function effectively, both individually and as a group. Competition for qualified senior employees can be intense. We have also experienced difficulty in hiring and retaining highly skilled engineers with appropriate qualifications to support our growth and expansion. Further, we must train our new personnel, especially our technical support personnel, to respond to and support our licensees and customers. If we fail to do this, it could lead to dissatisfaction among our licensees or customers, which could slow our growth or result in a loss of business.

**Our business operations could suffer in the event of information technology system failures or security breaches.**

Despite system redundancy and the implementation of security measures within our internal and external information technology and networking systems, our information technology systems may be subject to security breaches, unauthorized access (malicious or accidental), misuse of information by authorized users, data leaks or unintentional exposure of information, failed process, loss of data, damages from computer viruses or malware, natural disasters, terrorism, telecommunication failures or disruption of service. Any system failure or security breach could cause interruptions in our operations in addition to the possibility of losing proprietary information and trade secrets. To the extent that any disruption or security breach results in inappropriate disclosure of our confidential information, we may incur liability or additional costs to remedy the damages caused by these disruptions or security breaches.

**Decreased effectiveness of share-based compensation could adversely affect our ability to attract and retain employees.**

We have historically used stock options, restricted stock grants and other forms of stock-based compensation as key components of employee compensation in order to align employees' interests with the interests of our stockholders, encourage employee retention and provide competitive compensation and benefit packages. We incur significant compensation costs associated with our stock-based compensation programs. Failure to obtain stockholder approval of equity compensation plans or changes to the plans could make it harder or more expensive for us to grant stock-based compensation to employees in the future. As a result, we may find it difficult to attract, retain and motivate employees, and any such difficulty could have a materially adverse impact on our business.

**Failure to comply with environmental regulations could harm our business.**

We use hazardous substances in the manufacturing and testing of prototype products and in the development of technologies in our research and development laboratories. We are subject to a variety of local, state and federal regulations relating to the storage, discharge, handling, emission, generation, manufacture and disposal of toxic or other hazardous substances. Our past, present or future failure to comply with environmental regulations could result in the imposition of substantial fines, suspension of production, and alteration of our manufacturing processes or cessation of operations. Compliance with such regulations could require us to acquire expensive remediation equipment or to incur other substantial expenses. Any failure to control the use, disposal, removal or storage of, or to adequately restrict the discharge of, or assist in the cleanup of, hazardous or toxic substances, could subject us to significant liabilities, including joint and several liabilities under certain statutes. The imposition of such liabilities could significantly harm our business, financial position, results of operations and cash flows.

**We have business operations located in places that are subject to natural disasters.**

Our business operations depend on our ability to maintain and protect our facilities, computer systems and personnel. Our corporate headquarters are located in the San Francisco Bay Area and we have engineering activities in several locations throughout California, which in the past have experienced severe earthquakes. We do not carry earthquake insurance for any of our facilities except for our office in Calabasas, California. Earthquakes, fires, or other natural disasters could severely disrupt our operations, and have a material adverse effect on our business, results of operations, financial condition and prospects.

**We have made and may continue to make or to pursue acquisitions and other business combinations which could divert management's attention, cause ownership dilution to our stockholders, or be difficult to integrate, which may adversely affect our financial results.**

We have made several acquisitions, and it is our current plan to continue to acquire assets, patents, technologies or companies that we believe are strategic to our future business. For example, in December 2019 we announced the planned Mergers, and we currently expect that merger to be completed in the second quarter of 2020. In the fourth quarter of 2016, we acquired DTS, Inc., for approximately \$955 million. Investigating businesses, assets, patents or technologies and integrating newly acquired or merged businesses, assets, patents or technologies could put a strain on our resources, could be costly and time consuming, and might not be successful. Such activities divert our management's attention from other business concerns. In addition, we might lose key employees while integrating new organizations or operations. Mergers and acquisitions could also result in customer dissatisfaction, performance problems with an acquired or merged company or technology, potentially dilutive issuances of equity securities or the incurrence of debt, the assumption or incurrence of contingent liabilities, impairment charges related to goodwill and possible impairment charges related to other intangible assets or other unanticipated events or circumstances, any of which could harm our business.

Our plans to integrate and expand upon research and development programs and technologies obtained through acquisitions or mergers may result in products or technologies that are not adopted by the market. The market may adopt competitive solutions to our products or technologies. Consequently, we might not be successful in integrating any acquired or merged businesses, assets, products or technologies, and might not achieve anticipated revenue and cost benefits.

