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# FORM 10-K

## U.S. SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 20549

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(b) OF THE  
SECURITIES EXCHANGE ACT OF 1934  
FOR THE FISCAL YEAR ENDED **December 31, 2017**

**OR**

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(b) OF THE  
SECURITIES EXCHANGE ACT OF 1934  
COMMISSION FILE NO. **000-20728**

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## QUMU CORPORATION

(Exact name of registrant as specified in its charter)

**Minnesota**

State or other jurisdiction of incorporation or organization

**41-1577970**

(I.R.S. Employer Identification No.)

**510 1st Avenue North, Suite 305, Minneapolis, MN 55403**

(Address of principal executive offices)

**(612) 638 - 9100**

(Registrant's telephone number, including area code)

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

**Common Stock, \$.01 par value**

**Preferred Stock Purchase Rights**

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

**None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. **Yes**  **No**

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. **Yes**  **No**

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company.

Large Accelerated Filer  Accelerated Filer

Non-Accelerated Filer  Smaller Reporting Company  Emerging Growth Company

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

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

The aggregate market value of common stock held by non-affiliates of the registrant, computed by reference to the last quoted price at which such stock was sold on such date as reported by the Nasdaq Stock Market as of the last business day of the registrant's most recently completed second fiscal quarter was approximately \$24,328,000.

As of March 21, 2018, the registrant had 9,359,400 outstanding shares of common stock.

### DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement for its 2018 Annual Meeting of Shareholders, to be filed within 120 days after the end of the fiscal year covered by this report, are incorporated by reference into Part III hereof.

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## General Information

### PART I

#### Cautionary Note Regarding Forward-Looking Statements

We make statements from time to time regarding our business and prospects, such as projections of future performance, statements of management's plans and objectives, forecasts of market trends, and other matters that are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Statements containing the words or phrases "will likely result," "are expected to," "will continue," "is anticipated," "estimates," "projects," "believes," "expects," "anticipates," "intends," "target," "goal," "plans," "objective," "should" or similar expressions identify forward-looking statements. Forward-looking statements may appear in documents, reports, filings with the Securities and Exchange Commission (SEC), news releases, written or oral presentations made by our authorized officers or other representatives. For such statements, we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995.

Our future results, including results expressed in or implied by forward-looking statements, involve a number of risks and uncertainties. Forward-looking statements are not guarantees of future actions, outcomes, results or performance. Any forward-looking statement made by us or on our behalf speaks only as of the date on which such statement is made. We do not undertake any obligation to update or keep current any forward-looking statement to reflect events or circumstances arising after the date of such statement.

In addition to the factors identified or described by us from time to time in filings with the SEC, there are many important factors that could cause our future results to differ materially from historical results or trends, results anticipated or planned by us, or the results expressed in or implied by any forward-looking statements. These important factors are described below under Item 1A. Risk Factors.

#### ITEM 1. BUSINESS

##### Overview

Qumu Corporation ("Qumu" or the "Company") provides the tools to create, manage, secure, distribute and measure the success of live and on-demand video for the enterprise. The Qumu Qx platform enables global organizations to drive employee engagement, increase access to video, and modernize the workplace by providing a more efficient and effective way to share knowledge. The world's largest organizations leverage the Qumu Qx platform for a variety of cloud-based, on premise and hybrid use cases including self-service webcasting, sales enablement, internal communications, product training, regulatory compliance and customer engagement. The Company markets its products to customers primarily in North America, Europe and Asia.

Qumu generates revenue through the sale of enterprise video content management software solutions, hardware, maintenance and support, and professional and other services. Software sales may take the form of a perpetual software license, a cloud-hosted software as a service (SaaS) or a term software license. Software licenses and appliances revenue includes sales of perpetual software licenses and hardware. Service revenue includes SaaS, term software licenses, maintenance and support, and professional and other services. An individual sale can range from single year agreements for thousands of dollars to multi-year agreements for over a million dollars.

	Year Ended December 31,			Increase (Decrease)		Percent Increase (Decrease)	
	2017	2016	2015	2016 to 2017	2015 to 2016	2016 to 2017	2015 to 2016
Software licenses and appliances	\$ 5,982	\$ 5,839	\$ 9,456	\$ 143	\$ (3,617)	2 %	(38)%
Service	22,185	25,843	24,998	(3,658)	845	(14)%	3 %
Total revenues	\$ 28,167	\$ 31,682	\$ 34,454	\$ (3,515)	\$ (2,772)	(11)%	(8)%

##### History

The Company was founded in 1978, incorporated as IXI, Inc. in Minnesota in February 1987 and changed its name to Rimage Corporation in April 1988. Until October 2011, the Company focused its business on the development and sale of its CD recordable publishing systems and DVD recordable publishing systems.

In October 2011, the Company acquired Qumu, Inc., a leader in the enterprise video content management software market, and changed its name to Qumu Corporation in September 2013. Qumu completed the transition to an enterprise video content

management software company in July 2014, when the Company closed on the sale of its disc publishing assets to Equus Holdings, Inc. and Redwood Acquisition, Inc.

In October 2014, the Company acquired Kulu Valley Ltd., a private limited company incorporated and operating in England and Wales, subsequently renamed Qumu Ltd (“Kulu Valley”). The acquisition was made to expand Qumu’s addressable market through the offering of Kulu Valley’s best-in-class video content creation capabilities and easy-to-deploy pure cloud solution, while providing customers with access to industry-leading video content management and delivery capability.

### **Enterprise Video Content Management and Delivery Software**

To increase communication, engagement and collaboration between employees and stakeholders, organizations have and continue to be invested significantly in content and network infrastructure that connects these employees and stakeholders across offices, conference rooms, computers, tablets and smart phones. As part of this, enterprises are adopting video as a mainstream communication and collaboration tool because they understand its benefits over other mediums.

Qumu video content management software solutions allow organizations to create, capture, organize and deliver content across the extended enterprise to a wide variety of end points, including mobile devices and thin clients. Qumu's video platform supports both live and on-demand streaming, and also secure download capabilities, a critical component for enterprise delivery. Qumu provides information technology administrators and corporate communication leaders a way to securely address the challenges of video that might otherwise overwhelm their data networks while utilizing their existing information technology infrastructures, thereby maximizing their investment and enabling the rapid adoption of video in their content, collaboration, communication and marketing infrastructures.

Qumu provides an end-to-end solution with an intuitive and rich user experience to create, manage and deliver live and on-demand video content both behind and beyond the secure firewall.

### **Capabilities and Products**

#### ***Qumu Qx Enterprise Video Platform***

Qumu Qx is an end-to-end video creation, management and delivery solution for enterprises. Qx can be purchased as a perpetual software license, cloud-hosted software as a service (SaaS) or hybrid. Qx offers a scalable and extensible platform that organizations can use to improve how they lead, learn and collaborate both internally and externally.

Qumu’s implementations can range in size from tens of thousands to millions of dollars. The Qx platform integrates with customers' existing video services (e.g., videoconferencing systems), business applications (e.g., Skype, WebEx, etc..) and broader IT infrastructures using Qumu's extensive application services or "APIs." Deployments also range from a single customer location to a global infrastructure serving over one hundred thousand corporate employees. Qumu’s platform solution components are deployed as needed to serve different capabilities of the enterprise video content lifecycle of creating, capturing, managing, delivering and experiencing video content.

Qx offers a flexible deployment model that can be leveraged by organizations in three different ways:

- Inside the firewall as an on-premise enterprise-grade solution for high quality, secure internal communication over existing networks
- Outside of the firewall as a cloud-based solution for flexible, external communication applications, and
- As a hybrid solution, providing the flexibility of cloud, combined with Qumu’s intelligent delivery technology.

Qx encompasses four distinct elements:

- Video Capture
- Video Content Management
- Intelligent Delivery
- Extensions and Add-Ons



### **Video Capture**

Qumu's intelligent video capture (sometimes referred to as ingest) dynamically supports unlimited video content sources, accommodating a wide variety of video formats. Video conferencing solutions have emerged as a rapidly growing source of video content. These range from high-end, hardware-intensive conference room systems, such as those provided by Polycom and Cisco, to popular unified communications solutions such as Skype for Business and WebEx.

Qumu brings streaming and management to these video communications tools. As video conferencing becomes the de facto form of team communication, organizations can record, manage and broadcast these videos live or on demand to hundreds or thousands of employees. Intelligent video capture allows users to record and broadcast using existing video conferencing tools. With one enterprise-wide video management and delivery platform, IT can extend their existing video conferencing system investment and concurrently move forward with new unified communications strategies.

### **Video Content Management**

Organizations use Qumu to centrally manage all video content through a single interface. Qumu's video content management allows system users to ingest video, create metadata and share content quickly and securely to endpoints with rights and rules management. Some of Qx's notable functionality includes:

#### **Creation & Editing**

Qx provides comprehensive, easy-to-use tools to create and edit video from desktop and mobile devices or using conference room and studio systems. The tools can be used across a wide range of applications from creating a simple mobile phone presentation, to editing a video conference recording, to producing a multi-camera town hall event.

#### **Advanced Analytics**

Qumu Advanced Analytics provide leaders and communications staff with real-time visibility and insights into employee engagement for both live streaming video and video on demand (VOD). Advanced Analytics also help IT teams monitor and solve issues with buffering, bit rate and latency across internal networks, VPNs and external CDNs.

#### **Automated Workflows**

Qx allows users to automate processes and comply with policies by creating workflows for content approval, management and viewing rights. Automated workflows can be set for specific types of meeting recordings with disclaimers, security, time of life settings, and repurposing parameters.

### Security and Access Control

Qumu's access control model can leverage most major enterprise authentication solutions, securing access to videos, channels and administrative functions. In cases where a corporate authentication service is not available, Qumu provides its own user management tools for user creation, self-registration, approvals, and group assignment.

### Speech Search

Qumu Speech Search allows organizations to use their video repository for eDiscovery, internal clipping services or simply to find information quickly. Qumu Speech Search can quickly analyze thousands of hours of audio and video, index all spoken words and phrases, and return results beyond what metadata or caption-based searches can provide.

### **Intelligent Delivery**

Qx provides a diverse, flexible and robust series of solutions for enterprise delivery of live streaming or on demand video. At the core of Qumu's solution is an intelligent business rules engine and CDN broker. This proprietary technology allows organizations to configure and optimize video for their specific offices, mobile users, and various endpoints.

Qx's intelligent delivery supports multiple content delivery network configurations, automatically and intelligently selecting the optimal video quality for a given user, delivering video via eCDN, software CDN, and/or public CDNs. Qumu's intelligent delivery technology can be deployed as hardware, software, or Virtual Machine. Intelligent delivery can be centrally monitored, managed, and updated.

### **Extensions and Add-Ons**

Qx is designed to be a customizable, enhancing the customer's enterprise communication and collaboration solution. With its service-based extensible architecture, Qx can be built upon by third-party developers. Current integrations and extensions from Qumu and its partners include Microsoft Office 365, SharePoint, Skype for Business, Yammer, IPTV, Jive, IBM Connections and Dashboard.

Extensibility is important for meeting customers who have complex and unique digital environments and for Qumu's network of partners. Qumu's open, service-based architecture enables customers to more easily support native apps for iOS, Android, and Windows Mobile platforms. Qx offers robust REST APIs for both user and administrative functions, allowing customers to develop integrations of their own on top of the Qumu platform.

### **Marketing and Distribution**

Qumu's solutions serve a growing customer base of medium- and large-sized enterprises across a wide range of vertical and horizontal markets, the five primary markets being 1) Banking, Finance and Insurance, 2) Manufacturing, 3) Services and Consulting, 4) Telecom and Technology, and 5) Biotech and Health Care. Qumu has historically targeted enterprises with 10,000+ employees and a history of video use for corporate communications, although its Qumu Cloud product can service organizations as small as 5,000 or more employees. Across all deployment types (cloud, on premise and hybrid), Qumu's customers are among the largest Fortune 500 and Global 2000 companies in the world.

