# 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: June 30, 2019**
**OR**

o **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** | **05-0420589** |
|---|---|
| *(State or Other Jurisdiction of Incorporation or Organization)* | *(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 o

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

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.

| | | | |
|---|---|---|---|
| Large accelerated filer | o | Accelerated filer | ☒ |
| Non-accelerated filer | o | Smaller reporting company | ☒ |
| | | Emerging growth company | o |

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. o

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

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

| Title of Each Class | Trading Symbol(s) | Name of Each Exchange on which Registered |
|---|---|---|
| Common Stock, par value $0.01 per share | KVHI | The NASDAQ Stock Market LLC (NASDAQ Global Select Market) |

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

| Date | Class | Outstanding shares |
|---|---|---|
| July 29, 2019 | Common Stock, par value $0.01 per share | 18,027,681 |

**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)**

| | June 30, 2019 | December 31, 2018 |
|---|---|---|
| **ASSETS** | **(unaudited)** | |
| Current assets: | | |
| Cash and cash equivalents | $ 15,306 | $ 15,212 |
| Marketable securities | 50,057 | 25 |
| Accounts receivable, net of allowance for doubtful accounts of $2,111 and $2,390 as of June 30, 2019 and December 31, 2018, respectively | 29,598 | 28,592 |
| Inventories | 24,216 | 22,942 |
| Prepaid expenses and other current assets | 3,449 | 2,532 |
| Current contract assets | 3,834 | 3,566 |
| Current assets held for sale | — | 4,871 |
| Total current assets | 126,460 | 77,740 |
| Property and equipment, net | 52,501 | 50,633 |
| Intangible assets, net | 5,197 | 5,661 |
| Goodwill | 14,995 | 15,031 |
| Right of use assets | 8,162 | — |
| Other non-current assets | 5,809 | 5,484 |
| Non-current contract assets | 7,577 | 6,971 |
| Non-current deferred income tax asset | 195 | 226 |
| Non-current assets held for sale | — | 25,906 |
| **Total assets** | **$ 220,896** | **$ 187,652** |
| **LIABILITIES AND STOCKHOLDERS' EQUITY** | | |
| Current liabilities: | | |
| Accounts payable | $ 16,974 | $ 16,735 |
| Accrued compensation and employee-related expenses | 4,783 | 4,947 |
| Accrued other | 11,467 | 9,602 |
| Accrued product warranty costs | 2,181 | 1,916 |
| Current portion of long-term debt | 2,000 | 9,928 |
| Contract liabilities | 8,119 | 7,647 |
| Current operating lease liability | 4,418 | — |
| Liability for uncertain tax positions | 675 | 631 |
| Current liabilities held for sale | — | 4,604 |
| Total current liabilities | 50,617 | 56,010 |
| Other long-term liabilities | 1,599 | 1,920 |
| Long-term operating lease liability | 3,760 | — |
| Long-term contract liabilities | 10,056 | 9,070 |
| Long-term debt, excluding current portion | — | 19,437 |
| Non-current deferred income tax liability | 868 | 887 |
| Non-current liabilities held for sale | — | 813 |
| **Total liabilities** | **$ 66,900** | **$ 88,137** |
| Commitments and contingencies (Notes 2, 10, 12, and 19) | | |
| Stockholders' equity: | | |
| Preferred stock, $0.01 par value. Authorized 1,000,000 shares; none issued | — | — |
| Common stock, $0.01 par value. Authorized 30,000,000 shares; 19,319,933 and 19,026,393 shares issued at June 30, 2019 and December 31, 2018, respectively; and 18,037,511 and 17,743,971 shares outstanding at June 30, 2019 and December 31, 2018, respectively | 193 | 190 |
| Additional paid-in capital | 141,856 | 139,617 |
| Retained earnings (accumulated deficit) | 25,600 | (15,397) |
| Accumulated other comprehensive loss | (3,489) | (14,731) |
| | 164,160 | 109,679 |
| Less: treasury stock at cost, common stock, 1,282,422 shares as of June 30, 2019 and December 31, 2018 | (10,164) | (10,164) |
| **Total stockholders' equity** | **153,996** | **99,515** |
| **Total liabilities and stockholders' equity** | **$ 220,896** | **$ 187,652** |

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 June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | **2019** | **2018** | **2019** | **2018** |
| Sales: | | | | |
| Product | $ 14,694 | $ 16,162 | $ 27,568 | $ 30,154 |
| Service | 24,541 | 22,470 | 47,702 | 43,883 |
| Net sales | 39,235 | 38,632 | 75,270 | 74,037 |
| Costs and expenses: | | | | |
| Costs of product sales | 12,308 | 10,094 | 20,161 | 19,017 |
| Costs of service sales | 15,379 | 14,231 | 30,752 | 26,601 |
| Research and development | 3,798 | 3,565 | 7,666 | 7,499 |
| Sales, marketing and support | 8,853 | 7,609 | 16,987 | 15,186 |
| General and administrative | 5,730 | 5,713 | 12,685 | 12,146 |
| Total costs and expenses | 46,068 | 41,212 | 88,251 | 80,449 |
| Loss from operations | (6,833) | (2,580) | (12,981) | (6,412) |
| Interest income | 1,000 | 147 | 1,175 | 293 |
| Interest expense | 558 | 427 | 943 | 836 |
| Other income, net | 338 | 543 | 242 | 237 |
| Loss from continuing operations before income tax (benefit) expense | (6,053) | (2,317) | (12,507) | (6,718) |
| Income tax (benefit) expense from continuing operations | (2,599) | 85 | (2,631) | 130 |
| Net loss from continuing operations | $ (3,454) | $ (2,402) | $ (9,876) | $ (6,848) |
| | | | | |
| Income from discontinued operations, net of tax | 50,630 | 1,059 | 50,873 | 1,612 |
| **Net income (loss)** | **$ 47,176** | **$ (1,343)** | **$ 40,997** | **$ (5,236)** |
| | | | | |
| **Net loss from continuing operations per common share** | | | | |
| Basic and diluted | **$ (0.20)** | **$ (0.14)** | **$ (0.57)** | **$ (0.40)** |
| **Net income from discontinued operations per common share** | | | | |
| Basic and diluted | **$ 2.90** | **$ 0.06** | **$ 2.93** | **$ 0.10** |
| **Net income (loss) per common share** | | | | |
| Basic and diluted | **$ 2.70** | **$ (0.08)** | **$ 2.36** | **$ (0.31)** |
| **Weighted average number of common shares outstanding:** | | | | |
| Basic and diluted | **17,463** | **17,140** | **17,383** | **16,942** |

See accompanying Notes to Unaudited Consolidated Financial Statements.

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

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | **2019** | **2018** | **2019** | **2018** |
| **Net income (loss)** | $ 47,176 | $ (1,343) | $ 40,997 | $ (5,236) |
| **Other comprehensive income (loss), net of tax:** | | | | |
| Unrealized gain on available-for-sale securities | — | — | — | 1 |
| Foreign currency translation adjustment | 10,151 | (3,866) | 11,231 | (1,422) |
| Unrealized gain on derivative instruments, net | 3 | 15 | 11 | 37 |
| Other comprehensive income (loss), net of tax[1] | 10,154 | (3,851) | 11,242 | (1,384) |
| **Total comprehensive income (loss)** | $ 57,330 | $ (5,194) | $ 52,239 | $ (6,620) |

(1) Tax impact was nominal for all periods.

See accompanying Notes to Unaudited Consolidated Financial Statements.

**KVH INDUSTRIES, INC. AND SUBSIDIARIES**
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY**
**(in thousands, unaudited)**

| | Common Stock | | Additional Paid-in Capital | (Accumulated Deficit) Retained Earnings | Accumulated Other Comprehensive (Loss) Income | Treasury Stock | | Total Stockholders' Equity |
|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | | | | Shares | Amount | |
| **Balance at March 31, 2019** | **19,134** | **$ 191** | **$ 140,790** | **$ (21,576)** | **$ (13,643)** | **(1,282)** | **$ (10,164)** | **$ 95,598** |
| Net income | — | — | — | 47,176 | — | — | — | 47,176 |
| Other comprehensive income | — | — | — | — | 10,154 | — | — | 10,154 |
| Stock-based compensation | — | — | 1,033 | — | — | — | — | 1,033 |
| Exercise of stock options and issuance of restricted stock awards, net of forfeitures | 186 | 2 | 33 | — | — | — | — | 35 |
| **Balance at June 30, 2019** | **19,320** | **$ 193** | **$ 141,856** | **$ 25,600** | **$ (3,489)** | **(1,282)** | **$ (10,164)** | **$ 153,996** |

| | Common Stock | | Additional Paid-in Capital | (Accumulated Deficit) Retained Earnings | Accumulated Other Comprehensive (Loss) Income | Treasury Stock | | Total Stockholders' Equity |
|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | | | | Shares | Amount | |
| **Balance at December 31, 2018** | **19,026** | **$ 190** | **$ 139,617** | **$ (15,397)** | **$ (14,731)** | **(1,282)** | **$ (10,164)** | **$ 99,515** |
| Net income | — | — | — | 40,997 | — | — | — | 40,997 |
| Other comprehensive income | — | — | — | — | 11,242 | — | — | 11,242 |
| Stock-based compensation | — | — | 1,907 | — | — | — | — | 1,907 |
| Issuance of common stock under employee stock purchase plan | 23 | — | 218 | — | — | — | — | 218 |
| Exercise of stock options and issuance of restricted stock awards, net of forfeitures | 271 | 3 | 114 | — | — | — | — | 117 |
| **Balance at June 30, 2019** | **19,320** | **$ 193** | **$ 141,856** | **$ 25,600** | **$ (3,489)** | **(1,282)** | **$ (10,164)** | **$ 153,996** |

| | Common Stock | | Additional Paid-in Capital | Accumulated Deficit | Accumulated Other Comprehensive Loss | Treasury Stock | | Total Stockholders' Equity |
|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | | | | Shares | Amount | |
| **Balance at March 31, 2018** | **18,804** | **$ 188** | **$ 136,718** | **$ (11,058)** | **$ (8,850)** | **(1,282)** | **$ (10,164)** | **$ 106,834** |
| Net loss | — | — | — | (1,343) | — | — | — | (1,343) |
| Other comprehensive loss | — | — | — | — | (3,851) | — | — | (3,851) |
| ASC 606 adoption | — | — | — | — | — | — | — | — |
| Stock-based compensation | — | — | 739 | — | — | — | — | 739 |
| Exercise of stock options and issuance of restricted stock awards, net of forfeitures | 133 | 1 | 51 | — | — | — | — | 52 |
| **Balance at June 30, 2018** | **18,937** | **$ 189** | **$ 137,508** | **$ (12,401)** | **$ (12,701)** | **(1,282)** | **$ (10,164)** | **$ 102,431** |

| | Common Stock | | Additional Paid-in Capital | Accumulated Deficit | Accumulated Other Comprehensive Loss | Treasury Stock | | Total Stockholders' Equity |
|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | | | | Shares | Amount | |
| **Balance at December 31, 2017** | **18,788** | **$ 188** | **$ 134,361** | **$ (4,417)** | **$ (11,317)** | **(1,659)** | **$ (13,150)** | **$ 105,665** |
| Net loss | — | — | — | (5,236) | — | — | — | (5,236) |
| Other comprehensive loss | — | — | — | — | (1,384) | — | — | (1,384) |
| ASC 606 adoption | — | — | — | (2,748) | — | — | — | (2,748) |
| Stock-based compensation | — | — | 1,592 | — | — | — | — | 1,592 |
| Sale of treasury stock | — | — | 1,478 | — | — | 377 | 2,986 | 4,464 |
| Exercise of stock options and issuance of restricted stock awards, net of forfeitures | 149 | 1 | 77 | — | — | — | — | 78 |
| **Balance at June 30, 2018** | **18,937** | **$ 189** | **$ 137,508** | **$ (12,401)** | **$ (12,701)** | **(1,282)** | **$ (10,164)** | **$ 102,431** |

See accompanying Notes to Unaudited Consolidated Financial Statements.

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

| | Six Months Ended June 30, 2019 | Six Months Ended June 30, 2018 |
|---|---|---|
| **Cash flows from operating activities:** | | |
| Net income (loss) | $ 40,997 | $ (5,236) |
| Adjustments to reconcile net income (loss) to net cash used in operating activities: | | |
| Provision for doubtful accounts | (68) | 129 |
| Depreciation and amortization | 6,412 | 6,288 |
| Deferred income taxes | (22) | 24 |
| Loss on disposals of fixed assets | 117 | — |
| Gain on sale of Videotel | (54,520) | — |
| Compensation expense related to stock-based awards and employee stock purchase plan | 1,907 | 1,592 |
| Unrealized currency translation gain | (289) | (212) |
| Changes in operating assets and liabilities: | | |
| Accounts receivable | (1,186) | (1,719) |
| Inventories | (1,308) | (137) |
| Prepaid expenses, other current assets, and current contract assets | 272 | 230 |
| Other non-current assets and non-current contract assets | (1,466) | (1,252) |
| Accounts payable | (22) | 908 |
| Contract liabilities and long-term contract liabilities | 2,472 | 527 |
| Accrued compensation, product warranty and other current liabilities | 1,049 | (2,331) |
| Other long-term liabilities | (928) | (9) |
| **Net cash used in operating activities** | **$ (6,583)** | **$ (1,198)** |
| **Cash flows from investing activities:** | | |
| Capital expenditures | (6,720) | (7,461) |
| Cash paid for acquisition of intangible asset | (37) | — |
| Proceeds from sale of fixed assets | 103 | — |
| Proceeds from sale of Videotel, net of cash sold | 88,447 | — |
| Purchases of marketable securities | (50,032) | (2,036) |
| Maturities and sales of marketable securities | — | 10,020 |
| **Net cash provided by investing activities** | **$ 31,761** | **$ 523** |
| **Cash flows from financing activities:** | | |
| Repayments of long-term debt | (2,597) | (89) |
| Repayments of term note borrowings | (21,938) | (3,400) |
| Repayments of line of credit borrowings | (13,000) | — |
| Proceeds from line of credit borrowings | 10,000 | — |
| Proceeds from stock options exercised and employee stock purchase plan | 365 | 101 |
| Sale of treasury stock | — | 4,500 |
| Payment of finance lease | (304) | (258) |
| **Net cash (used in) provided by financing activities** | **$ (27,474)** | **$ 854** |
| Effect of exchange rate changes on cash and cash equivalents | (448) | (238) |
| **Net decrease in cash and cash equivalents** | **(2,744)** | **(59)** |
| **Cash and cash equivalents at beginning of period** | **18,050** | **34,596** |
| **Cash and cash equivalents at end of period** | **$ 15,306** | **$ 34,537** |
| Supplemental disclosure of non-cash investing activities: | | |
| Changes in accrued other and accounts payable related to property and equipment additions | **$ 229** | **$ 624** |

See accompanying Notes to Unaudited Consolidated Financial Statements.

**(1) Description of Business**

KVH Industries, Inc. (together with its subsidiaries, the Company or KVH) is a leading manufacturer of solutions that provide global high-speed Internet, television, and voice services via satellite to mobile users at sea and on land. KVH is also a leading provider of commercially licensed entertainment, including news, sports, music, and movies, to commercial and leisure customers in the maritime, hotel, and retail markets. KVH is also a premier manufacturer of high-performance navigational sensors and integrated inertial systems for defense and commercial applications. KVH's reporting segments are as follows:

- the mobile connectivity segment and
- the inertial navigation segment

KVH's mobile connectivity products enable customers to receive voice services, 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. In March 2019, KVH introduced a 1-meter Ku/C-band antenna designed to deliver download/upload speeds as fast as 20 Mbps/3Mbps through a dual Ku/C-band design that automatically switches between bandwidths to deliver expanded global coverage on KVH's mini-VSAT Broadband high-throughput satellite (HTS) network. In March 2019, KVH further expanded the mini-VSAT Broadband HTS network for the entire Pacific Ocean region via the Horizons 3e satellite, which is jointly owned by Intelsat and SKY Perfect JSAT. The high-performance Horizons 3e satellite immediately adds to the global coverage and capacity of KVH's mini-VSAT Broadband HTS network, which provides connectivity to vessels worldwide.

KVH's mobile connectivity service sales primarily represent 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 VoIP services, to its TracPhone V-series customers. The Company offers AgilePlans, a monthly mini-VSAT Broadband subscription model providing global connectivity to commercial maritime customers, including hardware, installation, broadband Internet, Voice over Internet Protocol (VoIP), entertainment and training content and global support for a monthly fee with no minimum commitment. KVH offers AgilePlans customers a variety of airtime data plans with varying data speeds and fixed data usage levels with overage charges per megabyte, which is similar to the plans that the Company offers to its other customers. The Company recognizes the monthly subscription fee as service revenue over the service delivery period. The Company retains ownership of the hardware that it provides to AgilePlans customers, who must return the hardware to KVH if they decide to terminate the service. Because KVH does not sell the hardware under AgilePlans, the Company does not recognize any product revenue when the hardware is deployed to an AgilePlans customer. KVH records the cost of the hardware used by AgilePlans customers as revenue-generating assets and depreciates the cost over an estimated useful life of five years. Since the Company retains ownership of the hardware, it does not accrue any warranty costs for AgilePlans hardware; however, any maintenance costs for the hardware are expensed in the period these costs are incurred. 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. 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.

On May 13, 2019, the Company and its wholly owned subsidiary, KVH Media Group Limited (KMG), entered into a Share Purchase Agreement (the Purchase Agreement) with Pelican Holdco Limited, an affiliate of Oakley Capital IV Master SCSp, a UK company (together, Oakley), pursuant to which KMG sold all of the issued share capital of Super Dragon Limited and Videotel Marine Asia Limited (together referred to as Videotel) to Oakley for $89,387 in cash, on a cash-free, debt-free basis, subject to working capital adjustments. Videotel comprised the Company's maritime training business, which offered video, animation, eLearning computer-based training and interactive distance learning services to the maritime industry. The sale was completed immediately upon execution of definitive agreements. The Company received payment of the initial purchase price pursuant to a loan agreement (the Bridge Loan) on June 21, 2019. The Bridge Loan was secured by a charge (a type of foreign security interest) over the shares of Super Dragon Limited and Videotel Marine Asia Limited and was further backed by an equity commitment letter from Oakley Capital IV Master SCSp. The Bridge Loan's interest rate was 5% per year during the period from closing until and including the 15$^{th}$ business day after the closing and increased to 12% per year during the period after the 15$^{th}$ business day until the maturity date. The working capital adjustment is in the process of being finalized.The Company has accrued an estimated adjustment liability of approximately $300 as of June 30, 2019. This adjustment will be finalized in the third quarter of 2019. The Company does not have any continuing involvement in these operations other than short term transition services which are being recorded in other income in continuing operations. The Company determined that the sale met the requirements for reporting as a discontinued operations in accordance with Accounting Standards Codification (ASC) 205-20. Please see Note 20 for the discontinued operations disclosures.

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 technology is 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 reflect the sale of Videotel as a discontinued operations. See Notes 1 and 20 for further information on the sale of Videotel.

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, 2018 filed on March 1, 2019 with the Securities and Exchange Commission, which financial statements and related notes do not reflect the sale of Videotel as a discontinued operations. The results for the three and six months ended June 30, 2019 are not necessarily indicative of operating results for the remainder of the year.

The only material change to the significant accounting policies disclosed in the Company's annual report on Form 10-K for the year ended December 31, 2018 was the Company's adoption of ASC 842, *Leases*, effective January 1, 2019. Please see Note 19 for further discussion.

*Significant Estimates and Assumptions and Other Significant Non-Recurring Transactions*

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 deferred purchase price consideration related to asset acquisition, 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 in addition to the valuation of right-of-use assets and lease liabilities, for the six months ended June 30, 2019.

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.

On February 27, 2018, the Company entered into a stock purchase agreement with SKY Perfect JSAT Corporation, or SJC, pursuant to which the Company agreed to sell 377 shares of treasury stock to SJC for a purchase price of $11.95 per share, or an aggregate of $4,500, in a private placement. The transaction closed on February 28, 2018.

During the first quarter of 2018, the Company entered into a five-year finance lease for three satellite hubs for the HTS network. Please see Note 19 for further discussion.