**There are numerous risks associated with our acquisitions or mergers of businesses, technologies and patents.**

We have made a number of acquisitions of businesses, technologies and patents in recent years, and expect to complete the planned Mergers in the second quarter of 2020. These acquisitions and the planned merger are subject to a number of risks, including but not limited to the following:

- these transactions could fail to produce anticipated benefits or could have other adverse effects that we currently do not foresee. As a result, these transactions could result in a reduction of net income per share as compared to the net income per share we would have achieved if these transactions had not occurred. We may also be required to recognize impairment charges of acquired assets or goodwill, and if we decide to restructure acquired or merged businesses, we may incur other restructuring charges;
- the purchase price for each transaction is determined based on significant judgment on factors such as projected cash flow, quality and availability of the business, technology or patent. In addition, if other companies have similar interests in the same business, technology or patent, our ability to negotiate these transactions at favorable terms may be limited and the transaction price may be artificially inflated;
- following completion of these transactions, we may uncover additional liabilities, patent validity, infringement or enforcement issues or unforeseen expenses not discovered during our diligence process;
- any such additional liabilities, patent validity, infringement or enforcement issues or expenses could result in significant unanticipated costs not originally estimated, such as impairment charges of acquired assets and goodwill, and may harm our financial results;
- the integration of technologies, patent assets and personnel, if any, will be a time consuming and expensive process that may disrupt our operations if it is not completed in a timely and efficient manner. If our integration efforts are not successful, our results of operations could be harmed, employee morale could decline, key employees could leave, and customer relations could be damaged. In addition, we may not achieve anticipated synergies or other benefits from any of these transactions;
- we have incurred substantial direct transaction and integration costs as a result of past transactions, and we expect to incur substantial costs as a result of the planned Mergers. In future acquisitions, the total direct transaction costs and the costs of integration may exceed our expectations;
- sales by the acquired and merged businesses may be subject to different accounting treatment than our existing businesses, especially related to the recognition of revenue. This may lead to the loss or deferral of revenue under current and emerging accounting standards, or confusion by investors and analysts based on the differences in revenue recognition in different parts of our business;
- there may be a significant time lag between acquiring patent assets and recognizing royalties from those patent assets. During that time lag, material costs are likely to be incurred in preparing licensing or litigation efforts and amortization of acquired patent assets that would have a negative effect on our results of operations, cash flows and financial position;
- we may require external financing that is dilutive or presents risks of debt; and
- we are required to estimate and record fair values of contingent assets, liabilities, deferred tax assets and liabilities at the time of a transaction. Even though these estimates are based on management's best judgment, the actual results may differ. Under the current accounting guidance, differences between actual results and management's estimates could cause our operating results to fluctuate or could adversely affect our results of operations.

**If our amortizable intangible assets (such as acquired patents) become impaired, we may be required to record a significant charge to earnings.**

In addition to internal development, we intend to broaden our intellectual property portfolio through strategic relationships and transactions such as the acquisitions of DTS, Inc. in the fourth quarter of 2016 and the planned Mergers that we expect to close in the second quarter of 2020. We believe these strategic relationships and transactions will enhance the competitiveness and size of our current businesses and provide diversification into markets and technologies that complement our current businesses. Future transactions could be in the form of asset purchases, equity investments, or business combinations. As a result, we may have intangible assets which are amortized over their estimated useful lives. We review our amortizable

intangible assets (such as our patent portfolio) for impairment when events or changes in circumstances indicate the carrying value may not be recoverable or the useful life is shorter than originally estimated. Factors that may be considered a change in circumstances indicating that the carrying value of our amortizable or other intangible assets may not be recoverable include a decline in future cash flows, fluctuations in market capitalization, slower growth rates in our industry or slower than anticipated adoption of our products by our customers. As we continue to review for factors that may affect our business which may not be in our control, we may be required to record a significant charge to earnings in our financial statements during the period in which any impairment of our amortizable intangible assets or equity investments is determined, resulting in an adverse impact on our business, financial position, or results of operations.

**Current and future governmental and industry standards may significantly limit our business opportunities.**

Technology standards are important in the audio and video industry as they help to assure compatibility across a system or series of products. Generally, standards adoption occurs on either a mandatory basis, requiring a particular technology to be available in a particular product or medium, or an optional basis, meaning that a particular technology may be, but is not required to be, utilized. If standards are re-examined or a new standard is developed in which we are not included, our growth in that area of our business could be significantly lower than expected.