Qumu serves its customer base primarily via direct sales, and to a lesser extent via channel partners, offering a variety of deployment methodologies and business models to meet customer demand including software, software on server appliance, software-enabled devices, SaaS and managed services.

Qumu has been identified as a leader by multiple industry analysts:

- Gartner's Critical Capabilities reports focuses on a group of competing products or services based on a set of use cases that match typical client deployment scenarios. These use cases are based on the real-world problems that clients need to solve, as well as how they intend to use the technology or service within their enterprises. Out of 15 competitors outlined in the current Gartner report, Qumu received a #1 ranking in both Internal Executive Messaging and Internal Collaboration, a #2 ranking in Internal Training and a #3 ranking in External Video for Sales.
- Aragon Research named Qumu a leader in its Video Content Management report.
- Wainhouse Research positioned Qumu as a leader in Enterprise Streaming Market.
- Frost & Sullivan identified Qumu as the *2018 Competitive Strategy Innovation and Leadership Award* winner, among 20 total companies the firm covers in the Enterprise Video space.

These selections are visible proof points in the market that had a positive impact on Qumu's market awareness and lead generation activities.

Qumu sells products and services internationally through its U.S. operation and its subsidiaries in the United Kingdom and Japan. International sales comprised approximately 27% of revenues for each of the years ended December 31, 2017, 2016 and 2015. During each of the years ended December 31, 2017, 2016 and 2015, the Company had one customer that accounted for more than 10% of its revenues.

### **Competition**

Major competitors of Qumu include Kaltura, VBrick, Brightcove, MediaPlatform and Panopto. Qumu competes with these other companies based primarily upon its unique end-to-end solution for a complete video infrastructure that includes support for mobile devices and existing IT infrastructure. Qumu occasionally encounters organizations utilizing Microsoft's Skype and Stream technologies. By some, Microsoft is viewed as a competitor, but our technology integrates and enables organizations to securely ingest, manage and distribute video content from a wide variety of organizational tool sets with greater flexibility and improved manageability. Qumu also differentiates itself from its competitors through its video ingestion and delivery technology, as well as its flexibility as to solution deployment and service options.

### **Research and Development**

Qumu develops its software internally and licenses or purchases software from third parties. Research and development expense was \$7.3 million, \$8.5 million and \$10.7 million for the years ended December 31, 2017, 2016 and 2015, respectively.

As of December 31, 2017, the Company employed 41 employees in research and development. This staff engages in research and development of new products and enhancements to existing products. In addition, Qumu partners with third parties to utilize their competencies in creating products to enhance its product offerings.

### **Intellectual Property**

Qumu currently maintains three U.S. patents and has two non-provisional utility patent applications pending in the U.S. Further, Qumu protects the proprietary nature of its software primarily through copyright and license agreements. It is Qumu's policy to protect the proprietary nature of its newly developed products whenever they are likely to become significant sources of revenue. No assurance can be given that Qumu will be able to obtain patent or other protection for its products. In addition, Qumu has registered and may in the future register trademarks and other marks used in its business.

Qumu also licenses or purchases the intellectual property ownership rights of programs developed by others with license or technology transfer agreements that may obligate Qumu to pay a flat license fee or royalties, typically based on a dollar amount per unit shipped or a percentage of the revenue generated by those programs. Contractual obligations with respect to such licenses will require cash payments of \$200,000 in 2018.

As the number of Qumu's products increases and the functionality of those products expand, Qumu believes that it may become increasingly subject to attempts by others to duplicate its proprietary technology and to the possibility of infringement of its intellectual property. In addition, although Qumu does not believe that any of its products infringe on the rights of others, third parties have claimed, and may in the future claim, Qumu's products infringe on their rights and these third parties may assert infringement claims against Qumu in the future. Qumu may litigate to enforce its intellectual property rights and to defend against claimed infringement of the rights of others or to determine the ownership, scope, or validity of Qumu's proprietary rights and the rights of others. Any claim of infringement against Qumu could involve significant liabilities to third parties, could require Qumu to seek licenses from third parties and could prevent Qumu from developing, selling or using its products.

The Company is the owner of various trademarks and trade names referenced in this Annual Report on Form 10-K including: "Qumu," "VideoNet Edge" and "Pathfinder." Solely for convenience, the trademarks and trade names in this Report are referred to without the ® and TM symbols, but such references should not be construed as any indicator that the Company or the other respective owners will not assert, to the fullest extent under applicable law, its or their rights thereto.

### **Employees**

As of December 31, 2017, the Company had 121 employees, of which 41 were involved in research and development, 33 in sales and marketing, 26 in service and support and 21 in administration and management. None of Qumu's employees are represented by a labor union or covered by a collective bargaining agreement.

### **Available Information**

Qumu maintains a website at [www.qumu.com](http://www.qumu.com). Qumu files reports with the Securities and Exchange Commission and its annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and other reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, are available on its website, as soon as reasonably

practicable after these documents are filed with the SEC. To obtain copies of these reports, go to [www.qumu.com](http://www.qumu.com) and click on "About," then click on "Investor Relations," then "SEC Filings" and all current EDGAR reports are available for viewing. A copy of any report filed by the Company with the SEC will also be furnished without charge to any shareholder who requests it in writing to: Secretary, Qumu Corporation 510 1st Avenue North, Suite 305, Minneapolis, MN 55403.

#### **ITEM 1A. RISK FACTORS**

If any of the following risks actually occur, our results of operations, cash flows and the market price of our common stock could be negatively impacted. Although we believe that we have identified and discussed below the most significant risk factors affecting our business, there may be additional risks and uncertainties that are not presently known or that are not currently believed to be significant that may adversely affect our performance or financial condition. Any forecast regarding our future performance, including, but not limited to, forecasts regarding estimated bookings, revenue, or cash flow from our operating activities, are forward-looking statements. These forward-looking statements reflect various assumptions and are subject to significant uncertainties and risks that could cause the actual results to differ materially from those described in the forward-looking statement, including the risks reflected in the risk factors set forth below. Consequently, the future results expressed or implied by any forward-looking statement are not guaranteed and the variation of actual results or events from such statements may be material and adverse.

#### **The markets for video content and software to manage video content are each in early stages of development. If this market does not develop or develops more slowly than we expect, our revenues may decline or fail to grow.**

The use of video as a mainstream communication and collaboration platform and the market for video content management software is in an early stage of development, and it is uncertain whether this use of video will achieve high levels of acceptance. Widespread acceptance and use of video in the enterprise is critical to our future growth and success. Likewise, it is uncertain whether video content management software will achieve high levels of demand and market acceptance. Our success will depend on enterprises adopting video as a platform and upon enterprise demand for software to help them capture, organize and distribute this content.

Some customers may be reluctant or unwilling to use video as a medium within the enterprise for a number of reasons, including lack of perceived benefit of this new method of communication and existing investments in other enterprise-wide communications tools. Further, even if customers are using video as a medium, these customers may choose to rely upon their own IT infrastructure and resources to manage their video content. Because many companies generally are predisposed to maintaining control of their IT systems and infrastructure, there may be resistance to using software as a service provided by a third party. Privacy concerns and transition costs are also factors that may affect a potential customer's decision to subscribe to an external solution.

Additional factors that may limit market acceptance of our video content management software include:

- competitive dynamics may cause pricing levels to change as the market matures and cause customers to seek out lower priced alternatives to our video content management software or force us to reduce the prices we charge for our products or services; or
- existing and new market participants may introduce new types of solutions and different approaches to enable enterprises to address their enterprise communications or video communications needs and these disruptive technologies may reduce demand for our video content management software.

If customers do not perceive the benefits of our video content management software, or if customers are unwilling to accept video content as an alternative to other more traditional forms of enterprise communication, the market for our software might not continue to develop or might develop more slowly than we expect, either of which would significantly adversely affect our financial results and prospects.

#### **We will need additional capital to fund repayment of our \$10 million term loan due in January 2020 and any additional capital we seek may not be available in the amount or at the time we need it.**

In the year ended December 31, 2017, we had an operating loss of \$8.9 million, used \$2.0 million of net cash in continuing operating activities, and ended 2017 with \$7.7 million in cash and cash equivalents. At December 31, 2017, we had approximately \$8.0 million in outstanding debt under a term loan credit agreement dated October 21, 2016 with HCP-FVD, LLC as lender and Hale Capital Partners, LP as administrative agent.

On January 10, 2018, we entered into a credit agreement for a \$10 million term loan from ESW Holdings, Inc. and used \$8.8 million of the \$10 million term loan proceeds to repay the outstanding obligations to HCP-FVD, LLC and Hale Capital Partners, LP. Under the credit agreement with ESW Holdings, the \$10 million term loan is scheduled to mature on January 10, 2020. Interest will accrue and compound monthly at a variable rate per annum equal to the prime rate plus 4%. We may prepay

the term loan at any time with the payment of a pre-payment fee of 10% of the amount prepaid. We are obligated to prepay the term loan, with the payment of the applicable pre-payment fee, with the net proceeds from certain dispositions, issuances of equity or debt securities, extraordinary transactions and upon a change of control. Notwithstanding the foregoing, the disposition of our interest in BriefCam, Ltd. will not trigger a mandatory pre-payment and the pre-payment fee will not attach to a voluntary pre-payment from proceeds of the disposition of BriefCam.

Over the last several years including 2017 and into 2018, we have implemented an ongoing expense reduction program that, when combined with expected revenue performance in 2018, we believe will allow us to attain our goal of becoming cash flow breakeven in the fourth quarter of 2018.

Even if we achieve our goal of becoming cash flow breakeven in the fourth quarter of 2018, we do not expect that we will generate sufficient cash flow from operations in 2018 and 2019 in order to fund repayment of the full amount of the obligations to ESW Holdings at the January 10, 2020 maturity date. Accordingly, to fund this short-term capital need, we will need to secure capital to refinance the term loan at maturity. At maturity, assuming no earlier repayment of the term loan, the total amount of principal and interest due will be approximately \$11.9 million.

Additionally, if we are not able to become cash flow breakeven in the fourth quarter of 2018 by increasing revenue and controlling expenses, we may need to raise capital in the future to execute our business plan and pursue our growth objectives. We believe the key factors to funding our long-term capital needs will be our ability to increase revenue and bookings and positive cash flow from our operations. Because of the mandatory prepayment provisions of our credit agreement with ESW Holdings, we will be required to repay the term loan in full before we would be able to use any of the net proceeds from the issuances of equity or debt securities to fund any long-term capital needs.

We may obtain future capital by incurring indebtedness, from an offering or sales of our equity securities, or from the disposition of our investment in BriefCam, or a combination of any of these. If we seek to raise capital in the future to fund our short-term or long-term capital needs, we cannot assure you that additional financing will be available in the amount or at the time we need it, or that it will be available on acceptable terms or at all.

If we raise additional equity financing, our shareholders may experience significant dilution of their ownership interests and the value of shares of our common stock could decline. Our efforts to raise additional funds from the sale of equity may be hampered by the currently depressed trading price of our common stock. If we raise additional equity financing, the provisions our credit agreement with ESW Holdings requires us to use the proceeds from the equity financing to prepay our term loan. New investors may demand rights, preferences or privileges senior to those of existing holders of common stock. Our efforts to raise funds by incurring additional indebtedness may be hampered by the covenants and restrictions of our existing outstanding indebtedness and the fact that our assets are pledged to our lender to secure existing debt. The covenants of our credit agreement restrict our ability to make dividends, create liens, incur indebtedness, and sell our assets and properties, subject to certain exceptions. Likewise, any additional debt we incur would likely have covenants that would affect the manner in which we conduct our business, including by restricting our ability to incur additional indebtedness, preventing us from creating liens or requiring specified financial covenants. In addition, we may face challenges in securing additional debt financing if our future cash flow from operations is not sufficient to support debt service payments. BriefCam is a private company with no readily available market for its stock and its organizational documents and stockholder agreements impose significant restrictions on transfer, including significant restrictions on transfer of our equity in BriefCam.