During the second quarter of 2019, the Company sold Videotel. Please see Notes 1 and 20 for further discussion.

**(3) Accounting Standards Issued and Not Yet Adopted**

*ASC Update No. 2016-13, ASC Update No. 2018-19, ASC Update No. 2019-04, and ASC Update No. 2019-05*

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.

In November 2018, the FASB issued ASC Update No. 2018-19, Codification Improvements to Topic 326, *Financial Instruments—Credit Losses*. This update introduced an expected credit loss methodology for the impairment of financial assets measured at amortized cost basis. The amendment also clarifies that receivables arising from operating leases are not within the scope of Subtopic 326-20. Instead, impairment of receivables arising from operating leases should be accounted for in accordance with Topic 842, Leases.

In May 2019, the FASB issued ASC Update No. 2019-04, Codification Improvements to Topic 326, *Financial Instruments—Credit Losses*, Topic 815, *Derivatives and Hedging*, and Topic 825, *Financial Instruments.* This update introduced clarifications of the Board's intent to accrued interest, the transfer between classifications or categories for loans and debt securities, recoveries, reinsurance recoverables, projects of interest rate environments for variable-rate financial instruments, costs to sell when foreclosure is probable, consideration of expected prepayments when determining the effective interest rate, vintage disclosures, and extension and renewal options.

In May 2019, the FASB issued ASC Update No. 2019-05, *Financial Instruments—Credit Losses* (Topic 326). The amendments in the update ease the transition for entities adopting ASC Update 2016-13 and increase the comparability of financial statement information. With the exception of held-to-maturity debt securities, the amendments allow entities to irrevocably elect to apply the fair value option to financial instruments that were previously recorded at amortized cost basis within the scope of Subtopic 326-20, *Financial Instruments—Credit Losses—Measured at Amortized Cost*. The adoption of Update Nos. 2016-13, 2018-19, 2019-04, and 2019-05 are not expected to have a material impact on the Company's financial position or results of operations.

*ASC Update No. 2018-13*

In August 2018, the FASB issued ASC Update No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework-Changes to the Disclosure Requirements for Fair Value Measurement.* The update is effective for annual periods beginning on or after December 15, 2019. Early adoption is permitted upon issuance of this update. The purpose of Update No. 2018-13 is to modify and eliminate some of the disclosure requirements on fair value measurements found in Topic 820, Fair Value Measurement, for both public and nonpublic entities. Through the inclusion of this update, FASB aims to facilitate a clear communication of the information required by GAAP that is most important to users of each entity's financial statements, thus helping to improve the effectiveness of disclosures in the notes to financial statements. Update No. 2018-13 is not expected to have a material impact on the Company's financial position or results of operations.

*ASC Update No. 2018-15*

In August 2018, the FASB issued ASC Update No. 2018-15, *Intangibles—Goodwill and Other—Internal-Use Software (Topic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract.* The update is effective for annual periods beginning on or after December 15, 2019. Early adoption of the amendments in this update is permitted, including adoption in any interim period, for all entities. The purpose of Update No. 2018-15 is to provide a new guideline to the accounting of a customer of a cloud computing arrangement hosted by a vendor when the customer incurs costs associated with the implementation, set-up, and other upfront costs. Specifically, customers will follow the same criteria found in an arrangement with a software license when they capitalize the implementation costs. The new guidance also affects the classification of the capitalized implementation costs and related amortization expense found in a company's balance sheet, income statement, and cash flow statement, and the update also requires additional quantitative and qualitative disclosures. Update No. 2018-15 is not expected to have a material impact on the Company's financial position or results of operations.

*ASC Update No. 2018-18*

In November 2018, the FASB issued ASC Update No. 2018-18, *Collaborative Arrangements (Topic 808): Clarifying the Interaction between Topic 808 and Topic 606*. This update is effective for public business entities for fiscal years beginning after December 15, 2019, and the interim periods within those fiscal years. Early adoption is permitted, including adoption in any interim period, for public business entities for periods for which financial statements have not yet been issued. The purpose of Update No. 2018-18 is to help make clarifications on the interactions between Topic 808, Collaborative Arrangement, and Topic 606, Revenue from Contracts with Customers. Update No. 2018-18 is not expected to have a material impact on the Company's financial position or results of operation.

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

## (4) Marketable Securities

Marketable securities as of June 30, 2019 and December 31, 2018 consisted of the following:

| June 30, 2019 | Amortized Cost | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value |
|---|---|---|---|---|
| Money market mutual funds | $ 50,057 | $ — | $ — | $ 50,057 |
| Total marketable securities designated as available-for-sale | $ 50,057 | $ — | $ — | $ 50,057 |

| December 31, 2018 | Amortized Cost | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value |
|---|---|---|---|---|
| Money market mutual funds | $ 25 | $ — | $ — | $ 25 |
| Total marketable securities designated as available-for-sale | $ 25 | $ — | $ — | $ 25 |

The amortized costs and fair value of marketable securities as of June 30, 2019 and December 31, 2018 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.

| June 30, 2019 | Amortized Cost | Fair Value |
|---|---|---|
| Due in less than one year | $ — | $ — |
| **December 31, 2018** | **Amortized Cost** | **Fair Value** |
| Due in less than one year | $ — | $ — |

Interest income from marketable securities was $32 and $3 during the three months ended June 30, 2019 and 2018, respectively, and $32 and $15 during the six months ended June 30, 2019 and 2018, respectively.

## (5) Stockholder's Equity

### *(a) Stock Equity and Incentive Plan*

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, or the ESPP, was $1,017 and $725 for the three months ended June 30, 2019 and 2018, respectively, and $1,877 and $1,568 for the six months ended June 30, 2019 and 2018, respectively. As of June 30, 2019, there was $3,676 of total unrecognized compensation expense related to stock options, which is expected to be recognized over a weighted-average period of 3.10 years. As of June 30, 2019, there was $4,654 of total unrecognized compensation expense related to restricted stock awards, which is expected to be recognized over a weighted-average period of 2.44 years.

*Stock Options*

During the three months ended June 30, 2019, 7 stock options were exercised for common stock. Additionally, during the three months ended June 30, 2019, 610 stock options were granted and 97 stock options expired, were canceled or were forfeited.

During the six months ended June 30, 2019, 14 stock options were exercised for common stock, $109 of which was delivered to the Company as payment for the exercise price and none of which were surrendered for minimum tax withholding obligations. Additionally, during the six months ended June 30, 2019, 610 stock options were granted with a weighted average grant date fair value of $3.09 per share and 99 stock options expired, were canceled or 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 six months ended June 30, 2019 and 2018 were as follows:

| | Six Months Ended June 30, | |
|---|---|---|
| | 2019 | 2018 |
| Risk-free interest rate | 1.93% | 2.81% |
| Expected volatility | 36.95% | 36.60% |
| Expected life (in years) | 4.27 | 4.29 |
| Dividend yield | 0% | 0% |

As of June 30, 2019, there were 1,774 options outstanding with a weighted average exercise price of $9.92 per share and 549 options exercisable with a weighted average exercise price of $10.27 per share.

*Restricted Stock*

During the three months ended June 30, 2019, 199 shares of restricted stock were granted with a weighted average grant date fair value of $9.46 per share, and 20 shares of restricted stock were forfeited. Additionally, during the three months ended June 30, 2019, 63 shares of restricted stock vested, of which no 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.

During the six months ended June 30, 2019, 277 shares of restricted stock were granted with a weighted average grant date fair value of $9.78 per share and 20 shares of restricted stock were forfeited. Additionally, during the six months ended June 30, 2019, 257 shares of restricted stock vested, of which no 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 June 30, 2019, there were 526 shares of restricted stock outstanding that were still subject to service-based vesting conditions.

As of June 30, 2019, 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***

The Company's Amended and Restated 1996 Employee Stock Purchase Plan (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 and six months ended June 30, 2019, 0 and 23 shares were issued under the ESPP plan, respectively. During the three and six months ended June 30, 2018, no shares were issued under the ESPP plan. The Company recorded compensation charges related to the ESPP of $16 and $14 for the three months ended June 30, 2019 and 2018, respectively, and $30 and $24 for the six months ended June 30, 2019 and 2018, respectively.

*(c) Stock-Based Compensation Expense*

The following table presents stock-based compensation expense, including expense for the ESPP, in the Company's consolidated statements of operations for the three and six months ended June 30, 2019 and 2018:

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | 2019 | 2018 | 2019 | 2018 |
| Cost of product sales | $ 61 | $ 11 | $ 102 | $ 82 |
| Research and development | 196 | 149 | 368 | 319 |
| Sales, marketing and support | 212 | 166 | 394 | 347 |
| General and administrative | 564 | 413 | 1,043 | 844 |
| | **$ 1,033** | **$ 739** | **$ 1,907** | **$ 1,592** |

*(d) Accumulated Other Comprehensive Loss (AOCI)*

Comprehensive income (loss) includes net income (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, which were not material. 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).

The balances for the three months ended June 30, 2019 and 2018 are as follows:

| | Foreign Currency Translation | Unrealized Gain (Loss) on Available for Sale Marketable Securities | Interest Rate Swaps | Total Accumulated Other Comprehensive Loss |
|---|---|---|---|---|
| **Balance, March 31, 2019** | **$ (13,640)** | **$ —** | **$ (3)** | **$ (13,643)** |
| Other comprehensive (loss) income before reclassifications | (1,332) | — | 3 | (1,329) |
| Reclassified from AOCI | 11,483 | — | — | 11,483 |
| Net other comprehensive income, June 30, 2019 | 10,151 | — | 3 | 10,154 |
| **Balance, June 30, 2019** | **$ (3,489)** | **$ —** | **$ —** | **$ (3,489)** |

| | Foreign Currency Translation | Unrealized Gain (Loss) on Available for Sale Marketable Securities | Interest Rate Swaps | Total Accumulated Other Comprehensive Loss |
|---|---|---|---|---|
| **Balance, March 31, 2018** | **$ (8,803)** | **$ —** | **$ (47)** | **$ (8,850)** |
| Other comprehensive (loss) income before reclassifications | (3,866) | — | 3 | (3,863) |
| Reclassified from AOCI | — | — | 12 | 12 |
| Net other comprehensive (loss) income, June 30, 2018 | (3,866) | — | 15 | (3,851) |
| **Balance, June 30, 2018** | **$ (12,669)** | **$ —** | **$ (32)** | **$ (12,701)** |

The balances for the six months ended June 30, 2019 and 2018 are as follows:

| | Foreign Currency Translation | Unrealized Gain (Loss) on Available for Sale Marketable Securities | Interest Rate Swaps | Total Accumulated Other Comprehensive Loss |
|---|---|---|---|---|
| **Balance, December 31, 2018** | **$ (14,720)** | **$ —** | **$ (11)** | **$ (14,731)** |
| Other comprehensive (loss) income before reclassifications | (252) | — | 3 | (249) |
| Reclassified from AOCI | 11,483 | — | 8 | 11,491 |
| Net other comprehensive income, June 30, 2019 | 11,231 | — | 11 | 11,242 |
| **Balance, June 30, 2019** | **$ (3,489)** | **$ —** | **$ —** | **$ (3,489)** |

| | Foreign Currency Translation | Unrealized (Loss) Gain on Available for Sale Marketable Securities | Interest Rate Swaps | Total Accumulated Other Comprehensive Loss |
|---|---|---|---|---|
| **Balance, December 31, 2017** | **$ (11,247)** | **$ (1)** | **$ (69)** | $ (11,317) |
| Other comprehensive (loss) income before reclassifications | (1,422) | 1 | 10 | (1,411) |
| Reclassified from AOCI | — | — | 27 | 27 |
| Net other comprehensive (loss) income, June 30, 2018 | (1,422) | 1 | 37 | (1,384) |
| **Balance, June 30, 2018** | **$ (12,669)** | **$ —** | **$ (32)** | **$ (12,701)** |

For additional information, see Note 4, "Marketable Securities," and 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 and six months ended June 30, 2019, since there was a net loss, the Company excluded all 978 and 959, respectively, in 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. For the three and six months ended June 30, 2018, since there was a net loss, the Company excluded all 634 and 805, respectively, in 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 June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | 2019 | 2018 | 2019 | 2018 |
| Weighted average common shares outstanding—basic | 17,463 | 17,140 | 17,383 | 16,942 |
| Dilutive common shares issuable in connection with stock plans | — | — | — | — |
| Weighted average common shares outstanding—diluted | 17,463 | 17,140 | 17,383 | 16,942 |

## (7) Inventories

Inventories are stated at the lower of cost and net realizable value using the first-in first-out costing method. Inventories as of June 30, 2019 and December 31, 2018 include the costs of material, labor, and factory overhead. Components of inventories consist of the following:

| | June 30, 2019 | December 31, 2018 |
|---|---|---|
| Raw materials | $ 9,146 | $ 13,698 |
| Work in process | 4,346 | 2,489 |
| Finished goods | 10,724 | 6,755 |
| | $ 24,216 | $ 22,942 |

During the second quarter of 2019, the Company recorded an inventory reserve of $2.1 million relating to its TracPhone V-IP products as the Company decided to no longer promote sales of these products and instead to focus its efforts on migrating customers to its HTS network and products.

## (8) Property and Equipment

Property and equipment, net, as of June 30, 2019 and December 31, 2018 consist of the following:

| | June 30, 2019 | December 31, 2018 |
|---|---|---|
| Land | $ 3,828 | $ 3,828 |
| Building and improvements | 24,096 | 24,060 |
| Leasehold improvements | 493 | 478 |
| Machinery and equipment | 17,520 | 17,239 |
| Revenue-generating assets | 43,111 | 38,066 |
| Office and computer equipment | 13,166 | 12,681 |
| Motor vehicles | 31 | 31 |
| | 102,245 | 96,383 |
| Less accumulated depreciation | (49,744) | (45,750) |
| | $ 52,501 | $ 50,633 |

Depreciation expense was $2,114 and $1,728 for the three months ended June 30, 2019 and 2018, respectively, and $4,207 and $3,256 for the six months ended June 30, 2019 and 2018, respectively.

Certain revenue-generating hardware assets are utilized by the Company 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 June 30, 2019 and December 31, 2018, the Company had accrued product warranty costs of $2,181 and $1,916, respectively.

The following table summarizes product warranty activity during 2019 and 2018:

| | Six Months Ended June 30, | |
|---|---|---|
| | 2019 | 2018 |
| Beginning balance | $ 1,916 | $ 2,074 |
| Charges to expense | 1,169 | 1,156 |
| Costs incurred | (904) | (1,191) |
| Ending balance | $ 2,181 | $ 2,039 |

## (10) Debt

Long-term debt consisted of the following:

| | June 30, 2019 | December 31, 2018 |
|---|---|---|
| 2018 term note | $ — | $ 21,938 |
| Line of credit | 2,000 | 5,000 |
| Mortgage loan | — | 2,597 |
| Total long-term debt | 2,000 | 29,535 |
| Less debt issuance costs for 2018 term note (a) | — | 170 |
| Total long-term debt less debt issuance costs | 2,000 | 29,365 |
| Less amounts classified as current | 2,000 | 9,928 |
| Long-term debt, excluding current portion | $ — | $ 19,437 |

*(a)- As of December 31, 2018, debt issuance costs classified as current and long-term are $60 and $110, respectively.*

*Term Note and Line of Credit*

On October 30, 2018, the Company amended and restated its 2014 Credit Agreement by entering into (i) a three-year senior credit facility agreement (the 2018 Credit Agreement) with Bank of America, N.A., as Administrative Agent, and the lenders named from time to time as parties thereto (the 2018 Lenders), for an aggregate amount of up to $42,500, including a term loan (2018 Term Loan) of $22,500 and a reducing revolving credit facility (the 2018 Revolver) of up to $20,000 initially and reducing to $15,000 on December 31, 2019, each to be used for general corporate purposes, including the refinancing of the Company's then outstanding indebtedness under the 2014 Credit Agreement, (ii) a Security Agreement 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 2018 Credit Agreement, and (iii) Pledge Agreements 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 2018 Credit Agreement. On the closing date, the Company repaid $17,225 on the 2014 Term Loan and refinanced its remaining balance. On the closing date, the Company also borrowed $5,000 under the 2018 Revolver.

The 2018 Credit Agreement contains provisions requiring the mandatory prepayment of amounts outstanding under the 2018 Term Loan and the 2018 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 above certain threshold amounts outside the ordinary course of business. The prepayments are first applied to the 2018 Term Loan, in inverse order of maturity, and then to the 2018 Revolver. As of June 30, 2019, there was $2,000 outstanding under the 2018 Revolver and the remaining balance of $18,000 was available for borrowing.

Borrowings under the 2018 Revolver are subject to the satisfaction of various 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 2018 Credit Agreement.

On May 13, 2019, the Company entered into a consent with Bank of America, N.A., as Administrative Agent, authorizing the Purchase Agreement and Bridge Loan, as discussed in Note 1. On June 27, 2019, the Company used the proceeds of the sale of Videotel to repay in full the then-outstanding balance of $21,375 under the 2018 Term Loan and to repay $13,000 of the the-outstanding balance under the 2018 Revolver such that the Consolidated Leverage Ratio is not more than 2.75:1.00. The 2018 Revolver will remain at $20,000 through the term of the Credit Agreement. On October 30, 2021, the entire principal balance of any outstanding loans under the 2018 Revolver are due and payable, together with all accrued and unpaid interest, fees and any other amounts due and payable under the 2018 Credit Agreement.

The 2018 Credit Agreement contains two financial covenants, a Maximum Consolidated Leverage Ratio and a Minimum Consolidated Fixed Charge Coverage Ratio, each as defined in the 2018 Credit Agreement. The Consolidated Leverage Ratio initially may not be greater than 3.00:1.00 and declines to 2.75:1.00 on September 30, 2019, to 2.50:1.00 on December 31, 2019 and to 2.00:1.00 on December 31, 2020. The Consolidated Fixed Charge Coverage Ratio may not be less than 1.25:1.00.

The 2018 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, performance of 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 2018 Credit Agreement could be accelerated upon an event of default under the terms, 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 2018 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 property loss events, and certain events relating to the impairment of collateral or the 2018 Lenders' security interest therein.

*Mortgage Loan*

In April 2019, on the Mortgage Loan’s original termination date, the Company repaid in full the outstanding balance of $2,551. As discussed in Note 17 to the consolidated financial statements, in April 2010 the Company entered into two interest rate swap agreements that were intended to hedge its mortgage interest obligations over the term of the Mortgage Loan by fixing the interest rates specified in the Mortgage Loan to 5.91% for half of the principal amount outstanding as of April 1, 2010 and 6.07% for the remaining half. Both interest rate swap agreements were also settled upon repayment of the Mortgage Loan.

**(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 directly 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. As discussed in Note 1, the Company’s Videotel business, which had previously been included in the mobile connectivity segment, has been classified as discontinued operations and therefore excluded from the segment information below.

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 21% and 21% of the Company's consolidated net sales for the three months ended June 30, 2019 and 2018, respectively, and 20% and 22% of the Company's consolidated net sales for the six months ended June 30, 2019 and 2018, respectively. Sales of mini-VSAT Broadband airtime service accounted for 49% and 45% of the Company's consolidated net sales for the three months ended June 30, 2019 and 2018, respectively, and 50% and 46% of the Company's consolidated net sales for the six months ended June 30, 2019 and 2018, 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 17% and 17% of the Company's consolidated net sales for the three months ended June 30, 2019 and 2018, respectively, and 15% and 16% of the Company's consolidated net sales for the six months ended June 30, 2019 and 2018, respectively.

No other single product class accounts for 10% or more of the Company's 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 61% and 55% of the Company's consolidated net sales for the three months ended June 30, 2019 and 2018, respectively, and 60% and 54% of the Company's consolidated net sales for the six months ended June 30, 2019 and 2018, respectively. No individual foreign country represented 10% or more of the Company's consolidated net sales for the three or six months ended June 30, 2019 and 2018.