As new technologies and entertainment media emerge, new standards relating to these technologies or media may develop. New standards may also emerge in existing markets that are currently characterized by competing formats, such as the market for PCs. We may not be successful in our efforts to include our technology in any such standards.

**Changes in or failure to comply with FCC requirements could adversely impact our HD Radio revenue and royalties.**

In October 2002, the Federal Communications Commission, or the FCC, selected our “In-Band, On-Channel” (“IBOC”) technology, also known as “HD Radio technology,” as the exclusive technology for introduction of terrestrial digital operations by AM and FM radio stations. In the United States, the FCC regulates the broadcast radio industry, interprets laws enacted by Congress and establishes and enforces regulations governing radio broadcasting. It is unclear what rules and regulations the FCC may adopt regarding digital audio broadcasting and what effect, if any, such rules and regulations will have on our Product Licensing segment, the operations of stations using our HD Radio technology or consumer electronics manufacturers. Any additional rules and regulations imposed on digital audio broadcasting could adversely impact the attractiveness of HD Radio technology and negatively impact our business. Also, non-compliance by us, or by radio stations offering HD Radio broadcasts, with any FCC requirements or conditions could result in fines, additional license conditions, license revocation or other detrimental FCC actions.

**Our licensing of industry standard technologies can be subject to limitations that could adversely affect our business and prospects.**

When a standards-setting body adopts our technologies as explicit industry standards, we generally must agree to license such technologies on a fair, reasonable and non-discriminatory basis, which we believe means that we treat similarly situated customers similarly. In these situations, we may be required to limit the royalty rates we charge for these technologies, which could adversely affect our business. Furthermore, we may have limited control over whom we license such technologies to and may be unable to restrict many terms of the license. From time to time, we may be subject to claims that our licenses of our industry standard technologies may not conform to the requirements of the standards-setting body. Claimants in such cases could seek to restrict or change our licensing practices or our ability to license our technologies in ways that could harm our reputation and otherwise materially and adversely affect our business, operating results and prospects.

**Our financial and operating results may vary, which may cause the price of our common stock to decline.**

Our quarterly operating results have fluctuated in the past and are likely to do so in the future. Because our operating results are difficult to predict, one should not rely on quarterly or annual comparisons of our results of operations as an indication of our future performance. Factors that could cause our operating results to fluctuate during any period or that could adversely affect our ability to achieve our strategic objectives include those listed in this “*Risk Factors*” section of this report and the following:

- the timing of, and compliance with license or service agreements and the terms and conditions for payment to us of license or service fees under these agreements;
- fluctuations in our royalties caused by the pricing terms of certain of our license agreements;
- the amount of our product and service revenue;
- changes in the level of our operating expenses;

- the substantial research and development expenses that we have made and will continue to make on new products, as well as the uncertainty that such products will generate material revenue for the Company;
- delays in our introduction of new technologies or market acceptance of these new technologies through new license agreements;
- our ability to protect or enforce our intellectual property rights or the terms of our agreements;
- legal proceedings affecting our patents, patent applications or license agreements;
- the timing of the introduction by others of competing technologies;
- changes in demand for semiconductor chips in the specific end markets in which we concentrate;
- changes in demand for camera-enabled devices including cell phones, security systems and personal computers;
- the timing of the conclusion of license agreements;
- the length of time it takes to establish new licensing arrangements;
- meeting the requirements for revenue recognition under generally accepted accounting principles;
- changes in generally accepted accounting principles including new accounting standards which may materially affect our revenue recognition and the comparability between revenue recognition and cash flow from customer royalties; and
- cyclical fluctuations in semiconductor and consumer electronics markets generally.

Due to fluctuations in our operating results, reports from market and security analysts, litigation-related developments, and other factors, the price at which our common stock will trade is likely to continue to be highly volatile. In future periods, if our revenue, royalties, billings, cash flows or operating results are below the estimates or expectations of public market analysts and investors, our stock price could decline.

**We may not continue to pay dividends at the same rate we are currently paying them, or at all, and any decrease in or suspension of the dividend could cause our stock price to decline.**

We currently pay a quarterly dividend of \$0.20 per share. We also have returned capital to shareholders through stock repurchases. We anticipate that all quarterly dividends and stock repurchases will be paid out of cash, cash equivalents and short-term investments. The payment of future cash dividends is subject to the final determination each quarter by our Board of Directors that the dividend remains in our best interests, which determination will be based on a number of factors, including our earnings, financial condition, actual and forecasted cash flows, capital resources and capital requirements, alternative uses of capital including business combinations, economic condition and other factors considered relevant by management and the Board of Directors. Any decrease in the amount of the dividend, or suspension or discontinuance of payment of a dividend, could cause our stock price to decline.