If we cannot timely raise any needed funds, we may be forced to make further substantial reductions in our operating expenses, which could limit our sales and marketing efforts, adversely affect our ability to attract and retain qualified personnel, limit our ability to develop and enhance our solutions, make it more difficult for us to respond to competitive pressures or unanticipated working capital requirements, and otherwise adversely affect our ability to pursue our growth objectives.

Further, upon a payment default, ESW Holdings may declare all or any part of the obligations under the ESW credit agreement to be due and payable and proceed to exercise its rights and remedies as a secured lender pursuant to the credit agreement and related agreements we have entered into giving ESW Holdings a security interest in substantially all of our properties, rights and assets (including equity interests of our subsidiaries).

**We have a history of losses and while our goal is to become cash flow breakeven in the fourth quarter of 2018, we may not achieve that goal or achieve or sustain cash flows or profitability in the future.**

We experienced consolidated net losses of \$11.7 million, \$11.1 million and \$28.7 million for the years ended December 31, 2017, 2016 and 2015, respectively. Moreover, we have historically not generated sufficient operating cash flow to fund our operations and expect to incur additional operating losses through at least the first half of 2018. Over the last several years including 2017 and into 2018, we have implemented an ongoing expense reduction program that, when combined with

expected revenue performance in 2018, we believe will allow us to attain our goal of becoming cash flow breakeven in the fourth quarter of 2018.

In order to achieve our goal of becoming cash flow breakeven and to achieve cash flow positivity and profitability in the future, we must increase the revenues received from the sale of our enterprise video content management software solutions, hardware, maintenance and support, and professional and other services, as well as achieve and maintain an expense structure that is aligned with our forecasted revenue and cash flows. Our ability to increase revenues depends upon increasing the number of new customers and expanding our sales to existing customers, maintaining high renewal rates among our existing customers, and maintaining our prices (despite pricing pressure due to competition).

We cannot assure you that we will achieve our goal of becoming cash flow breakeven in the fourth quarter of 2018, particularly if the benefits we expect to realize from some of our recent expense reduction efforts do not materialize in the timeframes or the amount of reduction to expenses that we have planned. We cannot assure you that we will generate increases in our revenues, attain a level of profitable operations, or successfully implement our business plan or future business opportunities. Our business plan and financing needs are subject to change depending on, among other things, success of our efforts to grow revenue and our efforts to continue to effectively manage expenses. If we are ultimately unable to generate sufficient revenue to meet our financial targets, become profitable and have sustainable positive cash flows, we may be required to further reduce expenses, which could have a further negative effect on our ability to generate revenue, or we may be required to raise additional capital more quickly than we expect or we may need more capital than we expect.

**If we are unable to retain our existing customers, our revenue and results of operations will be adversely affected.**

We sell our products pursuant to agreements that are generally for annual or other fixed terms. Our customers have no obligation to renew their subscriptions after their subscription period expires, and these subscriptions may not be renewed on the same or on more profitable terms. As a result, our ability to retain our existing customers and grow depends in part on subscription renewals. We may not be able to accurately predict future trends in customer renewals, and our customers' renewal rates may decline or fluctuate because of several factors, including their satisfaction or dissatisfaction with our services, the cost of our services and the cost of services offered by our competitors, reductions in our customers' spending levels or the introduction by competitors of attractive features and functionality. If our customer retention rates decrease, we may need to increase the rate at which we add new customers in order to maintain and grow our revenue, which may require us to incur significantly higher advertising and marketing expenses than we currently anticipate, or our revenue may decline. If our customers do not renew their subscriptions for our services, renew on less favorable terms, or do not purchase additional functionality or subscriptions, our revenue may grow more slowly than expected or decline, and our profitability and gross margins may be harmed.

**We encounter long sales cycles with our enterprise video solutions, which could adversely affect our operating results in a given period.**

Our ability to increase revenues and achieve profitability depends, in large part, on widespread acceptance of our enterprise video content management software products by large businesses and other organizations. As we target our sales efforts at these customers, we face greater costs, longer sales cycles and less predictability in completing sales. In the large enterprise market, the customer's decision to use our products may be an enterprise-wide decision and, therefore, these types of sales require us to provide greater levels of education regarding the use and benefits of our applications. Further, given the constant innovation with our industry and our products, customers may delay purchasing decisions until certain features or products in development are brought to market. Longer sales cycles could cause our operating and financial results to suffer in a given period.

**To compete effectively, we must continually improve existing products and introduce new products that achieve market acceptance.**

In order to remain competitive and increase sales to customers, we must anticipate and adapt to the rapidly changing technologies in the enterprise video content management market, enhance our existing products and introduce new products to address the changing demands of our customers. If we fail to anticipate or respond to technological developments or customer requirements, or if we are significantly delayed in developing and introducing products, our revenues will decline.

If we fail to accurately predict customers' changing needs and emerging technological trends, our business could be harmed. We must commit significant resources and may incur obligations (such as royalty obligations) to develop new products and features before knowing whether our investments will result in products the market will accept and without knowing the levels of revenue, if any, that may be derived from these products. Some of our competitors have greater engineering and product development resources than we have, allowing them to develop a greater number of products or improvements or to develop them more quickly.

If we fail to anticipate or respond in a cost-effective and timely manner to technological developments, changes in industry standards or customer requirements, or if we experience any significant delays in the development or introduction of new products or improvements to existing products, our business, operating results and financial condition could be affected adversely.

**We face intense competition and such competition may result in price reductions, lower gross profits and loss of market share.**

Our products face intense competition, both from other products and from other technologies, both in the U.S. and in international markets. We compete with others such as Kaltura, VBrick, Brightcove, MediaPlatform and Panopto who deliver video content to businesses. Qumu occasionally encounters organizations utilizing Microsoft's Skype and Stream technologies. By some, Microsoft is viewed as a competitor, but our technology integrates and enables organizations to securely ingest, manage and distribute video content from a wide variety of organizational tool sets with greater flexibility and improved manageability. Further, because some prospective customers may choose to rely upon their own IT infrastructure and resources to manage their video content, we compete with customer-created solutions for video content management. We expect the intensity of competition we face to increase in the future from other established and emerging companies.

Many of our competitors have greater resources than we do, including greater sales, product development, marketing, financial, technical or engineering resources. In addition, because our enterprise video content management software business is relatively new with a limited operating history, our target customers may prefer to purchase software products that are critical to their business from one of our larger, more established competitors.

To remain competitive, we believe that we must continue to provide:

- technologically advanced products and solutions that anticipate and satisfy the demands of end-users;
- continuing advancements or innovations in our product offerings, including products with price-performance advantages or value-added features in security, reliability or other key areas of customer interest;
- innovations in video content creation, management, delivery and user experience;
- a responsive and effective sales force;
- a dependable and efficient sales distribution network;
- superior customer service; and
- high levels of quality and reliability.

We cannot assure you that we will be able to compete successfully against our current or future competitors. Competition may result in price reductions, lower gross profit margins, increased discounts to customers and loss of market share, and could require increased spending by us on research and development, sales and marketing and customer support.

**Adverse economic conditions, particularly those affecting our customers have harmed and may continue to harm our business.**

Unfavorable changes in economic conditions, including recession, inflation, lack of access to capital, lack of consumer confidence or other changes have resulted and may continue to result in lower spending among our customers and target customers.

Further, we sell our products throughout the United States, as well as in several international countries to commercial and government customers. Our business may be adversely affected by factors in the United States and other countries such as disruptions in financial markets, reductions in government spending, or downturns in economic activity in specific countries or regions, or in the various industries in which we operate; social, political or labor conditions in specific countries or regions; or adverse changes in the availability and cost of capital, interest rates, tax rates, or regulations. These factors are beyond our control but may result in further decreases in spending among customers and softening demand for our products.

Further, challenging economic conditions also may impair the ability of our customers to pay for products and services they have purchased. As a result, our cash flow may be negatively impacted and our allowance for doubtful accounts and write-offs of accounts receivable may increase.

**Our sales will decline, and our business will be materially harmed, if our sales and marketing efforts are not effective.**

We will need to continue to optimize our sales infrastructure in order to grow our customer base and our business. Identifying and recruiting qualified personnel and training them in the use and functionality of our software requires significant time, expense and attention. It can take six months or longer before our sales representatives are fully-trained and productive. If we are unable to hire, develop and retain talented sales personnel or if new sales personnel are unable to achieve desired productivity levels in a reasonable period of time, we may not be able to realize the expected benefits of this investment or

increase our revenues. We also intend to expand new sales models that focus on different sales strategies tailored to different customer types. Our business may be adversely affected if our efforts to train our internal sales force or execute our selling strategies do not generate a corresponding increase in revenues.

For sales that are made to customers through our channel partners, we depend on these businesses to provide effective sales and marketing support to our products. Our channel partners are independent businesses that we do not control. Our agreements with channel partners do not contain requirements that a certain percentage of such parties' sales are of our products. These channel partners may choose to devote their efforts to other products in different markets or reduce or fail to devote the resources to provide effective sales and marketing support of our products, any of which could harm our business by reducing sales to customers.

We believe that our future growth and success will depend upon the success of our internal sales and marketing efforts as well as those of our channel partners.

**Competition for highly skilled personnel is intense and if we fail to attract and retain talented employees, we may fail to compete effectively.**

Our future success depends, in significant part, on our continuing ability to identify, hire, develop, motivate, and retain highly skilled personnel for all areas of our organization. Competition in our industry for qualified employees, particularly in senior management, product development and sales, is intense. In addition, our compensation arrangements, such as our equity award programs, may not always be successful in attracting new employees and retaining and motivating our existing employees given the high demand for these employees from other employers. Our ability to compete effectively depends on our ability to attract new employees and to retain and motivate our existing employees.

**Our enterprise video content management software products must be successfully integrated into our customers' information technology environments and workflows and changes to these environments, workflows or unforeseen combinations of technologies may harm our customers' experience in using our software products.**

A significant portion of our sales are made into applications that require our enterprise video content management software products to be integrated into other enterprise workflows, enterprise information technology environments or software functionalities. Any significant changes to enterprise workflows, IT environments or software programs may limit the use or functionality of or demand for our products. As our customers advance technologically, we must be able to effectively integrate our products to remain competitive. Further, current and potential customers may choose to use products offered by our competitors or may not purchase our products if our products would require changes in their existing enterprise workflows, IT environments or software.

**The growth and functionality of our enterprise video content management software products depend upon the solution's effective operation with mobile operating systems and computer networks.**

Our products are currently compatible with various mobile operating systems including the iOS, Windows Mobile and Android operating systems. The functionality of our products depends upon the continued interoperability of these products with popular mobile operating systems. Any changes in these systems that degrade our products' functionality or give preferential treatment to competitive offerings could adversely affect the operability and usage of our video management software products on mobile devices. Additionally, in order to deliver a high-quality user experience, it is important that our products work well with a range of mobile technologies, systems, and networks. We may not be successful in keeping pace with changes in mobile technologies, operating systems, or networks or in developing products that operate effectively within existing or future technologies, systems, and networks. Further, any significant changes to mobile operating systems by their respective developers may prevent our products from working properly or at all on these systems. In the event that it is more difficult for users to access content delivered by our solutions to their mobile devices, if our products do not operate effectively within the most popular operating systems or if popular mobile devices do not offer a high-quality user experience, sales of and customer demand for our software products could be harmed.