As of June 30, 2019 and December 31, 2018, 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 income (loss) for the Company's reporting segments and the Company's loss before income tax expense for the three and six months ended June 30, 2019 and 2018 were as follows:

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | **2019** | **2018** | **2019** | **2018** |
| **Net sales:** | | | | |
| Mobile connectivity | $ 30,974 | $ 29,004 | $ 59,547 | $ 57,057 |
| Inertial navigation | 8,261 | 9,628 | 15,723 | 16,980 |
| Consolidated net sales | $ 39,235 | $ 38,632 | $ 75,270 | $ 74,037 |
| | | | | |
| **Operating income (loss):** | | | | |
| Mobile connectivity | $ (2,519) | $ (243) | $ (3,876) | $ 176 |
| Inertial navigation | (247) | 1,564 | 195 | 1,898 |
| Subtotal | (2,766) | 1,321 | (3,681) | 2,074 |
| Unallocated, net | (4,067) | (3,901) | (9,300) | (8,486) |
| Loss from operations | (6,833) | (2,580) | (12,981) | (6,412) |
| Net interest and other income (expense) | 780 | 263 | 474 | (306) |
| Loss before income tax expense | $ (6,053) | $ (2,317) | $ (12,507) | $ (6,718) |

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

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | **2019** | **2018** | **2019** | **2018** |
| **Depreciation expense:** | | | | |
| Mobile connectivity | $ 1,669 | $ 1,346 | $ 3,339 | $ 2,481 |
| Inertial navigation | 307 | 254 | 594 | 506 |
| Unallocated | 138 | 128 | 274 | 269 |
| Total consolidated depreciation expense | $ 2,114 | $ 1,728 | $ 4,207 | $ 3,256 |
| | | | | |
| **Amortization expense:** | | | | |
| Mobile connectivity | $ 247 | $ 257 | $ 495 | $ 518 |
| Inertial navigation | — | — | — | — |
| Unallocated | — | — | — | — |
| Total consolidated amortization expense | $ 247 | $ 257 | $ 495 | $ 518 |

**(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 June 30, 2019, 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 six months ended June 30, 2019 and no repurchase programs expired during the period.

During the six months ended June 30, 2019 and 2018, 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.

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 June 30, 2019 and December 31, 2018 for which the Company measures fair value on a recurring basis, by level, within the fair value hierarchy:

| June 30, 2019 | Total | Level 1 | Level 2 | Level 3 | Valuation Technique |
|---|---|---|---|---|---|
| **Assets** | | | | | |
| Money market mutual funds | $ 50,057 | $ 50,057 | $ — | $ — | (a) |
| **Liabilities** | | | | | |
| Interest rate swaps | $ — | $ — | $ — | $ — | (b) |

| December 31, 2018 | Total | Level 1 | Level 2 | Level 3 | Valuation Technique |
|---|---|---|---|---|---|
| **Assets** | | | | | |
| Money market mutual funds | $ 25 | $ 25 | $ — | $ — | (a) |
| **Liabilities** | | | | | |
| Interest rate swaps | $ 11 | $ — | $ 11 | $ — | (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 June 30, 2019. 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 six months ended June 30, 2019:

| | Amounts |
|---|---|
| Balance at December 31, 2018 | $ 15,031 |
| Foreign currency translation adjustment | (36) |
| Balance at June 30, 2019 | $ 14,995 |

*Intangible Assets*

The changes in the carrying amount of intangible assets during the six months ended June 30, 2019 are as follows:

| | Amounts |
|---|---|
| Balance at December 31, 2018 | $ 5,661 |
| Amortization expense | (495) |
| Intangible assets acquired in asset acquisition | 37 |
| Foreign currency translation adjustment | (6) |
| Balance at June 30, 2019 | $ 5,197 |

Intangible assets arose from an acquisition made prior to 2013 and the acquisition of KVH Media Group (acquired as Headland Media Limited) in May 2013. 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. The intangibles arising from the KVH Media Group 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 included a component of contingent consideration under which the Company was 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 of June 30, 2019, the carrying value of the intangible assets acquired in the asset acquisition was $214. 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 six months ended June 30, 2019, $37 of additional consideration was earned under the contingent consideration arrangement. As the carrying value of the intangible assets has reached its maximum, no further additional consideration will be recorded.

Acquired intangible assets are subject to amortization. The following table summarizes acquired intangible assets at June 30, 2019 and December 31, 2018, respectively:

| | Gross Carrying Amount | Accumulated Amortization | Net Carrying Value |
|---|---|---|---|
| **June 30, 2019** | | | |
| Subscriber relationships | $ 7,717 | $ 4,880 | $ 2,837 |
| Distribution rights | 4,227 | 1,867 | 2,360 |
| Internally developed software | 446 | 446 | — |
| Proprietary content | 153 | 153 | — |
| Intellectual property | 2,284 | 2,284 | — |
| | $ 14,827 | $ 9,630 | $ 5,197 |
| **December 31, 2018** | | | |
| Subscriber relationships | $ 7,678 | $ 4,519 | $ 3,159 |
| Distribution rights | 4,233 | 1,731 | 2,502 |
| Internally developed software | 446 | 446 | — |
| Proprietary content | 153 | 153 | — |
| Intellectual property | 2,284 | 2,284 | — |
| | $ 14,794 | $ 9,133 | $ 5,661 |

Amortization expense related to intangible assets for the three and six months ended June 30, 2019 and 2018 was as follows:

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| **Expense Category** | **2019** | **2018** | **2019** | **2018** |
| General and administrative expense | $ 247 | $ 257 | $ 495 | $ 518 |

As of June 30, 2019, 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 | 4.0 |
| Distribution rights | 8.8 |

Estimated future amortization expense remaining at June 30, 2019 for intangible assets acquired is as follows:

| | | |
|---|---|---|
| Remainder of 2019 | $ | 486 |
| 2020 | | 972 |
| 2021 | | 972 |
| 2022 | | 972 |
| 2023 | | 536 |
| Thereafter | | 1,259 |
| Total future amortization expense | $ | 5,197 |

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 second quarter of 2019 which indicated that an assessment of the impairment of goodwill and intangible assets was required.

**(16) Revenue from Contracts with Customers (ASC 606)**

The Company adopted ASC 606 on January 1, 2018 using the modified retrospective method for all contracts not completed as of the date of adoption. The adoption of ASC 606 represents a change in accounting principle that is expected to more closely align revenue recognition with the delivery of the Company's products and services and is expected to provide financial statement readers with enhanced disclosures. In accordance with ASC 606, revenue is recognized when a customer obtains control of promised products and services. The amount of revenue recognized reflects the consideration to which the Company expects to be entitled to receive in exchange for these products and services.

***Disaggregation of Revenue***

The following table summarizes net sales from contracts with customers for the three and six months ended June 30, 2019:

| | Three Months Ended June 30 | | Six Months Ended June 30 | |
|---|---|---|---|---|
| | **2019** | **2018** | **2019** | **2018** |
| Mobile connectivity product, transferred at point in time | $ 6,697 | $ 6,731 | $ 12,374 | $ 13,401 |
| Mobile connectivity product, transferred over time | 1,371 | 1,372 | 2,756 | 2,622 |
| Mobile connectivity service | 22,906 | 20,901 | 44,417 | 41,034 |
| Inertial navigation product | 6,626 | 8,059 | 12,438 | 14,131 |
| Inertial navigation service | 1,635 | 1,569 | 3,285 | 2,849 |
| **Total net sales** | $ 39,235 | $ 38,632 | $ 75,270 | $ 74,037 |

Revenue recognized during the three months ended June 30, 2019 and 2018 from amounts included in contract liabilities at the beginning of the period was $1,254 and $1,193, respectively. Revenue recognized during the six months ended June 30, 2019 and 2018 from amounts included in contract liabilities at the beginning of the period was $2,590 and $2,408, respectively.

For mobile connectivity product sales, the delivery of the Company’s performance obligations, and associated revenue, are generally transferred to the customer at a point in time, with the exception of certain mini-VSAT contracts which are transferred to customers over time. For mobile connectivity service sales, the delivery of the Company’s performance obligations and associated revenue are transferred to the customer over time. For inertial navigation product sales, the delivery of the Company’s performance obligations, and associated revenue, are generally transferred to the customer at a point in time. For inertial navigation service sales, the Company's performance obligations, and associated revenue, are generally transferred to customers over time.

*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 the Company's consolidated net sales for three or six months ended June 30, 2019 or 2018 or accounts receivable at June 30, 2019 or December 31, 2018.

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 were 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 expired 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 (loss) 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 made the required principal and interest payments under the mortgage loan and the related interest rate swaps were settled, the Company reclassified 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 was any hedge ineffectiveness, changes in fair value relating to the ineffective portion were immediately recognized in earnings in other income (expense) in the consolidated statements of operations. The interest rate swap was 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 ended on April 1, 2019. On April 1, 2019, the two interest rate swaps matured and the Company made its final payment for its mortgage loan thereafter.

As of December 31, 2018, 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 | $ 1,299 | $ (5) | April 1, 2010 | April 1, 2019 | 1-month LIBOR | 5.91% |
| Interest rate swap | $ 1,299 | $ (6) | April 1, 2010 | April 1, 2019 | 1-month LIBOR | 6.07% |

## (18) Income Taxes

The Company’s effective tax rate for the three and six months ended June 30, 2019 was 42.9% and 21.0%, respectively, compared with (3.7)% and (1.9)% for the corresponding periods in the prior year, respectively. 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 periods, including retroactive changes in tax legislation, settlements of tax audits or assessments, and the resolution or identification of tax position uncertainties.

For the three months ended June 30, 2019, the effective tax rate was higher than the statutory tax rate primarily due to the Company's release of the valuation allowance against the discontinued operations tax expense. For the six months ended June 30, 2019 and three and six months ended June 30, 2018, the effective tax rates were lower than the statutory tax rate primarily due to the Company maintaining a valuation allowance reserve on its US deferred tax assets and to the composition of income from foreign jurisdictions that were taxed at lower rates.

As of June 30, 2019 and December 31, 2018, the Company had reserves for uncertain tax positions of $675 and $631, respectively. There were no material changes during the six months ended June 30, 2019 to the Company’s reserve for uncertain tax positions. The Company estimates that it is reasonably possible that the balance of unrecognized tax benefits as of June 30, 2019 may decrease $179 in the next twelve months as a result of a lapse of statutes of limitations and settlements with taxing authorities.

The Company’s tax jurisdictions include the United States, the United Kingdom, Denmark, Cyprus, Norway, Brazil, Singapore, Belgium, the Netherlands, Hong Kong, India and Japan. In general, the statute of limitations with respect to the Company's United States federal income taxes has expired for years prior to 2015, and the relevant state and foreign statutes vary. However, preceding years remain open to examination by United States federal and state and foreign taxing authorities to the extent of future utilization of net operating losses and research and development tax credits generated in each preceding year.

**(19) Leases**

The Company adopted ASC 842 on January 1, 2019. ASC 842 requires the recognition of lease assets and lease liabilities for leases classified as operating leases. The original guidance required application of ASC 842 on a modified retrospective basis with the earliest period presented. In August 2018, the FASB issued ASU 2018-11, *Targeted Improvements to ASC 842*, which included an option to not restate comparative periods in transition and elect to use the effective date as the date of initial application of transition. The Company elected not to restate comparative periods and, accordingly, the financial results reported for periods prior to January 1, 2019 have not been restated. In ASC 842, a lease is defined as follows: “[a] contract is or contains a lease if the contract conveys the right to control the use of identified property, plant, or equipment (an identified asset) for a period of time in exchange for consideration.”

Upon adoption, the Company recognized all leases greater than one year in duration on the balance sheet as right-of-use assets and lease liabilities. The Company made certain assumptions and judgments when applying ASC 842. The Company elected practical expedients available for the transition, such as whether expired or existing contracts contain leases under the new definition of a lease, lease classification for expired or existing leases, and whether previously capitalized initial direct costs would qualify for capitalization under ASC 842. For all asset classes, the Company elected to not separate non-lease components from lease components to which they relate and have accounted for the combined lease and non-lease components as a single lease component.

Many of our lease agreements contain renewal options which are recognized if it is determined that the Company is reasonably certain to renew the lease at inception or when a triggering event occurs. Some of our lease agreements contain rent escalation clauses, rent holidays, capital improvement funding or other lease concessions. The Company recognizes the minimum rental expense on a straight-line basis based on the fixed components of a lease arrangement and amortize such expense over the term of the lease beginning with the commencement date. Variable lease components that are not fixed at the beginning of the lease are recognized as incurred.

Under certain third-party service agreements, the Company controls a specific space or underlying asset used in providing the service by the third-party service provider. These arrangements meet the definition under ASC 842 and therefore are accounted for under ASC 842. Right-of-use assets and lease liabilities are recognized at commencement date based on the present value of lease payments over the lease term and include options to extend or terminate the lease when reasonably certain to be exercised. The present value of lease payments is determined using the incremental borrowing rate based on the information available at the lease commencement date.

The Company has operating leases for office facilities, equipment, and satellite service capacity and related equipment. Lease expense from continuing operations for the three and six months ended June 30, 2019 was $1,267 and $2,532, respectively. The future minimum lease payments under our operating leases as of June 30, 2019 are:

| | | |
|---|---|---|
| Remainder of 2019 | $ | 2,537 |
| 2020 | | 2,969 |
| 2021 | | 1,275 |
| 2022 | | 1,193 |
| 2023 | | 384 |
| 2024 and thereafter | | 538 |
| Total minimum lease payments | $ | 8,896 |
| | | |
| Less amount representing interest | $ | (718) |
| Present value of net minimum operating lease payments | $ | 8,178 |
| Less current installments of obligation under current-operating lease liabilities | $ | 4,418 |
| Obligations under long-term operating lease liabilities, excluding current installments | $ | 3,760 |
| | | |
| Weighted-average remaining lease term - operating leases (years) | | 2.94 |
| Weighted-average discount rate - operating leases | | 5.50% |

During the first quarter of 2018, the Company entered into a five-year financing lease for three satellite hubs for its HTS network. As of June 30, 2019, the gross costs and accumulated depreciation associated with this lease are included in revenue generating assets and amounted to $3,068 and $626, respectively. Property and equipment under financing leases are stated at the present value of minimum lease payments.

The property and equipment held under this financing lease are amortized on a straight-line basis over the seven-year estimated useful life of the asset, since the lease meets the bargain purchase option criteria. Amortization of assets held under financing leases is included within depreciation expense. Depreciation expense for these capital assets was $109 and $110 for the three months ended June 30, 2019 and 2018, respectively, and $219 and $188 for the six months ended June 30, 2019 and 2018, respectively.

The future minimum lease payments under this financing lease as of June 30, 2019 are:

| | | |
|---|---|---|
| Remainder of 2019 | $ | 312 |
| 2020 | | 624 |
| 2021 | | 624 |
| 2022 | | 624 |
| 2023 | | 45 |
| 2024 and thereafter | | — |
| Total minimum lease payments | $ | 2,229 |
| | | |
| Less amount representing interest | $ | (26) |
| Present value of net minimum financing lease payments | $ | 2,203 |
| Less current installments of obligation under accrued other | $ | 612 |
| Obligations under other long-term liabilities, excluding current installments | $ | 1,591 |
| | | |
| Weighted-average remaining lease term - finance leases (years) | | 3.67 |
| Weighted-average discount rate - finance leases | | 1.53% |

## (20) Discontinued Operations

The following table presents a reconciliation of the carrying amounts of major classes of assets and liabilities of the discontinued operations to the amounts presented separately in the Company's consolidated balance sheet:

| | | December 31, 2018 |
|---|---|---|
| Cash and cash equivalents | $ | 2,838 |
| Accounts receivable, net | | 1,071 |
| Prepaid expenses and other current assets | | 962 |
| Current assets held for sale | $ | 4,871 |
| Property and equipment, net | | 2,615 |
| Intangible assets, net | | 4,857 |
| Goodwill | | 17,182 |
| Other non-current assets | | 1,252 |
| Non-current assets held for sale | $ | 25,906 |
| Accounts payable | | 991 |
| Accrued compensation and employee-related expenses | | 220 |
| Accrued other | | 1,362 |
| Contract liabilities | | 1,546 |
| Liability for uncertain tax positions | | 485 |
| Current liabilities held for sale | $ | 4,604 |
| Non-current deferred income tax liability | | 813 |
| Non-current liabilities held for sale | $ | 813 |
| **Net assets held for sale** | **$** | **25,360** |

The following table presents a reconciliation of the major financial line items constituting the results for discontinued operations to the net income from discontinued operations, net of tax, presently separately in the Company's consolidated statements of operations and comprehensive income (loss):

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | 2019 | 2018 | 2019 | 2018 |
| Sales: | | | | |
| Service sales | $ 1,832 | $ 4,760 | $ 5,769 | $ 9,456 |
| | | | | |
| Costs, expenses and other expense, net: | | | | |
| Costs of service sales | 483 | 1,267 | 1,807 | 2,713 |
| Sales, marketing and support | 437 | 885 | 1,606 | 2,249 |
| General and administrative | 494 | 1,215 | 1,619 | 2,449 |
| Other expense, net | (14) | (90) | (23) | (56) |
| Income from discontinued operations before tax expense | 404 | 1,303 | 714 | 1,989 |
| Gain on sale of discontinued operations before tax expense | 54,520 | — | 54,520 | — |
| Total income from discontinued operations before tax expense | $ 54,924 | $ 1,303 | $ 55,234 | $ 1,989 |
| Income tax expense on discontinued operations | 4,294 | 244 | 4,361 | 377 |
| **Income from discontinued operations, net of taxes** | $ 50,630 | $ 1,059 | $ 50,873 | $ 1,612 |
| | | | | |
| **Net income from discontinued operations per common share** | | | | |
| Basic and diluted | **$ 2.90** | **$ 0.06** | **$ 2.93** | **$ 0.10** |
| **Weighted average number of common shares outstanding:** | | | | |
| Basic and diluted | **17,463** | **17,140** | **17,383** | **16,942** |

The following table presents supplemental cash flow information of the discontinued operations:

| | Six Months Ended June 30, | |
|---|---|---|
| | 2019 | 2018 |
| | | |
| Cash (used in) provided by operating activities—discontinued operations | $ (1,838) | $ 3,851 |
| Cash provided by (used in) investing activities—discontinued operations | $ 87,986 | $ (779) |

## 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 and services, 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 II of this quarterly report on Form 10-Q and in Item 1A of Part I of our annual report on Form 10-K for the year ended December 31, 2018. 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 inertial navigation products for the commercial and defense 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. We typically recognize revenue from media content sales ratably over the period of the service contract. We provide, for monthly fixed fees and usage-based 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 increased as a percentage of total consolidated revenue from 58% of our net sales for the three months ended June 30, 2018 to 63% for the three months ended June 30, 2019 and from 59% of our net sales for the six months ended June 30, 2018 to 63% for the six months ended June 30, 2019.

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.

*Sale of Videotel - Discontinued Operations*

In May 2019, we sold our Videotel business, which provided eLearning computer-based training, to an affiliate of Oakley Capital, a UK company, for $89.4 million in cash, on a cash-free, debt-free basis, subject to a working capital adjustment. We made a bridge loan to the purchaser and received payment of the initial purchase price on June 21, 2019. We determined that the sale met the requirements for reporting as a discontinued operations in accordance with ASC 205-20. Accordingly, we have classified the results of the Videotel business as a discontinued operations for all periods presented.

*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. Our inertial navigation service sales include engineering services provided under development contracts, product repairs and extended warranty sales.

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 June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | 2019 | 2018 | 2019 | 2018 |
| | (in thousands) | | (in thousands) | |
| Mobile connectivity | $ 30,974 | $ 29,004 | $ 59,547 | $ 57,057 |
| Inertial navigation | 8,261 | 9,628 | 15,723 | 16,980 |
| Net sales | $ 39,235 | $ 38,632 | $ 75,270 | $ 74,037 |

Product sales within the mobile connectivity segment accounted for 21% of our consolidated net sales for both the three months ended June 30, 2019 and 2018, and 20% and 22% of our consolidated net sales for the six months ended June 30, 2019 and 2018, respectively. Sales of mini-VSAT Broadband airtime service accounted for 49% and 45% of our consolidated net sales for the three months ended June 30, 2019 and 2018, respectively and 50% and 46% of our consolidated net sales for the six months ended June 30, 2019 and 2018, respectively.

Within our inertial navigation segment, net sales of FOG-based guidance and navigation systems accounted for 17% of our consolidated net sales for both the three months ended June 30, 2019 and 2018, and 15% and 16% of our consolidated net sales for the six months ended June 30, 2019 and 2018, respectively.

