

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended: **March 31, 2017**
OR

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

For the transition period from _____ to _____
Commission File Number **0-28082**

KVH Industries, Inc.
(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

05-0420589
(I.R.S. Employer
Identification Number)

50 Enterprise Center, Middletown, RI 02842
(Address of Principal Executive Offices) (Zip Code)

(401) 847-3327
(Registrant's Telephone Number, Including Area Code)

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

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

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

<u>Date</u>	<u>Class</u>	<u>Outstanding shares</u>
May 4, 2017	Common Stock, par value \$0.01 per share	17,024,170

KVH INDUSTRIES, INC. AND SUBSIDIARIES

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PART I. FINANCIAL INFORMATION

ITEM 1. Financial Statements

KVH INDUSTRIES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share amounts)

	March 31, 2017	December 31, 2016
ASSETS	(unaudited)	
Current assets:		
Cash and cash equivalents	\$ 29,385	\$ 26,422
Marketable securities	16,743	25,712
Accounts receivable, net of allowance for doubtful accounts of \$2,967 and \$3,477 as of March 31, 2017 and December 31, 2016, respectively	26,962	31,152
Inventories	21,755	20,745
Prepaid expenses and other current assets	4,953	4,801
Total current assets	99,798	108,832
Property and equipment, less accumulated depreciation of \$47,117 and \$45,766 as of March 31, 2017 and December 31, 2016, respectively	37,159	36,586
Intangible assets, less accumulated amortization of \$17,412 and \$16,344 as of March 31, 2017 and December 31, 2016, respectively	17,034	17,838
Goodwill	31,603	31,343
Other non-current assets	5,410	5,134
Non-current deferred income tax asset	24	24
Total assets	\$ 191,028	\$ 199,757
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 10,342	\$ 8,436
Accrued compensation and employee-related expenses	5,516	4,766
Accrued other	8,380	8,317
Accrued product warranty costs	2,395	2,280
Deferred revenue	7,156	6,661
Current portion of long-term debt	2,475	7,900
Liability for uncertain tax positions	1,293	1,283
Total current liabilities	37,557	39,643
Other long-term liabilities	41	326
Long-term debt, excluding current portion	46,435	50,153
Non-current deferred income tax liability	3,139	3,133
Total liabilities	\$ 87,172	\$ 93,255
Commitments and contingencies (Notes 2, 10 and 12)		
Stockholders' equity:		
Preferred stock, \$0.01 par value. Authorized 1,000,000 shares; none issued	—	—
Common stock, \$0.01 par value. Authorized 30,000,000 shares; 18,700,561 and 18,420,914 shares issued at March 31, 2017 and December 31, 2016, respectively; and 17,041,570 and 16,761,923 shares outstanding at March 31, 2017 and December 31, 2016, respectively	187	184
Additional paid-in capital	131,268	129,660
Retained earnings	1,732	6,617
Accumulated other comprehensive loss	(16,181)	(16,809)
	117,006	119,652
Less: treasury stock at cost, common stock, 1,658,991 shares as of March 31, 2017 and December 31, 2016	(13,150)	(13,150)
Total stockholders' equity	103,856	106,502
Total liabilities and stockholders' equity	\$ 191,028	\$ 199,757

See accompanying Notes to Unaudited Consolidated Financial Statements.

KVH INDUSTRIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except earnings per share amounts, unaudited)

	Three Months Ended	
	March 31,	
	2017	2016
Sales:		
Product	\$ 14,863	\$ 15,382
Service	25,348	24,998
Net sales	40,211	40,380
Costs and expenses:		
Costs of product sales	10,539	10,670
Costs of service sales	13,268	12,991
Research and development	3,947	3,783
Sales, marketing and support	8,740	8,658
General and administrative	8,187	7,652
Total costs and expenses	44,681	43,754
Loss from operations	(4,470)	(3,374)
Interest income	166	105
Interest expense	353	375
Other expense, net	(68)	(77)
Loss before income tax expense (benefit)	(4,725)	(3,721)
Income tax expense (benefit)	160	(930)
Net loss	\$ (4,885)	\$ (2,791)
Net loss per common share		
Basic and diluted	\$ (0.30)	\$ (0.18)
Weighted average number of common shares outstanding:		
Basic and diluted	16,261	15,723

See accompanying Notes to Unaudited Consolidated Financial Statements.

KVH INDUSTRIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in thousands, unaudited)

	Three Months Ended March 31,	
	2017	2016
Net loss	\$ (4,885)	\$ (2,791)
Other comprehensive income (loss), net of tax ⁽¹⁾:		
Foreign currency translation adjustment	601	(676)
Unrealized gain (loss) on derivative instruments, net ⁽²⁾	27	(20)
Other comprehensive income (loss), net of tax	628	(696)
Total comprehensive loss	\$ (4,257)	\$ (3,487)

(1) Tax impact was nominal for all periods.

(2) Represents the net of the gross unrealized gain (losses) for the period recorded to accumulated other comprehensive loss and the amounts reclassified from accumulated other comprehensive loss to other expense, net in the consolidated statements of operations. See Note 17 for further information.

See accompanying Notes to Unaudited Consolidated Financial Statements.

KVH INDUSTRIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands, unaudited)

	Three Months Ended	
	March 31,	
	2017	2016
Cash flows from operating activities:		
Net loss	\$ (4,885)	\$ (2,791)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Provision for doubtful accounts	74	403
Depreciation and amortization	2,761	3,189
Deferred income taxes	—	13
Loss on sale of fixed assets	3	256
Loss (gain) on derivative instruments	—	(19)
Compensation expense related to stock-based awards and employee stock purchase plan	960	1,052
Unrealized currency translation loss	12	536
Changes in operating assets and liabilities:		
Accounts receivable	4,160	11,516
Inventories	(1,009)	(1,572)
Prepaid expenses and other current assets	(203)	(1,167)
Other non-current assets	(269)	(525)
Accounts payable	1,724	(1,123)
Deferred revenue	454	894
Accrued other	849	(1,986)
Other long-term liabilities	(286)	(38)
Net cash provided by operating activities	\$ 4,345	\$ 8,638
Cash flows from investing activities:		
Capital expenditures	(2,047)	(1,276)
Cash paid for acquisition of intangible asset	(50)	—
Purchases of marketable securities	(1,385)	(2,306)
Maturities and sales of marketable securities	10,354	2,286
Net cash provided by (used in) investing activities	\$ 6,872	\$ (1,296)
Cash flows from financing activities:		
Repayments of long-term debt	(1,518)	(334)
Repayments of term note borrowings	(7,625)	(1,219)
Payment of employee restricted stock withholdings	(392)	(325)
Proceeds from stock options exercised and employee stock purchase plan	1,060	146
Net cash used in financing activities	\$ (8,475)	\$ (1,732)
Effect of exchange rate changes on cash and cash equivalents	221	(131)
Net increase in cash and cash equivalents	2,963	5,479
Cash and cash equivalents at beginning of period	26,422	22,719
Cash and cash equivalents at end of period	\$ 29,385	\$ 28,198
Supplemental disclosure of non-cash investing activities:		
Changes in accrued liabilities and accounts payable related to fixed asset additions	\$ 169	\$ —
Deferred purchase price consideration related to asset acquisition included in accrued expenses	\$ 50	\$ —

See accompanying Notes to Unaudited Consolidated Financial Statements.

KVH INDUSTRIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements
(Unaudited, all amounts in thousands except per share amounts)

(1) Description of Business

KVH Industries, Inc. (together with its subsidiaries, the Company or KVH) designs, develops, manufactures and markets mobile connectivity products and services for the marine and land mobile markets, and inertial navigation products for both the commercial and defense markets. In the fourth quarter of 2016, consistent with certain internal organizational changes implemented, the Company changed its reporting structure from two operating segments based on geographies selling navigation, guidance, and stabilization and mobile communication products, to two operating segments based on product lines: mobile connectivity and inertial navigation. The change was driven by several factors including:

- changes in the Company's overall organizational structure, including the appointment of a Chief Operating Officer and a new Chief Financial Officer;
- the completion of the Company's planning process for 2017, as a result of which the Company changed how it will measure and assess its financial performance; and
- the Company's process for measuring incentive compensation for key executives in 2016 and later years.

KVH's mobile connectivity products enable customers to receive voice and Internet services, and live digital television via satellite services in marine vessels, recreational vehicles, buses and automobiles. KVH's CommBox offers a range of tools designed to increase communication efficiency, reduce costs, and manage network operations. KVH sells and leases its mobile connectivity products through an extensive international network of dealers and distributors. KVH also sells and leases products directly to end users.

KVH's mobile connectivity service sales represent primarily sales earned from satellite voice and Internet airtime services. KVH provides, for monthly fixed and usage fees, satellite connectivity services, including broadband Internet, data and Voice over Internet Protocol (VoIP) services, to its TracPhone V-series customers. Mobile connectivity service sales also include the distribution of commercially licensed entertainment, including news, sports, music, and movies to commercial and leisure customers in the maritime, hotel, and retail markets through KVH Media Group (acquired as Headland Media Limited), the media and entertainment service company that KVH acquired on May 11, 2013, and the distribution of training films and eLearning computer-based training courses to commercial customers in the maritime market through Super Dragon Limited and Videotel Marine Asia Limited (together referred to as Videotel), a maritime training services company that KVH acquired on July 2, 2014. KVH also earns monthly usage fees from third-party satellite connectivity services, including voice, data and Internet services, provided to its Inmarsat and Iridium customers who choose to activate their subscriptions with KVH. Mobile connectivity service sales also include engineering services provided under development contracts, sales from product repairs, and extended warranty sales.

KVH's inertial navigation products offer precision fiber optic gyro (FOG)-based systems that enable platform and optical stabilization, navigation, pointing and guidance. KVH's inertial navigation products also include tactical navigation systems that provide uninterrupted access to navigation and pointing information in a variety of military vehicles, including tactical trucks and light armored vehicles. KVH's inertial navigation products are sold directly to U.S. and foreign governments and government contractors, as well as through an international network of authorized independent sales representatives. In addition, KVH's inertial navigation products are used in numerous commercial products, such as navigation and positioning systems for various applications including precision mapping, dynamic surveying, autonomous vehicles, train location control and track geometry measurement systems, industrial robotics and optical stabilization.

KVH's inertial navigation service sales include product repairs, engineering services provided under development contracts and extended warranty sales.

(2) Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements of KVH Industries, Inc. and its wholly owned subsidiaries have been prepared in accordance with accounting principles generally accepted in the United States of America. The Company has evaluated all subsequent events through the date of this filing. All significant intercompany accounts and transactions have been eliminated in consolidation.

The consolidated financial statements have not been audited by the Company's independent registered public accounting firm and include all adjustments (consisting of only normal recurring adjustments) which are, in the opinion of management, necessary for a fair presentation of the financial condition, results of operations, and cash flows for the periods presented. These consolidated financial statements do not include all disclosures associated with annual financial statements and accordingly should be read in conjunction with the Company's consolidated financial statements and related notes included in the Company's annual report on Form 10-K for the year ended December 31, 2016 filed on March 9, 2017 with the Securities and Exchange Commission. The results for the three months ended March 31, 2017 are not necessarily indicative of operating results for the remainder of the year.

Significant Estimates and Assumptions

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of sales and expenses during the reporting periods. As described in the Company's annual report on Form 10-K, the most significant estimates and assumptions by management affect the Company's revenue recognition, valuation of accounts receivable, valuation of inventory, valuations and purchase price allocations related to business combinations, expected future cash flows including growth rates, discount rates, terminal values and other assumptions and estimates used to evaluate the recoverability of long-lived assets and goodwill, estimated fair values of long-lived assets, including goodwill, amortization methods and periods, certain accrued expenses and other related charges, stock-based compensation, contingent liabilities, key valuation assumptions for its share-based awards, estimated fulfillment costs for warranty obligations, tax reserves and recoverability of the Company's net deferred tax assets and related valuation allowance. The Company has reviewed these estimates and determined that these remain the most significant estimates for the three months ended March 31, 2017. There have been no material changes to the significant accounting policies previously disclosed in the Company's annual report on Form 10-K for the year ended December 31, 2016, except for ASC Update No. 2016-09, *Compensation- Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*, which the Company adopted as required on January 1, 2017 resulted primarily in a change in the Company's accounting prospectively for share-based payment forfeitures and accounting for excess tax benefits or deficiencies related to share-based payments as a component of earnings (see Note 5 for further discussion) and ASC Update No. 2015-11, *Simplifying the Measurement of Inventory* adopted as of January 1, 2017, which simplified the subsequent measurement of inventory by replacing the lower of cost or market test with a lower of cost or net realizable value test (see Note 7 for further discussion).

Although the Company regularly assesses these estimates, actual results could differ materially from these estimates. Changes in estimates are recorded in the period in which they become known. The Company bases its estimates on historical experience and various other assumptions that it believes to be reasonable under the circumstances.

(3) Recently Announced Accounting Pronouncements

ASC Updates No. 2014-09, No. 2016-08, No. 2016-10, No. 2016-11, No. 2016-12 and No. 2016-20

In May 2014, the FASB issued ASC Update No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*. Update No. 2014-09 provides enhancements to the quality and consistency of how revenue is reported while also improving comparability in the financial statements of companies using International Financial Reporting Standards and U.S. GAAP. The core principle requires entities to recognize revenue in a manner that depicts the transfer of goods or services to customers in amounts that reflect the consideration an entity expects to be entitled to in exchange for those goods or services. In July 2015, the FASB voted to approve a one year deferral, making the standard effective for public entities for annual and interim periods beginning after December 15, 2017.