**Any failure of major elements of our products could lead to significant disruptions in the ability to serve customers, which could damage our reputation, reduce our revenues or otherwise harm our business.**

Our business is dependent upon providing customers with fast, efficient and reliable services. A reduction in the performance, reliability or availability of required network infrastructure may harm our ability to distribute content to our customers, as well as our reputation and ability to attract and retain customers. Our content management software solutions and operations are susceptible to, and could be damaged or interrupted by, outages caused by fire, flood, power loss, telecommunications failure, Internet or mobile network breakdown, earthquake and similar events. Our solutions are also subject to human error, security breaches, power losses, computer viruses, break-ins, "denial of service" attacks, sabotage, intentional acts of vandalism and

tampering designed to disrupt our computer systems and network communications. Our failure to protect our network against damage from any of these events could harm our business.

Our operations also depend on web browsers, ISPs (Internet service providers) and mobile networks to provide our customers' end-users with access to websites, streaming and mobile content. Many of these providers have experienced outages in the past, and could experience outages, delays and other difficulties due to system failures unrelated to our solutions. Any such outage, delay or difficulty could adversely affect our ability to effectively provide our products and services, which would harm our business.

**If we lose access to third-party licenses, our software product development and production may be delayed or we may incur additional expense to modify our products or products in development.**

Some of our solutions contain software licensed from third parties. Third-party licensing arrangements are subject to a number of risks and uncertainties, including:

- undetected errors or unauthorized use of another person's code in the third-party's software;
- disagreement over the scope of the license and other key terms, such as royalties payable;
- infringement actions brought by third-party licensees;
- that third parties will create solutions that directly compete with our products; and
- termination or expiration of the license.

Because of these risks, some of these licenses may not be available to us in the future on terms that are acceptable to us or allow our products to remain competitive. The loss of these licenses or the inability to maintain any of them on commercially acceptable terms could delay development of future products or impair the functionality or enhancement of existing products, leading to increased expense associated with licenses of third-party software or development of alternative software to provide comparable functionality for our existing products and modification of our existing products. Further, if we lose or are unable to maintain any of these third-party licenses or are required to modify software obtained under third-party licenses, it could delay the release of new products, delay enhancements to our existing products or delay sales of our existing products. Any delays could result in loss of competitive position, loss of sales and loss of customer confidence, which could have a material adverse effect on our business, results of operations and financial condition.

**If the limited amount of open source software that is incorporated into our products were to become unavailable or if we violate the terms of open source licenses, it could adversely affect sales of our products, which could disrupt our business and harm our financial results.**

Our products incorporate a limited amount of "open source" software. Open source software is made available to us and to the public by its authors or other third parties under licenses that impose certain obligations on licensees that re-distribute or make derivative works of the open source software. We may not be able to replace the functionality provided by the open source software currently incorporated in our products if that software becomes unavailable, obsolete or incompatible with future versions of our products. In addition, we must carefully monitor our compliance with the licensing requirements applicable to that open source software. If we have failed or if in the future we fail to comply with the applicable license requirements, we might lose the right to use the subject open source software. The terms of some open source licenses would require us to give our customers significant rights to open source software that is subject to those licenses and is incorporated in our products. This would include the right to obtain from us the source code form of that open source software, and the right to use, modify and distribute that open source software to others. We may be required to provide these rights to customers on a royalty-free basis. Those rights might also extend to modifications and additions we make to the subject open source software. That open source software, and those modifications and additions, also might be obtained by our competitors and used in competing products.

The enforceability and interpretation of open source licenses remains uncertain under applicable law. Unfavorable court decisions could require us to replace open source software incorporated in our products. In some cases this might require us to obtain licenses to commercial software under terms that restrict our use of that commercial software and require us to pay royalties. In some cases we might need to redesign our software products, or to discontinue the sale of our software products if a redesign could not be accomplished on a timely basis. These same consequences result if our use of any open source software or commercial software is found to infringe any intellectual property right of another party. Any of these occurrences would harm our business, operating results and financial condition.

**We sell a significant portion of our products internationally, which exposes us to risks associated with international operations.**

We sell a significant amount of our products to customers outside the United States, particularly in Europe and Asia. We expect that sales to international customers, including customers in Europe and Asia, will continue to account for a significant portion of our net sales. Sales outside the United States involve the following risks, among others:

- international governments may impose tariffs, quotas and taxes;
- the demand for our products will depend, in part, on local economic health;
- political and economic instability may reduce demand for our products;
- restrictions on the export or import of technology may reduce or eliminate our ability to sell in certain markets;
- potentially limited intellectual property protection in certain countries may limit our recourse against infringing products or cause us to refrain from selling in certain markets;
- potential difficulties in managing our international operations;
- the burden and cost of complying with a variety of international laws, including those relating to data security and privacy;
- we may decide to price our products in foreign currency denominations;
- our contracts with international channel partners cannot fully protect us against political and economic instability;
- potential difficulties in collecting receivables; and
- we may not be able to control our international channel partners' efforts on our behalf.

The financial results of our non-U.S. subsidiaries are translated into U.S. dollars for consolidation with our overall financial results. Currency translations and fluctuations may adversely affect the financial performance of our consolidated operations. Currency fluctuations may also increase the relative price of our product in international markets and thereby could also cause our products to become less affordable or less price competitive than those of international manufacturers. These risks associated with international operations may have a material adverse effect on our revenue from or costs associated with international sales.

**If our domestic or international intellectual property rights are not adequately protected, others may offer products similar to ours or independently develop the same or similar technologies or otherwise obtain access to our technology and trade secrets which could depress our product selling prices and gross profit or result in loss of market share.**

We believe that protecting our proprietary technology is important to our success and competitive positioning. In addition to common law intellectual property rights, we rely on patents, trade secrets, trademarks, copyrights, know-how, license agreements and contractual provisions to establish and protect our intellectual property rights. However, these legal means afford us only limited protection and may not adequately protect our rights or remedies to gain or keep any advantages we may have over our competitors.

Our competitors, who may have or could develop or acquire significant resources, may make substantial investments in competing technologies, or may apply for and obtain patents that will prevent, limit or interfere with our ability to develop or market our products. Further, although we do not believe that any of our products infringe on the rights of others, third parties have claimed, and may claim in the future, that our products infringe on their rights, and these third parties may assert infringement claims against us in the future.

Costly litigation may be necessary to enforce patents issued to us, to protect trade secrets or "know-how" we own, to defend us against claimed infringement of the rights of others or to determine the ownership, scope, or validity of our proprietary rights and the rights of others. Any claim of infringement against us may involve significant liabilities to third parties, could require us to seek licenses from third parties, and could prevent us from manufacturing, selling, or using our products. The occurrence of this litigation, or the effect of an adverse determination in any of this type of litigation, could have a material adverse effect on our business, financial condition and results of operations. Further, the laws of some of the countries in which our products are or may be sold may not protect our products and intellectual property to the same extent as the United States or at all. Our failure to protect or enforce our intellectual property rights could have a material adverse effect on our business, results of operations and financial condition.

**Changes in laws and regulations related to the Internet or changes in the Internet infrastructure itself may diminish the demand for our products, and could have a negative impact on our business.**

The future success of our business depends in part upon the continued use of the Internet as a primary medium for commerce, communication and business applications. Federal, state or international government bodies or agencies have in the past adopted, and may in the future adopt, laws or regulations affecting the use of the Internet as a commercial medium. Changes in these laws or regulations could require us to modify our products in order to comply with these changes. In addition, government agencies or private organizations may begin to impose taxes, fees or other charges for accessing the Internet or

commerce conducted via the Internet. These laws or charges could limit the growth of Internet-related commerce or communications generally, or result in reductions in the demand for Internet-based applications such as ours. The adoption of any laws or regulations that adversely affect the growth, popularity or use of the Internet could limit the growth of the video as a mainstream communication and collaboration tool, limit the market for video content management software generally, and limit the demand for our products.

In addition, the use of the Internet as a business tool could be adversely affected due to delays in the development or adoption of new standards and protocols to handle increased demands of Internet activity, security, reliability, cost, ease of use, accessibility, and quality of service. The performance of the Internet and its acceptance as a business tool has been adversely affected by “viruses,” “worms” and similar malicious programs and the Internet has experienced a variety of outages and other delays as a result of damage to portions of its infrastructure. If the use of the Internet is adversely affected by these issues, demand for our applications could suffer.

**Expanding laws, regulations and customer requirements relating to data security and privacy may adversely affect sales of our products and result in increased compliance costs.**

Our customers can use our products to collect, use and store personal or identifying information regarding their employees, customers and suppliers. Federal, state and international government bodies and agencies have adopted, are considering adopting, or may adopt laws and regulations regarding data security, privacy and the collection, use, storage and disclosure of personal information obtained from consumers and individuals. These laws and regulations could reduce the demand for our software products if we fail to design or enhance our products to enable our customers to comply with the privacy and security measures required by the legislation.

We also must comply with the policies, procedures and business requirements of our customers relating to data privacy and security, which can vary based upon the customer, the customer’s industry or location, and the product the customer selects, and which may be more restrictive than the privacy and security measures required by law or regulation. In particular, the European Union and many countries in Europe have stringent privacy laws and regulations, which may impact our ability to profitably operate in certain European countries or to offer products that meet the needs of customers subject to European Union privacy laws and regulations.

The costs of compliance with, and other burdens imposed by, our customers’ own requirements and the privacy and security laws and regulations that are applicable to our customers’ businesses may limit the use and adoption of our products and reduce overall demand. Non-compliance with our customers’ specific requirements may lead to termination of contracts with these customers or liabilities to the customers; non-compliance with applicable laws and regulations may lead to significant fines, penalties or liabilities.

Furthermore, privacy concerns may cause our customers’ workers to resist providing the personal data necessary to allow our customers to use our products effectively. If a customer experiences a significant data security breach involving our software products, our customers could lose confidence in our software’s ability to protect the personal information of their employees, customers and suppliers, which could cause our customers to discontinue use of our products. The loss of confidence from a significant data security breach involving our software products could hurt our reputation, cause sales and marketing challenges to existing and new customers, cause loss of market share or exacerbate competitive pressures, result in an increase in our development costs to address any potential vulnerabilities in our software products, and may result in reduced demand and revenue. Even the perception of privacy concerns, whether or not valid, may inhibit market adoption of our products in certain industries.

Domestic and international legislative and regulatory initiatives and our customers’ privacy policies and practices may adversely affect our customers’ ability to process, handle, store, use and transmit demographic and personal information from their employees, customers and suppliers, which could reduce demand for our products.

In addition to government activity, privacy advocacy groups and the technology and other industries are considering various new, additional or different self-regulatory standards that may place additional burdens on our software products. If the processing of personal information were to be curtailed in this manner, our software products would be less effective, which may reduce demand for our products and adversely affect our business.

**We may face circumstances in the future that could result in impairment charges, including, but not limited to, significant goodwill impairment charges.**

If the fair value of any of our long-lived assets decreases as a result of an economic slowdown, a downturn in the markets where we sell products and services or a downturn in our financial performance and/or future outlook, we may be required to record an impairment charge on such assets, including goodwill.

We are required to test intangible assets with indefinite life periods for potential impairment annually and on an interim basis if there are indicators of a potential impairment. We also are required to evaluate amortizable intangible assets and fixed assets for impairment if there are indicators of a possible impairment. One potential indicator of impairment is the value of our market capitalization, or enterprise value, as compared to our net book value.