**Our stock repurchase program could increase the volatility of the price of our common stock, and the program may be suspended or terminated at any time, which may cause the trading price of our common stock to decline.**

In August 2007, we authorized a plan to repurchase our outstanding shares of common stock dependent on market conditions, share price and other factors. As of March 31, 2020, the total amount available for repurchase under the plan was \$101.4 million.

The amount of repurchases under our stock repurchase program will vary. In 2016, we repurchased approximately 2,300,000 shares for an aggregate amount of \$67.7 million. In 2017, we repurchased approximately 654,000 shares for an aggregate amount of \$15.3 million. In 2018, we repurchased approximately 2,137,000 shares for an aggregate amount of \$41.4 million. We did not repurchase any shares in 2019 or in the first quarter of 2020. Additionally, the timing of repurchases is at our discretion and the program may be suspended or discontinued at any time. Any suspension or discontinuation could cause the market price of our stock to decline. The timing of repurchases pursuant to our stock repurchase program could affect our stock price and increase its volatility. There can be no assurance that any stock repurchases will enhance stockholder value because the market price of our common stock may decline below the levels at which we effected repurchases. Furthermore, we may engage in mergers, acquisitions, or other activity that could result in us reducing or discontinuing share repurchases for a period of time. For example, the DTS acquisition resulted in a significant decrease in cash, cash equivalents and short-term investments, as well as the issuance of approximately \$600 million in debt. The terms of our current or future debt agreements could limit our ability to repurchase shares.

**Provisions of our certificate of incorporation and bylaws or Delaware law might delay or prevent a change of control transaction and depress the market price of our stock.**

Various provisions of our certificate of incorporation and bylaws might have the effect of making it more difficult for a third party to acquire, or discouraging a third party from attempting to acquire, control of our company. These provisions could limit the price that certain investors might be willing to pay in the future for shares of our common stock. Certain of these provisions eliminate cumulative voting in the election of directors, authorize the board to issue “blank check” preferred stock, prohibit stockholder action by written consent, eliminate the right of stockholders to call special meetings, and establish advance notice procedures for director nominations by stockholders and the submission of other proposals for consideration at stockholder meetings. We are also subject to provisions of Delaware law that could delay or make more difficult a merger, tender offer or proxy contest involving our company. In particular, Section 203 of the Delaware General Corporation Law prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years unless specific conditions are met. Any of these provisions could have the effect of delaying, deferring or preventing a change in control, including without limitation, discouraging a proxy contest or making more difficult the acquisition of a substantial block of our common stock.

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

Items 2(a) and 2(b) are not applicable.

(c) Stock Repurchases

In August 2007, the Company’s Board of Directors authorized a plan to repurchase the Company’s outstanding shares of common stock dependent on market conditions, share price and other factors. No expiration date has been specified for this plan. We made no stock repurchases during the first quarter of 2020. At March 31, 2020, the total amount available for repurchase under our stock repurchase program was \$101.4 million.

**Item 3. Defaults Upon Senior Securities**

Not applicable.

**Item 4. Mine Safety Disclosures**

Not applicable.

**Item 5. Other Information**

Not applicable.