In March 2016, the FASB issued ASC Update No. 2016-08, *Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net)*. The purpose of Update No. 2016-08 is to clarify the guidance on principal versus agent considerations. It includes indicators that help to determine whether an entity controls the specified good or service before it is transferred to the customer and to assist in determining when the entity satisfied the performance obligation and as such, whether to recognize a gross or a net amount of consideration in their consolidated statement of operations.

In April 2016, the FASB issued ASC Update No. 2016-10, *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing*. Update No. 2016-10 clarifies that entities are not required to assess whether promised goods or services are performance obligations if they are immaterial in the context of the contract. Update No. 2016-10 also addresses how to determine whether promised goods or services are separately identifiable and permits entities to make a policy election to treat shipping and handling costs as fulfillment activities. In addition, it clarifies key provisions in Topic 606 related to licensing.

In May 2016, the FASB issued ASC Update No. 2016-11, *Revenue Recognition (Topic 605) and Derivatives and Hedging (Topic 815)*. Update No. 2016-11 rescinds previous SEC comments that were codified in Topic 605, Topic 932 and Topic 815. Upon adoption of Topic 606, certain SEC comments including guidance on accounting for shipping and handling fees and costs and consideration given by a vendor to a customer should not be relied upon.

In May 2016, the FASB also issued ASC Update No. 2016-12, *Revenue from Contracts with Customers (Topic 606): Narrow Scope Improvements and Practical Expedients*. Update No. 2016-12 provides clarity around collectability, presentation of sales taxes, non-cash consideration, contract modifications at transition and completed contracts at transition. Update No. 2016-12 also includes a technical correction within Topic 606 related to required disclosures if the guidance is applied retrospectively upon adoption.

In December 2016, the FASB issued ASC Update No. 2016-20, *Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers*. Update No. 2016-20 allows entities not to make quantitative disclosures about remaining performance obligations in certain cases and requires entities that use any of the optional exemptions to expand their qualitative disclosures. Update No. 2016-20 also clarifies other areas of the new revenue standard, including disclosure requirements for prior period performance obligations, impairment guidance for contract costs and the interaction of impairment guidance in ASC 340-40 with other guidance elsewhere in the Codification.

The Company will adopt Topic 606 effective January 1, 2018. The Company anticipates it will adopt Topic 606 under the modified retrospective method and will only apply this method to contracts that are not completed as of the date of adoption. The modified retrospective method will result in a cumulative effect of initially applying the standard as an adjustment to the opening balance of retained earnings at the date of initial application for any open contracts as of the adoption date. The Company has established a cross-functional implementation team consisting of representatives from all of its business divisions and regions. The Company has commenced analyzing the impact of the standard on its contract portfolio by reviewing a sample of its contracts to identify potential differences that would result from applying the requirements of the new standard. The implementation team is apprising both management and the audit committee of project status on a recurring basis.

The Company has not yet finalized its assessment of the impact of Topic 606. The Company continues to analyze combining of contracts, performance obligations, variable consideration and disclosures. Additionally, the Company is monitoring updates issued by the FASB. The Company continues to perform its impact assessment and, following completion, the Company will initiate efforts to redesign impacted processes, policies and controls as necessary.

ASC Update No. 2016-01

In January 2016, the FASB issued ASC Update No. 2016-01, *Financial Instruments-Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities*. It is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. Early application of certain provisions is permitted. Update No. 2016-01 requires entities to measure equity investments that do not result in consolidation and are not accounted for under the equity method at fair value with changes recognized in net income. However, an entity may choose to measure equity investments that do not have readily determinable fair values at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. It also simplifies the impairment assessment of equity investments without readily determinable fair values by requiring a qualitative assessment to identify impairment. Update No. 2016-01 also requires separate presentation of financial assets and financial liabilities by measurement category and form of financial asset and liability. The adoption of Update No. 2016-01 is not expected to have a material impact on the Company's financial position or results of operations.

ASC Update No. 2016-02

In February 2016, the FASB issued ASC Update No. 2016-02, *Leases (Topic 842)*. It is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Earlier application is permitted. Update No. 2016-02 is intended to increase the transparency and comparability among organizations by recognizing lease asset and lease liabilities on the balance sheet, including those previously classified as operating leases under current U.S. GAAP, and disclosing key information about leasing arrangements. The Company is in the process of determining the effect that the adoption of this standard will have on its financial position and results of operations.

ASC Update No. 2016-13

In June 2016, the FASB issued ASC Update No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. The update is effective for fiscal years beginning after December 15, 2019. Early adoption is permitted for fiscal years beginning after December 15, 2018. The purpose of Update No. 2016-13 is to replace the current incurred loss impairment methodology for financial assets measured at amortized cost with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information, including forecasted information, to develop credit loss estimates. The Company is in the process of determining the effect that the adoption will have on its financial position and results of operation.

ASC Update No. 2016-15

In August 2016, the FASB issued ASC Update No. 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*. The update is effective for fiscal years beginning after December 15, 2017 and interim periods within those fiscal years. Early adoption is permitted, including adoption in an interim period. The purpose of Update No. 2016-15 is to reduce the diversity in practice in presentation and classification of the following items within the statement of cash flows: debt prepayments, settlement of zero coupon debt instruments, contingent consideration payments, insurance proceeds, securitization transactions and distributions from equity method investees. The update also addresses classification of transactions that have characteristics of more than one class of cash flows. The Company is in the process of determining the effect that the adoption will have on its financial position and results of operations.

ASC Update No. 2016-16

In October 2016, the FASB issued ASC Update No. 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory*. The update is effective for fiscal years beginning after December 15, 2017, including interim reporting periods within those fiscal years. Early adoption is permitted as of the beginning of an annual reporting period for which financial statements (interim or annual) have not been issued or made available for issuance. The purpose of Update No. 2016-16 is to allow an entity to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs, as opposed to waiting until the asset is sold to an outside party. The Company is in the process of determining the effect that the adoption will have on its financial position and results of operations.

ASC Update No. 2017-04

In January 2017, the FASB issued ASC Update No. 2017-04, *Intangibles--Goodwill and Other (Topic 350): Simplifying the Test of Goodwill Impairment*. This ASC simplifies the accounting for goodwill impairment for all entities by requiring impairment charges to be based on the first step of the goodwill impairment test under ASC 350. Under previous guidance, if the fair value of a reporting unit is lower than its carrying amount (Step 1), an entity calculates any impairment charge by comparing the implied fair value of goodwill with its carrying amount (Step 2). The implied fair value of goodwill is calculated by deducting the fair value of all assets and liabilities of the reporting unit from the reporting unit's fair value as determined in Step 1. To determine the implied fair value of goodwill, entities estimate the fair value of any unrecognized intangible assets (including in-process research and development) and any corporate-level assets or liabilities that were included in the determination of the carrying amount and fair value of the reporting unit in Step 1. Under this new guidance if a reporting unit's carrying value exceeds its fair value, an entity will record an impairment charge based on that difference with such impairment charge limited to the amount of goodwill in the reporting unit. This ASC does not change the guidance on completing Step 1 of the goodwill impairment test. An entity will still be able to perform today's optional qualitative goodwill impairment assessment before determining whether to proceed to Step 1. This ASC will be applied prospectively and is effective for annual and interim impairment test performed in periods beginning after December 15, 2019 for public business enterprises. Early adoption is permitted for annual and interim goodwill impairment testing dates after January 1, 2017. The Company elected to early adopt this ASC as of January 1, 2017. The adoption of this ASC had no impact on the Company's consolidated statements of operations, financial condition or cash flows. The Company expects that adoption of this ASC will simplify the evaluation and recording of goodwill impairment charges, if any.

There are no other recent accounting pronouncements issued by the FASB that would have a material impact on the Company's financial statements.

(4) Marketable Securities

Marketable securities as of March 31, 2017 and December 31, 2016 consisted of the following:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
March 31, 2017				
Money market mutual funds	\$ 14,233	\$ —	\$ —	\$ 14,233
Certificates of deposit	2,510	—	—	2,510
Total marketable securities designated as available-for-sale	\$ 16,743	\$ —	\$ —	\$ 16,743
December 31, 2016				
Money market mutual funds	\$ 21,848	\$ —	\$ —	\$ 21,848
Certificates of deposit	3,864	—	—	3,864
Total marketable securities designated as available-for-sale	\$ 25,712	\$ —	\$ —	\$ 25,712

The amortized costs and fair value of marketable securities as of March 31, 2017 and December 31, 2016 are shown below by effective maturity. Effective maturities may differ from contractual maturities because the issuers of the securities may have the right to prepay obligations without prepayment penalties.

	Amortized Cost	Fair Value
March 31, 2017		
Due in less than one year	\$ 2,510	\$ 2,510
December 31, 2016		
Due in less than one year	\$ 3,864	\$ 3,864

Interest income from marketable securities was \$31 and \$20 during the three months ended March 31, 2017 and 2016, respectively.

(5) Stockholder's Equity

(a) Stock Equity and Incentive Plan

The Company adopted ASC Update No. 2016-09, *Compensation- Stock Compensation (ASC Topic 718): Improvements to Employee Share-Based Payment Accounting* on January 1, 2017. Although, this ASC update did not impact the Company's results of operations, financial position or cash flows for any periods prior to the adoption, the adoption of this ASC update had the following impact on the date of adoption:

- The adoption of ASC Update No. 2016-09 requires all income tax adjustments to be recorded in the consolidated statements of operations. The cumulative adjustment upon adoption to accumulated earnings was zero since the increase in net deferred tax assets was fully offset by a corresponding increase in the deferred tax asset valuation allowance. The amount of deferred tax assets that had not been previously recognized due to the recognition of excess tax benefits was \$1,571.
- The tax benefit or expense is required to be classified as a cash flow provided by (used in) operating activities. It was previously required to be presented as a cash flow provided by (used in) financing activities in the Consolidated Statements of Cash Flows, with a corresponding adjustment to operating cash flows.
- In the diluted net earnings per share calculation, when applying the treasury stock method for shares that could be repurchased, the assumed proceeds no longer include the amount of excess tax benefit. This provision, which is only applicable on a prospective basis, did not have an impact on the Company's diluted net earnings per share calculation for the three months ended March 31, 2017.

- The Company has elected to account for forfeitures on share-based payments as these forfeitures occur, which represents a change from the accounting previously required under ASC Topic 718. As a result, the Company notes that future forfeitures could result in a significant reversal of stock-based compensation expense recognized in the period in which such forfeitures occur. During the three months ended March 31, 2017, as a result of share-based award forfeitures, the Company recorded a reversal of previously recognized stock-based compensation expense of \$5. In addition, had the Company continued to account for stock-based compensation expense related to forfeitures of share-based payments based on estimating the number of awards expected to be forfeited and recognizing only stock-based compensation expense on awards expected to vest, the Company would have recognized \$927 of stock-based compensation expense, or \$16 less than what was actually recorded during the three months ended March 31, 2017.

The Company recognizes stock-based compensation in accordance with the provisions of ASC Topic 718, *Compensation--Stock Compensation*. Stock-based compensation expense, excluding compensation charges related to our employee stock purchase plan, ESPP, was \$943 and \$1,040 for the three months ended March 31, 2017 and 2016, respectively. As of March 31, 2017, there was \$2,022 of total unrecognized compensation expense related to stock options, which is expected to be recognized over a weighted-average period of 3.24 years. As of March 31, 2017, there was \$5,626 of total unrecognized compensation expense related to restricted stock awards, which is expected to be recognized over a weighted-average period of 2.89 years.

Stock Options

During the three months ended March 31, 2017, 114 stock options were exercised for common stock, none of which was delivered to the Company as payment for the exercise price or related minimum tax withholding obligations. Additionally, during the three months ended March 31, 2017, 531 stock options were granted with a weighted average grant date fair value of \$2.47, per share and 4 stock options were forfeited. The Company has estimated the fair value of each option grant on the date of grant using the Black-Scholes option-pricing model. The weighted average assumptions utilized to determine the fair value of options granted during the three months ended March 31, 2017 were as follows:

	Three Months Ended March 31,	
	2017	2016
Risk-free interest rate	1.96%	1.43%
Expected volatility	35.53%	38.22%
Expected life (in years)	4.22	4.17
Dividend yield	0%	0%

As of March 31, 2017, there were 1,048 options outstanding with a weighted average exercise price of \$9.76 per share and 281 options exercisable with a weighted average exercise price of \$12.14 per share.

Restricted Stock

During the three months ended March 31, 2017, 209 shares of restricted stock were granted with a weighted average grant date fair value of \$8.31 per share and no shares of restricted stock were forfeited. Additionally, during the three months ended March 31, 2017, 233 shares of restricted stock vested, of which 43 shares of common stock were surrendered to the Company as payment by employees in lieu of cash to satisfy minimum tax withholding obligations in connection with the vesting of restricted stock. As of March 31, 2017, there were 620 shares of restricted stock outstanding still subject to service-based vesting conditions.

As of March 31, 2017, the Company had no unvested outstanding options and no shares of restricted stock that were subject to performance-based or market-based vesting conditions.

(b) Employee Stock Purchase Plan

On June 15, 2016, at the Company's 2016 Annual Meeting of Stockholders, the stockholders of the Company also approved amendments to the Company's Amended and Restated 1996 Employee Stock Purchase Plan (ESPP) that, among other things, increased the number of shares of common stock reserved for issuance to a total of 1,650. As amended, the ESPP affords eligible employees the right to purchase common stock, via payroll deductions, through various offering periods at a purchase price equal to 85% of the fair market value of the common stock on the first or last day of the offering period, whichever is lower. During the three months ended March 31, 2017 and 2016, no shares were issued under the ESPP plan. The Company recorded compensation charges of \$17 and \$13 for the three months ended March 31, 2017 and 2016, related to the ESPP.