No other single product class accounted for 10% or more of our consolidated net sales for the three months ended June 30, 2019 or 2018 or the six months ended June 30, 2019 or 2018, respectively. No individual customer accounted for 10% or more of our consolidated net sales for the three months ended June 30, 2019 or 2018 or the six months ended June 30, 2019 or 2018, respectively.

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 61% and 55% of our consolidated net sales for the three months ended June 30, 2019 and 2018, respectively, and 60% and 54% of our consolidated net sales for the six months ended June 30, 2019 and 2018, respectively. No individual foreign country represented 10% or more of our consolidated net sales for the three months ended June 30, 2019 or 2018 or the six months ended June 30, 2019 or 2018. 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 June 30, | | | | Six Months Ended June 30, | | | |
|---|---|---|---|---|---|---|---|---|
| | 2019 | | 2018 | | 2019 | | 2018 | |
| | (in thousands) | | | | (in thousands) | | | |
| Research and development expense presented on the statement of operations | $ | 3,798 | $ | 3,565 | $ | 7,666 | $ | 7,499 |
| Costs of customer-funded research and development included in costs of service sales | | 1,700 | | 953 | | 2,748 | | 1,628 |
| Total consolidated statements of operations expenditures on research and development activities | $ | 5,498 | $ | 4,518 | $ | 10,414 | $ | 9,127 |

***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, 2018.

As described in our annual report on Form 10-K for the year ended December 31, 2018, 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 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 six months ended June 30, 2019. We have updated our leasing policies in conjunction with our adoption of ASC 842 as of January 1, 2019, as further described in Note 19 to the accompanying financial statements.

Readers should refer to our annual report on Form 10-K for the year ended December 31, 2018 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 June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | 2019 | 2018 | 2019 | 2018 |
| Sales: | | | | |
| Product | 37.5 % | 41.8 % | 36.6 % | 40.7 % |
| Service | 62.5 | 58.2 | 63.4 | 59.3 |
| Net sales | 100.0 | 100.0 | 100.0 | 100.0 |
| Cost and expenses: | | | | |
| Costs of product sales | 31.4 | 26.1 | 26.8 | 25.7 |
| Costs of service sales | 39.2 | 36.8 | 40.9 | 35.9 |
| Research and development | 9.7 | 9.2 | 10.2 | 10.1 |
| Sales, marketing and support | 22.6 | 19.7 | 22.6 | 20.5 |
| General and administrative | 14.6 | 14.8 | 16.9 | 16.4 |
| Total costs and expenses | 117.5 | 106.6 | 117.4 | 108.6 |
| Loss from operations | (17.5) | (6.6) | (17.4) | (8.6) |
| Interest income | 2.5 | 0.4 | 1.6 | 0.4 |
| Interest expense | 1.4 | 1.1 | 1.3 | 1.1 |
| Other income, net | 0.9 | 1.4 | 0.3 | 0.3 |
| Loss before income tax (benefit) expense | (15.5) | (5.9) | (16.8) | (9.0) |
| Income tax (benefit) expense | (6.6) | 0.2 | (3.5) | 0.2 |
| Net loss from continuing operations | (8.9)% | (6.1)% | (13.3)% | (9.2)% |

**Three months ended June 30, 2019 and 2018**

***Net Sales***

As discussed further under the heading "Segment Discussion" below, product sales decreased $1.5 million, or 9%, to $14.7 million for the three months ended June 30, 2019 from $16.2 million for the three months ended June 30, 2018, primarily due to a decrease in inertial navigation product sales of $1.5 million. Service sales for the three months ended June 30, 2019 increased $2.1 million, or 9%, to $24.5 million from $22.4 million for the three months ended June 30, 2018, due to an increase in mobile connectivity service sales of $2.0 million and an increase in inertial navigation 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 by $3.4 million, or 14%, in the three months ended June 30, 2019 to $27.7 million from $24.3 million in the three months ended June 30, 2018. The increase in costs of sales was driven by a $2.2 million increase in costs of product sales and a $1.2 million increase in costs of service sales. As a percentage of net sales, costs of sales was 71% and 63% for the three months ended June 30, 2019 and 2018, respectively.

Our costs of product sales consist primarily of materials, manufacturing overhead, and direct labor used to produce our products. For the three months ended June 30, 2019, costs of product sales increased by $2.2 million, or 22%, to $12.3 million from $10.1 million in the three months ended June 30, 2018. As a percentage of product sales, costs of product sales were 84% and 62% for the three months ended June 30, 2019 and 2018, respectively. Mobile connectivity costs of product sales increased by $2.5 million, or 46%, and mobile connectivity costs of product sales as a percentage of mobile connectivity product sales were 98% and 67% for the three months ended June 30, 2019 and 2018, respectively. The increase was primarily driven by an inventory reserve of $2.1 million relating to our TracPhone V-IP products as we have decided to no longer promote sales of these products and instead to focus our efforts on migrating customers to our HTS network and products. Inertial navigation costs of product sales decreased by $0.3 million, or 6%, primarily due to a $1.0 million decrease in our FOG costs of product sales and a $0.4 million decrease in our TACNAV costs of product sales, largely offset by a $1.1 million decrease in absorption of factory overhead due to a decrease in the volume of production. As a percentage of inertial navigation product sales, costs of inertial navigation product sales were 67% and 58% for the three months ended June 30, 2019 and 2018, respectively.

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 June 30, 2019, costs of service sales increased by $1.2 million, or 8%, to $15.4 million from $14.2 million for the three months ended June 30, 2018. As a percentage of service sales, costs of service sales were 63% for both the three months ended June 30, 2019 and 2018. Mobile connectivity costs of service sales increased by $1.0 million, or 8%, primarily due to a $0.6 million increase in costs associated with contract engineering service revenue. In addition, there was also an increase in mini-VSAT airtime costs of service sales, resulting from increased HTS network capacity costs, legacy network revenue share minimums and AgilePlans depreciation costs. As a percentage of mobile connectivity service sales, costs of mobile connectivity service sales were 62% and 63% for the three months ended June 30, 2019 and 2018, respectively. Inertial navigation costs of service sales increased by $0.2 million, or 20%, due to an increase in contract engineering service revenues. As a percentage of inertial navigation service sales, costs of inertial navigation service sales were 75% and 67% for the three months ended June 30, 2019 and 2018, respectively, due to the mix of services delivered.

We expect that our costs of sales will generally increase in correlation with our expected growth in our mobile connectivity and inertial navigation net sales. To the extent that customers continue to subscribe to our AgilePlans program, we expect a corresponding decrease in product sales and increase in depreciation expense for AgilePlans equipment.

***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 June 30, 2019 increased by $0.2 million, or 6%, to $3.8 million from $3.6 million for the three months ended June 30, 2018. The primary reasons for the increase in research and development expense was a $0.5 million increase in expensed materials, a $0.2 million increase in professional fees and a $0.1 million increase in salaries and employee benefits, partially offset by a $0.7 million increase in funded engineering expenses (which are reflected in costs of service sales rather than research and development expense). As a percentage of net sales, research and development expense for the three months ended June 30, 2019 and 2018 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 for the three months ended June 30, 2019 increased by $1.3 million, or 17%, to $8.9 million from $7.6 million for the three months ended June 30, 2018. The increase primarily resulted from a $0.8 million increase in salaries and employee benefits and internal commissions, a $0.3 million increase in external commissions, and a $0.2 million increase in warranty expense. As a percentage of net sales, sales, marketing and support expense was 23% and 20% for the three months ended June 30, 2019 and 2018, respectively.

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 June 30, 2019 and 2018 remained flat at $5.7 million. As a percentage of net sales, general and administrative expense for the three months ended June 30, 2019 and 2018 was 15%.

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

***Interest and Other Income, Net***

Interest income represents interest earned on our note receivable and our cash and cash equivalents, as well as from investments. Interest income increased $0.9 million for the three months ended June 30, 2019 to $1.0 million from $0.1 million for the three months ended June 30, 2018 primarily due to the interest related to the note receivable from Oakley Capital as part of our sale of Videotel. Interest expense increased $0.2 million for the three months ended June 30, 2019 to $0.6 million from $0.4 million for the three months ended June 30, 2018. Other income, net decreased to $0.3 million from other income, net of $0.5 million for the three months ended June 30, 2019 and 2018 primarily due to a decrease in foreign exchange gains from our UK operations.

***Income Tax (Benefit) Expense***

Income tax benefit for the three months ended June 30, 2019 was $2.6 million and related the valuation allowance release against discontinued operations. The losses we incurred in the US did not generate any income tax benefit during the quarter due to a full valuation allowance on our related deferred tax assets generated in connection with losses. Income tax expense for the three months ended June 30, 2018 was $0.1 million and related to taxes on income earned in foreign jurisdictions. The losses we incurred in the US in 2018 did not generate any income tax benefit during the quarter due to a full valuation allowance on our related deferred tax assets.

***Discontinued Operations***

During the three months ended June 30, 2019, we sold our Videotel business for $89.4 million in cash, on a cash-free, debt-free basis, subject to a working capital adjustment. We determined that the sale met the requirements for reporting as a discontinued operations in accordance with ASC 205-20. Accordingly, we have classified the results of the Videotel business as a discontinued operations for all periods presented. Results for discontinued operations are as follows:

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | 2019 | 2018 | 2019 | 2018 |
| Sales from discontinued operations | $ 1,832 | $ 4,760 | $ 5,769 | $ 9,456 |
| Income from discontinued operations, net tax | $ 50,630 | $ 1,059 | $ 50,873 | $ 1,612 |

**Segment Discussion - Three months ended June 30, 2019 and 2018**

As noted above, we have classified our Videotel, business as a discontinued operations and have therefore excluded it from the segment information below. The Videotel business had previously been included in our mobile connectivity business segment.

Our net sales by segment for the three months ended June 30, 2019 and 2018 were as follows:

| | For the three months ended June 30, | | Change 2019 vs. 2018 | |
|---|---|---|---|---|
| | 2019 | 2018 | $ | % |
| | (dollars in thousands) | | | |
| Mobile connectivity sales: | | | | |
| Product | $ 8,068 | $ 8,103 | $ (35) | — % |
| Service | 22,906 | 20,901 | 2,005 | 10 % |
| **Net sales** | $ 30,974 | $ 29,004 | $ 1,970 | 7 % |
| | | | | |
| Inertial navigation sales: | | | | |
| Product | $ 6,626 | $ 8,059 | $ (1,433) | (18)% |
| Service | 1,635 | 1,569 | 66 | 4 % |
| **Net sales** | $ 8,261 | $ 9,628 | $ (1,367) | (14)% |

Operating income (loss) by segment for the three months ended June 30, 2019 and 2018 were as follows:

| | For the three months ended June 30, | | Change 2019 vs. 2018 | |
|---|---|---|---|---|
| | 2019 | 2018 | $ | % |
| | (dollars in thousands) | | | |
| Mobile connectivity | $ (2,519) | $ (243) | $ (2,276) | (937)% |
| Inertial navigation | (247) | 1,564 | (1,811) | (116)% |
| | $ (2,766) | $ 1,321 | $ (4,087) | (309)% |
| Unallocated | (4,067) | (3,901) | (166) | (4)% |
| **Loss from operations** | $ (6,833) | $ (2,580) | $ (4,253) | (165)% |

***Mobile Connectivity Segment***

Net sales in the mobile connectivity segment increased by $2.0 million, or 7%, for the three months ended June 30, 2019 as compared to the three months ended June 30, 2018. Mobile connectivity product sales were flat at $8.1 million for the three months ended June 30, 2019 and 2018. This was primarily due to a $0.2 million, or 3%, increase in TracVision marine mobile connectivity product sales and a $0.2 million, or 33%, decrease in sales of our land mobile connectivity products.

Mobile connectivity service sales increased by $2.0 million, or 10%, to $22.9 million for the three months ended June 30, 2019 from $20.9 million for the three months ended June 30, 2018. The increase was primarily due to a $1.8 million increase in our mini-VSAT service sales compared to the three months ended June 30, 2018, which resulted in part from a 13% increase in subscribers, partially as a result of the introduction of AgilePlans and our HTS network. In addition, our contract engineering service revenue increased by $0.5 million. Partially offsetting these increases was a $0.4 million decrease in content service sales, which resulted primarily from a decrease in content customers.

We expect that our mini-VSAT service sales will continue to grow, primarily through the continued expansion of our mini-VSAT Broadband customer base and the availability of our AgilePlans subscription service model. We expect that mini-VSAT product sales will decline to the extent that customers select the AgilePlans subscription service model.

Operating loss for the mobile connectivity segment increased $2.3 million for the three months ended June 30, 2019 as compared to the three months ended June 30, 2018. This increase resulted primarily from a $2.1 million inventory reserve relating to our TracPhone V-IP products as we decided to no longer promote sales of these products and to instead focus our efforts on migrating customers to our HTS network and products, as well as an increase in airtime network costs due to the operation of both our HTS network and our legacy network. In addition, we had a $0.3 million increase in warranty expense and expensed materials and a $0.2 million increase in marketing expenses, which were partially offset by a $1.0 million increase in service sales less associated costs.

***Inertial Navigation Segment***

Net sales in the inertial navigation segment decreased $1.4 million, or 14%, for the three months ended June 30, 2019 as compared to the three months ended June 30, 2018. Inertial navigation product sales decreased $1.5 million, or 18%, to $6.6 million for the three months ended June 30, 2019 from $8.1 million for the three months ended June 30, 2018, primarily as a result of a $1.3 million decrease in TACNAV sales and a $0.2 million decrease in FOG product sales.

Inertial navigation service sales increased $0.1 million, or 4%, to $1.6 million for the three months ended June 30, 2019 from $1.5 million for the three months ended June 30, 2018. The increase resulted from a $0.1 million increase in contracted engineering services for an engineering and services development contract from a major U.S. defense contractor, which began in the fourth quarter of 2018 and is expected to continue through the third quarter of 2021.

Our operating earnings for the inertial navigation segment decreased $1.8 million for the three months ended June 30, 2019 as compared to the three months ended June 30, 2018. This decrease is primarily due to the decrease in TACNAV product sales previously mentioned, and a $0.2 million increase in external commissions.

***Unallocated***

Certain corporate-level costs have not been allocated because they are not directly 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 $0.2 million, or 4%, for the three months ended June 30, 2019 as compared to the three months ended June 30, 2018. The increase in the unallocated operating loss was primarily the result of an increase in salaries and associated compensation as well as deferred financing expenses.

**Six months ended June 30, 2019 and 2018**

***Net Sales***

As discussed further under the heading "Segment Discussion" below, product sales decreased $2.6 million, or 9%, to $27.6 million for the six months ended June 30, 2019 from $30.2 million for the six months ended June 30, 2018, due to a decrease in inertial navigation product sales of $1.7 million and a decrease in mobile connectivity product sales of $0.9 million. Service sales for the six months ended June 30, 2019 increased $3.9 million, or 9%, to $47.7 million from $43.8 million for the six months ended June 30, 2018 due to an increase in mobile connectivity service sales of $3.4 million and an increase in inertial navigation service sales of $0.5 million.

***Costs of Sales***

Costs of sales increased by $5.3 million, or 12%, in the six months ended June 30, 2019 to $50.9 million from $45.6 million in the six months ended June 30, 2018. The increase in costs of sales was driven by an increase of $4.2 million in costs of service sales and a $1.1 million increase in costs of product sales. As a percentage of net sales, costs of sales were 68% and 62% for the six months ended June 30, 2019 and 2018, respectively.

For the six months ended June 30, 2019, costs of product sales increased by $1.1 million, or 6%, to $20.1 million from $19.0 million in the six months ended June 30, 2018. As a percentage of product sales, costs of product sales were 73% and 63% for the six months ended June 30, 2019 and 2018, respectively. Mobile connectivity costs of product sales increased by $2.0 million, or 19%, primarily due to a $2.1 million inventory reserve for TracPhone V-IP products. Mobile connectivity costs of product sales as a percentage of mobile connectivity product sales were 83% and 66% for the six months ended June 30, 2019 and 2018, respectively. Inertial navigation costs of product sales decreased by $0.9 million, or 11%, primarily due to a $1.5 million decrease in our FOG costs of product sales and a $0.4 million decrease in our TACNAV costs of product sales, largely offset by a $1.0 million decrease in absorption of factory overhead due to a decrease in the volume of production. Inertial navigation costs of product sales as a percentage of inertial navigation product sales were 60% and 59% for the six months ended June 30, 2019 and 2018, respectively.

For the six months ended June 30, 2019, costs of service sales increased by $4.2 million, or 16%, to $30.8 million from $26.6 million for the six months ended June 30, 2018. As a percentage of service sales, costs of service sales were 65% and 61% for the six months ended June 30, 2019 and 2018, respectively. Mobile connectivity costs of service sales increased by $3.7 million, or 15%, primarily due a $3.1 million increase in mini-VSAT airtime costs of service sales, including increased HTS network capacity costs, legacy network revenue share minimums and AgilePlans depreciation costs. In addition, there was a $0.6 million increase in costs associated with contract engineering service revenue. Mobile connectivity costs of service sales as a percentage of mobile connectivity service sales were 64% and 60% for the six months ended June 30, 2019 and 2018, respectively. Inertial navigation costs of service sales increased by $0.5 million, or 28%, due to an increase in contract engineering services sales. Inertial navigation costs of service sales as a percentage of inertial navigation service sales were 70% and 64% for the six months ended June 30, 2019 and 2018, respectively.

***Operating Expenses***

Research and development expense for the six months ended June 30, 2019 increased by $0.2 million, or 3%, to $7.7 million from $7.5 million for the six months ended June 30, 2018. The primary reason for the increase in research and development expense was a $0.5 million increase in expensed materials, a $0.4 million increase in consulting fees, and a $0.2 million increase in salaries and employee benefits, partially offset by a $1.1 million increase in funded engineering expenses (which are reflected in costs of service sales rather than research and development expense). As a percentage of net sales, research and development expense for the six months ended June 30, 2019 and 2018 was 10%.

Sales, marketing and support expense for the six months ended June 30, 2019 increased by $1.8 million, or 12%, to $17.0 million from $15.2 million for the six months ended June 30, 2018. The increase in sales, marketing and support expense resulted primarily from a $1.3 million increase in salaries and employee benefits and a $0.3 million increase in marketing expenses. As a percentage of net sales, sales, marketing and support expense was 23% and 21% for the six months ended June 30, 2019 and 2018, respectively.

General and administrative expense for the six months ended June 30, 2019 increased by $0.6 million, or 5%, to $12.7 million from $12.1 million for the six months ended June 30, 2018. The increase in general and administrative expense resulted primarily from a $0.7 million increase in salaries and associated compensation partially offset by a $0.2 million decrease in legal and professional fees. As a percentage of net sales, general and administrative expense for the six months ended June 30, 2019 was 17% as compared to 16% for the six months ended June 30, 2018.

***Interest and Other Income, Net***

Interest income increased $0.9 million for the six months ended June 30, 2019 to $1.2 million from $0.3 million for the six months ended June 30, 2018. The increase was primarily due to the interest related to the note receivable from Oakley Capital in connection with our sale of Videotel. Interest expense increased $0.1 million to $0.9 million for the six months ended June 30, 2019 from $0.8 million for the six months ended June 30, 2018. Other income, net remained flat at $0.2 million for the six months ended June 30, 2019 and 2018.

***Income Tax (Benefit) Expense***

Income tax benefit for the six months ended June 30, 2019 was $2.6 million and related to the valuation allowance release against discontinued operations. The losses we incurred in the US did not generate any income tax benefit during the period due to a full valuation allowance on our related deferred tax assets generated in the period. Income tax expense for the six months ended June 30, 2018 was $0.1 million and related to taxes on income earned in foreign jurisdictions. The losses we incurred in the US did not generate any income tax benefit during the period due to a full valuation allowance on our related deferred tax assets in 2018.

**Segment Discussion - Six months ended June 30, 2019 and 2018**

As noted above, we have classified our Videotel business as a discontinued operations and have therefore excluded it from the segment information below. The Videotel business had previously been included in our mobile connectivity business segment.