## Item 6. Exhibits

<u>Exhibit Number</u>	<u>Exhibit Title</u>
2.1*	<a href="#"><u>Agreement and Plan of Merger and Reorganization, dated December 18, 2019, by and among the Registrant, TiVo Corporation, XRAY Merger Sub Corporation, TWOLF Merger Sub Corporation and XRAY-TWOLF HoldCo Corporation (filed as Exhibit 2.1 to the Registrant's Current Report on Form 8-K, filed December 24, 2019, and incorporated herein by reference)</u></a>
2.2	<a href="#"><u>Amendment No. 1 to the Agreement and Plan of Merger and Reorganization, dated January 31, 2020, by and among the Registrant, TiVo Corporation, XRAY-TWOLF HoldCo Corporation, XRAY Merger Sub Corporation and TWOLF Merger Sub Corporation (filed as Exhibit 2.1 to the Registrant's Current Report on Form 8-K, filed February 4, 2020, and incorporated herein by reference)</u></a>
3.1	<a href="#"><u>Restated Certificate of Incorporation (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed December 1, 2016, and incorporated herein by reference)</u></a>
3.2	<a href="#"><u>Certificate of Amendment of the Restated Certificate of Incorporation dated as of February 22, 2017 (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed February 27, 2017, and incorporated herein by reference)</u></a>
3.3	<a href="#"><u>Amended and Restated Bylaws, dated as of December 1, 2016 (filed as Exhibit 3.2 to the Registrant's Current Report on Form 8-K, filed December 1, 2016, and incorporated herein by reference)</u></a>
3.4	<a href="#"><u>Amendment to the Amended and Restated Bylaws, dated as of December 6, 2016 (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed December 7, 2016, and incorporated herein by reference)</u></a>
3.5	<a href="#"><u>Amendment to the Amended and Restated Bylaws, dated as of April 27, 2017 (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed May 3, 2017, and incorporated herein by reference)</u></a>
3.6	<a href="#"><u>Amendment to the Amended and Restated Bylaws, dated as of February 1, 2018 (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed February 7, 2018, and incorporated herein by reference)</u></a>
3.7	<a href="#"><u>Amendment to the Amended and Restated Bylaws, dated as of April 27, 2018 (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed May 3, 2018, and incorporated herein by reference)</u></a>
3.8	<a href="#"><u>Amendment to the Amended and Restated Bylaws, effective as of December 15, 2018 (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed October 30, 2018, and incorporated herein by reference)</u></a>
3.9	<a href="#"><u>Amendment to the Amended and Restated Bylaws, effective as of January 30, 2020 (filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed February 4, 2020, and incorporated herein by reference)</u></a>
31.1	<a href="#"><u>Certification of the Chief Executive Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934</u></a>
31.2	<a href="#"><u>Certification of the Chief Financial Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934</u></a>
32.1	<a href="#"><u>Certification of the Chief Executive Officer and Chief Financial Officer pursuant to Rule 13a-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u></a>
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

\* The exhibits and schedules to this agreement have been omitted in reliance on Item 601(b)(2) of Regulation S-K promulgated by the SEC, and a copy thereof will be furnished supplementally to the SEC upon its request. Readers are cautioned that the representations and warranties set forth in this agreement are qualified by those schedules, and should not be relied upon as accurate or complete without reference to those schedules.

## 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.

Dated: May 6, 2020

XPERI CORPORATION

By:     /s/ Jon Kirchner      
Jon Kirchner  
Chief Executive Officer



**Certification of the Chief Executive Officer**  
**Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934**

I, Jon Kirchner, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Xperi Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 6, 2020

/s/ Jon Kirchner  
Jon Kirchner  
Chief Executive Officer

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**Certification of the Chief Financial Officer**  
**Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934**

I, Robert Andersen, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Xperi Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 6, 2020

/s/ Robert Andersen

Robert Andersen

Executive Vice President and Chief Financial Officer

**CERTIFICATION PURSUANT TO  
RULE 13a-14(b) OF THE SECURITIES EXCHANGE ACT OF 1934  
AND 18 U.S.C. SECTION 1350**

In connection with the Quarterly Report of Xperi Corporation, a Delaware corporation (the "Company"), on Form 10-Q for the three months ended March 31, 2020 as filed with the Securities and Exchange Commission (the "Report"), I, Jon Kirchner, Chief Executive Officer, certify, pursuant to Rule 13a-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

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

/s/ Jon Kirchner  
Jon Kirchner  
Chief Executive Officer  
May 6, 2020

**CERTIFICATION PURSUANT TO  
RULE 13a-14(b) OF THE SECURITIES EXCHANGE ACT OF 1934  
AND 18 U.S.C. SECTION 1350**

In connection with the Quarterly Report of Xperi Corporation, a Delaware corporation (the "Company"), on Form 10-Q for the three months ended March 31, 2020 as filed with the Securities and Exchange Commission (the "Report"), I, Robert Andersen, Chief Financial Officer of the Company, certify, pursuant to Rule 13a-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

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

/s/ Robert Andersen  
Robert Andersen  
Executive Vice President and Chief Financial Officer  
May 6, 2020

*A signed original of this written statement required by Rule 13a-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350 has been provided to the Registrant and will be retained by the Registrant and furnished to the Securities and Exchange Commission or its staff upon request.*