(c) Stock- Based Compensation Expense

The following presents stock-based compensation expense including ESPP in the Company's consolidated statements of operations for the three months ended March 31, 2017 and 2016:

	Three Months Ended March 31,	
	2017	2016
Cost of product sales	\$ 82	\$ 90
Cost of service sales	—	1
Research and development	189	186
Sales, marketing and support	268	273
General and administrative	421	503
	\$ 960	\$ 1,053

(d) Accumulated Other Comprehensive Loss

Comprehensive income (loss) includes net earnings (loss), unrealized gains and losses from foreign currency translation, unrealized gains and losses from available for sale marketable securities and changes in fair value related to interest rate swap derivative instruments, net of tax attributes. The components of the Company's comprehensive income (loss) and the effect on earnings for the periods presented are detailed in the accompanying consolidated statements of comprehensive income (loss).

	Foreign Currency Translation	Unrealized Gain (Loss) on Available for Sale Marketable Securities	Interest Rate Swaps	Total Accumulated Other Comprehensive Loss
Balance, December 31, 2016	(16,651)	—	(158)	(16,809)
Other comprehensive (loss) income before reclassifications	601	—	5	606
Amounts reclassified from AOCI to Other income (expense), net (1)	—	—	22	22
Net other comprehensive (loss) income, March 31, 2017	601	—	27	628
Balance, March 31, 2017	(16,050)	—	(131)	(16,181)

	Foreign Currency Translation	Unrealized Gain (Loss) on Available for Sale Marketable Securities	Interest Rate Swaps	Total Accumulated Other Comprehensive Loss
Balance, December 31, 2015	\$ (7,363)	\$ 1	\$ (238)	\$ (7,600)
Other comprehensive (loss) income before reclassifications	(676)	—	(45)	(721)
Amounts reclassified from AOCI to Other income (expense), net (1)	—	—	25	25
Net other comprehensive (loss) income, March 31, 2016	(676)	—	(20)	(696)
Balance, March 31, 2016	(8,039)	1	(258)	(8,296)

(1) For additional information, see Note 4, "Marketable Securities," and see Note 17, "Derivative Instruments and Hedging Activities."

(6) Net Loss per Common Share

Basic net loss per share is calculated based on the weighted average number of common shares outstanding during the period. Diluted net loss per share incorporates the dilutive effect of common stock equivalent options, warrants and other convertible securities, if any, as determined with the treasury stock accounting method. For the three months ended March 31, 2017 and 2016, since there was a net loss, the Company excluded all outstanding stock options and non-vested restricted shares from its diluted loss per share calculation, as inclusion of these securities would have reduced the net loss per share.

A reconciliation of the basic and diluted weighted average common shares outstanding is as follows:

	Three Months Ended March 31,	
	2017	2016
Weighted average common shares outstanding—basic	16,261	15,723
Dilutive common shares issuable in connection with stock plans	—	—
Weighted average common shares outstanding—diluted	16,261	15,723

(7) Inventories

The Company adopted ASC 2015-11, *Simplifying the Measurement of Inventory* as of January 1, 2017. ASC 2015-11 simplifies the subsequent measurement of inventory by replacing the lower of cost or market test with a lower of cost or net realizable value test. The adoption of this standard did not have a material impact on the Company's consolidated financial position or results of operations. Inventories are stated at the lower of cost or net realizable value using the first-in first-out costing method. Inventories as of March 31, 2017 and December 31, 2016 include the costs of material, labor, and factory overhead. Components of inventories consist of the following:

	March 31, 2017	December 31, 2016
Raw materials	\$ 11,629	\$ 10,606
Work in process	2,170	2,185
Finished goods	7,956	7,954
	<u>\$ 21,755</u>	<u>\$ 20,745</u>

(8) Property and Equipment

Property and equipment, net, as of March 31, 2017 and December 31, 2016 consist of the following:

	March 31, 2017	December 31, 2016
Land	\$ 3,828	\$ 3,828
Building and improvements	22,994	21,717
Leasehold improvements	155	155
Machinery and equipment	42,258	41,777
Office and computer equipment	14,990	14,824
Motor vehicles	51	51
	84,276	82,352
Less accumulated depreciation	(47,117)	(45,766)
	\$ 37,159	\$ 36,586

Depreciation expense was \$1,693 and \$1,907 for the three months ended March 31, 2017 and 2016, respectively.

Included within machinery and equipment are certain hardware revenue generating assets that had a net book value of \$7,161 and \$7,734 as of March 31, 2017 and December 31, 2016, respectively, that are utilized in the delivery of the Company's airtime services, media, and other content.

(9) Product Warranty

The Company's products carry standard limited warranties that range from one to two years and vary by product. The warranty period begins on the date of retail purchase or lease by the original purchaser. The Company accrues estimated product warranty costs at the time of sale and any additional amounts are recorded when such costs are probable and can be reasonably estimated. Factors that affect the Company's warranty liability include the number of units sold or leased, historical and anticipated rates of warranty repairs and the cost per repair. Warranty and related costs are reflected within sales, marketing and support in the accompanying consolidated statements of operations. As of March 31, 2017 and December 31, 2016, the Company had accrued product warranty costs of \$2,395 and \$2,280, respectively.

The following table summarizes product warranty activity during 2017 and 2016:

	Three Months Ended March 31,	
	2017	2016
Beginning balance	\$ 2,280	\$ 1,880
Charges to expense	237	528
Costs incurred	(122)	(333)
Ending balance	\$ 2,395	\$ 2,075

(10) Debt

Long-term debt consisted of the following:

	March 31, 2017	December 31, 2016
Term note	\$ 46,000	\$ 53,625
Mortgage loan	2,910	2,951
Equipment loans	—	1,477
Total	48,910	58,053
Less amounts classified as current	2,475	7,900
Long-term debt, excluding current portion	\$ 46,435	\$ 50,153

Term Note and Line of Credit

On July 1, 2014, the Company entered into (i) a five-year senior credit facility agreement (the Credit Agreement) with Bank of America, N.A., as Administrative Agent, and the lenders named from time to time as parties thereto (the Lenders), for an aggregate amount of up to \$80,000, including a revolving credit facility (the Revolver) of up to \$15,000 and a term loan (Term Loan) of \$65,000 to be used for general corporate purposes, including both (A) the refinancing of the Company's \$30,000 then-outstanding indebtedness under its previous credit facility and (B) permitted acquisitions, (ii) revolving credit notes (together, the Revolving Credit Note) to evidence the Revolver, (iii) term notes (together, the Term Note, and together with the Revolving Credit Note, the Notes) to evidence the Term Loan, (iv) a Security Agreement (the Security Agreement) required by the Lenders with respect to the grant by the Company of a security interest in substantially all of the assets of the Company in order to secure the obligations of the Company under the Credit Agreement and the Notes, and (v) Pledge Agreements (the Pledge Agreements) required by the Lenders with respect to the grant by the Company of a security interest in 65% of the capital stock of each of KVH Industries A/S and KVH Industries U.K. Limited held by the Company in order to secure the obligations of the Company under the Credit Agreement and the Notes.

The Credit Agreement was amended in June 2015 to modify the circumstances under which certain changes in the Company's Board of Directors would constitute a change of control. The Credit Agreement was further amended in September 2015 to modify the Maximum Consolidated Leverage Ratio as of September 30, 2015. The Credit Agreement was amended again in March 2017 to further modify the Maximum Consolidated Leverage Ratio, to amend the Applicable Rate and amortization schedule of the Term Loan and to modify the definition of the Consolidated Fixed Charges Coverage Ratio, as well as make certain other changes. The amendment was accounted for as a debt modification as it did not result in a significant modification to the Credit Agreement.

The \$65,000 Term Note was executed on July 1, 2014 in connection with the acquisition of Videotel. Proceeds in the amount of \$35,000 were applied toward the payment of a portion of the purchase price for the acquired shares of Videotel, and proceeds in the amount of approximately \$30,000 were applied toward the refinancing of the then-outstanding balance of the Company's previous credit facility. The Company was required to make principal repayments on the Term Loan in the amount of approximately \$1,200 at the end of each of the first 8 three-month periods following the closing; thereafter, the Company was required to make principal repayments in the amount of approximately \$1,600 for each succeeding three-month period until the maturity of the loan on July 1, 2019. The Company made the first payment on this debt in September 2014 and has made all required principal repayments on a timely basis. In connection with the March 2017 amendment, the Company made an additional principal repayment of \$6,000 on the Term Note and amended the repayment terms. Under the amended terms, the Company must make principal repayments of \$575 every three months starting on April 1, 2017 until the Term Note maturity on July 1, 2019. On the maturity date, the entire remaining principal balance of the loan, including any future loans under the Revolver, is due and payable, together with all accrued and unpaid interest, penalties and other amounts due and payable under the Credit Agreement. The Credit Agreement contains provisions requiring the mandatory prepayment of amounts outstanding under the Term Loan and the Revolver under specified circumstances, including (i) 100% of the net cash proceeds from certain dispositions to the extent not reinvested in the Company's business within a stated period, (ii) 50% of the net cash proceeds from stated equity issuances and (iii) 100% of the net cash proceeds from certain receipts of more than \$250 outside the ordinary course of business. The prepayments are first applied to the Term Loan, in inverse order of maturity, and then to the Revolver. In the discretion of the Administrative Agent, certain mandatory prepayments made on the Revolver can permanently reduce the amount of credit available under the Revolver.

Loans under the Credit Agreement bear interest at varying rates determined in accordance with the Credit Agreement. Each LIBOR Rate Loan, as defined in the Credit Agreement, bears interest on the outstanding principal amount thereof for each interest period from the applicable borrowing date at a rate per annum equal to the LIBOR Daily Floating Rate or LIBOR Monthly Floating Rate, each as defined in the Credit Agreement, as applicable, plus the Applicable Rate, as defined in the Credit Agreement, and each Base Rate Loan, as defined in the Credit Agreement, bears interest on the outstanding principal amount thereof from the applicable borrowing date at a rate per annum equal to the Base Rate, as defined in the Credit Agreement, plus the Applicable Rate. The Applicable Rate ranges from 1.75% to 2.25%, depending on the Company's Consolidated Leverage Ratio, as defined in the Credit Agreement. The highest Applicable Rate applies when the Consolidated Leverage Ratio exceeds 1.50:1.00. Upon certain defaults, including failure to make payments when due, interest becomes payable at a higher default rate.

Borrowings under the Revolver are subject to the satisfaction of numerous conditions precedent at the time of each borrowing, including the continued accuracy of the Company's representations and warranties and the absence of any default under the Credit Agreement. As of March 31, 2017, there were no borrowings outstanding under the Revolver and the full balance of \$15,000 was available for borrowing.

The Credit Agreement contains two financial covenants, a Maximum Consolidated Leverage Ratio and a Minimum Consolidated Fixed Charge Coverage Ratio, each as defined in the Credit Agreement. In September 2015, the Maximum Consolidated Leverage Ratio was increased from 1.00:1.00 to 1.75:1.00 for September 30, 2015, 1.50:1.00 for December 31, 2015, and 1.25:1.00 for March 31, 2016 and each fiscal quarter thereafter. In March 2017, the Maximum Consolidated Leverage Ratio was increased to 1.50:1.00. The Minimum Consolidated Fixed Charge Coverage Ratio may not be less than 1.25:1.00. In March 2017, the definition of the Consolidated Fixed Charge Coverage Ratio was amended to include only maintenance capital expenditures, as defined in the amendment, and to reflect certain other changes. The Company was in compliance with these financial ratio debt covenants as of March 31, 2017.

The Credit Agreement imposes certain other affirmative and negative covenants, including without limitation covenants with respect to the payment of taxes and other obligations, compliance with laws, entry into material contracts, creation of liens, incurrence of indebtedness, investments, dispositions, fundamental changes, restricted payments, changes in the nature of the Company's business, transactions with affiliates, corporate and accounting changes, and sale and leaseback arrangements.

The Company's obligation to repay loans under the Credit Agreement could be accelerated upon a default or event of default under the terms of the Credit Agreement, including certain failures to pay principal or interest when due, certain breaches of representations and warranties, the failure to comply with the Company's affirmative and negative covenants under the Credit Agreement, a change of control of the Company, certain defaults in payment relating to other indebtedness, the acceleration of payment of certain other indebtedness, certain events relating to the liquidation, dissolution, bankruptcy, insolvency or receivership of the Company, the entry of certain judgments against the Company, certain events relating to the impairment of collateral or the Lenders' security interest therein, and any other material adverse change with respect to the Company.