As of December 31, 2017, the Company's market capitalization, without a control premium, was greater than its book value and the Company concluded there was no goodwill impairment. Declines in the Company's market capitalization or a downturn in our future financial performance and/or future outlook could require the Company to record goodwill and other impairment charges. While a goodwill impairment charge is a non-cash charge, it would have a negative impact on our results of operations.

**We may experience significant quarterly and annual fluctuations in our results of operations due to a number of factors and these fluctuations may negatively impact the market price of our common stock.**

Our quarterly and annual results of operations may fluctuate significantly due to a variety of factors, many of which are outside of our control. This variability may lead to volatility in our stock price as research analysts and investors respond to quarterly fluctuations and this volatility may be exacerbated by the relatively illiquid nature of our common stock. In addition, comparing our results of operations on a period-to-period basis, particularly on a sequential quarterly basis, may not be meaningful. You should not rely on our past results as an indication of our future performance.

Factors that may affect our results of operations include:

- the number and mix of products and solutions sold in the period;
- the timing and amount of our recorded revenue, which will depend upon the mix of products and solutions selected by our customers with revenue from paid-up perpetual software licenses being recognized upon delivery, revenue from term software licenses recognized over the term of the contract, and revenue from cloud-hosted services recognized over the term of the subscription agreement;
- timing of customer purchase commitments, including the impact of long sales cycles and seasonal buying patterns;
- variability in the size of customer purchases and the impact of large customer orders on a particular period;
- the timing of major development projects and market launch of new products or improvements to existing products;
- reductions in our customers' budgets for information technology purchases and delays in their purchasing cycles, due to changing global economic or market conditions;
- the impact to the marketplace of competitive products and pricing;
- the timing and level of operating expenses;
- the impact on revenue and expenses of acquisitions by us or by our competitors;
- future accounting pronouncements or changes in our accounting policies; and
- the impact of a recession or any other adverse global economic conditions on our business, including uncertainties that may cause a delay in entering into or a failure to enter into significant customer agreements.

The foregoing factors are difficult to forecast, and these, as well as other factors, could adversely affect our quarterly and annual results of operations. Failure to achieve our quarterly or annual forecasts or to meet or exceed the expectations of research analysts or investors may cause our stock price to decline abruptly and significantly.

**The limited liquidity for our common stock could affect your ability to sell your shares at a satisfactory price.**

Our common stock is relatively illiquid. As of December 31, 2017, we had 9,364,804 shares of common stock outstanding. The average daily trading volume in our common stock, as reported by the Nasdaq Stock Market, for the 63 trading days beginning October 1, 2017 and ending December 31, 2017 was approximately 26,900 shares. A more active public market for our common stock may not develop, which could adversely affect the trading price and liquidity of our common stock. Moreover, a thin trading market for our stock could cause the market price for our common stock to fluctuate significantly more than the stock market as a whole. Without a larger float, our common stock is less liquid than the stock of companies with broader public ownership. As a result, the trading prices of our common stock have been and may continue to be more volatile. In addition, in the absence of an active public trading market, shareholders may be unable to liquidate their shares of our common stock at a satisfactory price.

**Provisions of Minnesota law, our bylaws and other agreements may deter a change of control of our company and may have a possible negative effect on our stock price.**

Certain provisions of Minnesota law, our bylaws and other agreements may make it more difficult for a third-party to acquire, or discourage a third-party from attempting to acquire, control of our company, including:

- the provisions of Minnesota law relating to business combinations and control share acquisitions;
- the provisions of our bylaws regarding the business properly brought before shareholders;
- the right of our board of directors to establish more than one class or series of shares and to fix the relative rights and preferences of any such different classes or series;
- the provisions of our stock incentive plans allowing for the acceleration of vesting or payments of awards granted under the plans in the event of specified events that result in a “change in control”;
- the provisions of our agreements provide for severance payments to our executive officers in the event of certain terminations following a “change in control”;
- and
- the provisions of our credit agreement requiring prepayment in full of our term loan upon a change in control.

These measures could discourage or prevent a takeover of our company or changes in our management, even if an acquisition or such changes would be beneficial to our shareholders. This may have a negative effect on the price of our common stock.

**ITEM 1B. UNRESOLVED STAFF COMMENTS**

None.

**ITEM 2. PROPERTIES**

Location of Property	Use of Property	Approximate Monthly Rent (USD)	Approximate Leased Square Footage	Lease Expiration Date
Minneapolis, Minnesota (Headquarters)	Engineering, service, sales, marketing and administration	\$ 23,000 <sup>(1)</sup>	16,500	January 2023
San Bruno, California	Engineering, service, sales, marketing and administration	\$ 37,000 <sup>(2)</sup>	13,900	June 2018
London, England	Engineering, service, sales, marketing and administration	\$ 34,000 <sup>(3)</sup>	5,500	September 2019
Hyderabad, India	Software development and testing	\$ 8,000	4,800	September 2018

<sup>(1)</sup> The agreement has escalating lease payments ranging from approximately \$23,000 to \$26,000 per month during the course of the lease.

<sup>(2)</sup> The agreement has escalating lease payments ranging from approximately \$33,000 to \$38,000 per month during the course of the lease.

<sup>(3)</sup> Effective January 1, 2018, approximately 2,750 square feet of the leased space was sublet for approximately \$12,000 per month through September 2019.

**ITEM 3. LEGAL PROCEEDINGS**

The Company is exposed to a number of asserted and unasserted legal claims encountered in the ordinary course of its business. Although the outcome of any such legal actions cannot be predicted, management believes that there are no pending legal proceedings against or involving the Company for which the outcome is likely to have a material adverse effect upon its financial position or results of operations.

**ITEM 4. MINE SAFETY DISCLOSURES**

Not applicable.

## PART II

### ITEM 5. MARKET FOR COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

#### Market Information

Qumu's common stock is traded on the Nasdaq Global Market under the symbol "QUMU." The following table sets forth, for the periods indicated, the range of low and high sales prices for Qumu's common stock as reported on The Nasdaq Stock Market.

	Year Ended December 31,			
	2017		2016	
	Low	High	Low	High
First Quarter	\$ 1.80	\$ 2.97	\$ 2.10	\$ 5.48
Second Quarter	\$ 2.45	\$ 3.23	\$ 3.53	\$ 5.50
Third Quarter	\$ 2.50	\$ 3.12	\$ 2.19	\$ 4.84
Fourth Quarter	\$ 2.08	\$ 3.28	\$ 2.20	\$ 3.77

#### Shareholders

As of March 21, 2018, there were 98 shareholders of record of Qumu's common stock.

#### Dividends

The Company did not pay a dividend in 2017 or 2016 and does not expect to pay a dividend in 2018. The payment by Qumu of dividends, if any, on its common stock in the future is subject to the discretion of the Board of Directors and will depend on Qumu's future earnings, financial condition, capital requirements and other relevant factors. Under the credit agreement, the Company is prohibited from making dividends, distributions or payments on its capital stock.

#### Issuer Purchases of Equity Securities

The Company's Board of Directors has approved common stock repurchases of up to 3,500,000 shares of the Company's common stock. The Company has implemented a Rule 10b5-1 plan in connection with the repurchase program in order to give the Company the ability to repurchase its shares at times when it otherwise might be prevented from doing so under insider trading laws or because of self-imposed blackout periods. Shares may be purchased at prevailing market prices in the open market or in private transactions, subject to market conditions, share price, trading volume and other factors. The repurchase program may be discontinued at any time. The repurchase program has been funded to date using cash on hand. During the three months ended December 31, 2017, no repurchases were made under the repurchase program. While the current authorization remains in effect, the Company expects its primary use of cash will be to fund operations in support of the Company's goals for revenue growth and operating margin improvement.

In addition to shares purchased under the Board authorization, the Company purchases shares of common stock held by employees who wish to tender owned shares to satisfy the exercise price or tax withholding on stock option exercises or vesting of restricted stock awards. All of the share repurchase activity included in the table below for the three months ended December 31, 2017 was associated with satisfaction of employee tax withholding requirements on vesting of restricted stock awards. Under the credit agreement, the Company is prohibited from repurchasing or redeeming its stock, subject to certain exceptions relating to the exercise or vesting of equity awards.

Information on the Company's repurchases of its common stock during each month of the fourth quarter ended December 31, 2017, is as follows:

Monthly Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares That May Yet Be purchased Under the Plans or Programs (at end of period)
October 2017	1,680	\$ 3.14	—	778,365
November 2017	446	\$ 2.40	—	778,365
December 2017	—	\$ —	—	778,365

### Other Information Regarding Equity Compensation Plans

The following table sets forth information regarding Qumu's equity compensation plans in effect as of December 31, 2017. Each of the Company's equity compensation plans is an "employee benefit plan" as defined by Rule 405 of Regulation C of the Securities Act of 1933.

Plan category	Securities Authorized for Issuance Under Equity Compensation Plans		
	Number of Shares of Common Stock to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Shares of Common Stock Remaining Available for Future Issuance Under Equity Compensation Plans <sup>(1)</sup>
Equity compensation plans approved by shareholders	1,122,875	\$ 5.94	582,188
Equity compensation plans not approved by shareholders <sup>(2)</sup>	165,000	\$ 7.78	—
Total	1,287,875	\$ 6.18	582,188

<sup>(1)</sup> Excludes shares of common stock listed in the first column.

<sup>(2)</sup> Consists of outstanding non-qualified stock option grants on November 26, 2012 and May 18, 2015 to Vern Hanzlik, the Company's President and Chief Executive Officer, and Peter Goepfrich, the Company's former Chief Financial Officer, on the respective start dates of their employment with Qumu. The stock options were granted outside of the Company's current equity incentive plan, the 2007 Stock Incentive Plan, as "inducement awards" pursuant to Nasdaq Listing Rule 4350(i)(1)(A)(iv). The options have an exercise price equal to the closing price of the Company's common stock as reported by the Nasdaq Stock Market on the grant dates, vest in four equal installments on each of the first four anniversaries of the date of grant, and have a term of seven years. In other respects, the options were structured to mirror the terms of options granted under the Company's 2007 Stock Incentive Plan and are subject to a stock option plan and agreement entered into by and between the Company and each employee.

## ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated financial data below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Item 7 below and the Consolidated Financial Statements and the Notes thereto included in Item 8 below. Results of operations exclude the operations of the disc publishing business, which are reported as discontinued operations for all periods presented in the Consolidated Financial Statements due to the sale of the Disc Publishing business on July 1, 2014.

### Consolidated Statements of Operations Information

	Year Ended December 31,				
	2017	2016	2015	2014	2013
Total revenues	\$ 28,167	\$ 31,682	\$ 34,454	\$ 26,521	\$ 17,736
Gross profit	\$ 17,905	\$ 19,322	\$ 16,955	\$ 12,049	\$ 10,402
Operating loss	\$ (8,871)	\$ (11,361)	\$ (29,404)	\$ (28,726)	\$ (19,605)
Net loss from continuing operations	\$ (11,724)	\$ (11,175)	\$ (28,689)	\$ (22,343)	\$ (16,221)
Net loss	\$ (11,724)	\$ (11,175)	\$ (28,699)	\$ (8,520)	\$ (9,694)
Net loss from continuing operations per share – basic	\$ (1.25)	\$ (1.21)	\$ (3.11)	\$ (2.53)	\$ (1.87)
Net loss from continuing operations per share – diluted	\$ (1.25)	\$ (1.23)	\$ (3.11)	\$ (2.53)	\$ (1.87)
Weighted average shares outstanding:					
Basic	9,347	9,232	9,235	8,836	8,691
Diluted	9,347	9,232	9,235	8,836	8,691

### Consolidated Balance Sheets Information

	December 31,				
	2017	2016	2015	2014	2013
Cash and cash equivalents	\$ 7,690	\$ 10,364	\$ 7,072	\$ 11,684	\$ 37,725
Marketable securities	\$ —	\$ —	\$ 6,249	\$ 23,486	\$ 13,233
Current assets	\$ 15,205	\$ 20,646	\$ 28,629	\$ 52,752	\$ 71,774
Total assets	\$ 34,276	\$ 42,229	\$ 54,412	\$ 80,177	\$ 89,146
Current liabilities	\$ 16,672	\$ 15,431	\$ 19,113	\$ 19,377	\$ 23,028
Long-term liabilities	\$ 8,412	\$ 8,222	\$ 4,542	\$ 2,527	\$ 3,537
Stockholders' equity	\$ 9,192	\$ 18,576	\$ 30,757	\$ 58,273	\$ 62,581

Historical data is not necessarily indicative of the Company's future results of operations or financial condition. See discussion of "Risk Factors" in Part I, Item 1A of this Annual Report on Form 10-K.