Our net sales by segment for the six months ended June 30, 2019 and 2018 were as follows:

| | For the six months ended June 30, | | Change 2019 vs. 2018 | |
|---|---|---|---|---|
| | 2019 | 2018 | $ | % |
| | (dollars in thousands) | | | |
| Mobile connectivity sales: | | | | |
| Product | $ 15,130 | $ 16,023 | $ (893) | (6)% |
| Service | 44,417 | 41,034 | 3,383 | 8 % |
| **Net sales** | $ 59,547 | $ 57,057 | $ 2,490 | 4 % |
| | | | | |
| Inertial navigation sales: | | | | |
| Product | $ 12,438 | $ 14,131 | $ (1,693) | (12)% |
| Service | 3,285 | 2,849 | 436 | 15 % |
| **Net sales** | $ 15,723 | $ 16,980 | $ (1,257) | (7)% |

Operating income (loss) by segment for the six months ended June 30, 2019 and 2018 were as follows:

| | For the six months ended June 30, | | Change 2019 vs. 2018 | |
|---|---|---|---|---|
| | 2019 | 2018 | $ | % |
| | (dollars in thousands) | | | |
| Mobile connectivity | $ (3,876) | $ 176 | $ (4,052) | n/m |
| Inertial navigation | 195 | 1,898 | (1,703) | (90)% |
| | $ (3,681) | $ 2,074 | $ (5,755) | (277)% |
| Unallocated | (9,300) | (8,486) | (814) | (10)% |
| **Loss from operations** | $ (12,981) | $ (6,412) | $ (6,569) | (102)% |

***Mobile Connectivity Segment***

Net sales in the mobile connectivity segment increased by $2.5 million, or 4%, for the six months ended June 30, 2019 as compared to the six months ended June 30, 2018. Mobile connectivity product sales decreased by $0.9 million, or 6%, to $15.1 million for the six months ended June 30, 2019 from $16.0 million for the six months ended June 30, 2018. The decrease was primarily due to a $0.6 million, or 4%, decrease in marine mobile connectivity product sales due partly to the impact of the AgilePlans subscription service and a $0.3 million, or 25%, decrease in sales of our land mobile connectivity products.

Mobile connectivity service sales increased by $3.4 million, or 8%, to $44.4 million for the six months ended June 30, 2019 from $41.0 million for the six months ended June 30, 2018. The increase was primarily due to a $3.6 million increase in our mini-VSAT service sales compared to the six months ended June 30, 2018 primarily due to a 13% increase in subscribers, partially as a result of the introduction of AgilePlans and our HTS network. In addition, our contract engineering service revenue increased by $0.5 million. Partially offsetting these increases was a $0.9 million decrease in content service sales.

Operating earnings for the mobile connectivity segment decreased by $4.1 million, for the six months ended June 30, 2019 as compared to the six months ended June 30, 2018. This decrease resulted primarily from a decrease in product sales less associated costs of $2.9 million, driven by the $2.1 million inventory reserve related to our TracPhone V-IP products. In addition there was a decrease in service sales less associated costs of $0.3 million, a $0.3 million increase in professional fees and a $0.3 million increase in marketing expenses, partially offset by a $0.1 million decrease in bad debt expense.

***Inertial Navigation Segment***

Net sales in the inertial navigation segment decreased $1.2 million, or 7%, for the six months ended June 30, 2019 as compared to the six months ended June 30, 2018. Inertial navigation product sales decreased by $1.7 million, or 12%, to $12.5 million for the six months ended June 30, 2019 from $14.2 million for the six months ended June 30, 2018, primarily due to a $1.2 million decrease in TACNAV sales and a $0.5 million decrease in FOG products sale.

Inertial navigation service sales increased $0.5 million, or 15%, to $3.3 million for the six months ended June 30, 2019 from $2.8 million for the six months ended June 30, 2018. The increase resulted primarily from a $0.6 million increase in contracted engineering services for an engineering and services development contract from a major U.S. defense contractor, which began in the fourth quarter of 2018 is expected to continue through the third quarter of 2021.

Our operating earnings for the inertial navigation segment decreased by $1.7 million for the six months ended June 30, 2019 as compared to the six months ended June 30, 2018. This decrease is primarily due to the decrease in product sales less associated costs of $0.8 million, a $0.3 million increase in warranty expense and expensed materials, a $0.2 million increase in salaries and associated compensation, a $0.2 million increase in professional fees and $0.2 million increase in external commissions.

***Unallocated***

Unallocated operating loss increased $0.8 million, or 10%, for the six months ended June 30, 2019 as compared to the six months ended June 30, 2018. The increase was primarily the result of an increase in salaries and associated compensation.

***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. However as of June 30, 2019, we had over 170 TracPhone HTS units in backlog to be shipped through 2020.

Our backlog for all products and services was $17.7 million and $14.5 million as of June 30, 2019 and December 31, 2018, respectively. As of June 30, 2019, $12.2 million of our backlog was scheduled for fulfillment in 2019, $2.9 million was scheduled for fulfillment in 2020, and $2.6 million was scheduled for fulfillment in 2021 through 2028.

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 June 30, 2019, our backlog included $5.3 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 periods, we have funded our operations primarily from an asset sale, cash flows from operations, bank financing, an equity private placement and the proceeds received from exercises of stock options.

As of June 30, 2019, we had $65.4 million in cash, cash equivalents, and marketable securities, of which $2.0 million in cash and cash equivalents was held in local currencies by our foreign subsidiaries. Our foreign subsidiaries held no marketable securities as of June 30, 2019. As of June 30, 2019, we had $75.8 million in working capital.

Net cash used in operations was $6.6 million for the six months ended June 30, 2019 compared to net cash used in operations of $1.2 million for the six months ended June 30, 2018. The $5.4 million increase in cash used in operations was primarily due to a $54.3 million decrease in non-cash items, a $1.2 million increase in cash outflows relating to inventories, and a $0.9 million increase in cash outflows related to other long-term liabilities. Partially offsetting these items were a $46.2 million increase in our net income, a $2.5 million decrease in cash outflows relating to accounts payable and accrued expenses, a $1.9 million increase in cash inflows relating to contract liabilities and long-term contract liabilities, and a $0.5 million decrease in cash outflows relating to accounts receivable.

Net cash provided by investing activities was $31.8 million for the six months ended June 30, 2019 compared to net cash provided by investing activities of $0.5 million for the six months ended June 30, 2018. The $31.3 million increase in net cash provided by investing activities was principally the result of $88.4 million in net proceeds from the sale of Videotel, a $0.7 million decrease in capital expenditures, and a $0.1 million increase in proceeds from sales of property and equipment. Partially offsetting these items was a $58.0 million increase in net investment in marketable securities.

Net cash used in financing activities was $27.5 million for the six months ended June 30, 2019 compared to net cash provided by financing activities of $0.9 million for the six months ended June 30, 2018. The $28.4 million increase in net cash used in financing activities is primarily attributable to a $24.0 million increase in repayments of long-term debt and term note borrowings and a $4.5 million decrease in sale of treasury stock. These amounts were partially offset by a $0.3 million increase in proceeds from the exercise of stock options net of payments for employee restricted stock withholdings.

***Borrowing Arrangements***

*Principal Credit Facility*

On October 30, 2018, we amended and restated our 2014 credit agreement by entering into (i) a three-year senior credit facility agreement, or the 2018 credit agreement, with Bank of America, N.A., as administrative agent, and the lenders named from time to time as parties thereto, or the 2018 lenders, for an aggregate amount of up to $42.5 million, including a term loan, or the 2018 term loan, of $22.5 million and a reducing revolving credit facility, or the 2018 revolver, of up to $20.0 million initially and reducing to $15.0 million on December 31, 2019, each to be used for general corporate purposes, including the refinancing of our then-outstanding indebtedness under the 2014 credit agreement, (ii) 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 2018 credit agreement and, (iii) 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 that we hold in order to secure our obligations under the 2018 credit agreement. On the closing date, we repaid $17.2 million on the 2014 term loan and refinanced its remaining balance. On the closing date, we also borrowed $5.0 million under the 2018 revolver.

The 2018 credit agreement contains provisions requiring the mandatory prepayment of amounts outstanding under the 2018 term loan and the 2018 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 above certain threshold amounts outside the ordinary course of business. The prepayments are first applied to the 2018 term loan, in inverse order of maturity, and then to the 2018 revolver.

On May 13, 2019, we entered into a consent with Bank of America, N.A., as administrative agent, authorizing the purchase agreement and bridge loan to Oakley Capital, as discussed in Note 1. On June 27, 2019, we used the proceeds of the sale of Videotel to repay in full the then-outstanding balance of $21.4 million under the 2018 term loan and to repay $13.0 million of the then-outstanding balance under the 2018 revolver such that the Consolidated Leverage Ration is not more than 2.75:1.00. The 2018 revolver will remain at $20.0 million through the term of the credit agreement. On October 30, 2021, the entire principal balance of any outstanding loans under the 2018 revolver are due and payable, together with all accrued and unpaid interest, fees and any other amounts due and payable under the 2018 Credit Agreement. As of June 30, 2019, there was $2.0 million outstanding under the 2018 revolver, and the remaining balance of $18.0 million was available for borrowing.

Borrowings under the 2018 revolver are subject to the satisfaction of various 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 2018 credit agreement.

The 2018 credit agreement contains two financial covenants, a maximum Consolidated Leverage Ratio and a minimum Consolidated Fixed Charge Coverage Ratio, each as defined in the 2018 credit agreement. The Consolidated Leverage Ratio initially may not be greater than 3.00:1.00 and have declines to 2.75:1.00 on September 30, 2019, to 2.50:1.00 on December 31, 2019 and to 2.00:1.00 on December 31, 2020. The Consolidated Fixed Charge Coverage Ratio may not be less than 1.25:1.00.

The 2018 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, performance of 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 2018 credit agreement could be accelerated upon an event of default under its terms, 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 2018 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 property loss events, and certain events relating to the impairment of collateral or the 2018 lenders' security interest therein.

*Mortgage Loan*

In April 2019, on the Mortgage Loan's original termination date, we repaid in full the outstanding balance of $2.5 million. In April 2010, we entered into two interest rate swap agreements that were intended to hedge our mortgage interest obligations over the term of the Mortgage Loan by fixing the interest rates specified in the Mortgage Loan to 5.91% for half of the principal amount outstanding as of April 1, 2010 and 6.07% for the remaining half. Both interest rate swap agreements were also settled upon repayment of the Mortgage Loan.

***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. From time to time we have entered into multi-year agreements to lease satellite capacity, and we have also purchased numerous satellite hubs to support the added capacity. These transactions can involve millions of dollars, and from time to time we have entered into secured lending arrangements to finance them. During the first quarter of 2018, we entered into a five-year capital lease for three satellite hubs for the HTS network. The total cost of the five-year capital lease will be $3.1 million.

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 June 30, 2019, 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 six months ended June 30, 2019.

## 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 June 30, 2019, 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 June 30, 2019.

***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 second quarter of 2019. 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 second quarter of 2019 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 1A. RISK FACTORS

*An investment in our common stock involves a high degree of risk. You should carefully consider the following risk factors in evaluating our business. If any of these risks, or other risks not presently known to us or that we currently believe are not significant, develops into an actual event, then our business, financial condition and results of operations could be adversely affected. If that happens, the market price of our common stock could decline.*

**We expect that our AgilePlans pricing model for our mini-VSAT broadband business will continue to adversely affect our revenues at least in the short term.**

In April 2017, we launched AgilePlans, our all-inclusive connectivity-as-a-service, or CaaS, usage-based pricing model for our mini-VSAT broadband service. Under this CaaS model, we charge subscribers a monthly fee for satellite communication hardware, shipping and installation, maintenance and support, airtime and voice services, a service management portal and certain basic content services. AgilePlans customers do not make long-term commitments and can cancel their AgilePlans subscription service at any time. For 2018 and the six months ended June 30, 2019, AgilePlans revenue comprised 4% and 8% of our total revenue, respectively. Under this model, we retain ownership of our satellite equipment and do not sell it to subscribers; accordingly, to the extent that customers continue to adopt this subscription model, our revenues from product sales will continue to decline, and our provision of this equipment to subscribers will continue to increase our capital expenditures, which over time will increase our operating expenses as we depreciate these assets. Similarly, revenues from other services included in the plans, which have previously been sold separately, will also decline. In May 2019, we sold our Videotel business and the services offered by the Videotel business have historically been included in our AgilePlans programs. Although we retained the right to continue to offer Videotel services as a part of our AgilePlans programs for a period of time, any discontinuation of the Videotel services may reduce the attractiveness of our AgilePlans programs. Although our goal with the AgilePlans pricing model is to increase the number of subscribers and thereby increase our overall mobile connectivity revenues, the pricing model is still relatively untested and may have unanticipated consequences for our business if adopted on a large scale. There can be no assurance that customers will continue to adopt the AgilePlans pricing model or that revenues from our AgilePlans will offset the loss of other revenue and increase our overall mobile connectivity revenues. Accordingly, an expansion of the AgilePlans pricing model may continue to lead to lower overall revenues in our mobile connectivity segment on either a short-term or long-term basis. Further, because we retain ownership of the satellite communications equipment provided to subscribers under the AgilePlans, we may incur increased costs, including write-offs seeking to recover equipment from any customers who may default on payment or transition to another service. Adoption of the same or similar pricing models by competitors may lead to significant price competition, which could also adversely affect our revenues.

**Our launch of a new high-throughput satellite network is causing us to incur significant additional operating costs and may create technical challenges and management distraction that will adversely affect our operating profit.**

In November 2017, we launched our new high-throughput satellite, or HTS, communications service that uses Intelsat’s Global IntelsatOne Flex managed services and SKY-Perfect JSAT capacity. We also operate a global network of leased satellite transponders and terrestrial teleports in cooperation with ViaSat, Inc. We anticipate that the HTS network may eventually significantly reduce costs and enhance the capabilities of the satellite communications services that we offer to our customers. In the near term, however, the launch of the HTS network has resulted and will result in additional operating costs arising from the need to operate both the HTS network and the legacy network. The operation of the HTS network may also present technical challenges arising from Intelsat’s use of the relatively new iDirect Velocity technology for the coding and modulation of satellite signals. Further, the operational requirements associated with the HTS network may continue to require significant attention from our management, marketing, sales, and technical teams, potentially distracting them from other opportunities to further develop our services and increase our customer base. Finally, our current focus on the HTS network creates potential risks with respect to the continued operation of our existing satellite communications network and our contractual arrangement with ViaSat and satellite operators. The contractual arrangement with ViaSat and satellite operators will need to be phased out over a period of several years, but the reliability of the existing satellite network will need to be maintained during the entirety of the wind-down period.

**Our financial results may be adversely affected by changes in accounting principles applicable to us.**

Generally accepted accounting principles in the United States, or U.S. GAAP, are subject to modification and interpretation by the Financial Accounting Standards Board, or the FASB, the SEC, and other bodies formed to promulgate and interpret accounting principles. For example, in May 2014, the FASB issued Accounting Standards Codification Update No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which substantially revised revenue recognition guidance under U.S. GAAP. We implemented this new revenue standard in the first quarter of 2018. The adoption of this new standard is having a material impact on our consolidated financial statements, including delays in recognition of revenue for certain mini-VSAT Broadband services and hardware contracts and balance sheet impacts relating to accounts receivable, contract assets and contract liabilities. These or other changes in accounting principles are adversely affecting our reported financial results, including a meaningful increase to our accumulated deficit upon adoption. Moreover, our system of internal controls was originally designed to address previous standards for revenue recognition (Topic 605), and the relatively minor modifications we have made to our internal controls to address the new standard may be insufficient to implement the new standard accurately or in full. Any insufficiencies or errors in implementation could lead to mistakes in, or delays in filing, our consolidated financial statements as well as deficiencies or weaknesses in our internal control over financial reporting and our disclosure controls and procedures, any of which could lead to additional accounting, legal and other expenses, potential restatements, loss of investor confidence, enforcement actions by governmental authorities, securities class actions and other adverse consequences.

**Our revenues and results of operations have been and may continue to be adversely impacted by economic turmoil in the markets we serve, political events, macroeconomic conditions, credit tightening and associated declines in consumer and enterprise spending.**

Economic conditions in the various geographic markets we serve have experienced significant turmoil over the last several years, including slow economic activity, tight credit markets, inflation and deflation concerns, low consumer confidence, limited capital spending, adverse business conditions, war and refugee crises in the Middle East and Europe, terrorist attacks, the departure of the United Kingdom from the European Union, the changes in government priorities, trade wars, a government shutdown, gridlock from a divided Congress, and liquidity concerns. These factors vary in intensity by region. These conditions can make it difficult for businesses, governments and consumers to accurately forecast and plan future activities. Many governments, including the US government, are experiencing significant deficits that have caused and may continue to cause them to curtail spending significantly and/or reallocate funds away from defense programs. There can be no assurances that government programs to improve economic conditions will be effective. As a result of these and other factors, customers and government entities could continue to slow or suspend spending on our products and services. We may also incur increased credit losses and need to further increase our allowance for doubtful accounts, which would have a negative impact on our earnings and financial condition.

We cannot predict the timing, duration, or ultimate impact of the turmoil in our markets. We expect our business to continue to be adversely impacted by this turmoil to varying degrees and for varying amounts of time, in all our geographic markets.

**We have a history of losses and are uncertain when we may regain profitability.**

We recorded substantial losses from continuing operations in the six months ended June 30, 2019 and in each of the last three fiscal years. We expect to incur substantial losses in the near future as we continue to bear the expenses of maintaining two satellite networks during the transition of our mini-VSAT customers from our legacy network to our new HTS network, as we increase satellite capacity to handle our growing subscriber base, as we continue to shift our business from a model based primarily on product sales to a model based primarily on recurring revenue, and as we continue to invest in research and development to improve our existing products and develop new products, including our photonic chip-based fiber optic gyro. In upcoming quarters, we expect to invest substantially in the development of our photonic chip-based fiber optic gyro in an effort to take advantage of opportunities we may have in the autonomous vehicle and other markets. We expect that, as we increase our investments in these and other areas, including, for example, in our Internet of Things (IoT) product, our losses will grow. Moreover, the sale of our profitable Videotel business in May 2019 will complicate our ability to reduce our losses and regain profitability. Although the sale of the Videotel business generated substantial proceeds that enabled us to reduce our indebtedness, the net proceeds from the sale will allow us to continue to incur significant operating losses for only a limited period of time. In order to regain profitability, we must successfully complete the transition of our mini-VSAT customers to our HTS network and continue to introduce new and improved products in order to maintain and improve our competitive position and generate revenue. Our inability to accomplish any of these goals could have a material adverse effect on our revenues, profitability and cash flow, and we cannot assure you when, or whether, we will regain profitability.

**Turmoil in U.S. trade policy, including changes to existing trade agreements and any resulting changes in international trade relations, may have a material adverse effect on us.**

The U.S. administration is continuing to alter the U.S.'s approach to international trade and is renegotiating, and may terminate, certain existing bilateral or multi-lateral trade agreements and treaties with foreign countries. In addition, the U.S. administration has imposed tariffs on certain foreign goods and may increase tariffs or impose new ones, and certain foreign governments have imposed retaliatory tariffs on certain U.S. goods and may increase tariffs or impose new ones. We derive a majority of our revenues from international sales, which makes us especially vulnerable to increased tariffs. The changes have created ongoing turmoil in international trade relations and it is unclear what future actions the U.S. government or foreign governments will or will not take with respect to tariffs or other international trade agreements and policies. Current trade negotiations may fail, which may exacerbate these risks. Ongoing or new trade wars or other governmental action related to tariffs or international trade agreements or policies could reduce demand for our products and services, increase our costs, reduce our profitability, adversely impact our supply chain or otherwise have a material adverse effect on our business and results of operations.

**Declines in oil prices may continue to adversely affect our revenues and profitability.**

Oil prices have declined significantly since the peak in 2014. West Texas Intermediate oil prices dropped from a high of $107.26 per barrel on June 20, 2014 to a low of $26.21 per barrel on February 11, 2016. Customers of our mobile satellite business include offshore support vessel companies that participate in or depend on the offshore oil industry. Although prices have recovered somewhat in recent periods, the cycle of declines in worldwide oil prices have had a significant impact on the financial performance of companies in this sector of the economy, and as a result demand for new products and services has declined severely since 2015 as they have sought to reduce expenditures. In addition, we have experienced a higher customer churn rate primarily attributed to customers that operate in this sector, where the sale, decommissioning, or laying up of vessels has led to a higher rate of airtime plan terminations and suspensions. These trends could continue to limit or reduce demand for our mobile connectivity products and services from companies in this sector, which could continue to adversely affect our revenues and profitability.