Mortgage Loan

On April 6, 2009, the Company entered into a mortgage loan in the amount of \$4,000 related to its headquarters facility in Middletown, Rhode Island. On June 9, 2011, the Company entered into an amendment to the mortgage loan. The loan term is ten years, with a principal amortization of 20 years, and the interest rate will be a rate per year adjusted periodically based on a defined interest period equal to the BBA LIBOR Rate plus 2.00 percentage points. Land, building and improvements with an approximate carrying value of \$5,000 as of March 31, 2017 secure the mortgage loan. The monthly mortgage payment is approximately \$14 plus interest and increases in increments of approximately \$1 each year throughout the life of the mortgage. Due to the difference in the term of the loan and amortization of the principal, a balloon payment of \$2,551 is due on April 1, 2019. The loan contains one financial covenant, a Fixed Charge Coverage Ratio, which applies in the event that the Company's consolidated cash, cash equivalents and marketable securities balance falls below \$25,000 at any time. As the Company's consolidated cash, cash equivalents, and marketable securities balance was above the minimum threshold throughout the three months ended March 31, 2017, the Fixed Charge Coverage Ratio did not apply. Under the mortgage loan, the Company may prepay its outstanding loan balance subject to certain early termination charges as defined in the mortgage loan agreement. If the Company were to default on its mortgage loan, the land, building and improvements would be used as collateral. As discussed in Note 17 to the consolidated financial statements, effective April 1, 2010, in order to reduce the volatility of cash outflows that arise from changes in interest rates, the Company entered into two interest rate swap agreements that are intended to hedge its mortgage interest obligations by fixing the interest rates specified in the mortgage loan to 5.91% for half of the principal amount outstanding and 6.07% for the remaining half of the principal amount outstanding as of April 1, 2010 until the mortgage loan expires on April 16, 2019.

Equipment Loans

In January 2013, the Company borrowed \$4,700 from a bank and pledged as collateral six satellite hubs and related equipment, including three hubs purchased in 2012. The term of the equipment loan was five years, and the loan bore interest at a fixed rate of 2.76% per annum. In March 31, 2017, the Company repaid in full the current balance of the loan in advance of the January 30, 2018 original maturity date. In December 2013, the Company borrowed \$1,200 from a bank and pledged as collateral one satellite hub and related equipment. The term of the equipment loan was five years, and the loan bore interest at a fixed rate of 3.08% per annum. In March 2017, the Company repaid in full the current balance of the loan in advance of the December 30, 2018 original maturity date.

(11) Segment Reporting

The financial results of each segment are based on revenues from external customers, cost of revenue and operating expenses that are directly attributable to the segment and an allocation of costs from shared functions. These shared functions include, but are not limited to, facilities, human resources, information technology, and engineering. Allocations are made based on management's judgment of the most relevant factors, such as head count, number of customer sites, or other operational data that contribute to the shared costs. Certain corporate-level costs have not been allocated as they are not attributable to either segment. These costs primarily consist of broad corporate functions, including executive, legal, finance, and costs associated with corporate actions. Segment-level asset information has not been provided as such information is not reviewed by the chief operating decision-maker for purposes of assessing segment performance and allocating resources. There are no inter-segment sales or transactions.

The Company's performance is impacted by the levels of activity in the marine and land mobile markets and defense sectors, among others. Performance in any particular period could be impacted by the timing of sales to certain large customers.

The mobile connectivity segment primarily manufactures and distributes a comprehensive family of mobile satellite antenna products and services that provide access to television, the Internet and voice services while on the move. Product sales within the mobile connectivity segment accounted for approximately 25% and 27% of our consolidated net sales for the three months ended March 31, 2017 and 2016, respectively. Sales of mini-VSAT Broadband airtime service accounted for approximately 40% and 38% of our consolidated net sales for the three months ended March 31, 2017 and 2016, respectively. Sales of content and training services within the mobile connectivity segment accounted for approximately 19% and 22% of our consolidated net sales for the three months ended March 31, 2017 and 2016, respectively.

The inertial navigation segment manufactures and distributes a portfolio of digital compass and fiber optic gyro (FOG)-based systems that address the rigorous requirements of military and commercial customers and provide reliable, easy-to-use and continuously available navigation and pointing data. The principal product categories in this segment include the FOG-based inertial measurement units (IMUs) for precision guidance, FOGs for tactical navigation as well as pointing and stabilization systems, and digital compasses that provide accurate heading information for demanding applications, security, automation and access control equipment and systems. Sales of FOG-based guidance and navigation systems within the inertial navigation segment accounted for approximately 11% and 10% of the company's consolidated net sales for for the three months ended March 31, 2017 and 2016, respectively.

No other single product class accounts for 10% or more of consolidated net sales.

The Company operates in a number of major geographic areas across the globe. The Company generates international net sales, based upon customer location, primarily from customers located in Canada, Europe, Africa, Asia/Pacific, the Middle East, and India. International revenues represented 59% and 63% of consolidated net sales for the three months ended March 31, 2017 and 2016, respectively. No individual foreign country represented 10% or more of the Company's consolidated net sales for the three months ended March 31, 2017 and 2016, respectively.

As of March 31, 2017 and December 31, 2016, the long-lived tangible assets related to the Company's international subsidiaries were less than 10% of the Company's long-lived tangible assets and were deemed not material.

Net sales and operating earnings (loss) for the Company's reporting segments and the Company's loss before income tax expense (benefit) for the three months ended March 31, 2017 and 2016 were as follows:

	For the three months ended March 31,	
	2017	2016
Net sales:		
Mobile connectivity	\$ 34,287	\$ 35,265
Inertial navigation	5,924	5,115
Consolidated net sales	<u>\$ 40,211</u>	<u>\$ 40,380</u>
Operating earnings (loss):		
Mobile connectivity	\$ 622	\$ 1,990
Inertial navigation	(44)	(927)
Subtotal	578	1,063
Unallocated, net	(5,048)	(4,437)
Loss from operations	(4,470)	(3,374)
Net interest and other expense	(255)	(347)
Loss before income tax expense (benefit)	<u>\$ (4,725)</u>	<u>\$ (3,721)</u>

Depreciation expense and amortization expense for the Company's segments are presented in the following table for the periods presented:

	For the three months ended March 31,	
	2017	2016
Depreciation expense:		
Mobile connectivity	1,478	1,659
Inertial navigation	195	224
Unallocated	20	24
Total consolidated depreciation expense	<u>1,693</u>	<u>1,907</u>
Amortization expense:		
Mobile connectivity	1,068	1,283
Inertial navigation	—	—
Unallocated	—	—
Total consolidated amortization expense	<u>1,068</u>	<u>1,283</u>

(12) Legal Matters

From time to time, the Company is involved in litigation incidental to the conduct of its business. In the ordinary course of business, the Company is a party to inquiries, legal proceedings and claims including, from time to time, disagreements with vendors and customers. The Company is not a party to any lawsuit or proceeding that, in management's opinion, is likely to materially harm the Company's business, results of operations, financial condition, or cash flows.

(13) Share Buyback Program

On November 26, 2008, the Company's Board of Directors authorized a program to repurchase up to 1,000 shares of the Company's common stock. As of March 31, 2017, 341 shares of the Company's common stock remain available for repurchase under the authorized program. The repurchase program is funded using the Company's existing cash, cash equivalents, marketable securities and future cash flows. Under the repurchase program, the Company, at management's discretion, may repurchase shares on the open market from time to time, in privately negotiated transactions or block transactions, or through an accelerated repurchase agreement. The timing of such repurchases depends on availability of shares, price, market conditions, alternative uses of capital, and applicable regulatory requirements. The program may be modified, suspended or terminated at any time without prior notice. The repurchase program has no expiration date. There were no other repurchase programs outstanding during the three months ended March 31, 2017 and no repurchase programs expired during the period.

During the three months ended March 31, 2017 and 2016, the Company did not repurchase any shares of its common stock.

(14) Fair Value Measurements

ASC Topic 820, *Fair Value Measurements and Disclosures* (ASC 820), provides a framework for measuring fair value and requires expanded disclosures regarding fair value measurements. ASC 820 defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (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. ASC 820 also establishes a fair value hierarchy, which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. ASC 820 describes three levels of inputs that may be used to measure fair value:

- Level 1: Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities. The Company's Level 1 assets are investments in money market mutual funds and certificates of deposit.
- Level 2: Quoted prices for similar assets or liabilities in active markets; or observable prices that are based on observable market data, based on directly or indirectly market-corroborated inputs. The Company's Level 2 liabilities are interest rate swaps.
- Level 3: Unobservable inputs that are supported by little or no market activity, and are developed based on the best information available given the circumstances. The Company has no Level 3 assets.

Assets and liabilities measured at fair value are based on the valuation techniques identified in the table below. The valuation techniques are:

- (a) Market approach—prices and other relevant information generated by market transactions involving identical or comparable assets.
- (b) The valuations of the interest rate swaps intended to mitigate the Company's interest rate risk are determined with the assistance of a third-party financial institution using widely accepted valuation techniques, including discounted cash flow analysis on the expected cash flows of each instrument. This analysis utilizes observable market-based inputs, including interest rate curves and interest rate volatility, and reflects the contractual terms of these instruments, including the period to maturity.

The following tables present financial assets and liabilities at March 31, 2017 and December 31, 2016 for which the Company measures fair value on a recurring basis, by level, within the fair value hierarchy:

<u>March 31, 2017</u>	<u>Total</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Valuation Technique</u>
Assets					
Money market mutual funds	\$ 14,233	\$ 14,233	\$ —	\$ —	(a)
Certificates of deposit	2,510	2,510	—	—	(a)
Liabilities					
Interest rate swaps	131	—	131	—	(b)

<u>December 31, 2016</u>	<u>Total</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Valuation Technique</u>
Assets					
Money market mutual funds	\$ 21,848	\$ 21,848	\$ —	\$ —	(a)
Certificates of deposit	3,864	3,864	—	—	(a)
Liabilities					
Interest rate swaps	158	—	158	—	(b)

Certain financial instruments are carried at cost on the consolidated balance sheets, which approximates fair value due to their short-term, highly liquid nature. These instruments include cash and cash equivalents, accounts receivable, accounts payable, and accrued expenses. The carrying amount of the Company's debt approximates fair value based on currently available quoted rates of similarly structured debt.

Assets Measured and Recorded at Fair Value on a Nonrecurring Basis

The Company's non-financial assets, such as goodwill, intangible assets, and other long-lived assets resulting from business combinations, are measured at fair value using income approach valuation methodologies at the date of acquisition and subsequently re-measured if an impairment exists. There were no impairments of the Company's non-financial assets noted as of March 31, 2017. The Company does not have any liabilities that are recorded at fair value on a non-recurring basis.

(15) Goodwill and Intangible Assets

Goodwill

The following table sets forth the changes in the carrying amount of goodwill for the three months ended March 31, 2017:

	Amounts
Balance at December 31, 2016	\$ 31,343
Foreign currency translation adjustment	260
Balance at March 31, 2017	<u>\$ 31,603</u>

ASC Topic 350, *Intangibles—Goodwill and Other* (ASC 350) requires the completion of a goodwill impairment test at least annually. Historically, this goodwill impairment test was comprised of a two-step process. The first step compares the carrying value of the Company's reporting units to their estimated fair values as of the test date. If fair value is less than carrying value, a second step is performed to quantify the amount of the impairment, if any. As of August 31, 2016 (the Company's annual goodwill impairment test date), the Company performed its annual impairment test for goodwill at the reporting unit level and, after conducting the first step, determined that it was not necessary to conduct the second step as it concluded that the fair value of its reporting units exceeded their carrying value. If different assumptions were used, particularly with respect to estimating future cash flows, weighted average costs of capital, and terminal growth rates, different estimates of fair value may have resulted. However, based on the excess of fair value over carrying value and additional sensitivity analysis considered with respect to the Company's valuation assumptions, the Company concluded that it was more likely than not that no goodwill impairment exists. As of August 31, 2016, the Company noted that the fair value of all of the Company's reporting units exceeded their carrying values by more than 10%. The Company notes that its one reporting unit whose fair value exceeded its carrying value by less than 100% had goodwill of approximately \$4,401 at March 31, 2017. A negative trend of

operating results or material changes to forecasted operating results could result in the requirement for additional interim goodwill impairment tests and the potential of a future goodwill impairment charge, which could be material.

In January 2017, the FASB issued ASC Update No. 2017-04, *Intangibles--Goodwill and Other (Topic 350): Simplifying the Test of Goodwill Impairment*. This ASC simplifies the accounting for goodwill impairment for all entities by requiring impairment charges to be based on the first step of the goodwill impairment test under ASC 350. Under previous guidance, if the fair value of a reporting unit is lower than its carrying amount (Step 1), an entity calculates any impairment charge by comparing the implied fair value of goodwill with its carrying amount (Step 2). The implied fair value of goodwill is calculated by deducting the fair value of all assets and liabilities of the reporting unit from the reporting unit's fair value as determined in Step 1. To determine the implied fair value of goodwill, entities estimate the fair value of any unrecognized intangible assets (including in-process research and development) and any corporate-level assets or liabilities that were included in the determination of the carrying amount and fair value of the reporting unit in Step 1. Under this new guidance if a reporting unit's carrying value exceeds its fair value, an entity will record an impairment charge based on that difference with such impairment charge limited to the amount of goodwill in the reporting unit. This ASC does not change the guidance on completing Step 1 of the goodwill impairment test. An entity will still be able to perform today's optional qualitative goodwill impairment assessment before determining whether to proceed to Step 1. This ASC will be applied prospectively and is effective for annual and interim impairment test performed in periods beginning after December 15, 2019 for public business enterprises. Early adoption is permitted for annual and interim goodwill impairment testing dates after January 1, 2017. The Company has elected to early adopt this ASC as of January 1, 2017. The adoption of this ASC had no impact on the Company's consolidated statements of operations, financial condition or cash flows. There were no potential indicators of goodwill impairment identified during the three months ended March 31, 2017 that would require an interim goodwill impairment test.