## **ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

*The following discussion and analysis of our financial condition and results of operations should be read together with the section titled "Selected Financial Data" and our audited financial statements and related notes which are included elsewhere in this Annual Report on Form 10-K. Our actual results could differ materially from those anticipated in the forward-looking statements included in this discussion as a result of certain factors, including, but not limited to, those discussed in "Risk Factors" included in Item 1A in this Annual Report on Form 10-K.*

### **Overview**

Qumu Corporation ("Qumu" or the "Company") provides the software applications businesses use to create, manage, secure, deliver and measure the success of their videos. The Company's innovative solutions release the power in video to engage and empower employees, partners and clients, allowing organizations around the world to realize the greatest possible value from video they create and publish. Whatever the audience size, viewer device or network configuration, the Company's solutions are how business does video.

The Company generates revenue through the sale of enterprise video content management software solutions, hardware, maintenance and support, and professional and other services. Software sales may take the form of a perpetual software license, a cloud-hosted software as a service (SaaS) or a term software license. Software licenses and appliances revenue includes sales of perpetual software licenses and hardware. Service revenue includes SaaS, term software licenses, maintenance and support, and professional and other services.

For the years ended December 31, 2017, 2016 and 2015, the Company generated revenues of \$28.2 million, \$31.7 million and \$34.5 million, respectively.

### **History**

The Company was founded in 1978, incorporated as IXI, Inc. in Minnesota in February 1987 and changed its name to Rimage Corporation in April 1988. From 1995 to 2011, the Company focused its business on the development and sale of its CD recordable publishing systems and DVD recordable publishing systems.

In response to declines in the disc publishing business due to technology substitutions and the rise of video as a communication and collaboration platform, in October 2011, the Company acquired Qumu, Inc., a leader in the enterprise video content management software market and changed its name to Qumu Corporation in September 2013. Qumu completed the transition to enterprise video content management software company in July 2014, when the Company closed on the sale of its disc publishing assets to Equus Holdings, Inc. and Redwood Acquisition, Inc. (now known as Rimage Corporation). As a result, the disc publishing business was classified as held for sale and qualified for presentation as discontinued operations effective with the reporting of the Company's financial results for the second quarter of 2014.

On October 3, 2014, the Company acquired Kulu Valley Ltd., a private limited company incorporated and operating in England and Wales, subsequently renamed Qumu Ltd ("Kulu Valley"). The acquisition was made to expand Qumu's addressable market through the offering of Kulu Valley's best-in-class video content creation capabilities and easy-to-deploy pure cloud solution, and provides Kulu Valley's customers with access to industry-leading video content management and delivery capability.

The results of the discontinued disc publishing business and associated financial impacts from the sale of this business have been presented as discontinued operations for the years ended December 31, 2016 and 2015; there were no such financial impacts to the consolidated financial statements for the year ended December 31, 2017. No general corporate charges were allocated to the discontinued business. Other than consolidated amounts reflecting operating results and balances for both the continuing and discontinued operations, all remaining amounts presented in the accompanying consolidated financial statements reflect the financial results and financial position of the Company's continuing enterprise video content management software business.

The following discussion of year-to-year changes and trends in financial statement results under "Management's Discussion and Analysis of Financial Condition and Results of Operations" aligns with the financial statement presentation described above.

### **Critical Accounting Policies**

The discussion of the Company's financial condition and results of operations is based upon its financial statements, which are prepared in accordance with accounting principles generally accepted in the United States of America, or GAAP. The preparation of these financial statements requires management to make estimates, judgments and assumptions that affect the

reported amounts of assets, liabilities, revenues, costs and expenses and related disclosures. On an ongoing basis, management evaluates its estimates and assumptions. Management bases its estimates of the carrying value of certain assets and liabilities on historical experience and on various other assumptions that management believes to be reasonable. The Company's actual results may differ from these estimates under different assumptions or conditions.

Management believes that of the Company's significant accounting policies, which are described in the notes to our financial statements, the following accounting policies involve a greater degree of judgment, complexity and effect on materiality. A critical accounting policy is one that is both material to the presentation of our financial statements and requires management to make difficult, subjective or complex judgments for uncertain matters that could have a material effect on the Company's financial condition and results of operations. Accordingly, these are the policies management believes are the most critical to aid in fully understanding and evaluating the Company's financial condition and results of operations.

#### ***Revenue Recognition***

The Company follows specific and detailed guidelines in determining the proper amount of revenue to be recorded; however, certain judgments affect the application of its revenue recognition policy.

The Company commences revenue recognition when all of the following conditions are met: there is persuasive evidence of an arrangement; the product has been delivered or the services have been provided to the customer; the collection of the fees is reasonably assured; and the amount of fees to be paid by the customer is fixed or determinable.

Revenue results are difficult to predict, and any shortfall in revenue or delay in recognizing revenue could cause the Company's operating results to vary significantly from period to period. The significant judgments for revenue recognition typically involve allocation of revenue to multiple element arrangements, which must be analyzed to determine the fair value of each element, the amount of revenue to be recognized for each element, if any, and the period and conditions under which deferred revenue should be recognized. As a result, if facts and circumstances change that affect management's current judgments, the Company's revenue could be materially different in the future.

#### ***Investment in Nonconsolidated Company***

As of December 31, 2017 and 2016, the Company held an investment totaling \$3.1 million in convertible preferred stock of BriefCam, Ltd. ("BriefCam") a privately-held Israeli company that develops video synopsis technology to augment security and surveillance systems to facilitate review of surveillance video. The investment is included in other non-current assets. Qumu's ownership interest is less than 20%. Qumu accounts for this equity investment using the cost method. Equity securities accounted for under the cost method are reviewed quarterly for changes in circumstances or the occurrence of events that suggest the Company's investment may not be fully recoverable. If an unrealized loss for the investment is considered to be other-than-temporary, the loss will be recognized in the consolidated statements of operations in the period the determination is made. Qumu monitors BriefCam's results of operations, business plan and capital raising activities and is not aware of any events or circumstances that would indicate a decline in the fair value below the carrying value of its investment.

#### ***Derivative Liability***

In conjunction with debt financing completed in October 2016, the Company issued a warrant for the purchase of up to 14,286 shares of the Company's common stock, the entire portion of which remained unexercised and outstanding at December 31, 2017. The Company accounts for the warrant, a derivative financial instrument issued in conjunction with the Company's 2016 debt financing, as a current liability based upon the characteristics and provisions of the instrument. The warrant was determined to be ineligible for equity classification because of provisions that allow the holder under certain circumstances, essentially the sale of the Company as defined in the warrant agreement, to elect to receive a minimum cash payment in lieu of the Company's common shares. The warrant liability was recorded in the Company's consolidated balance sheets at its fair value on the date of issuance and is revalued on each subsequent balance sheet date until such instrument is exercised or expires, with any changes in the fair value between reporting periods recorded as other income or expense. The Company estimates the fair value of this liability using an option pricing model that is based on the individual characteristics of the warrant on the valuation date, which includes assumptions for expected volatility, expected life and risk-free interest rate, as well as the present value of the minimum cash payment component of the instrument. Changes in the assumptions used could have a material impact on the resulting fair value. The primary inputs affecting the value of the warrant liability are the Company's stock price and volatility in the Company's stock price. Increases in the fair value of the underlying stock or increases in the volatility of the stock price generally result in a corresponding increase in the fair value of the warrant liability; conversely, decreases in the fair value of the underlying stock or decreases in the volatility of the stock price generally result in a corresponding decrease in the fair value of the warrant liability.

### Royalties for Third-Party Technology

Royalties for third-party technology are either paid in advance and capitalized as prepaid royalties or are accrued as incurred and subsequently paid. These royalties are generally expensed to cost of revenue generally at the greater of a rate based on the contractual or estimated term or an effective royalty rate based on the total projected net revenue for contracts with guaranteed minimums. Each quarter, the Company also evaluates the expected future realization of its prepaid royalties, as well as any minimum commitments not yet paid to determine amounts it deems unlikely to be realized through product sales. Any impairments or losses determined before the launch of a product are generally charged to general and administrative expense, and any impairments or losses determined post-launch are charged to cost of revenue. Unrecognized minimum royalty-based commitments are accounted for as executory contracts, and therefore, any losses on these commitments are recognized when the underlying intellectual property is abandoned (i.e., cease use) or the contractual rights to use the intellectual property are terminated.

### Results of Operations

The percentage relationships to revenues of certain income and expense items for the years ended December 31, 2017, 2016 and 2015, and the percentage changes in these income and expense items between years, are contained in the following table (all amounts presented reflect only the financial results of the Company's continuing enterprise video content management software business):

	Percentage of Revenues			Percent Increase (Decrease)	
	2017	2016	2015	2016 to 2017	2015 to 2016
Revenues	100.0 %	100.0 %	100.0 %	(11)%	(8)%
Cost of revenues	(36.4)	(39.0)	(50.8)	(17)	(29)
Gross profit	63.6	61.0	49.2	(7)	14
Operating expenses:					
Research and development	25.9	27.0	31.0	(15)	(20)
Sales and marketing	35.6	36.4	52.2	(13)	(36)
General and administrative	30.4	30.7	49.0	(12)	(42)
Amortization of purchased intangibles	3.2	2.8	2.3	1	12
Total operating expenses	95.1	96.9	134.5	(13)	(34)
Operating loss	(31.5)	(35.9)	(85.3)	(22)	(61)
Other expense, net	(11.4)	(0.2)	(0.4)	4,765	(47)
Loss before income taxes	(42.9)	(36.1)	(85.7)	6	(61)
Income tax benefit	(1.3)	(0.8)	(2.4)	42	(70)
Net loss from continuing operations	(41.6)%	(35.3)%	(83.3)%	5 %	(61)%

### Revenues

The Company generates revenue through the sale of enterprise video content management software solutions, hardware, maintenance and support, and professional and other services. Software sales may take the form of a perpetual software license, a cloud-hosted software as a service (SaaS) or a term software license. Software licenses and appliances revenue includes sales of perpetual software licenses and hardware. Service revenue includes SaaS, term software licenses, maintenance and support, and professional and other services.