**Our financial performance is impacted by U.S. government contracts, which are subject to uncertain levels of funding and termination.**

We have historically sold a substantial portion of our TACNAV and FOG products and services to the U.S. government and its contractors. We are unable to predict the impact on our business of Congressional gridlock, tax reform and government policies, which have increased already significant budget deficits and may lead to an overall reduction in federal spending. A reduction in sales to the U.S. government or its contractors, whether due to lack of funding, for convenience or otherwise, or the occurrence of delays, could negatively impact our results of operations and financial condition.

In addition, U.S. government contracts generally also permit the government to terminate the contract, in whole or in part, without prior notice, at the government's convenience or for default based on performance. Government customers can also decline to exercise previously disclosed contract options. If one of our contracts is terminated for convenience, we would generally be entitled to payments for our allowable costs and would receive some allowance for profit on the work performed. If one of our contracts is terminated for default, we would generally be entitled to payments for our work that has been accepted by the government. A termination arising out of our default could expose us to liability and adversely affect our ability to obtain future contracts and orders. Furthermore, on contracts for which we are a subcontractor and not the prime contractor, the U.S. government could terminate the prime contract for convenience or otherwise, irrespective of our performance as a subcontractor.

**We must generate a certain level of sales of the TracPhone V-HTS and V-IP series products and our mini-VSAT Broadband service in order to maintain or improve our service gross margins.**

As a result of our mini-VSAT Broadband network infrastructure, our cost of service sales includes certain fixed costs that do not generally vary with the volume of service sales, and we have almost no ability to reduce these fixed costs in the short term. These fixed costs have increased significantly each year as we have further expanded our network to accommodate additional subscriber demand and/or coverage areas, and we expect that this trend will continue in the rest of 2019 and beyond, particularly as we expand our HTS network. Revenues from our TracPhone V-IP series products declined from 2016 to 2017, continuing through 2018 and 2019 due in part to our introduction of TracPhone V-HTS and our AgilePlans. If sales of our TracPhone V-HTS and V-IP series products and the mini-VSAT Broadband service, including through our AgilePlans subscription model, do not generate the level of revenue that we expect or if those revenues decline, our service gross margins may continue to decline. As our market share has increased, we have also experienced a general increase in customer termination and suspension rates, compounded by accelerated declines in sales for vessels servicing the oil supply market with some bulk carriers, and lower unit sales of our mobile connectivity hardware, both in the United States and Europe. The failure to improve our mini-VSAT Broadband service gross margins and unit or subscriber sales would have a material adverse effect on our overall profitability.

**Competition may limit our ability to sell our mobile connectivity products and services and inertial navigation products.**

The mobile connectivity markets and defense navigation and inertial navigation markets in which we participate are very competitive, and we expect this competition to persist and intensify in the future. We may not be able to compete successfully against current and future competitors, which could impair our ability to sell our products and services. For example, improvements in the performance of lower-cost gyros by competitors could potentially jeopardize sales of our FOGs and FOG-based systems. As our market share in the mobile satellite communication market has grown, competition has intensified significantly, most notably from companies that seek to compete primarily on price. These companies may continue to implement price reductions and discounts for both products and services, which have required us to reduce our prices or offer discounts in order to maintain or increase our market share. Some of our VSAT competitors have also leveraged partnerships amongst themselves in order to capture larger combined market share. We anticipate that this trend of substantial competition will continue. Further, some of the companies that we depend on to supply us with capacity on satellite communications networks may vertically integrate by introducing their own products and services in competition with our products and services, thus potentially incentivizing them to refrain from providing satellite network capacity to us, or to make it available only on less favorable terms.

In the marine market for satellite TV equipment, we compete primarily with Intellian, Cobham SATCOM, Orbit Communication Systems, RayMarine (Intellian made), KNS, and Sea King (King Controls).

In the marine market for voice, fax, data, and Internet communications equipment, we compete primarily with Intellian, Cobham SATCOM, Orbit Communication Systems, Jotron AS, KNS Inc., Inmarsat, AddValue, and Iridium Satellite LLC.

In the marine market for high-speed voice, fax, data, and Internet services, we compete primarily with Inmarsat, Marlink, Speedcast, Network Innovations, and Global Eagle Entertainment. We also face competition from providers of low-speed data services, which include Inmarsat, Globalstar LP, and Iridium Satellite LLC.

In the market for land mobile satellite TV equipment, we compete primarily with King Controls and Winegard Company.

In the markets for media content, the KVH Media Group competes primarily with Swank Motion Pictures and NewspaperDirect Inc.

In the inertial navigation markets, we compete primarily with Honeywell International Inc., Northrop Grumman Corporation, Goodrich Aerospace, IAI, Fizoptica, SAGEM, and Systron Donner Inertial.

Among the factors that may affect our ability to compete in our markets are the following:

- many of our primary competitors are well-established companies that generally have substantially greater financial, managerial, technical, marketing, personnel and other resources than we do, which help them to compete more effectively in the market for mobile broadband solutions for larger fleets of vessels;
- the infrastructure costs for potential customers to switch from an existing service provider to our service may create disincentives for customers to enter into agreements for our services, even when those services are more attractive or cost-effective;
- many of our primary competitors have well-established and/or growing partner programs, which pose a threat of multiplying their market influence;
- product and service improvements, new product and service developments or price reductions by competitors may weaken customer acceptance of, and reduce demand for, our products and services;
- new technology or market trends may disrupt or displace a need for our products and services;
- our competitors may have access to a broader array of media content than we do, which may cause customers to prefer competitors’ media offerings; and
- our competitors may have lower production costs than we do, which may enable them to compete more aggressively in offering discounts and other promotions.

**The emergence of a competing small maritime VSAT antenna and complementary service or other similar service could reduce the competitive advantage we believe we currently enjoy with our smaller TracPhone V-IP series antennas and Ku-band mini-VSAT Broadband service, or with our TracPhone V11-IP antenna and our C/Ku-band mini-VSAT Broadband service.**

Our TracPhone V-HTS and V-IP systems offer customers a range of benefits due to their integrated design, hardware costs that are lower than existing maritime Ku-band VSAT systems, and broadband technology. We currently compete against companies that offer established maritime Ku-band VSAT service using, in some cases, antennas 1-meter in diameter or larger. While we are unaware of any company offering a 37-cm VSAT solution comparable to our TracPhone V3-IP, we are encountering regional competition from companies offering 60-cm VSAT systems and services, which are comparable in size to our TracPhone V7-IP. Likewise, our TracPhone V11-IP, at 1.1-meter in diameter, is approximately 85% smaller and lighter than competing C-band maritime VSAT systems, which use antennas in excess of 2.4-meters in diameter to provide similar global services. We are unaware of any competitor currently offering a similar size solution for global C-band coverage, but any introduction of such a product could adversely impact our success. In addition, other companies could replicate some of the distinguishing features of our TracPhone V-HTS and V-IP series products, which could potentially reduce the appeal of our solution, increase price competition, and adversely affect sales. We compete against Inmarsat's Fleet Xpress service, a global Ka-band mobile VSAT service that Inmarsat claims is faster and has a lower price per megabit than existing Ku-band services. This service may continue to adversely impact sales of our mini-VSAT Broadband service and related equipment. Our arrangement to use the IntelsatOne Flex service for our HTS network is not exclusive, and competitors’ use of this service could also adversely impact sales. Moreover, consumers may choose other services such as FleetBroadband or Iridium OpenPort for their service coverage at potentially lower hardware costs despite higher service costs and slower data rates.

**If we are unable to improve our existing mobile connectivity and inertial navigation products and services and develop new, innovative products and services, our sales and market share may decline.**

The markets for mobile connectivity products and services and inertial navigation products and services are each characterized by rapid technological change, frequent new product innovations, changes in customer requirements and expectations, and evolving industry standards. For example, we now compete with Inmarsat's Fleet Xpress satellite communications products and services. If we fail to make innovations in our existing products and services and reduce the costs of our products and services in a timely way, our market share may decline. For example, the introductions of our TracVision TV-series antennas in 2014 occurred later than we had anticipated, which we believe led certain customers to purchase competing products. Products or services using new technologies, or emerging industry standards, could render our products and services obsolete. If our competitors successfully introduce new or enhanced products or services that eliminate technological advantages our products or services may have in a market or otherwise outperform our products or services, or are perceived by consumers as doing so, we may be unable to compete successfully in the markets affected by these changes.

**We are devoting significant resources to research and development efforts that may be unsuccessful.**

Research and development in our industry is inherently complex and uncertain, and our current and anticipated research and development projects may not achieve the results we seek. For example, we are currently investing in the development of a new, low-cost FOG for the autonomous vehicle market that will satisfy rigorous performance expectations but that can be manufactured at a significantly lower cost than our current FOGs. We plan to use a potentially significant portion of the proceeds from the sale of our Videotel business to substantially accelerate this development program. We are also seeking to develop enhancements to our current generation of TACNAV products. As with all development projects, we may encounter unforeseen technical challenges, delays, cost overruns, licensing requirements or other problems that prevent us from achieving our goals, as a result of which we could lose significant market opportunities. Our research and development expenses decreased 6% from 2017 to 2018, and increased 3% from the six months ended June 30, 2018 to the six months ended June 30, 2019, and the capital resources that we can devote to our research and development efforts may be insufficient to achieve our goals. Our efforts may not result in any viable products or may result in products whose performance, features, price or availability may not be attractive to customers. As a result, our efforts may not result in products that generate meaningful revenues in the near term, or at all. We may expend a significant amount of resources in unsuccessful research and development efforts, and any failure to achieve our research and development goals may harm our reputation with customers or otherwise adversely affect our business, financial condition and results of operations.

**The purchasing and delivery schedules and priorities of the U.S. military and foreign governments are often unpredictable.**

We sell our FOG systems and tactical navigation products and services to U.S. and foreign military and government customers, either directly or as a subcontractor to other contractors. These customers often use a competitive bidding process and have unique purchasing and delivery requirements, which often makes the timing of sales to these customers unpredictable. Factors that affect their purchasing and delivery decisions include:

- increasing budgetary pressures, which may reduce or delay funding for military programs;
- changes in modernization plans for military equipment;
- changes in tactical navigation requirements;
- global conflicts impacting troop deployment, including troop withdrawals;
- priorities for current battlefield operations;
- new military and operational doctrines that affect military equipment needs;
- sales cycles that are long and difficult to predict;
- shifting response time and/or delays in the approval process associated with the export licenses we must obtain prior to the international shipment of certain of our military products;
- delays in military procurement schedules; and
- delays in the testing and acceptance of our products, including delays resulting from changes in customer specifications.

These factors periodically cause substantial fluctuations in sales of our TACNAV and FOG products and services from period to period. For example, TACNAV product sales decreased $1.2 million, or 58%, from the six months ended June 30, 2018 to the six months ended June 30, 2019, and sales of our TACNAV products decreased $0.2 million, or 4%, from 2017 to 2018. Similarly, sales of our FOG products decreased $0.5 million, or 4%, from the six months ended June 30, 2018 to the six months ended June 30, 2019, and sales of our FOG products increased $7.2 million, or 37%, from 2017 to 2018. In October 2014, we received a $19.0 million TACNAV product and services contract with an international military customer which included program management and engineering services delivered through 2017 and hardware shipments that were completed in the third quarter of 2016. These types of large orders contribute to the unpredictability of our revenues from period to period. Government customers may change defense spending priorities at any time.

**Sales of our FOG systems and TACNAV products generally consist of a few large orders, and the delay or cancellation of a single order will substantially reduce our net sales.**

KVH products sold to customers in the defense industry are purchased through orders that can generally range in size from several hundred thousand dollars to several million dollars. For example, we received orders for TACNAV products and services of $3.5 million, $1.3 million, $1.4 million, $1.5 million, $4.3 million, $19.0 million, and $5.2 million in April 2017, November 2015, September 2015, May 2015, November 2014, October 2014 and May 2014, respectively. Orders of this size are often unpredictable and difficult to replicate. As a result, the delay or cancellation of a single order could materially reduce our net sales and results of operations. We routinely experience repeated and unanticipated delays in defense orders, which make our revenues and operating results less predictable. Because our inertial navigation products typically have relatively higher product gross margins than our mobile connectivity products, the loss of an order for inertial navigation products could have a disproportionately adverse effect on our results of operations.

**Only a few customers account for a substantial portion of our inertial navigation revenues, and the loss of any of these customers could substantially reduce our net sales.**

We derive a significant portion of our inertial navigation revenues from a small number of customers, many of whom are contractors for the U.S. government. The loss of business from any of these customers or delays in orders could substantially reduce our net sales and results of operations and could seriously harm our business. Since we are often awarded a contract as a subcontractor to a major defense supplier that is engaged in a competitive bidding process as prime contractor for a major weapons procurement program, our revenues depend significantly on the success of the prime contractors with which we align ourselves.

**Commercial sales of our inertial navigation products are unpredictable.**

Fluctuating commercial sales of our inertial navigation products are making it more difficult to predict our future revenues. We have been marketing our inertial navigation products, particularly our FOG products and systems, to original equipment manufacturers for incorporation into commercial products, such as navigation and positioning systems for various applications, including precision mapping, dynamic surveying, self-driving and other autonomous vehicles, train location control and track geometry measurement systems, industrial robotics, and optical stabilization. Because we sell these products to original equipment manufacturers rather than end-users, we have less information about market trends and other developments affecting the buying patterns of end-users and, as a result, may be unable to forecast demand for these products accurately. Sales of FOGs for commercial applications increased from 2017 to 2018; however, sales can significantly increase or decrease quarter-to-quarter due to our customer mix. Moreover, sales of these products for commercial applications depend on the success of our customers' products, and any decline in sales of our customers' products would reduce demand for our products

**Our results of operations are adversely affected by unseasonably cold weather, prolonged winter conditions, disasters or similar events.**

Our leisure marine business is highly seasonal, and seasonality can also impact our commercial marine business. Historically, we have generated the majority of our leisure marine 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 winter months. Our leisure marine business is also significantly affected by the weather. Unseasonably cool weather, prolonged winter conditions, hurricanes, unusual amounts of rain, and natural and other disasters may decrease boating, which could reduce our revenues. Specifically, we may encounter a decrease in new airtime activations as well as an increase in the number of cancellations or temporary suspensions of our airtime service.

**An increasing portion of our revenues derives from commercial leases of mobile connectivity equipment, rather than sales, which increases our credit and collection risk.**

We are actively seeking to increase revenues from the commercial markets for our mini-VSAT Broadband service, particularly shipping companies and other companies that deploy a fleet of vessels. In marketing this service, we offer leasing arrangements for the TracPhone antennas to both commercial and leisure customers. If commercial leases become increasingly popular with our customers, we could face increased risks of default under those leases. Defaults could increase our costs of collection (including costs of retrieving or abandoning leased equipment) and reduce the amount we collect from customers, which could harm our results of operations. Moreover, fleet sales are likely to be less common than, and perhaps substantially larger than, our typical orders, which could lead to increased variability in our quarterly revenues and gross margin realization. Under ASC 606, product revenue for sales-type leases of our mini-VSAT equipment will be recognized throughout the lease term, which is typically three to five years.

**Our ability to compete in the maritime airtime services market will be impaired if we are unable to provide sufficient service capacity to meet customer demand.**

We currently offer our mini-VSAT Broadband service in the Americas, Europe, the Middle East, Africa, Asia-Pacific, and Australian and New Zealand waters. In the future, we may need to expand capacity, including under our new HTS network, in existing coverage areas to support our subscriber base. If we are unable to reach agreement with third-party satellite providers to support our mini-VSAT Broadband service and its technology or if transponder capacity is unavailable to meet growing demand in a given region, our ability to provide airtime services will be at risk and could reduce the attractiveness of our products and services.

**Changes in foreign currency exchange rates negatively affect our financial condition and results of operations.**

Because of the scope of our foreign sales and foreign operations, we face significant exposure to movements in exchange rates for foreign currencies, particularly the pound sterling and the euro. During 2018 and 2019, the U.S. dollar has generally strengthened against certain foreign currencies, which decreased our revenues reported in U.S. dollars and decreased the reported value of our assets in foreign countries. If the U.S. dollar continues to strengthen (as has recently occurred relative to the pound sterling), our revenues denominated in foreign currencies but reported in U.S. dollars, as well as the reported value of our assets in foreign countries, would be commensurately lower.

We also have intragroup receivables and liabilities, such as loans, that can generate significant foreign currency effects. Changes in exchange rates, particularly the U.S. dollar against the pound sterling, could lead to the recognition of unrealized foreign exchange losses.

Moreover, certain of our products and services are sold internationally in U.S. dollars; if the U.S. dollar strengthens, the relative cost of these products and services to customers located in foreign countries would increase, which could adversely affect export sales. In addition, most of our financial obligations, including payments under our outstanding debt obligations, must be satisfied in U.S. dollars. Our exposures to changes in foreign currency exchange rates may change over time as our business practices evolve and could result in increased costs or reduced revenue and could adversely affect our cash flow. Changes in the relative values of currencies occur regularly and may have a significant impact on our operating results. We cannot predict with any certainty changes in foreign currency exchange rates or the degree to which we can cost-effectively mitigate this exposure.

**Brexit and political uncertainty in the United Kingdom and Europe could adversely affect our revenue and results of operations and disrupt our operations.**

We have significant operations in the United Kingdom, including the major portion of our KVH Media Group operations. The United Kingdom's intention to exit from the European Union, or Brexit, has caused significant political uncertainty in both the United Kingdom and the European Union. The impact of Brexit and the resulting turmoil on the political and economic future of the United Kingdom and the European Union is uncertain, and we may be adversely affected in ways we do not currently anticipate. Brexit may result in a significant change in the British regulatory environment, which would likely increase our compliance costs. Customers and other businesses may curtail expenditures, including for purchases of our products and services. We may find it more difficult to conduct business in the United Kingdom and the European Union, as Brexit may result in increased restrictions on the movement of capital, goods and personnel. Depending on the outcome of negotiations between the United Kingdom and the European Union regarding the terms of Brexit, we may decide to relocate or otherwise alter our European operations to respond to the new business, legal, regulatory, tax and trade environments that may result. Brexit may materially and adversely affect our relationships with customers, suppliers and employees and could result in decreased revenue, increased expenses, higher tariffs and taxes, and lower earnings and cash flow.

**Tight credit availability, environmental concerns and ongoing low levels of consumer confidence are adversely affecting sales of our mobile satellite TV products.**

Factors such as tight credit, environmental protection laws and ongoing low levels of consumer confidence can materially and adversely affect sales of larger vehicles and vessels for which our mobile satellite TV products are designed, such as yachts and recreational vehicles. Many customers finance their purchases of these vehicles and vessels, and tight credit availability can reduce demand for both these vehicles and vessels and our mobile satellite TV products. Moreover, financing for these purchases has sometimes been unavailable or more difficult to obtain. The increased cost of operating these vehicles and vessels can adversely affect demand for our mobile satellite TV products.

**We have outstanding indebtedness, which could restrict our business opportunities.**

We currently have, and will likely continue to have, outstanding indebtedness. Our indebtedness could, among other things, make it more difficult for us to satisfy our financial obligations, require us to use a portion of our cash flow from operations to repay and service our debt or otherwise create liquidity problems, limit our flexibility to adjust to market conditions, place us at a competitive disadvantage and expose us to interest rate fluctuations. As of June 30, 2019, we had $2.0 million in aggregate principal amount of debt outstanding, all of which was outstanding under our revolving credit facility, which matures in October 2021. As of June 30, 2019, $18.0 million was available for borrowing under our revolving credit facility.

We expect to obtain the money to pay our expenses and pay the principal and interest on our indebtedness from any cash flow from our operations and potentially from other debt or equity offerings. Accordingly, our ability to meet our obligations depends on our future performance and capital raising activities, which will be affected by financial, business, economic and other factors, many of which are beyond our control. If our cash flow and capital resources prove inadequate to allow us to pay the principal and interest on our debt and meet our other obligations, we could face substantial liquidity problems and might be required to dispose of material assets or operations, restructure or refinance our debt, which we may be unable to do on favorable terms, and forego attractive business opportunities. In addition, the terms of our existing or future debt agreements may restrict us from pursuing any of these alternatives.