Intangible Assets

The changes in the carrying amount of intangible assets during the three months ended March 31, 2017 are as follows:

	Amounts
Balance at December 31, 2016	\$ 17,838
Amortization expense	(1,068)
Intangible assets acquired in asset acquisition	100
Foreign currency translation adjustment	164
Balance at March 31, 2017	<u>\$ 17,034</u>

Intangible assets arose from an acquisition made prior to 2013, the acquisition of KVH Media Group (acquired as Headland Media Limited) in May 2013 and the acquisition of Videotel in July 2014. Intangibles arising from the acquisition made prior to 2013 are being amortized on a straight-line basis over an estimated useful life of 7 years. Intangibles arising from the acquisition of KVH Media Group are being amortized on a straight-line basis over the estimated useful life of: (i) 10 years for acquired subscriber relationships, (ii) 15 years for distribution rights, (iii) 3 years for internally developed software and (iv) 2 years for proprietary content. Intangibles arising from the acquisition of Videotel are being amortized on a straight-line basis over the estimated useful life of: (i) 8 years for acquired subscriber relationships, (ii) 5 years for favorable leases, (iii) 4 years for internally developed software and (iv) 5 years for proprietary content. The intangibles arising from the KVH Media Group and Videotel acquisitions were recorded in pounds sterling and fluctuations in exchange rates could cause these amounts to increase or decrease from time to time.

In January 2017, the Company completed the acquisition of certain subscriber relationships from a third party. This acquisition did not meet the definition of a business under ASC 2017-01, *Business Combinations (Topic 805)-Clarifying the Definition of a Business*, which the Company adopted on October 1, 2016. The Company ascribed \$100 of the initial purchase price to the acquired subscriber relationships definite-lived intangible assets with an initial estimated useful life of 10 years. Under the asset purchase agreement, the purchase price includes a component of contingent consideration under which the Company is required to pay a percentage of recurring revenues received from the acquired subscriber relationships through 2026 up to a maximum annual payment of \$114. As the acquisition did not represent a business combination, the contingent consideration arrangement is recognized only when the contingency is resolved and the consideration is paid or becomes payable. The amounts payable under the contingent consideration arrangement, if any, will be included in the measurement of the cost of the acquired subscriber relationships. During the three months ended March 31, 2017, no additional consideration was earned under the contingent consideration arrangement.

Acquired intangible assets are subject to amortization. The following table summarizes acquired intangible assets at March 31, 2017 and December 31, 2016, respectively:

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value
March 31, 2017			
Subscriber relationships	\$ 17,086	\$ 6,891	\$ 10,195
Distribution rights	4,150	1,245	2,905
Internally developed software	2,304	1,983	321
Proprietary content	7,993	4,785	3,208
Intellectual property	2,284	2,137	147
Favorable lease	629	371	258
	<u>\$ 34,446</u>	<u>\$ 17,412</u>	<u>\$ 17,034</u>
December 31, 2016			
Subscriber relationships	\$ 16,888	\$ 6,431	\$ 10,457
Distribution rights	4,122	1,180	2,942
Internally developed software	2,301	1,904	397
Proprietary content	7,960	4,431	3,529
Intellectual property	2,284	2,056	228
Favorable lease	627	342	285
	<u>\$ 34,182</u>	<u>\$ 16,344</u>	<u>\$ 17,838</u>

Amortization expense related to intangible assets for the three months ended March 31, 2017 and 2016 was as follows:

<u>Expense Category</u>	Three Months Ended March 31,	
	2017	2016
Cost of service sales	\$ 355	\$ 452
General administrative expense	713	831
Total amortization expense	<u>\$ 1,068</u>	<u>\$ 1,283</u>

As of March 31, 2017, the total weighted average remaining useful lives of the definite-lived intangible assets was 4.9 years and the weighted average remaining useful lives by the definite-lived intangible asset category are as follows:

Intangible Asset	Weighted Average Remaining Useful Life in Years
Subscriber relationships	5.6
Distribution rights	11.1
Internally developed software	1.1
Proprietary content	2.3
Intellectual property	0.5
Favorable lease	2.3

Estimated future amortization expense remaining at March 31, 2017 for intangible assets acquired is as follows:

Remainder of 2017	\$	3,099
2018		3,766
2019		2,880
2020		2,114
2021		2,114
Thereafter		3,061
Total future amortization expense	\$	<u>17,034</u>

For intangible assets, the Company assesses the carrying value of these assets whenever events or circumstances indicate that the carrying value may not be recoverable. Recoverability of assets to be held and used is measured by comparing the carrying amount of an asset, or asset group, to the future undiscounted cash flows expected to be generated by the asset, or asset group. There were no events or changes in circumstances during the first quarter of 2017 which indicated that an assessment of the impairment of goodwill and intangible assets was required.

(16) Business and Credit Concentrations

Concentrations of risk with respect to trade accounts receivable are generally limited due to the large number of customers and their dispersion across several geographic areas. Although the Company does not foresee that credit risk associated with these receivables will deviate from historical experience, repayment is dependent upon the financial stability of those individual customers. The Company establishes allowances for potential bad debts and evaluates, on a monthly basis, the adequacy of those reserves based upon historical experience and its expectations for future collectability concerns. The Company performs ongoing credit evaluations of the financial condition of its customers and generally does not require collateral.

No single customer accounted for 10% or more of consolidated net sales for the first quarter of 2017 or 2016 or accounts receivable at March 31, 2017 or December 31, 2016.

Certain components from third parties used in the Company's products are procured from single sources of supply. The failure of a supplier, including a subcontractor, to deliver on schedule could delay or interrupt the Company's delivery of products and thereby materially adversely affect the Company's revenues and operating results.

(17) Derivative Instruments and Hedging Activities

Effective April 1, 2010, in order to reduce the volatility of cash outflows that arise from changes in interest rates, the Company entered into two interest rate swap agreements. These interest rate swap agreements are intended to hedge the Company's mortgage loan related to its headquarters facility in Middletown, Rhode Island by fixing the interest rates specified in the mortgage loan to 5.9% for half of the principal amount outstanding and 6.1% for the remaining half of the principal amount outstanding as of April 1, 2010 until the mortgage loan expires on April 16, 2019. The Company does not use derivatives for speculative purposes. For a derivative that is designated as a cash flow hedge, changes in the fair value of the derivative are recognized in accumulated other comprehensive income ("AOCI") to the extent the derivative is effective at offsetting the changes in the cash flows being hedged until the hedged item affects earnings. As the Company makes the required principal and interest payments under the mortgage loan and the related interest rate swaps are settled, the Company reclassifies the amounts recorded in AOCI related to the changes in the fair value of the settled interest rate swaps to earnings. To the extent there is any hedge ineffectiveness, changes in fair value relating to the ineffective portion are immediately recognized in earnings in other income (expense) in the consolidated statements of income. The interest rate swap is recorded within accrued other liabilities on the balance sheet. The critical terms of the interest rate swaps were designed to mirror the terms of the Company's mortgage loans. The Company designated these derivatives as cash flow hedges of the variability of the LIBOR-based interest payments on principal over a nine-year period, which ends on April 1, 2019. As of March 31, 2017, the Company determined that the existence of hedge ineffectiveness, if any, was immaterial and all changes in the fair value of the interest rate caps were recorded in the consolidated statements of comprehensive (loss) income as a component of AOCI.

As of March 31, 2017, the Company had the following outstanding interest rate derivatives that were designated as cash flow hedges of interest rate risk:

Interest Rate Derivatives	Notional (in thousands)	Asset (Liability)	Effective Date	Maturity Date	Index	Strike Rate
Interest rate swap	\$ 1,455	(63)	April 1, 2010	April 1, 2019	1-month LIBOR	5.91%
Interest rate swap	\$ 1,455	(68)	April 1, 2010	April 1, 2019	1-month LIBOR	6.07%

As of December 31, 2016, the Company had the following outstanding interest rate derivatives that were designated as cash flow hedges of interest rate risk:

Interest Rate Derivatives	Notional (in thousands)	Asset (Liability)	Effective Date	Maturity Date	Index	Strike Rate
Interest rate swap	\$ 1,476	(76)	April 1, 2010	April 1, 2019	1-month LIBOR	5.91%
Interest rate swap	\$ 1,476	(82)	April 1, 2010	April 1, 2019	1-month LIBOR	6.07%

(18) Income Taxes

The Company's effective tax rate for the three months ended March 31, 2017 was (3.41)% compared with 25.00% for the corresponding period in the prior year. The effective income tax rate is based on estimated income for the year, the estimated composition of the income in different jurisdictions and discrete adjustments, if any, in the applicable quarterly periods, including retroactive changes in tax legislation, settlements of tax audits or assessments, the resolution or identification of tax position uncertainties and acquisitions of other companies.

For the three months ended March 31, 2017, the effective tax rate was lower than the statutory tax rate primarily due to the Company maintaining a valuation allowance reserve on its US deferred tax assets, and the composition of income from foreign jurisdictions that were taxed at lower rates compared to the statutory tax rates in the U.S. For the three months ended March 31, 2016, the effective tax rate was lower than the statutory tax rate primarily due to the composition of income from foreign jurisdictions taxed at lower rates.

As of January 1, 2017 the Company adopted ASC 2016-09, *Improvements to Employee Share-Based Payment Accounting* (ASC 2016-09). In accordance with ASC 2016-09, previously unrecognized excess tax benefits are recognized on a modified retrospective basis. On January 1, 2017, the Company recorded a \$1,117 deferred tax asset related to unrecognized excess tax benefits with an offsetting adjustment to retained earnings. As the Company had previously recorded a full valuation allowance on its U.S. deferred tax assets, a corresponding increase to the valuation allowance was recorded with an offsetting adjustment to retained earnings. During the three months ended March 31, 2017, exercises of non-qualified stock options and releases of restricted stock awards resulted in shortfalls and related tax expense of \$342. The Company also recorded an offsetting tax benefit of \$342 resulting from a corresponding decrease to the valuation allowance.

As of March 31, 2017 and December 31, 2016, the Company had reserves for uncertain tax positions of \$1,293 and \$1,283, respectively. The Company recognizes interest and penalties related to income taxes as a component of income tax expense. As of March 31, 2017, \$467 in interest and penalties have been accrued. There were no material changes during the three months ended March 31, 2017 to the Company's reserve for uncertain tax positions. The Company does not expect that its unrecognized tax benefits will materially change within the next twelve months.

The Company is subject to taxation in the U.S. and various state and foreign jurisdictions. The Company's tax years from 2013 through 2016 are subject to examination by these various tax authorities. With few exceptions, the Company is no longer subject to U.S. federal, state, local and foreign examinations by tax authorities for years before 2013.

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

Introduction

The statements included in this quarterly report on Form 10-Q, other than statements of historical fact, are forward-looking statements. Examples of forward-looking statements include statements regarding our future financial results, operating results, business strategies, projected costs, products, competitive positions and plans, customer preferences, consumer trends, anticipated product development, and objectives of management for future operations. In some cases, forward-looking statements can be identified by terminology such as "may," "will," "should," "would," "expects," "plans," "anticipates," "believes," "estimates," "predicts," "potential," "continue," or the negative of these terms or other comparable terminology. Any expectations based on these forward-looking statements are subject to risks and uncertainties and other important factors, including those discussed in the section entitled "Risk Factors" in Item 1A of Part I of our annual report on Form 10-K for the year ended December 31, 2016. These and many other factors could affect our future financial and operating results, and could cause actual results to differ materially from expectations based on forward-looking statements made in this document or elsewhere by us or on our behalf. For example, our expectations regarding certain items as a percentage of sales assume that we will achieve our anticipated sales goals. The following discussion and analysis should be read in conjunction with our consolidated financial statements and related notes appearing elsewhere in this report.

Overview

We design, develop, manufacture and market mobile connectivity products and services for the marine and land mobile markets, and navigation, guidance and stabilization products for both the defense and commercial markets. We operate in two operating segments based on product lines: mobile connectivity and inertial navigation.

Mobile Connectivity Segment

Our mobile connectivity segment offers satellite communications products and services. Our mobile connectivity products enable customers to receive voice and Internet services and live digital television via satellite services in marine vessels, recreational vehicles, buses and automobiles. Our CommBox offers a range of tools designed to increase communication efficiency, reduce costs, and manage network operations. We sell and lease our mobile connectivity products through an extensive international network of dealers and distributors. We also sell and lease products directly to end users.

Our mobile connectivity service sales include sales of satellite voice and Internet airtime services, engineering services provided under development contracts, sales from product repairs, and extended warranty sales. Our mobile connectivity service sales also include our distribution of entertainment, including news, sports, music, and movies, to commercial and leisure customers in the maritime, hotel, and retail markets through KVH Media Group, as well as the distribution of training films and eLearning computer-based training courses to commercial customers in the maritime market through our Videotel business. We typically recognize revenue from media content sales ratably over the period of the service contract. We provide, for monthly fixed and usage fees, satellite connectivity services for broadband Internet, data and Voice over Internet Protocol (VoIP) service to our TracPhone V-series customers. We also earn monthly usage fees for third-party satellite connectivity for voice, data and Internet services to our Inmarsat and Iridium customers who choose to activate their subscriptions with us. Our service sales have grown as a percentage of total revenue from 62% of our net sales for the first three months of 2016 to 63% in the first three months of 2017. The majority of KVH Media Group's and Videotel's services are invoiced in pounds sterling, which increases our exposure to fluctuations in exchange rates.

Our marine leisure business within the mobile connectivity segment is highly seasonal, and seasonality can also impact our commercial marine business. Historically, we have generated the majority of our marine leisure product revenues during the first and second quarters of each year, and these revenues typically decline in the third and fourth quarters of each year, compared to the first two quarters. Temporary suspensions of our airtime services typically increase in the third and fourth quarters of each year as boats are placed out of service during the winter months.