The table below describes Qumu's revenues by product category (in thousands):

	Year Ended December 31,			Increase (Decrease)		Percent Increase (Decrease)	
	2017	2016	2015	2016 to 2017	2015 to 2016	2016 to 2017	2015 to 2016
Software licenses and appliances	\$ 5,982	\$ 5,839	\$ 9,456	\$ 143	\$ (3,617)	2 %	(38)%
Service							
Subscription, maintenance and support	19,374	21,443	18,804	(2,069)	2,639	(10)	14
Professional services and other	2,811	4,400	6,194	(1,589)	(1,794)	(36)	(29)
Total service	22,185	25,843	24,998	(3,658)	845	(14)	3
Total revenues	\$ 28,167	\$ 31,682	\$ 34,454	\$ (3,515)	\$ (2,772)	(11)%	(8)%

The \$3.5 million decrease in total revenues from 2016 to 2017 reflects a \$3.7 million decrease in service revenues, partially offset by a \$143,000 increase in software licenses and appliances revenues. The increase in software licenses and appliances revenues in 2017 was largely impacted by an increase in the value of perpetual product license contracts entered into in 2017

and converted to revenue. Revenues can vary year to year based on the type of contract the Company enters into with each customer. Contracts for perpetual software licenses, which are included in software licenses and appliances revenue, generally result in revenue recognized closer to the contract commitment date, while contracts for term software licenses and SaaS, which are included in service revenue, result in most of the revenue being recognized over the period of the contract. The \$3.7 million decrease in service revenues from 2016 to 2017 resulted from a \$2.1 million decrease in subscription, maintenance and support revenues driven primarily by approximately \$800,000 of decreased recurring revenue resulting from the loss of a large customer in the fourth quarter of 2017 and the prior year inclusion of \$1.2 million of previously deferred subscription, maintenance and support revenue contingent on a customer's acceptance, which was received in the fourth quarter of 2016. The \$1.6 million decrease in professional services revenues, which generally move directionally with changes in perpetual license sales, was driven by the timing of professional services related to perpetual product license contracts entered into in 2017 and the prior year recognition of \$0.4 million of previously deferred professional service revenue contingent on a customer's acceptance, which was received in the fourth quarter of 2016.

The \$2.8 million decrease in total revenues from 2015 to 2016 reflects a \$3.6 million decrease in software licenses and appliances revenues, partially offset by a \$845,000 increase in service revenues. The decrease in software licenses and appliances revenues in 2016 was largely impacted by a decrease in the value of perpetual product license contracts entered into in 2016 and converted to revenue. The increase in service revenues from 2015 to 2016 resulted from a \$2.6 million increase in subscription, maintenance and support revenues driven primarily from growth in the customer base and \$1.2 million of previously deferred subscription, maintenance and support revenue contingent on a customer's acceptance, which was received in the fourth quarter of 2016. Partially offsetting the growth in subscription, maintenance and support revenues was an approximately \$1.8 million decrease in professional services revenues. The decrease in professional services revenues, which generally move directionally with changes in perpetual license sales, was driven by the decrease in the value of perpetual product license contracts entered into in 2016, partially offset by the recognition of \$0.4 million of previously deferred professional service revenue contingent on a customer's acceptance, which was received in the fourth quarter of 2016.

Future consolidated revenues will be dependent upon many factors, including the rate of adoption of the Company's software solutions in its targeted markets and whether arrangements with customers are structured as a perpetual software license, a term software license or a SaaS, which impacts the timing of revenue recognition. Other factors that will influence future consolidated revenues include the timing of customer orders, the product and service mix of customer orders, the impact of changes in economic conditions and the impact of foreign currency exchange rate fluctuations.

### **Cost of Revenues and Gross Profit**

A comparison of gross profit and gross margin by revenue category is as follows (dollars in thousands):

	Year Ended December 31,			Increase (Decrease)		Percent Increase (Decrease)		
	2017	2016	2015	2016 to 2017	2015 to 2016	2016 to 2017	2015 to 2016	
<b>Gross profit:</b>								
Software licenses and appliances	\$ 3,575	\$ 3,365	\$ 6,507	\$ 210	\$ (3,142)	6 %	(48)%	
Service	14,330	15,957	10,448	(1,627)	5,509	(10)	53	
Total gross profit	\$ 17,905	\$ 19,322	\$ 16,955	\$ (1,417)	\$ 2,367	(7)%	14 %	
<b>Gross margin:</b>								
Software licenses and appliances	59.8%	57.6%	68.8%	2.2%	(11.2)%			
Service	64.6%	61.7%	41.8%	2.9%	19.9 %			
Total gross margin	63.6%	61.0%	49.2%	2.6%	11.8 %			

For the years ended December 31, 2017, 2016 and 2015, gross margins are inclusive of the impact of approximately \$1.2 million, \$1.3 million and \$1.3 million, respectively, in amortization expense associated with intangible assets acquired as a result of the acquisition of Qumu, Inc. in the fourth quarter of 2011 and Kulu Valley in the fourth quarter of 2014. The Company had 26, 28 and 43 service personnel at December 31, 2017, 2016 and 2015, respectively. Cost of revenues for 2017, 2016 and 2015 included severance expense of \$9,000, \$116,000 and \$49,000, respectively, relating to cost reduction initiatives.

The 2.6% improvement in gross margin in 2017 compared to 2016 was primarily due to a 2.9% improvement in service gross margin primarily driven by improved economies of scale on increased revenue in software licenses and appliances and a reduction in headcount.

The 11.8% improvement in gross margin in 2016 compared to 2015 was primarily due to a 19.9% improvement in service gross margin primarily driven by improved economies of scale on increased service revenue and a reduction in headcount. Additionally, service margin for the full year 2016 benefited from the cost savings initiatives in the second half of

2015 and a 1.8% favorable impact in 2016 of \$1.6 million of previously deferred service revenue contingent on a customer's acceptance, which was received in the fourth quarter 2016. Partially offsetting the improvement in 2016 service gross margin was an 11.2% decrease in software licenses and appliance gross margin due to the decrease in software licenses revenues.

Future gross profit margins will fluctuate quarter to quarter and will be impacted by the rate of growth and mix of the Company's product and service offerings and foreign currency exchange rate fluctuations. Cost of software licenses and appliances revenues in 2018 is expected to include approximately \$1.2 million of amortization expense for purchased intangibles.

### Operating Expenses

The following is a summary of operating expenses:

	Year Ended December 31,			Increase (Decrease)		Percent Increase (Decrease)	
	2017	2016	2015	2016 to 2017	2015 to 2016	2016 to 2017	2015 to 2016
Operating expenses:							
Research and development	\$ 7,279	\$ 8,541	\$ 10,689	\$ (1,262)	\$ (2,148)	(15)%	(20)%
Sales and marketing	10,026	11,529	17,994	(1,503)	(6,465)	(13)	(36)
General and administrative	8,567	9,722	16,878	(1,155)	(7,156)	(12)	(42)
Amortization of purchased intangibles	904	891	798	13	93	1	12
Total operating expenses	\$ 26,776	\$ 30,683	\$ 46,359	\$ (3,907)	\$ (15,676)	(13)%	(34)%

With the exception of amortization of purchased intangibles, which are subject to variances primarily due to currency fluctuations, operating expenses for the year ended December 31, 2017 reflected the continued benefit of cost savings initiatives in the second half of 2015 through the end of 2017 across all functional expense categories. Operating expenses for 2017, 2016 and 2015 included severance expense of \$256,000, \$447,000 and \$2.1 million, respectively, relating to the cost reduction initiatives and executive transitions. Operating expenses for the year ended December 31, 2015 also included an equipment operating lease loss of \$1.0 million and a loss relating to a third-party license agreement of \$1.2 million.

### Research and development

Research and development expenses were as follows (dollars in thousands):

	Year Ended December 31,			Increase (Decrease)		Percent Increase (Decrease)	
	2017	2016	2015	2016 to 2017	2015 to 2016	2016 to 2017	2015 to 2016
Compensation and employee-related	\$ 5,475	\$ 6,238	\$ 6,738	\$ (763)	\$ (500)	(12)%	(7)%
Overhead and other expenses	1,064	1,201	1,067	(137)	134	(11)	13
Outside services and consulting	473	685	2,349	(212)	(1,664)	(31)	(71)
Depreciation and amortization	133	210	273	(77)	(63)	(37)	(23)
Equity-based compensation	134	207	262	(73)	(55)	(35)	(21)
Total research and development expenses	\$ 7,279	\$ 8,541	\$ 10,689	\$ (1,262)	\$ (2,148)	(15)%	(20)%

Total research and development expenses for the years ended December 31, 2017, 2016 and 2015 represented 26%, 27% and 31% of revenues, respectively. The Company had 41, 61 and 57 research and development personnel at December 31, 2017, 2016 and 2015, respectively.

The decrease in expenses in 2017 and 2016, compared to the respective prior year periods, was driven primarily by less utilization of contractors and lower employee costs due to fewer U.S. research and development personnel. Research and development expenses for 2017, 2016 and 2015 included severance expense of \$22,000, \$13,000 and \$136,000, respectively, relating to cost reduction initiatives.

### Sales and marketing

Sales and marketing expenses were as follows (dollars in thousands):

	Year Ended December 31,			Increase (Decrease)		Percent Increase (Decrease)	
	2017	2016	2015	2016 to 2017	2015 to 2016	2016 to 2017	2015 to 2016
Compensation and employee-related	\$ 7,806	\$ 9,175	\$ 14,293	\$ (1,369)	\$ (5,118)	(15)%	(36)%
Overhead and other expenses	1,046	1,172	1,691	(126)	(519)	(11)	(31)
Outside services and consulting	935	844	1,521	91	(677)	11	(45)
Depreciation and amortization	58	128	130	(70)	(2)	(55)	(2)
Equity-based compensation	181	210	359	(29)	(149)	(14)	(42)
Total sales and marketing expenses	\$ 10,026	\$ 11,529	\$ 17,994	\$ (1,503)	\$ (6,465)	(13)%	(36)%

Total sales and marketing expenses for the years ended December 31, 2017, 2016 and 2015 represented 36%, 36% and 52% of revenues, respectively. The Company had 33, 37 and 61 sales and marketing personnel at December 31, 2017, 2016 and 2015, respectively.

The decrease in expenses in 2017 and 2016, compared to the respective prior year periods, was driven primarily by lower employee costs due to fewer sales and marketing personnel and, in 2016, less utilization of contractors. Sales and marketing expenses for 2017, 2016 and 2015 included severance expense of \$234,000, \$356,000 and \$550,000, respectively, relating cost reduction initiatives.

### General and administrative

General and administrative expenses were as follows (dollars in thousands):

	Year Ended December 31,			Increase (Decrease)		Percent Increase (Decrease)	
	2017	2016	2015	2016 to 2017	2015 to 2016	2016 to 2017	2015 to 2016
Compensation and employee-related	\$ 3,525	\$ 3,920	\$ 7,522	\$ (395)	\$ (3,602)	(10)%	(48)%
Overhead and other expenses	1,078	1,708	3,607	(630)	(1,899)	(37)	(53)
Outside services and consulting	2,404	2,383	4,146	21	(1,763)	1	(43)
Depreciation and amortization	724	756	549	(32)	207	(4)	38
Equity-based compensation	836	955	1,054	(119)	(99)	(12)	(9)
Total general and administrative expenses	\$ 8,567	\$ 9,722	\$ 16,878	\$ (1,155)	\$ (7,156)	(12)%	(42)%

Total general and administrative expenses for the years ended December 31, 2017, 2016 and 2015 represented 30%, 31% and 49% of revenues, respectively. The Company had 21, 24 and 31 general and administrative personnel at December 31, 2017, 2016 and 2015, respectively.

The decrease in expenses in 2017 and 2016, compared to the respective prior year periods, was driven primarily by lower employee costs due to fewer general and administrative personnel. Additionally, expenses incurred in 2015 that contributed to the decrease included an equipment operating lease loss of \$1.0 million and a loss relating to a third-party license agreement of \$1.2 million. Also driving the decrease were non-recurring audit, legal and outside service costs in 2015 associated with transition and reorganization activities resulting from the divestiture in 2014 of the Company's disc publishing business. General and administrative expenses for 2016 and 2015 included severance expense of \$78,000 and \$1.4 million, respectively, relating cost reduction initiatives and executive transition initiatives; no significant severance expense was incurred in 2017.