**The agreements governing our secured credit facility subject us to various restrictions that may limit our ability to pursue business opportunities.**

The agreements governing our secured credit facility subject us to various restrictions on our ability to engage in certain activities, including, among other things, our ability to:

- acquire other businesses or make investments;
- raise additional capital;
- incur other debt or create liens on our assets;
- pay dividends or make distributions;
- prepay indebtedness; and
- merge, dissolve, liquidate, consolidate, or dispose of all or substantially all of our assets.

These restrictions may limit or restrict our cash flow and our ability to pursue business opportunities or strategies that we would otherwise consider to be in our best interests.

**Our secured credit facility contains certain financial and other restrictive covenants that we may not satisfy, and that, if not satisfied, could result in the acceleration of the amounts due under our secured credit facility and the limitation of our ability to borrow additional funds in the future.**

The agreements governing our secured credit facility subject us to various financial and other affirmative and negative covenants with which we must comply on an ongoing or periodic basis. These include covenants pertaining to a maximum consolidated leverage ratio and a minimum consolidated fixed charge coverage ratio and covenants requiring the mandatory prepayment of amounts outstanding under 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 above certain threshold amounts outside the ordinary course of business. The consolidated leverage ratio may not be greater than 3.00:1.00 and declines to 2.75:1.00 on September 30, 2019, to 2.50:1.00 on December 31, 2019 and to 2.00:1.00 on December 31, 2020. The consolidated fixed charge coverage ratio may not be less than 1.25:1.00. If we violate any of these covenants, any outstanding debt under our secured credit facility could become immediately due and payable, our lenders could proceed against any collateral securing such indebtedness, and our ability to borrow additional funds in the future could be limited or terminated. Alternatively, we could be forced to refinance or renegotiate the terms and conditions of our secured credit facility, including the interest rates, financial and restrictive covenants and security requirements of the secured credit facility, on terms that may be significantly less favorable to us.

**Our mobile satellite products currently depend on satellite services, gateway teleports and terrestrial networks provided by third parties, and a disruption in those services could adversely affect sales.**

Our satellite antenna products include the equipment necessary to utilize satellite services. We do not own the satellites that directly provide two-way satellite communications or the terrestrial networks that interconnect our facilities with the satellite teleports that communicate with the satellites. We currently offer satellite television products compatible with the DIRECTV and DISH Network services in the United States, the Bell TV service in Canada, the Sky Mexico service and various other regional satellite TV services in other parts of the world.

SES, Eutelsat, Sky Perfect-JSAT, Telesat, EchoStar, Intelsat and Star One currently provide the satellite capacity to support the mini-VSAT Broadband service and our TracPhone V-IP and V-HTS series products. Intelsat also currently provides our C-Band satellite coverage. In addition, we have agreements with various teleports and Internet service providers around the globe to support the mini-VSAT Broadband service. The terrestrial fiber links that we use to connect with the Internet and to move our voice and data services between our facilities and the various satellite earth stations that support our services are provided to us through numerous service providers, some of which have contractual relationships with our satellite service providers and not directly with us. We rely on Inmarsat for satellite communications services for our FleetBroadband and FleetOne compatible TracPhone products. We also have an arrangement with Iridium for additional satellite communications services that we make available to our customers as a backup option to provide communications redundancy with our primary service offerings.

We exercise little or no control over these third-party providers of satellite, teleport and terrestrial network services, which increases our vulnerability to problems with the services they provide. Due to our reliance on these service providers, when problems occur, it may be difficult to identify the source of the problem. Service disruption or outages, regardless of whether they are caused by our service, the equipment or services of our third-party service providers, or our customers' or their equipment and systems, may result in loss of market acceptance of our service, and any necessary repairs or other remedial actions may cause us to incur significant costs and expenses. Any failure on the part of third-party service providers to achieve or maintain expected performance levels, stability and security could harm our relationships with our customers, result in claims for credits or damages, damage our reputation, significantly reduce customer demand for our solution and seriously harm our financial condition and operating results.

If customers become dissatisfied with the programming, pricing, service, availability or other aspects of any of these satellite services, or if any one or more of these services becomes unavailable for any reason, we could suffer a substantial decline in sales of our satellite products. There may be no alternative service provider available in a particular geographic area, and our modem or other technology may not be compatible with the technology of any alternative service provider that may be available. Even if available, delays caused by switching our technology to another service provider, if available, and qualifying this new service provider could materially harm our customer relationships, business, financial condition and operating results. In addition, the unexpected failure of a satellite could disrupt the availability of programming and services, which could reduce the demand for, or customer satisfaction with, our products.

**We rely upon third-party communications technology and satellite providers to permit two-way broadband Internet via our TracPhone V-HTS and V-IP series antennas, and any disruption in the availability of this technology will adversely affect sales.**

Our mini-VSAT Broadband service relies on broadband communications technology developed by ViaSat and Intelsat for use with satellite capacity controlled by SES, Eutelsat, Sky Perfect-JSAT, Telesat, Echostar, Intelsat and Star One. Our TracPhone broadband satellite terminals combine our stabilized antenna technology with this third-party mobile broadband technology, including modems, to provide two-way broadband Internet service. This third-party technology is also integrated within the satellite hubs that support this service. Sales of the TracPhone V-HTS and V-IP series products and our mini-VSAT Broadband service could be disrupted if we fail to receive approval from regulatory authorities to provide our service in the waters of various countries where our customers operate or if there are issues with the availability of the third-party hardware. Moreover, satellite communications technology may continue to evolve, which could reduce the relative attractiveness of the third-party technology we currently offer, and the hardware we use may cease to be compatible with changes in satellite service offerings. As we transition customers to our new HTS service over the next several years, we may encounter technological challenges, increased expenses, customer dissatisfaction, inventory obsolescence, interruptions in supply, disruptions in current relationships or arrangements and unforeseen obstacles, any of which could have a material adverse effect on our mobile satellite business, revenues and profitability.

**We have single dedicated manufacturing facilities for each of our mobile connectivity and inertial navigation product categories, and any significant disruption to a facility will impair our ability to deliver our products.**

We currently manufacture all of our mobile connectivity products at our manufacturing facility in Middletown, Rhode Island, and the majority of our inertial navigation products at our facility in Tinley Park, Illinois. Some of our production processes are complex, and we may be unable to respond rapidly to the loss of the use of either production facility. For example, our production facilities use some specialized equipment that may take time to replace if they are damaged or become unusable for any reason. In that event, shipments would be delayed, which could result in customer or dealer dissatisfaction, loss of sales and damage to our reputation. Finally, we have only a limited capability to increase our manufacturing capacity in the short term. If short-term demand for our products exceeds our manufacturing capacity, our inability to fulfill orders in a timely manner could also lead to customer or dealer dissatisfaction, loss of sales and damage to our reputation.

**We depend on sole or limited source suppliers, and any disruption in supply could impair our ability to deliver our products on time or at expected cost.**

We obtain many key components for our products from third-party suppliers, and in some cases we use a single or a limited number of suppliers. Any interruption in supply could impair our ability to deliver our products until we identify and qualify a new source of supply, which could take several weeks, months or longer and could increase our costs significantly. Suppliers might change or discontinue key components, which could require us to modify our product designs. For example, in the past, we have experienced changes in the chemicals used to coat our optical fiber, which changed its characteristics and thereby necessitated design modifications. Department of Defense regulations requiring government contractors to implement processes to avoid counterfeit parts may require us to find new sources of materials or components if the current supplier cannot meet the requirements. In general, we do not have written long-term supply agreements with our suppliers but instead purchase components through purchase orders, which expose us to potential price increases and termination of supply without notice or recourse. It is generally not our practice to carry significant inventories of product components, and this could magnify the impact of the loss of a supplier. If we are required to use a new source of materials or components, it could also result in unexpected manufacturing difficulties and could affect product performance and reliability. In addition, from time to time, lead times for certain components can increase significantly due to imbalances in overall market supply and demand. This, in turn, could limit our ability to satisfy the demand for certain of our products on a timely basis and could result in some customer orders being rescheduled or canceled.

**We may continue to increase the use of international suppliers to source components for our manufacturing operations, which could disrupt our business.**

Although we have historically manufactured and sourced raw materials for the majority of our products domestically, in order for us to compete with lower priced competing products while also improving our profitability, in some instances we have found it desirable to source raw materials and manufactured components and assemblies from Europe, Asia, and South America. Reliance on foreign manufacturing and/or raw material supply has lengthened our supply chain and increased the risk that a disruption in that supply chain could have a material adverse effect on our operations and financial performance.

**We depend on cloud-based data services operated by third parties, and any disruption in the operation of these services could harm our business.**

We host some of our content services and business records using various cloud-based data services operated by third parties. Any failure or downtime in one of these services could affect a significant percentage of our customers. Although we control and have access to our servers and all of the components of our network that are located in our internal facilities and certain of our external data facilities, we do not control the operation of external facilities. The providers of our data management services have no obligation to renew their agreements with us on commercially reasonable terms, or at all. If we are unable to renew these agreements on commercially reasonable terms, or if one or more of our data management service providers is acquired, closes, suffers financial difficulty or is unable to meet our growing capacity needs, we may be required to transfer our data to other services, and we may incur significant costs and service interruptions in connection with doing so, which could harm our reputation with our customers and adversely affect our revenues and results of operations.

**Adverse economic conditions could result in financial difficulties or bankruptcy for any of our suppliers, which could adversely affect our business and results of operations.**

The current state of worldwide economic conditions and tight credit could present challenges to our suppliers, which could result in disruptions to our business, increase our costs, delay shipment of our products or delivery of services, and impair our ability to generate and recognize revenue. To address their own business challenges, our suppliers may increase prices, reduce the availability of credit, require deposits or advance payments or take other actions that may impose a burden on us.

They may also reduce production capacity, slow or delay delivery of products, face challenges meeting our specifications or otherwise fail to meet our requirements. In some cases, our suppliers may face bankruptcy. We may be required to identify, qualify, and engage new suppliers, which would require time and the attention of management. Any of these events could impair our ability to deliver our products and services to customers in a timely and cost-effective manner, cause us to breach our contractual commitments or result in the loss of customers.

**Our media and entertainment business relies on licensing arrangements with content providers, and the loss of or changes in those arrangements could adversely affect our business.**

We distribute premium news, sports, movies, and music content for commercial and leisure customers in the maritime, hotel, and retail markets. We do not generate this content but instead license the content from third parties on a non-exclusive basis. We do not have long-term license agreements with any content provider. Accordingly, any content provider could terminate our existing arrangements with little or no advance notice or could adversely modify the terms of the arrangement, including initiating potential price increases. Further, the licenses we obtain are limited in scope, and any violation of the terms of a license could expose us to liability for copyright infringement. We pay license fees that are based in part on the revenue we generate from sublicenses, and our licensors generally have the right to audit our records to determine whether we have paid all necessary license fees. Failure to pay required license fees could result in any combination of termination of our license rights, penalties, or damages. The loss of content could adversely affect the attractiveness of our media and entertainment offerings, which could in turn adversely affect our revenues. Any increase in the cost of content could reduce the profitability of these offerings.

**Any failure to maintain and expand our third-party distribution relationships may limit our ability to penetrate markets for mobile connectivity products and services.**

We market and sell our mobile connectivity products and services through an international network of independent retailers, chain stores and distributors, as well as to manufacturers of marine vessels, recreational vehicles and buses. Many of our distributors are also responsible for providing onsite support and installation for our products, which requires our distributors to employ highly skilled workers and maintain facilities in locations convenient to our customers, such as at maritime ports. We also expect our distributors to assist us in expanding internationally. Some of our distribution relationships are new, and our new distributors may not be successful in marketing and selling our products and services. In addition, our distribution partners do not have exclusive relationships with us and may sell products of other companies, including competing products, and are generally not required to purchase minimum quantities of our products. Our competitors may be able to cause our current or potential distributors to favor their services over ours, either through financial incentives, technological innovation, by offering a broader array of services to these service providers or otherwise, which could reduce the effectiveness of our use of these distributors. If we fail to maintain relationships with our current distributors, fail to develop relationships with new distributors in new and existing markets, or manage, train, or provide appropriate incentives to our existing distributors, or if our distributors are not successful in their sales efforts, sales of our products and services may decline and our operating results could be harmed.

**Our international business operations expose us to a number of difficulties in coordinating our activities abroad and in dealing with multiple regulatory environments.**

Historically, sales to customers outside the United States have accounted for a significant portion of our net sales. We derived 60%, 57%, 57%, and 58% of our revenues in the six months ended June 30, 2019 and the years ended December 31, 2018, 2017, and 2016, respectively, from sales to customers outside the United States. We have foreign sales offices in Denmark, the United Kingdom, Singapore, Hong Kong, Japan, Norway, Cyprus and the Philippines, as well as a subsidiary in Brazil that manages local sales. However, aside from these international sales offices, substantially all of our personnel and operations, particularly for our mobile connectivity equipment business and our inertial navigation business, are located in the United States. Our limited operations in foreign countries may impair our ability to compete successfully in international markets and to meet the service and support needs of our customers in countries where we have little to no infrastructure. We are subject to a number of risks associated with our international business activities, which may increase our costs and require significant management attention. These risks include:

- retaliatory and other tariffs;
- technical challenges we may face in adapting our mobile connectivity products to function with different satellite services and technology in use in various regions around the world;
- satisfaction of international regulatory requirements and delays and costs associated with procurement of any necessary licenses or permits;
- the potential unavailability of content licenses covering international waters and foreign locations;
- restrictions on the sale of certain inertial navigation products to foreign military and government customers;
- increased costs of providing customer support in multiple languages;
- increased costs of managing operations that are international in scope;
- potentially adverse tax consequences, including restrictions on the repatriation of earnings;
- protectionist laws and business practices that favor local competitors, which could slow our growth in international markets;
- potentially longer sales cycles, which could slow our revenue growth from international sales;
- potentially longer accounts receivable payment cycles and difficulties in collecting accounts receivable; and
- economic and political instability in some international markets.

**We could incur additional legal compliance costs associated with our international operations and could become subject to legal penalties if we do not comply with certain regulations.**

As a result of our international operations, we are subject to a number of legal requirements, including the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act and the customs, export, trade sanctions and anti-boycott laws of the United States, including those administered by the U.S. Customs and Border Protection, the Bureau of Industry and Security, the Department of Commerce, the Department of State, and the Office of Foreign Assets Control of the Treasury Department, as well as those of other nations in which we do business. In addition, the governments of many of the countries where our customers use our products and services maintain licensing and regulatory requirements for the importation and use of satellite communications and reception equipment, including the use of such equipment in the country's territorial waters, the transmission of satellite signals on certain radio frequencies, the transmission of voice over Internet services using such equipment, and, in some cases, the reception of certain video programming services. These laws and regulations are changing continuously, and compliance with these laws and regulations is complex. We incur significant costs identifying and maintaining compliance with applicable licensing and regulatory requirements. In addition, our training and compliance programs and our other internal control policies may be insufficient to protect us from acts committed by our employees, agents or third-party contractors. Any violation of these requirements by us or our employees, agents or third-party contractors may subject us to significant criminal and civil liability.

**Exports of certain inertial navigation products are subject to the U.S. Export Administration Regulations and the International Traffic in Arms Regulations and require a license from the U.S. Department of State prior to shipment.**

We must comply with the United States Export Administration Regulations and the International Traffic in Arms Regulations, or ITAR. Certain of our products have military or strategic applications and are on the munitions list of the ITAR and require an individual validated license in order to be exported to certain jurisdictions. Any changes in export regulations or reclassifications of our products may further restrict the export of our products, and we may cease to be able to procure export licenses for our products under existing regulations. The length of time required by the licensing process can vary, potentially delaying the shipment of products and the recognition of the corresponding revenue. Any restriction on the export of a product line or any amount of our products could cause a significant reduction in net sales.

**We are subject to FCC rules and regulations, and any non-compliance could subject us to FCC enforcement actions, fines, loss of licenses and possibly restrictions on our ability to operate or offer certain of our services.**

The satellite communications industry is regulated by the Federal Communications Commission in the United States and, as a result, we are subject to existing and potential FCC regulations relating to privacy, contributions to the Universal Service Fund, or USF, and other requirements. If we do not comply with FCC rules and regulations, we could be subject to FCC enforcement actions, substantial fines, penalties, loss of licenses and possibly restrictions on our ability to operate or offer certain of our services. Any enforcement action by the FCC, which may be a public process, could hurt our reputation in the industry, possibly impair our ability to sell our services to customers and could harm our business and results of operations.

**Reform of federal and state USF programs could increase the cost of our service to our customers, diminishing or eliminating our pricing advantage.**

The FCC has been considering reform or other modifications to its USF program. The way we calculate our contribution to USF may change if the FCC engages in reform or adopts other modifications. In April 2012, the FCC released a Further Notice of Proposed Rulemaking to consider reforms to the manner in which companies like us contribute to the federal USF program. In general, the Further Notice of Proposed Rulemaking indicates that the FCC is considering changes to the companies that should contribute, how contributions should be assessed, and methods to improve the administration of the system. We cannot predict the outcome of this proceeding or its impact on our business at this time. The changes in the leadership of the U.S. Government resulting from the federal election in 2016 may renew interest in completing this proceeding.

Should the FCC adopt new contribution mechanisms or otherwise modify contribution obligations that increase our contribution burden, we will either need to raise the amount we currently collect from our customers to cover this obligation or absorb the costs, which would reduce our profit margins. The attractiveness of our services may also be reduced as compared to the services of our competitors that do not appear to contribute to USF, or do not do so to the same extent that we do.

**Privacy concerns and domestic or foreign laws and regulations may reduce demand for our services, increase our costs and harm our business.**

Our company and our customers can potentially use our services to collect, use and store information, including personally identifiable information or other information treated as confidential, regarding the content and manner of usage of our services by them, their employees and maritime crews. Federal, state and foreign governments and agencies have adopted, are considering adopting, and may adopt new and more stringent laws and regulations regarding the collection, use, storage and disclosure of such information obtained from consumers and individuals, such as the European Union’s General Data Protection Regulation, or the GDPR, which took effect in May 2018. The costs of compliance with, and other burdens imposed by, such laws and regulations that are applicable to us and the operations of our customers may limit the use and adoption of our services and reduce overall demand, and any non-compliance with these laws and regulations could lead to significant remediation expenses, fines, penalties or other regulatory liabilities such as orders or consent decrees forcing us to modify our privacy practices, as well as reputational damage or third-party lawsuits seeking damages or other relief. For example, the GDPR imposes a strict data protection compliance regime with penalties of up to the greater of 4% of worldwide revenue and €20 million.

Domestic and international legislative and regulatory initiatives may harm our ability, and the ability of our customers, to process, handle, store, use and transmit information, including demographic and personally identifiable information or other information treated as confidential, regarding individual users of the services, which could reduce demand for some of our services, increase our costs and force us to change our business practices. These laws and regulations are still evolving and are likely to be in flux and subject to uncertain interpretation for the foreseeable future. For example, under the GDPR, data protection authorities in each country have the ability to interpret the GDPR, which could create inconsistencies on a country-by-country basis. Our business could be harmed if legislation or regulations are adopted, interpreted or implemented in a manner that is inconsistent from country to country or inconsistent with our current policies and practices or those of our customers. In addition, foreign data protection, privacy, and consumer protection laws and regulations, such as the GDPR, are often more stringent than those in the United States.