Inertial Navigation Segment

Our inertial navigation segment offers precision fiber optic gyro (FOG)-based systems that enable platform and optical stabilization, navigation, pointing, and guidance. Our inertial navigation products also include tactical navigation systems that provide uninterrupted access to navigation and pointing information in a variety of military vehicles, including tactical trucks and light armored vehicles. Our inertial navigation products are sold directly to U.S. and foreign governments and government contractors, as well as through an international network of authorized independent sales representatives. In addition, our inertial navigation products are used in numerous commercial products, such as navigation and positioning systems for various applications including precision mapping, dynamic surveying, autonomous vehicles, train location control and track geometry measurement systems, industrial robotics and optical stabilization.

We generate sales primarily from the sale of our mobile connectivity systems and services and our inertial navigation products and services. The following table provides, for the periods indicated, our sales by segment:

	Three Months Ended March 31,	
	2017	2016
Mobile connectivity	\$ 34,287	\$ 35,265
Inertial navigation	5,924	5,115
Net sales	<u>\$ 40,211</u>	<u>\$ 40,380</u>

Product sales within the mobile connectivity segment accounted for approximately 25% and 27% of our consolidated net sales for the three months ended March 31, 2017 and 2016, respectively. Sales of mini-VSAT Broadband airtime service accounted for approximately 40% and 38% of our consolidated net sales for the three months ended March 31, 2017 and 2016, respectively. Sales of content and training service sales within the mobile connectivity segment accounted for approximately 19% and 22% of our consolidated net sales for the three months ended March 31, 2017 and 2016, respectively.

Within our inertial navigation segment, net sales of FOG-based guidance and navigation systems accounted for approximately 11% and 10% of our consolidated net sales for the three months ended March 31, 2017 and 2016, respectively.

No other single product class accounts for 10% or more of our consolidated net sales for the three months ended March 31, 2017 and 2016. No individual customer accounted for 10% or more of our consolidated net sales for the three months ended March 31, 2017 and 2016.

We operate in a number of major geographic areas across the globe. We generate our international net sales, based upon customer location, primarily from customers located in Canada, Europe, Africa, Asia/Pacific, the Middle East, and India. Our international net sales totaled 59% and 63% of our consolidated net sales for the three months ended March 31, 2017 and 2016, respectively. No individual foreign country represented 10% or more of our consolidated net sales for the three months ended March 31, 2017 and 2016. See Note 11 to our consolidated financial statements for more information on our segments.

In addition to our internally funded research and development efforts, we also conduct research and development activities that are funded by our customers. These activities relate primarily to engineering studies, surveys, prototype development, program management, and standard product customization. In accordance with accounting principles generally accepted in the United States of America, we account for customer-funded research as service revenue, and we account for the associated research and development costs as costs of service and product sales. As a result, customer-funded research and development are not included in the research and development expense that we present in our statement of operations. The following table presents our total annual research and development effort, representing the sum of research costs of service and product sales and the operating expense of research and development as described in our statement of operations. Our management believes this information is useful because it provides a better understanding of our total expenditures on research and development activities.

	Three Months Ended March 31,	
	2017	2016
	(in thousands)	
Research and development expense presented on the statement of operations	\$ 3,947	\$ 3,783
Costs of customer-funded research and development included in costs of service sales	509	147
Total consolidated statements of operations expenditures on research and development activities	<u>\$ 4,456</u>	<u>\$ 3,930</u>

Critical Accounting Policies and Significant Estimates

The discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities, sales and expenses, and related disclosure at the date of our financial statements. Our significant accounting policies are summarized in Note 1 to the consolidated financial statements in our annual report on Form 10-K for the year ended December 31, 2016.

As described in our annual report on Form 10-K for the year ended December 31, 2016, our most critical accounting policies and estimates upon which our consolidated financial statements were prepared were those relating to revenue recognition, valuation of accounts receivable, valuation of inventory, valuations and purchase price allocations related to business combinations, expected future cash flows including growth rates, discount rates, terminal values and other assumptions and estimates used to evaluate the recoverability of long-lived assets and goodwill, estimated fair values of long-lived assets, including goodwill, amortization methods and periods, certain accrued expenses and other related charges, stock-based compensation, contingent liabilities, key valuation assumptions for its share-based awards, estimated fulfillment costs for warranty obligations, tax reserves and recoverability of the our net deferred tax assets and related valuation allowance. We have reviewed our policies and estimates and determined that these remain our most critical accounting policies and estimates for the three months ended March 31, 2017.

Readers should refer to our annual report on Form 10-K for the year ended December 31, 2016 under “Management’s Discussion and Analysis of Financial Condition and Results of Operation—Critical Accounting Policies and Significant Estimates” for descriptions of these policies and estimates, as well as the notes to the consolidated financial statements included elsewhere within this report.

Results of Operations

The following table provides, for the periods indicated, certain financial data expressed as a percentage of net sales:

	Three Months Ended	
	March 31,	
	2017	2016
Sales:		
Product	37.0 %	38.1 %
Service	63.0	61.9
Net sales	100.0	100.0
Cost and expenses:		
Costs of product sales	26.2	26.4
Costs of service sales	33.0	32.2
Research and development	9.8	9.4
Sales, marketing and support	21.7	21.4
General and administrative	20.4	18.9
Total costs and expenses	111.1	108.3
Loss from operations	(11.1)	(8.3)
Interest income	0.4	0.3
Interest expense	0.9	0.9
Other expense, net	(0.2)	(0.2)
Loss before income tax expense (benefit)	(11.8)	(9.1)
Income tax expense (benefit)	0.4	(2.3)
Net loss	(12.2)%	(6.8)%

Three Months Ended March 31, 2017 and 2016

Net Sales

As discussed further under the heading "Segment Discussion" below, product sales decreased \$0.5 million, or 3%, to \$14.9 million for the three months ended March 31, 2017 from \$15.4 million for the three months ended March 31, 2016, primarily due to a decrease in mobile connectivity product sales of \$0.9 million, which was partially offset by an increase in inertial navigation product sales of \$0.4 million. Service sales for the three months ended March 31, 2017 increased \$0.3 million to \$25.3 million from \$25.0 million for three months ended March 31, 2016 primarily an increase in inertial navigation service sales of \$0.4 million, which was partially offset by a decrease in mobile connectivity service sales of \$0.1 million.

Costs of Sales

Costs of sales consists of costs of product sales and costs of service sales. Costs of sales increased in the three months ended March 31, 2017 to approximately \$23.8 million from \$23.7 million in the three months ended March 31, 2016. The increase in costs of sales was driven by an increase of \$0.3 million in costs of service sales, partially offset by a \$0.2 million decrease in costs of product sales. As a percentage of net sales, costs of sales was approximately 59% for the three months ended March 31, 2017 and the three months ended March 31, 2016.

Our costs of product sales consist primarily of materials, manufacturing overhead, and direct labor used to produce our products. For the three months ended March 31, 2017, costs of product sales decreased to approximately \$10.5 million from \$10.7 million in the three months ended March 31, 2016. As a percentage of product sales, costs of product sales were approximately 71% and 69% for the three months ended March 31, 2017 and 2016, respectively. The increase in costs of product sales as a percentage of product sales was due to an increase in wage and benefit expenses due to a slight increase in headcount, as well as lower overhead absorption due to lower manufacturing volumes driven by lower product sales. Mobile connectivity costs of product sales decreased by \$0.4 million, or 5%, due to a decrease in our mobile connectivity costs of product sales. Mobile connectivity costs of product sales as a percentage of mobile connectivity product sales were 74% and 72% for the three months ended March 31, 2017 and 2016, respectively. The increase was principally driven by a slight increase in product costs, as well as lower overhead absorption due to lower manufacturing volumes driven by lower product sales. Inertial navigation costs of product sales increased by \$0.3 million, or 9%, primarily due to a \$0.5 million increase in our FOG costs of product sales, partially offset by a \$0.2 million decrease in our TACNAV costs of product sales. Inertial navigation costs of product sales as a percentage of inertial navigation product sales was 65% and 64% for the three months ended March 31, 2017 and 2016, respectively. The increase was primarily driven by lower overhead absorption due to lower manufacturing volumes.

Our costs of service sales consist primarily of satellite service capacity, depreciation, service network overhead expense associated with our mini-VSAT Broadband network infrastructure, direct network service labor, Inmarsat service costs, product installation costs, engineering and related direct costs associated with customer-funded research and development, media materials and distribution costs, and service repair materials. For the three months ended March 31, 2017, costs of service sales increased by \$0.3 million, or 2%, to \$13.3 million from \$13.0 million for the three months ended March 31, 2016. As a percentage of service sales, costs of service sales were approximately 52% and 52% for the three months ended March 31, 2017 and 2016, respectively. Mobile connectivity costs of service sales decreased by \$0.1 million, or 1%, primarily due to a \$0.4 million decrease in content and learning costs of service sales, partially offset by a \$0.3 million increase in airtime costs of service sales. Mobile connectivity costs of service sales as a percentage of mobile connectivity service sales was 52% and 52% for the three months ended March 31, 2017 and 2016, respectively. Inertial navigation costs of service sales increased by \$0.4 million, or 245%, due to an increase in contract engineering services revenues. Inertial navigation costs of service sales as a percentage of inertial navigation service sales was 56% and 33% for the three months ended March 31, 2017 and 2016, respectively.

We expect that our costs of sales will increase in correlation with our expected growth in our mobile connectivity and inertial navigation net sales. We expect that the mobile connectivity costs of service sales as percentage of mobile connectivity sales will decrease slightly as we are seeking to implement additional airtime cost-saving initiatives.

Operating Expenses

Research and development expense consists of direct labor, materials, external consultants, and related overhead costs that support our internally funded product development and product sustaining engineering activities. Research and development expense for the three months ended March 31, 2017 increased by \$0.1 million, or 3% to \$3.9 million from \$3.8 million for the three months ended March 31, 2016. The primary reasons for the increase in research and development expense were a \$0.1 million increase in labor expenses and outside consulting fees. As a percentage of net sales, research and development expense for the three months ended March 31, 2017 and 2016 was 10% and 9%, respectively.

We expect that research and development expense will grow year-over-year as we continue to invest in developing new technologies and applications for our products.

Sales, marketing, and support expense consists primarily of salaries and related expenses for sales and marketing personnel, commissions for both in-house and third-party representatives, costs related to the co-development of certain content, other sales and marketing support costs such as advertising, literature and promotional materials, product service personnel and support costs, warranty-related costs and bad debt expense. Sales, marketing and support expense also includes the operating expenses of our sales office subsidiaries in Denmark, Singapore, Brazil, and Japan. Sales, marketing and support expense was \$8.7 million for both the three months ended March 31, 2017 and three months ended March 31, 2016. As a percentage of net sales, sales, marketing and support expense for the three months ended March 31, 2017 was 22% as compared to 21% for the three months ended March 31, 2016.

We expect that our sales, marketing, and support expense will increase year-over-year primarily driven by increased personnel, marketing and technology investments to support product sales and launches.

General and administrative expense consists of costs attributable to management, finance and accounting, information technology, human resources, certain outside professional services, and other administrative costs. General and administrative expense for the three months ended March 31, 2017 increased by \$0.5 million, or 7%, to \$8.2 million from \$7.7 million for the three months ended March 31, 2016. The increase in general and administrative expense primarily resulted from an increase in salaries and associated compensation due to an increase in headcount. As a percentage of net sales, general and administrative expense for the three months ended March 31, 2017 was 20% as compared to 19% for the three months ended March 31, 2016.

We expect general and administrative expenses to increase year-over-year in 2017, primarily driven by increased personnel costs.

Interest and Other Expense, Net

Interest income represents interest earned on our cash and cash equivalents, as well as from investments. Interest income increased slightly to \$0.2 million for the three months ended March 31, 2017 from \$0.1 million for the three months ended March 31, 2016. Interest expense remained flat at \$0.4 million for the three months ended March 31, 2017 and 2016. Other expense, net remained flat at \$0.1 million for the three months ended March 31, 2017 and 2016.

Income Tax Expense (Benefit)

Income tax expense for the three months ended March 31, 2017 was \$0.2 million due to taxes related to income earned in foreign jurisdictions and no associated income tax benefit related to the loss incurred in the U.S. due to a full valuation allowance on our U.S. deferred tax assets. Income tax benefit of \$0.9 million for the three months ended March 31, 2016 was based on the estimated effective tax rate for fiscal 2016 and the related composition of the pre-tax loss for the period.

Segment Discussion - Three Months Ended March 31, 2017 and 2016

Our net sales by segment for the three months ended March 31, 2017 and 2016 were as follows:

	For the three months ended March 31,		Change	
	2017	2016	\$	%
<i>(dollars in thousands)</i>				
Mobile connectivity sales				
Product	\$9,854	\$10,716	\$ (862)	(8)%
Service	24,433	24,549	(116)	(1)%
Net sales	\$ 34,287	\$ 35,265	\$ (978)	(3)%
Inertial navigation sales				
Product	\$5,009	\$4,666	\$ 343	7 %
Service	915	449	466	104 %
Net sales	\$ 5,924	\$ 5,115	\$ 809	16 %

Operating earnings (loss) by segment for for the three months ended March 31, 2017 and 2016 were as follows:

	For the three months ended March 31,		Change	
	2017	2016	\$	%
<i>(dollars in thousands)</i>				
Mobile connectivity	\$622	\$1,990	\$ (1,368)	(69)%
Inertial navigation	(44)	(927)	883	95 %
	\$578	\$1,063	\$(485)	(46)%
Unallocated	(5,048)	(4,437)	(611)	(14)%
Loss from operations	\$ (4,470)	\$ (3,374)	\$ (1,096)	(32)%

Mobile Connectivity Segment

Net sales in the mobile connectivity segment decreased approximately \$1.0 million, or 3%, for the three months ended March 31, 2017 as compared to the three months ended March 31, 2016. Mobile connectivity product sales decreased by \$0.9 million, or 8%, to approximately \$9.8 million for the three months ended March 31, 2017 from \$10.7 million for the three months ended March 31, 2016. The decrease was primarily due to a \$0.7 million, or 7%, decrease in mini-VSAT product sales due to a continuing weakness in the European maritime markets and a \$0.2 million, or 15%, decrease in our sales of our land mobile connectivity products.

Mobile connectivity service sales decreased by \$0.1 million, or 1%, to \$24.4 million for the three months ended March 31, 2017 from \$24.5 million for the three months ended March 31, 2016. The decrease was primarily due to a \$1.1 million decrease in our content and training service revenue, which resulted primarily from exchange rate weakness arising from content and training service sales recorded in pounds sterling, and a \$0.1 million decrease in Inmarsat service sales due to a decrease in Inmarsat airtime customers. Partially offsetting these decreases was a \$1.0 million increase in mini-VSAT service sales driven by an increase in the number of installed mini-VSAT units.

We expect that our mini-VSAT service sales will grow moderately year-over-year, primarily through the continued expansion of our mini-VSAT Broadband customer base, and due to a new product offering, subscription service model "Agile Plans", which allows customers the option to receive mini-VSAT Broadband airtime and hardware for a single monthly charge. We expect that mini-VSAT product sales may decline if customers select the new subscription service model.

Operating earnings for the mobile connectivity segment decreased approximately \$1.4 million, or 69%, for the three months ended March 31, 2017 as compared to the three months ended March 31, 2016. This decrease resulted primarily from a \$0.9 million increase in unfunded engineering costs, a \$0.4 million increase in professional and consulting services, and a \$0.3 million increase in travel expenses, partially offset by a \$0.2 million decrease in warranty expense.

We expect our overall mobile connectivity operating earnings, before consideration of corporate allocations, to be generally in line with 2016. We also anticipate that we will improve our service margins to the extent that customers adopt our mini-VSAT Broadband rate plans that provide customers with faster speeds with data caps. Additionally, we intend to seek to improve margins by lowering costs through increased network volume and lower-cost network capacity.

Inertial Navigation Segment

Net sales in the inertial navigation segment increased approximately \$0.8 million, or 16%, for the three months ended March 31, 2017 as compared to the three months ended March 31, 2016. Inertial navigation product sales increased \$0.3 million, or 7%, to \$5.0 million for the three months ended March 31, 2017 from \$4.7 million for the three months ended March 31, 2016. Specifically, sales of our FOG products increased \$0.4 million, or 11%, partially offset by a \$0.1 million, or 10%, decrease in TACNAV sales. FOG product sales increased due to increased IMU FOG unit sales. Inertial navigation service sales increased \$0.5 million, or 104%, to \$0.9 million for the three months ended March 31, 2017 from \$0.4 million for the three months ended March 31, 2016. The primary reason for the increase was a \$0.6 million increase in contracted engineering services due to a new project which began in January of 2017 and is anticipated to run through the third quarter of 2017. This increase was partially offset by a \$0.1 million decrease in inertial navigation repair revenue.

We expect that TACNAV product sales will continue to see growth in 2017 compared with 2016; however, it is challenging to forecast the specific timing that orders will be received and delivered to the customer. Our current forecast is based on our expectation that these sales will be weighted towards the second half of 2017, and we anticipate that product sales on a quarter-to-quarter basis may be very uneven. Additionally, we expect to see modest growth in our FOG products in 2017 as these products are incorporated into additional commercial applications and programs. We also expect to see modest growth in contracted engineering services year-over-year.

Our operating loss for the inertial navigation segment decreased approximately \$0.9 million, or approximately 95%, for the three months ended March 31, 2017 as compared to the three months ended March 31, 2016. This decrease is primarily due to a \$0.7 million decrease in unfunded engineering costs and the increase in product sales.

We expect our overall inertial navigation operating earnings, before consideration of corporate allocations, to decline in 2017 due to lower contracted engineering service revenue, which often generates higher margins than other inertial navigation revenue. Similar to inertial navigation net sales noted above, operating earnings are expected to be uneven during 2017 as a result of the specific timing of orders.

Unallocated

Certain corporate-level costs have not been allocated because they are not attributable to either segment. These costs primarily consist of broad corporate functions, including executive, legal, finance, information technology, and costs associated with corporate actions.

Unallocated operating loss increased approximately \$0.6 million, or approximately 14%, for the three months ended March 31, 2017 as compared to the three months ended March 31, 2016. The increase in the operating loss was primarily the result of an increase in salaries and associated compensation due to an increase in headcount.

Backlog

Backlog is not a meaningful indicator for predicting revenue in future periods. Commercial resellers for our mobile connectivity products and FOG products do not carry extensive inventories and rely on us to ship products quickly. Generally due to the rapid delivery of our commercial products, our backlog for those products is not significant.

Our backlog for all products and services was approximately \$10.4 million and \$8.9 million as of March 31, 2017 and December 31, 2016, respectively. As of March 31, 2017, \$8.2 million of our backlog was scheduled for fulfillment in 2017, \$1.9 million was scheduled for fulfillment in 2018, and \$0.3 million was scheduled for fulfillment in 2019 through 2025.

Backlog consists of orders evidenced by written agreements and specified delivery dates for customers who are acceptable credit risks. We do not include satellite connectivity service sales in our backlog even though many of our satellite connectivity customers have signed annual or multi-year service contracts providing for a fixed monthly fee. Military orders included in backlog are generally subject to cancellation for the convenience of the customer. When orders are canceled, we generally recover actual costs incurred through the date of cancellation and the costs resulting from termination. As of March 31, 2017, our backlog included approximately \$5.2 million in orders that are subject to cancellation for convenience by the customer. Individual orders for guidance and stabilization products are often large and may require procurement of specialized long-lead components and allocation of manufacturing resources. The complexity of planning and executing larger orders generally requires customers to order well in advance of the required delivery date, resulting in backlog.

Liquidity and Capital Resources

Our primary liquidity needs are to fund general business requirements, including working capital requirements, capital expenditures, interest payments, and debt repayments. In recent years, we have funded our operations primarily from cash flows from operations, bank financing, and the proceeds received from exercises of stock options.

As of March 31, 2017, we had \$46.1 million in cash, cash equivalents, and marketable securities, of which \$15.2 million in cash and cash equivalents was held in local currencies by our foreign subsidiaries. Our foreign subsidiaries held no marketable securities as of March 31, 2017. As of March 31, 2017, we had \$62.2 million in working capital.

Net cash provided by operations was \$4.3 million for the three months ended March 31, 2017 compared to net cash provided by operations of \$8.6 million for the three months ended March 31, 2016. The \$4.3 million decrease in cash provided by operations was primarily due to a \$7.4 million decrease in cash inflows relating to accounts receivable principally due to lower sales in the fourth quarter of 2016 as compared to the fourth quarter of 2015 that were paid in the first quarter of 2017 and the first quarter of 2016, respectively, a \$2.1 million increase in net loss, a \$1.6 million decrease in non-cash items, and a \$0.4 million decrease in cash inflows relating to deferred revenue. Partially offsetting the decrease in cash inflows were a \$2.8 million decrease in cash outflows relating to accrued expenses, a \$2.8 million decrease in cash outflows relating to accounts payable, a \$1.0 million decrease in cash outflows related to prepaid expenses and other assets and a \$0.6 million decrease in cash outflows relating to inventories.

Net cash provided by investing activities was \$6.9 million for the three months ended March 31, 2017 compared to net cash used in investing activities of \$1.3 million for the three months ended March 31, 2016. The \$8.2 million increase was principally the result of a \$9.0 million decrease in net investments in available-for-sale marketable securities, which was partially offset by a \$0.8 million increase in capital expenditures. The increase in cash provided by investing activities was principally driven by a decrease in available-for-sale marketable securities purchases of \$0.9 million and an increase in available-for-sale marketable securities maturities or sales of \$8.1 million, resulting in an overall decrease in available-for-sale marketable securities held as of March 31, 2017.

Net cash used in financing activities was \$8.5 million for the three months ended March 31, 2017 compared to net cash used in financing activities of \$1.7 million for the three months ended March 31, 2016. The \$6.8 million increase in net cash used in financing activities is primarily attributable to a \$6.4 million increase in repayments of our term loan we undertook in connection with the acquisition of Videotel in July 2014, a \$1.2 million increase in repayments of long-term debt under our credit agreement and a \$0.1 million increase in payments of employee restricted stock withholdings. These amounts were partially offset by a \$0.9 million increase in proceeds from the exercise of stock options and the purchase of shares under our employee stock purchase plan.

Borrowing Arrangements

Principal Credit Facility

As of March 31, 2017, there was \$46.0 million in aggregate principal amount outstanding under our principal credit facility. On July 1, 2014, we entered into a five-year senior credit agreement with Bank of America, N.A., as administrative agent, and the lenders named from time to time as parties thereto, for an aggregate amount of up to \$80.0 million, including a revolving credit facility of up to \$15.0 million and a term loan of \$65.0 million to be used for general corporate purposes, including both the refinancing of the \$30.0 million of indebtedness then outstanding under our former credit facility and permitted acquisitions. We also entered into a security agreement with respect to our grant of a security interest in substantially all of our assets in order to secure our obligations under the credit agreement and the related notes and pledge agreements with respect to our grant of a security interest in 65% of the capital stock of each of KVH Industries A/S and KVH Industries U.K. Limited held by us in order to secure our obligations under the credit agreement and the notes. We made certain amendments to the credit agreement in June and September 2015. We also amended the credit agreement again in March 2017 to further modify the Maximum Consolidated Leverage Ratio, to amend the Applicable Rate and amortization schedule of the term loan and to modify the definition of Consolidated Fixed Charges, and to make certain other changes, as described below.

We executed \$65.0 million in term notes on July 1, 2014 in connection with our acquisition of Videotel. We applied proceeds in the amount of \$35.0 million toward the payment of a portion of the purchase price for Videotel, and we applied proceeds in the amount of \$30.0 million toward the refinancing of the then-outstanding balance under our former credit facility. We were required to make principal repayments on the term loan in the amount of approximately \$1.2 million at the end of each of the first eight three-month periods following the closing; thereafter, we were required to make principal repayments in the amount of approximately \$1.6 million for each succeeding three-month period until the maturity of the loan on July 1, 2019. We made all required principal repayments on a timely basis. In connection with the amendment to the credit agreement entered into in March 2017, we made a principal repayment of \$6.0 million on the term loan and amended the repayment terms. Under the amended terms, we must make principal repayments of \$575,000 every three months starting on April 1, 2017 until the maturity of the loan on July 1, 2019. On the maturity date, the entire remaining principal balance of the loan, including any future loans under the revolver, is due and payable, together with all accrued and unpaid interest, penalties and other amounts due and payable under the credit agreement. The credit agreement contains provisions requiring the mandatory prepayment of amounts outstanding under the term loan and the revolver under specified circumstances, including (i) 100% of the net cash proceeds from certain dispositions to the extent not reinvested in our business within a stated period, (ii) 50% of the net cash proceeds from stated equity issuances and (iii) 100% of the net cash proceeds from certain receipts of more than \$250,000 outside the ordinary course of business. The prepayments are first applied to the term loan, in inverse order of maturity, and then to the revolver. In the discretion of the administrative agent, certain mandatory prepayments made on the revolver can permanently reduce the amount of credit available under the revolver.

Loans under the credit agreement bear interest at varying rates determined in accordance with the credit agreement. Each LIBOR Rate Loan, as defined in the credit agreement, bears interest on the outstanding principal amount thereof for each interest period from the applicable borrowing date at a rate per annum equal to the LIBOR Daily Floating Rate or LIBOR Monthly Floating Rate, each as defined in the credit agreement, as applicable, plus the Applicable Rate, as defined in the credit agreement, and each Base Rate Loan, as defined in the credit agreement, bears interest on the outstanding principal amount thereof from the applicable borrowing date at a rate per annum equal to the Base Rate, as defined in the credit agreement, plus the Applicable Rate. The Applicable Rate ranges from 1.75% to 2.25%, depending on our Consolidated Leverage Ratio, as defined in the credit agreement. The highest Applicable Rate applies when the Consolidated Leverage Ratio exceeds 1.50:1.00. Upon certain defaults, including failure to make payments when due, interest becomes payable at a higher default rate.

Borrowings under the revolver are subject to the satisfaction of numerous conditions precedent at the time of each borrowing, including the continued accuracy of our representations and warranties and the absence of any default under the credit agreement. As of March 31, 2017, there were no borrowings outstanding under the revolver.

The credit agreement contains two financial covenants, a Maximum Consolidated Leverage Ratio and a Minimum Consolidated Fixed Charge Coverage Ratio, each as defined in the credit agreement. In September 2015, the Maximum Consolidated Leverage Ratio was increased from 1.00:1.00 to 1.75:1.00 for September 30, 2015, 1.50:1.00 for December 31, 2015, and 1.25:1.00 for March 31, 2016 and each fiscal quarter thereafter. In March 2017, the Maximum Consolidated Leverage Ratio was increased to 1.50:1.00. The Minimum Consolidated Fixed Charge Coverage Ratio may not be less than 1.25:1.00. In March 2017, the definition of the Consolidated Fixed Charge Coverage Ratio was amended to include only maintenance capital expenditures, as defined in the amendment, and to reflect certain other changes. We were in compliance with these financial ratio covenants as of March 31, 2017 and expect to be in compliance with the amended financial covenants for the foreseeable future.