**Acquisitions may disrupt our operations or adversely affect our results.**

We evaluate strategic acquisition opportunities to acquire other businesses as they arise. The expenses we incur evaluating and pursuing these and other such acquisitions could have a material adverse effect on our results of operations. If we acquire a business, we may be unable to manage it profitably or successfully integrate its operations with our own. Moreover, we may be unable to realize the strategic, financial, operational and other benefits we anticipate from any acquisition, and any acquisition may increase our overall operating expenses, including expenses we may incur to complete acquired research and development programs. Competition for acquisition opportunities could increase the price we pay for businesses we acquire and could reduce the number of potential acquisition targets. Further, our approach to acquisitions may involve a number of special financial and business risks, such as:

- entry into new and unfamiliar lines of business or markets, which may present challenges or risks that we did not anticipate;
- entry into new or unfamiliar geographic regions, including exposure to additional tax and regulatory regimes;
- increased expenses associated with the amortization of acquired intangible assets;
- increased exposure to fluctuations in foreign currency exchange rates;
- charges related to any potential acquisition from which we may withdraw;
- diversion of our management's time, attention, and resources;
- loss of key acquired personnel;
- increased costs to improve or coordinate managerial, operational, financial, and administrative systems, including compliance with the Sarbanes-Oxley Act of 2002;
- dilutive issuances of equity securities;
- the assumption of legal liabilities; and
- losses arising from impairment charges associated with goodwill or intangible assets.

For example, we incurred additional expenses to implement internal control over financial reporting appropriate for a public company at two companies we acquired, which previously operated as private companies not subject to U.S. generally accepted accounting principles.

**We may have liabilities relating to the sale of our Videotel business.**

We may have liabilities under our agreements with Oakley Capital and its affiliates (together, "Oakley") regarding the sale of our Videotel business, including purchase price adjustments for indebtedness and any shortfall in working capital below a specified amount. These adjustments could be material. In these agreements, we made certain warranties about the Videotel business, including general commercial warranties, warranties regarding tax matters and warranties regarding capacity and title. We also generally indemnified Oakley for the pre-closing taxes of the Videotel business. Although we negotiated for certain limitations on our liability for these matters, including certain limits regarding the periods during which claims for breach may be asserted and certain caps on our maximum potential liability, our exposure is still substantial. If we are found to have breached any of our warranties or to have failed to fulfill our tax obligations, we may have to pay damages or take other remedial measures, either of which could have a material adverse effect on our business, financial condition and cash flow.

**If we cannot effectively manage changes in our rate of growth, our business may suffer.**

We have previously expanded our operations to pursue existing and potential market opportunities, and we are continuing to expand our international operations. For example, we expanded our service offerings through acquisitions in 2014 and in 2013. This growth placed a strain on our personnel, management, financial and other resources and increased our operating expenses. If any portion of our business grows more rapidly than we anticipate and we fail to manage that growth properly, we may incur unnecessary expenses, and the efficiency of our operations may decline. If we are unable to adjust our operating expenses on a timely basis in response to changes in revenue cycles, our results of operations may be harmed. To manage changes in our rate of growth effectively, we must, among other things:

- match our manufacturing facilities and capacity to demand for our products and services in a timely manner;
- secure appropriate satellite capacity to match changes in demand for airtime services in a timely manner;
- successfully attract, train, motivate and manage appropriate numbers of employees for manufacturing, sales, marketing and customer support activities;
- effectively manage our inventory and working capital;
- maintain the efficiencies within our operating, administrative, financial and accounting systems; and
- ensure that our procedures and internal controls are revised and updated to remain appropriate for the size and scale of our business operations.

**If we are unable to hire and retain the skilled personnel we need to expand our operations, our business will suffer.**

To meet our growth objectives, we must attract and retain highly skilled technical, operational, managerial and sales and marketing personnel. If we fail to attract and retain the necessary personnel, we may be unable to achieve our business objectives and may lose our competitive position, which could lead to a significant decline in net sales. We face significant competition for these skilled professionals from other companies, research and academic institutions, government entities and other organizations

**Our success depends on the services of our executive officers.**

Our future success depends to a significant degree on the skills and efforts of Martin Kits van Heyningen, our co-founder, President, Chief Executive Officer, and Chairman of the Board. If we lost the services of Mr. Kits van Heyningen, our business and operating results could be seriously harmed. We also depend on the ability of our other executive officers to work effectively as a team. The loss of one or more of our executive officers could impair our ability to manage our business effectively.

**Our business may suffer if we cannot protect our proprietary technology.**

Our ability to compete depends significantly upon our patents, copyrights, source code, and other proprietary technology. The steps we have taken to protect our technology may be inadequate to prevent others from using what we regard as our technology to compete with us. Our patents will eventually expire and could be challenged, invalidated or circumvented, and the rights we have under our patents could provide no competitive advantages. Existing trade secret, copyright, and trademark laws offer only limited protection. Customers or others with access to our proprietary or licensed media content could copy that content without permission or otherwise violate the terms of our customer agreements, which would adversely affect our revenues and could impair our relationships with content providers. In addition, the laws of some foreign countries do not protect our proprietary technology to the same extent as the laws of the United States, which could increase the likelihood of misappropriation. Furthermore, other companies could independently develop similar or superior technology without violating our intellectual property rights. Any misappropriation of our technology or the development of competing technology could seriously harm our competitive position, which could lead to a substantial reduction in net sales.

If we resort to legal proceedings to enforce our intellectual property rights, the proceedings could be burdensome, disruptive and expensive, distract the attention of management, and there can be no assurance that we would prevail.

Also, we have delivered certain technical data and information to the U.S. government under procurement contracts, and it may have unlimited rights to use that technical data and information. There can be no assurance that the U.S. government will not authorize others to use that data and information to compete with us.

**Claims by others that we infringe their intellectual property rights could harm our business and financial condition.**

Our industries are characterized by the existence of a large number of patents and frequent claims and related litigation regarding patent and other intellectual property rights. We cannot be certain that our products do not and will not infringe issued patents, patents that may be issued in the future, or other intellectual property rights of others.

We do not generally conduct exhaustive patent searches to determine whether the technology used in our products infringes patents held by third parties. In addition, product development is inherently uncertain in a rapidly evolving technological environment in which there may be numerous patent applications pending, many of which are confidential when filed, with regard to similar technologies.

From time to time we have faced claims by third parties that our products or technology infringe their patents or other intellectual property rights, and we may face similar claims in the future. For example, we were sued for patent infringement in 2015, and we settled this claim in January 2016 with a payment of cash to Advanced Media Network. Any claim of infringement could cause us to incur substantial costs defending against or settling the claim, even if the claim is invalid, and could distract the attention of our management. If any of our products are found to violate third-party proprietary rights, we may be required to pay substantial damages. In addition, we may be required to re-engineer our products or obtain licenses from third parties to continue to offer our products. Any efforts to re-engineer our products or obtain licenses on commercially reasonable terms may not be successful, which would prevent us from selling our products, and, in any case, could substantially increase our costs and have a material adverse effect on our business, financial condition and results of operations.

**Cybersecurity breaches could disrupt our operations, expose us to liability, damage our reputation, and require us to incur significant costs or otherwise adversely affect our financial results.**

We are highly dependent on information technology networks and systems, including the Internet, to securely process, transmit and store electronic information, including personal information of our customers. We also retain sensitive data, including intellectual property, proprietary business information, personally identifiable information, credit card information, and usage data of our employees and customers on our computer networks. Although we take certain protective measures and endeavor to modify them as we believe circumstances warrant, invasive technologies and techniques continue to evolve rapidly, and our computer systems, software and networks are vulnerable to disruption, shutdown, unauthorized access, misuse, erasure, alteration, employee error, phishing, computer viruses or other malicious code, and other events that could have a security impact. Our protective measures may be inadequate to detect future cybersecurity breaches or determine the extent of any breach, and there can be no assurance that undetected breaches have not already occurred. Any security breach may compromise information stored on our networks and may result in significant data losses or theft of our, our customers', our business partners' or our employees' sensitive information. Public reports suggest that cybersecurity incidents are happening more often and with increasingly severe consequences. We may be required to expend substantial additional resources to augment our efforts to address potential cybersecurity risks, which could adversely affect our results of operations.

If any of these events were to occur, they could disrupt our operations, distract our management, cause us to lose existing customers and fail to attract new customers, as well as subject us to regulatory actions, litigation, fines, damage to our reputation or competitive position, or orders or decrees requiring us to modify our business practices, any of which could have a material adverse effect on our financial position, results of operations or cash flows.

**Fluctuations in our quarterly net sales and results of operations could depress the market price of our common stock.**

We have at times experienced significant fluctuations in our net sales and results of operations from one quarter to the next. Our future net sales and results of operations could vary significantly from quarter to quarter due to a number of factors, many of which are outside our control. Accordingly, you should not rely on quarter-to-quarter comparisons of our results of operations as an indication of future performance. It is possible that our net sales or results of operations in a quarter will fall below the expectations of securities analysts or investors. If this occurs, the market price of our common stock could fall significantly. Our results of operations in any quarter can fluctuate for many reasons, including:

- changes in demand for our mobile connectivity and inertial navigation products and services, including as a result of our AgilePlans;
- the timing and size of individual orders from military customers, which may be delayed or canceled for various reasons;
- the mix of products and services we sell, including the mix of fixed rate and metered contracts for airtime services;
- our ability to manufacture, test and deliver products in a timely and cost-effective manner, including the availability and timely delivery of components and subassemblies from our suppliers;
- our success in winning competitions for orders;
- the timing of new product introductions by us or our competitors;
- the scope and success of our investments in research and development;
- expenses incurred in pursuing acquisitions and investments;
- expenses incurred in expanding, maintaining, or improving our mini-VSAT Broadband network;
- market and competitive pricing pressures;
- unanticipated charges or expenses, such as increases in warranty claims;
- general economic climate; and
- seasonality of pleasure boat and recreational vehicle usage.

In light of our current and anticipated investments in research and development and the expansion of our new HTS network, we expect that our operating expenses in upcoming quarters will increase significantly over the amounts we incurred in prior comparable quarters.

A large portion of our expenses, including expenses for network infrastructure, facilities, equipment, and personnel, are relatively fixed. Accordingly, if our net sales decline or do not grow as much or as quickly as we anticipate, we might be unable to maintain or improve our operating margins. Any failure to achieve anticipated net sales could therefore significantly harm our operating results for a particular fiscal period.

**The market price of our common stock may be volatile.**

Our stock price has historically been volatile. During the period from January 1, 2016 to June 30, 2019, the trading price of our common stock ranged from $7.31 to $14.15. Many factors may cause the market price of our common stock to fluctuate, including:

- variations in our quarterly results of operations;
- the introduction of new products and services by us or our competitors;
- changing needs of military customers;
- changes in estimates of our performance or recommendations by securities analysts;
- the hiring or departure of key personnel;
- acquisitions or strategic alliances involving us or our competitors;
- market conditions in our industries; and
- the global macroeconomic and geopolitical environment.

In addition, the stock market can experience extreme price and volume fluctuations. Major stock market indices experienced dramatic declines in 2008, the first quarter of 2009, January 2016, and the fourth quarter of 2018. These fluctuations are often unrelated to the operating performance of particular companies. These broad market fluctuations may adversely affect the market price of our common stock. When the market price of a company's stock drops significantly, stockholders often institute securities litigation against that company. Any such litigation could cause us to incur significant expenses defending against the claim, divert the time and attention of our management and result in significant damages.

**We may have exposure to additional tax liabilities, which could negatively impact our income tax expense, net income and cash flow.**

We are subject to income taxes and other taxes in both the U.S. and the foreign jurisdictions in which we currently operate. The determination of our worldwide provision for income taxes and current and deferred tax assets and liabilities requires significant judgment and estimation. In the ordinary course of our business, there are many transactions and calculations where the ultimate tax determination is uncertain. We are subject to regular review and audit by both domestic and foreign tax authorities and to the prospective and retrospective effects of changing tax regulations and legislation. Although we believe our tax estimates are reasonable, the ultimate tax outcome may materially differ from the tax amounts recorded in our consolidated financial statements and may materially affect our income tax benefit or expense, net loss or income, and cash flows in the period in which such determination is made. As of June 30, 2019, we had liabilities for uncertain tax positions of $0.7 million.

Deferred tax assets are recognized for the expected future tax consequences of temporary differences between the financial reporting and tax bases of assets and liabilities, and for operating losses and tax credit carry forwards. In certain instances, a valuation allowance may be recorded to reduce certain deferred tax assets to estimated realizable value. We review our deferred tax assets and valuation allowance requirements on a quarterly basis. If, during our quarterly reviews of our deferred tax assets, we determine that it is more likely than not that we will not be able to generate sufficient future taxable income to realize the net carrying value of deferred tax assets, we will record a valuation allowance to reduce the tax assets to estimated realizable value, which could result in a material income tax charge. As part of our review, we consider positive and negative evidence, including cumulative results of recent years.

**Our effective tax rate fluctuates, and we may incur obligations in tax jurisdictions in excess of accrued amounts.**

As a global company, we are subject to taxation in numerous countries, states and other jurisdictions. As a result, our effective tax rate is derived from a combination of applicable tax rates in the various places that we operate. In preparing our financial statements, we estimate the amount of tax that will become payable in each jurisdiction. Our effective tax rate may vary as a result of numerous factors, including changes in the mix of our profitability from country to country, the results of examinations and audits of our tax filings, adjustments to the value of our uncertain tax positions, changes in accounting for income taxes and changes in tax laws, including the 2017 Tax Cuts and Jobs Act, or the 2017 Tax Act. Both recently issued and future U.S. Treasury regulations, administrative interpretations or court decisions interpreting the 2017 Tax Act may require further adjustments and changes in our estimates, which could have a material adverse effect on our business, results of operations or financial conditions. Any of these factors could cause us to experience an effective tax rate significantly different from previous periods or our current expectations.

In addition, our inability to secure or sustain acceptable arrangements with tax authorities and future changes in the tax laws, among other things, may result in tax obligations that exceed the amounts accrued in our financial statements.

The 2017 Tax Act has resulted in significant changes to the U.S. corporate income tax system. These changes include a federal statutory rate reduction from 35% to 21%, the elimination or reduction of certain domestic deductions and credits and limitations on the deductibility of interest expense and executive compensation. The 2017 Tax Act also transitions taxation of earnings from a worldwide system to a modified territorial system and includes base erosion prevention measures on non-U.S. earnings, which subjects certain earnings of our foreign subsidiaries to U.S. taxation as global intangible low-taxed income, or GILTI. There is substantial uncertainty regarding the application of many of the provisions of the 2017 Tax Act and related regulations, and the positions we take may later be challenged by tax authorities, which could lead to additional taxes, penalties and interest and, if material, might require us to revise or restate our consolidated financial statements. Moreover, the 2017 Tax Act and related regulations and interpretations require us to perform new, complex computations, make significant judgments and estimates, and prepare and analyze information not previously relevant or regularly produced. Our information management systems and related processes may require modifications in order to collect and process necessary information. We may be unable to make necessary modifications in a timely or effective manner, which could result in the miscalculation of our tax obligations.

The 2017 Tax Act also included a transition toll tax, which was a one-time mandatory deemed repatriation tax on accumulated foreign subsidiaries' previously untaxed foreign earnings.

**Changes in the competitive environment, supply chain issues and the transition to our HTS network may require inventory write-downs.**

From time to time, we have recorded significant inventory charges and/or inventory write-offs as a result of substantial declines in customer demand. For example, in the second quarter of 2019, we recorded a $2.1 million inventory reserve relating to our TracPhone V-IP products as we decided to no longer promote sales of these products but instead to focus our efforts on migrating customers to our HTS network and products. Market or competitive changes could lead to future charges for excess or obsolete inventory, especially if we are unable to appropriately adjust the supply of material from our vendors.

**If goodwill or other intangible assets that we have recorded in connection with our acquisitions of other businesses become impaired, we could have to take significant charges against earnings.**

As a result of our acquisitions, we have recorded, and may continue to record, a significant amount of goodwill and other intangible assets. Under current accounting guidelines, we must assess, at least annually and potentially more frequently, whether the value of goodwill and other intangible assets has been impaired. Any reduction or impairment of the value of goodwill or other intangible assets will result in additional charges against earnings, which could materially reduce our reported results of operations in future periods.

**Our charter and by-laws and Delaware law may deter takeovers.**

Our certificate of incorporation, by-laws and Delaware law contain provisions that could have an anti-takeover effect and discourage, delay or prevent a change in control or an acquisition that many stockholders may find attractive. These provisions may also discourage proxy contests and make it more difficult for our stockholders to take some corporate actions, including the election of directors. These provisions relate to:

- the ability of our Board of Directors to issue preferred stock, and determine its terms, without a stockholder vote;
- the classification of our Board of Directors, which effectively prevents stockholders from electing a majority of the directors at any one annual meeting of stockholders;
- the limitation that directors may be removed only for cause by the affirmative vote of the holders of two-thirds of our shares of capital stock entitled to vote;
- the prohibition against stockholder actions by written consent;
- the inability of stockholders to call a special meeting of stockholders; and
- advance notice requirements for stockholder proposals and director nominations.

## 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 June 30, 2019, 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 June 30, 2019, and no repurchase programs expired during the period.

We did not repurchase any shares of our common stock in open market transactions during the six months ended June 30, 2019.

During the three months ended June 30, 2019, no vested restricted shares were surrendered to us in satisfaction of tax withholding obligations.

## ITEM 6. EXHIBITS

***Exhibits:***

| Exhibit No. | Description | Filed with this Form 10-Q | Incorporated by Reference | | |
|---|---|---|---|---|---|
| | | | Form | Filing Date | Exhibit No. |
| 2.1 | Share Purchase Agreement dated as of May 13, 2019 among KVH Industries, Inc., KVH Media Group Limited and Pelican Holdco Limited relating to the sale of the entire issued share capital of Super Dragon Limited and Videotel Marine Asia Limited | | 8-K | May 16, 2019 | 2.1 |
| 2.2 | Tax Deed of Covenant dated as of May 13, 2019 among KVH Industries, Inc., KVH Media Group Limited and Pelican Holdco Limited relating to the sale of the entire issued share capital of Super Dragon Limited and Videotel Marine Asia Limited | | 8-K | May 16, 2019 | 2.2 |
| 3.1 | Amended and Restated Certificate of Incorporation, as amended | | 10-Q | August 6, 2010 | 3.1 |
| 3.2 | Amended and Restated Bylaws | | 10-Q | November 1, 2017 | 3.2 |
| 4.1 | Specimen certificate for the common stock | | 10-K | March 2, 2017 | 4.1 |
| 10.1 | Loan Agreement dated as of May 13, 2019 between KVH Media Group Limited, as Lender, and Pelican Holdco Limited, as Borrower | | 8-K | May 16, 2019 | 10.1 |
| 10.2 | Deed of Share Charge dated as of May 13, 2019 between Pelican Holdco Limited, as Charger, in favor of KVH Media Group Limited, as Chargee, over shares of Super Dragon Limited | | 8-K | May 16, 2019 | 10.2 |
| 10.3 | Deed of Share Charge dated as of May 13, 2019 between Pelican Holdco Limited, as Charger, in favor of KVH Media Group Limited, as Chargee, over shares of Videotel Marine Asia Limited | | 8-K | May 16, 2019 | 10.3 |
| 10.4 | Consent dated as of May 13, 2019 among KVH Industries, Inc., as Borrower, Bank of America, N.A., as Lender and Administrative Agent, and The Washington Trust Company, as Lender, under the Amended and Restated Credit Agreement dated as of October 30, 2018 among such parties | | 8-K | May 16, 2019 | 10.4 |
| 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 June 30, 2019, 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 Income (Loss) (unaudited), (iv) the Consolidated Statement of Stockholder's Equity (unaudited), (v) the Consolidated Statements of Cash Flows (unaudited), and (vi) 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: August 2, 2019

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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| 101 | The following financial information from KVH Industries, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, 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 Income (Loss) (unaudited), (iv) the Consolidated Statement of Stockholder's Equity (unaudited), (v) the Consolidated Statements of Cash Flows (unaudited), and (vi) the Notes to Consolidated Financial Statements (unaudited). | X | | | |

**Exhibit 31.1**

**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: August 2, 2019

/s/ Martin A. Kits van Heyningen

Martin A. Kits van Heyningen

President, Chief Executive Officer and

Chairman of the Board

**Exhibit 31.2**

**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: August 2, 2019

/s/ Donald W. Reilly

Donald W. Reilly

Chief Financial Officer

**Exhibit 32.1**

**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 June 30, 2019, 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 | | /s/ Donald W. Reilly |
| | Martin A. Kits van Heyningen | | Donald W. Reilly |
| | President, Chief Executive Officer and Chairman of the Board | | Chief Financial Officer |
| Date: | August 2, 2019 | Date: | August 2, 2019 |