The credit agreement imposes certain other affirmative and negative covenants, including without limitation covenants with respect to the payment of taxes and other obligations, compliance with laws, entry into material contracts, creation of liens, incurrence of indebtedness, investments, dispositions, fundamental changes, restricted payments, changes in the nature of our business, transactions with affiliates, corporate and accounting changes, and sale and leaseback arrangements.

Our obligation to repay loans under the credit agreement could be accelerated upon a default or event of default under the terms of the credit agreement, including certain failures to pay principal or interest when due, certain breaches of representations and warranties, the failure to comply with our affirmative and negative covenants under the credit agreement, a change of control, certain defaults in payment relating to other indebtedness, the acceleration of payment of certain other indebtedness, certain events relating to our liquidation, dissolution, bankruptcy, insolvency or receivership, the entry of certain judgments against us, certain events relating to the impairment of collateral or the lenders' security interest therein, and any other material adverse change with respect to us.

Mortgage Loan

On April 6, 2009, we entered into a mortgage loan in the amount of \$4.0 million related to our headquarters facility in Middletown, Rhode Island. On June 9, 2011, we entered into an amendment to the mortgage loan. The loan term is ten years, with a principal amortization of 20 years, and the interest rate will be a rate per year adjusted periodically based on a defined interest period equal to the BBA LIBOR Rate plus 2.00 percentage points. Land, building and improvements with an approximate carrying value of approximately \$5.0 million as of March 31, 2017 secure the mortgage loan. The monthly mortgage payment is approximately \$14,000, plus interest and increases in increments of \$1,000 each year throughout the life of the mortgage. Due to the difference in the term of the loan and amortization of the principal, a balloon payment of \$2.6 million is due on April 1, 2019. The loan contains one financial covenant, a Fixed Charge Coverage Ratio, which applies in the event that our consolidated cash, cash equivalents, and marketable securities balance falls below \$25.0 million at any time. As our consolidated cash, cash equivalents and marketable securities balance was above \$25.0 million for the three months ended March 31, 2017, the Fixed Charge Coverage Ratio did not apply. Under the mortgage loan we may prepay our outstanding loan balance subject to certain early termination charges as defined in the mortgage loan agreement. If we were to default on our mortgage loan, the land, building and improvements would be used as collateral. As discussed in Note 17 to the consolidated financial statements, effective April 1, 2010, in order to reduce the volatility of cash outflows that arise from changes in interest rates, we entered into two interest rate swap agreements that are intended to hedge our mortgage interest obligations by fixing the interest rates specified in the mortgage loan to 5.9% for half of the principal amount outstanding and 6.1% for the remaining half of the principal amount outstanding as of April 1, 2010 until the mortgage loan expires on April 16, 2019.

Other Matters

We intend to continue to invest in the mini-VSAT Broadband network on a global basis. As part of the future potential capacity expansion, we would plan to seek to acquire additional satellite capacity from satellite operators, expend funds to seek regulatory approvals and permits, develop product enhancements in anticipation of the expansion, and hire additional personnel. For example, in December 2011, we entered into a five-year agreement to lease satellite capacity from a satellite operator, effective February 1, 2012, and in 2012 we also purchased three satellite hubs to support this added capacity. The total cost of the five-year satellite capacity agreement, the satellite hubs, and teleport services was approximately \$12.2 million, including \$2.7 million for the hubs. In January 2013, we borrowed \$4.7 million from a bank and pledged as collateral six satellite hubs and related equipment, including the three hubs purchased in 2012. The term of the equipment loan was five years, and the loan bore interest at a fixed rate of 2.76% per annum. In March 2017, we repaid in full the current balance of the loan in advance of the January 30, 2018 original maturity date. In December 2013, we borrowed \$1.2 million from a bank and pledged as collateral one satellite hub and related equipment. The term of the equipment loan was five years, and the loan bore interest at a fixed rate of 3.08% per annum. In March 2017, we repaid in full the current balance of the loan in advance of the December 30, 2018 original maturity date.

On November 26, 2008, our Board of Directors authorized a program to repurchase up to one million shares of our common stock. The share repurchase program is funded using our existing cash, cash equivalents, marketable securities and future cash flows. As of March 31, 2017, 341,000 shares of our common stock remain available for repurchase under the program. We did not purchase any shares of our common stock in the three months ended March 31, 2017.

As of March 31, 2017, we held \$46.1 million in cash, cash equivalents and marketable securities. We believe that our cash, cash equivalents and marketable securities, together with our other working capital and cash flows from operations, will be adequate to meet planned operating and capital requirements through at least the next twelve months. However, as the need or opportunity arises, we may seek to raise additional capital through public or private sales of securities or through additional debt financing. There are no assurances that we will be able to obtain any additional funding or that such funding will be available on terms acceptable to us.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Our primary market risk exposures are interest rate risk and foreign currency exchange rate risk.

We are exposed to changes in interest rates because we finance certain operations through fixed and variable rate debt instruments.

We had \$46.0 million in borrowings outstanding at March 31, 2017, at an interest rate equal to the LIBOR Daily Floating Rate plus 1.75% under our variable-rate credit facility. For more information regarding our credit facility, see Item 2. *Management's Discussion and Analysis of Financial Condition and Results of Operations - Borrowing Arrangements*. A hypothetical 10% increase or decrease in interest rates would have approximately a \$0.1 million impact on our annual interest expense based on the \$46.0 million outstanding at March 31, 2017 with an interest rate of 2.73%.

As discussed in Note 17 to the consolidated financial statements, effective April 1, 2010, in order to reduce the volatility of cash outflows that arise from changes in interest rates, we entered into two interest rate swap agreements. These interest rate swap agreements are intended to hedge our mortgage loan related to our headquarters facility in Middletown, Rhode Island by fixing the interest rates specified in the mortgage loan to 5.9% for half of the principal amount outstanding and 6.1% for the remaining half of the principal amount outstanding as of April 1, 2010 until the mortgage loan expires on April 16, 2019.

We are exposed to currency exchange rate fluctuations related to our subsidiary operations in the United Kingdom, Denmark, Norway, Brazil, Singapore, Hong Kong, Cyprus, Japan, Belgium, and the Netherlands. Certain transactions in these locations are made in the local currency, yet are reported in the U.S. dollar. For foreign currency exposures existing at March 31, 2017, a 10% unfavorable movement in the foreign exchange rates for our subsidiary locations would not expose us to material losses in earnings or cash flows.

From time to time, we have purchased foreign currency forward contracts. These forward contracts are intended to offset the impact of exchange rate fluctuations on cash flows of our foreign subsidiaries. Foreign exchange contracts are accounted for as cash flow hedges and are recorded on the balance sheet at fair value until executed. Changes in the fair value are recognized in earnings. We did not enter into any such contracts or have any such contracts outstanding during the three months ended March 31, 2017.

The primary objective of our investment activities is to preserve principal and maintain liquidity, while at the same time maximizing income. We have not entered into any instruments for trading purposes. Some of the securities that we invest in may have market risk. To minimize this risk, we maintain our portfolio of cash equivalents and short-term investments in a variety of securities that can include United States treasuries, certificates of deposit, investment grade asset-backed corporate securities, money market mutual funds, municipal bonds, and government agency and non-government debt securities. As of March 31, 2017, a hypothetical 100 basis-point increase in interest rates would have resulted in an immaterial decrease in the fair value of our investments that had maturities of greater than one year. Due to the conservative nature of our investments and the relatively short duration of their maturities, we believe this interest rate risk is substantially mitigated. As of March 31, 2017, 15% of the \$16.7 million classified as available-for-sale marketable securities will mature or reset within one year. Accordingly, long-term interest rate risk is not considered material for our investment activities. We did not invest in any financial instruments denominated in foreign currencies as of March 31, 2017.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, which are designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission'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 timely decisions regarding required disclosure. Under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, our management has evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2017, the end of the period covered by this interim report. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of March 31, 2017.

Changes in Internal Control over Financial Reporting

Under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, our management has evaluated changes in our internal control over financial reporting that occurred during the first quarter of 2017. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer did not identify any change in our internal control over financial reporting during the first quarter of 2017 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Important Considerations

The effectiveness of our disclosure controls and procedures and our internal control over financial reporting is subject to various inherent limitations, including cost limitations, judgments used in decision making, assumptions about the likelihood of future events, the soundness of our systems, the possibility of human error, and the risk of fraud. Moreover, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions and the risk that the degree of compliance with policies or procedures may deteriorate over time. Because of these limitations, there can be no assurance that any system of disclosure controls and procedures or internal control over financial reporting will be successful in preventing all errors or fraud or in making all material information known in a timely manner to the appropriate levels of management.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

From time to time, we are involved in litigation incidental to the conduct of our business. In the ordinary course of business, we are a party to inquiries, legal proceedings and claims including, from time to time, disagreements with vendors and customers. We are not a party to any lawsuit or proceeding that, in our opinion, is likely to materially harm our business, results of operations, financial condition, or cash flows.

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

On November 26, 2008, our Board of Directors authorized a program to repurchase up to one million shares of our common stock. As of March 31, 2017, 341,000 shares of common stock remain available for repurchase under the program. The repurchase program is funded using our existing cash, cash equivalents, marketable securities, and future cash flows. Under the repurchase program, at management's discretion, we may repurchase shares on the open market from time to time, in privately negotiated transactions or block transactions, or through an accelerated repurchase agreement. The timing of such repurchases depends on availability of shares, price, market conditions, alternative uses of capital, and applicable regulatory requirements. The program may be modified, suspended or terminated at any time without prior notice. The repurchase program has no expiration date. There were no other repurchase programs outstanding during the three months ended March 31, 2017, and no repurchase programs expired during the period.

We did not repurchase any shares of our common stock in open market transactions during the three months ended March 31, 2017.

During the three months ended March 31, 2017, 43,217 vested restricted shares were surrendered to us in satisfaction of tax withholding obligations.

Period	Total Number of Shares	Average Price Per Share
January	—	—
February	15,179	\$ 10.30
March	28,038	\$ 8.41

ITEM 6. EXHIBITS

Exhibits:

Exhibit No.	Description	Filed with this Form 10-Q	Incorporated by Reference		
			Form	Filing Date	Exhibit No.
3.1	Amended and Restated Certificate of Incorporation, as amended		10-Q	August 6, 2010	3.1
3.2	Amended and Restated Bylaws		8-K	April 30, 2014	3.1
4.1	Specimen certificate for the common stock		S-1/A	March 22, 1996	4.1
10.2	Third Amendment of Credit Agreement, dated as of March 7, 2017, among Bank of America, N.A., The Washington Trust Company and KVH Industries, Inc.		8-K	March 9, 2017	10.1
31.1	Rule 13a-14(a)/15d-14(a) certification of principal executive officer	X			
31.2	Rule 13a-14(a)/15d-14(a) certification of principal financial officer	X			
32.1	Section 1350 certification of principal executive officer and principal financial officer	X			
101	The following financial information from KVH Industries, Inc.'s Quarterly Report on Form 10-Q for the quarter ended March 31, 2017, formatted in XBRL (Extensible Business Reporting Language): (i) the Consolidated Balance Sheets (unaudited), (ii) the Consolidated Statements of Operations (unaudited), (iii) the Consolidated Statements of Comprehensive Loss (unaudited), (iv) the Consolidated Statements of Cash Flows (unaudited), and (v) the Notes to Consolidated Financial Statements (unaudited).	X			

SIGNATURE

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.

Date: May 9, 2017

KVH Industries, Inc.

By:

/s/ DONALD W. REILLY

Donald W. Reilly
(Duly Authorized Officer and Chief Financial Officer)

Exhibit Index

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32.1	Section 1350 certification of principal executive officer and principal financial officer	X			
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Certification of Principal Executive Officer
Pursuant to Rule 13a-14 or 15d-14 under the Securities Exchange Act of 1934 as Adopted Pursuant to
Section 302 of the Sarbanes-Oxley Act of 2002

I, Martin A. Kits van Heyningen, certify that:

1. I have reviewed this quarterly report on Form 10-Q of KVH Industries, Inc.;
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 9, 2017

/s/ Martin A. Kits van Heyningen

Martin A. Kits van Heyningen

President, Chief Executive Officer and

Chairman of the Board

Certification of Principal Financial Officer
Pursuant to Rule 13a-14 or 15d-14 under the Securities Exchange Act of 1934 as Adopted Pursuant to
Section 302 of the Sarbanes-Oxley Act of 2002

I, Donald W. Reilly, certify that:

1. I have reviewed this quarterly report on Form 10-Q of KVH Industries, Inc.;
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 9, 2017

/s/ Donald W. Reilly

Donald W. Reilly

Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. §1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report on Form 10-Q of KVH Industries, Inc. (the "Company") for the quarter ended March 31, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned President, Chief Executive Officer and Chairman of the Board, and Chief Financial Officer of the Company, certifies, to his best knowledge and belief, pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

/s/ Martin A. Kits van Heyningen

Martin A. Kits van Heyningen

President, Chief Executive Officer and

Chairman of the Board

/s/ Donald W. Reilly

Donald W. Reilly

Chief Financial Officer

Date: May 9, 2017

Date: May 9, 2017