### Amortization of Purchased Intangibles

Operating expenses include \$904,000, \$891,000 and \$798,000 in 2017, 2016 and 2015, respectively, for the amortization of intangible assets acquired as part of the Company's acquisition of Qumu, Inc. in October 2011 and Kulu Valley in October 2014. Operating expenses in 2018 are expected to include approximately \$0.9 million of amortization expense associated with purchased intangibles, exclusive of the portion classified in cost of revenue.

### Other Income (Expense), Net

Other income (expense), net was as follows (dollars in thousands):

	Year Ended December 31,			Increase (Decrease)		Percent Increase (Decrease)	
	2017	2016	2015	2016 to 2017	2015 to 2016	2016 to 2017	2015 to 2016
Interest income (expense), net	\$ (2,852)	\$ (287)	\$ 7	\$ (2,565)	\$ (294)	894 %	(4,200)%
Change in fair value of warrant liability	74	137	—	(63)	137	(46)	n/m
Other, net	(433)	84	(131)	(517)	215	(615)	(164)
Total other expense, net	\$ (3,211)	\$ (66)	\$ (124)	\$ (3,145)	\$ 58	4,765 %	(47)%

The Company recognized interest expense on its term loan and capital leases of \$2.9 million and \$287,000 in 2017 and 2016, respectively, and interest income on cash and marketable securities, net of interest expense on capital leases, of \$7,000 in 2015. Interest expense for 2017 and 2016 includes the accrual of interest on the Company's term loan at prime plus 6%, as well as the amortization of deferred financing costs. During 2017, concurrent with the Company's modification its term loan credit agreement with Hale Capital Partners, LP, the Company commenced a plan to refinance the term loan, which it completed upon the closing of its \$10.0 million credit agreement with ESW Holdings, Inc. on January 12, 2018. In connection with this refinancing plan, upon loan modification, the Company accelerated the amortization of deferred financing costs by recognizing the unamortized deferred financing costs over the expected remaining term of the Hale credit agreement. As a result of the loan modification, the Company had unamortized debt discount and debt issuance costs of \$2.0 million on November 6, 2017, of which it recognized \$1.6 million of interest expense for the amortization of deferred financing costs through December 31, 2017, resulting in unamortized debt discount and debt issuance costs of \$395,000 as of December 31, 2017. The balance of unamortized deferred financing costs will be recognized in 2018 during the year-to-date period ending January 12, 2018, to coincide with the extinguishment of the term note under the Hale credit agreement.

In conjunction with the debt financing completed in October 2016, the Company issued a warrant for the purchase of up to 14,286 shares of the Company's common stock, the entire portion of which remained unexercised and outstanding at December 31, 2017. The warrant contains a cash settlement feature upon the occurrence of a certain event, essentially the sale of the Company as defined in the warrant agreement. As a result of this feature, the warrant is subject to derivative accounting as prescribed under ASC 815. Accordingly, the fair value of the warrant on the date of issuance was recorded in the Company's consolidated balance sheets as a liability. The fair value of the warrant liability is estimated at the end of each reporting period and the change in the fair value is recorded as a non-operating gain or loss in the Company's consolidated statements of operations. During the years ended December 31, 2017 and 2016, the Company recorded a non-cash gain from the change in fair value of the warrant liability of \$74,000 and \$137,000, respectively. The decrease in fair value in 2017 was primarily driven by decreased volatility in the Company's stock price and in 2016 was primarily driven by a decrease in the Company's stock price, each of which had a corresponding impact to the valuation of the warrant liability.

During 2017, the Company determined that one of its two office spaces in London, England was no longer needed and, in December 2017, ceased using the leased space, subsequently making it available for sublessee occupancy. Also in December 2017, the Company entered into a sublease agreement, having a term beginning January 1, 2018 and extending through September 2019, and received the first year's sublease payment of \$122,000. Accordingly, the Company recorded a liability at fair value of \$194,000, which is reported in accrued liabilities as of December 31, 2017, for the future contractual lease payments, net of expected sublease receipts. The Company also recorded a loss related to the exit activity of \$72,000, which is included in other income (expenses) for the year ended December 31, 2017.

Other income also included the net gains (losses) on foreign currency transactions of \$(356,000), \$162,000 and \$(131,000) in 2017, 2016 and 2015, respectively. See "Liquidity and Capital Resources" below for a discussion of changes in cash levels.

### Income Taxes

The provision for income taxes represents federal, state, and foreign income taxes or income tax benefit on income or loss. For the years ended December 31, 2017, 2016 and 2015, net income tax benefit amounted to \$358,000, \$252,000 and \$839,000, respectively.

On December 22, 2017, the Tax Cuts and Jobs Act (the Tax Act) was enacted, significantly altering U.S. corporate income tax law. The Tax Act establishes new tax laws that will affect 2018 and after, including a reduction in the U.S. federal corporate income tax rate from 34% to 21%, repeal of the corporate AMT system, limitations on the deductibility of interest expense and executive compensation, and changes to net operating loss carryforward rules. The Tax Act also includes various international provisions, including a one-time deemed mandatory repatriation of accumulated foreign earnings and a new tax referred to as Global Intangible Low-Tax Income (GILTI).

Income tax benefit in 2017 is primarily attributable to the Tax Act and to UK operations, which include refundable research credits. The Company recorded a provision tax benefit of \$172,000 for the impact of the Tax Act. The tax benefit primarily relates to the future cash refund of excess AMT credits due to the repeal of the corporate AMT system. AMT credits previously had a full valuation allowance recorded, however a benefit was recorded as the AMT credits are now expected to be realized. For further discussion of the Tax Act and its impact on the Company's consolidated financial statements, see Note 9—"Income Taxes" of the accompanying consolidated financial statements.

Income tax benefit in 2016 and 2015 is primarily attributable to UK operations, which include refundable research credits.

### Liquidity and Capital Resources

The following table sets forth certain relevant measures of the Company's liquidity and capital resources (in thousands):

	December 31,	
	2017	2016
Cash and cash equivalents	\$ 7,690	\$ 10,364
Working capital	\$ (1,467)	\$ 5,215
Financing obligations	\$ 1,050	\$ 678
Term loan	7,605	6,617
Financing obligations and term loan	\$ 8,655	\$ 7,295

The Company expects it will be able to maintain current operations and anticipated capital expenditure requirements for at least the next 12 months through its cash reserves, which includes the proceeds of the debt financing completed in the first quarter of 2018, as well as any cash flows that may be generated from current operations. Based on expected revenue performance and continued management of expenses to scale with revenue, the Company expects that it will be cash flow breakeven for the fourth quarter of 2018. If the Company is unable to meet its revenue expectations, it is positioned to further reduce costs to mitigate the impact on its cash reserves for at least the next 12 months.

At December 31, 2017, the Company had aggregate negative working capital of \$1.5 million, down \$6.7 million from positive working capital of \$5.2 million at December 31, 2016. The primary contributors to the decrease in working capital were the generation of a net loss adjusted for non-cash items during the year ended December 31, 2017 of \$5.6 million, debt issuance costs of \$225,000 and principal payments on capital lease obligations of \$505,000.

Financing obligations consist of capital leases related to the acquisition of computer and network equipment and furniture and other financing obligations. The term loan consisted of a three-year note having a face value of \$8.0 million, which was paid in full upon the execution of a \$10.0 million credit agreement with ESW Holdings, Inc. on January 12, 2018. The Company used \$8.8 million of the \$10.0 million term loan proceeds provided through the credit agreement with ESW Holdings, Inc. to pay all outstanding obligations under the term loan credit agreement dated as of October 21, 2016 among the Company, Qumu, Inc., HCP-FVD, LLC, as lender and Hale Capital Partners, LP, as administrative agent. Concurrently with such repayment, the October 21, 2016 term loan credit agreement terminated by its terms effective January 12, 2018.

Apart from proceeds from term loans received in the fourth quarter of 2016 and the first quarter of 2018, the Company's primary source of cash from operating activities has been cash collections from sales of products and services to customers. The Company expects cash inflows from operating activities to be affected by increases or decreases in sales and timing of collections. The Company's primary use of cash for operating activities has been for personnel costs and outside service providers, payment of royalties associated with third-party software licenses and purchases of equipment to fulfill customer orders. The Company expects cash flows from operating activities to be affected by fluctuations in revenues, personnel costs, outside service providers, and the amount and timing of royalty payments and equipment purchases as the Company continues to support the growth of the business. The amount of cash and cash equivalents held by the Company's international subsidiaries that is not available to fund domestic operations unless repatriated was \$894,000 as of December 31, 2017. The repatriation of cash and cash equivalents held by the Company's international subsidiaries would not result in an adverse tax impact on cash given that the future tax consequences of repatriation are expected to be insignificant as a result of the Tax Act.

### Summary of Credit Agreement and Warrant

On January 12, 2018, the Company and its wholly-owned subsidiary, Qumu, Inc., entered into a term loan credit agreement (the "ESW Credit Agreement") with ESW Holdings, Inc. as lender and administrative agent (the "Administrative Agent") pursuant to which the Company borrowed \$10.0 million in the form of a term loan.

The term loan is scheduled to mature on January 10, 2020. Interest will accrue and compound monthly at a variable rate per annum equal to the prime rate plus 4%. The Company may prepay the term loan at any time with the payment of a pre-payment

fee of 10% of the amount prepaid. The Company is obligated to prepay the term loan, with the payment of the applicable pre-payment fee, with the net proceeds from certain dispositions, issuances of equity or debt securities, extraordinary transactions and upon a change of control. Notwithstanding the foregoing, the disposition of the Company's interest in BriefCam, Ltd. would not trigger a mandatory pre-payment, and the pre-payment fee would not attach to a voluntary pre-payment from proceeds of a disposition of BriefCam, Ltd.

The ESW Credit Agreement contains affirmative and negative covenants and requirements relating to the Company and its operations. The affirmative covenants require, among other things, that the Company deliver to the Administrative Agent financial statements, annual operating plan, updated schedules, various reports, compliance certificates and other information. There are also affirmative covenants relating to access to collateral and the Company's books and records, insurance, compliance with laws, payment of taxes, maintenance of existence, employee benefit plans, maintenance of accounts, and environmental matters. The negative covenants prohibit the Company from incurring debt, encumbering its assets, exceeding operating lease expense amounts, making dividends, distributions or payments on the Company's capital stock, being a party to any acquisition or any merger or consolidation or similar transaction, modifying its organizational documents, entering into certain transactions with affiliates, making certain transfers to or conducting certain business through foreign subsidiaries, and incentivizing accelerated customer payments. The negative covenants of the ESW Credit Agreement also require the Company to meet financial covenants beginning with the quarter ended September 30, 2018 relating to minimum core bookings, maximum deferred revenue non-current, minimum subscription, and maintenance and support revenue and minimum subscription and maintenance and support dollar renewal rates.

Upon certain events of default relating to bankruptcy or insolvency, the obligations under the ESW Credit Agreement will become immediately due and payable. Upon other events of default – including relating to non-payment of the term loan obligations, non-payment of other debt, default of other material obligations, non-compliance with loan documents, breach of representations or warranties, certain pension plan events, certain judgments, invalidity of collateral documents, termination of the Company's reporting obligations to the Securities and Exchange Commission or failure to be listed on any national stock exchange, material adverse effect and cessation of business – the Administrative Agent may declare all or any part of the obligations under the ESW Credit Agreement to be due and payable.

Pursuant to a Guaranty and Collateral Agreement dated January 12, 2018 in favor of the Administrative Agent, the Company granted a first priority security interest in substantially all of its properties, rights and assets (including equity interests of the Company's subsidiaries) and Qumu, Inc. provided a full and unconditional guaranty of the Company's obligations under the ESW Credit Agreement.

In connection with the ESW Credit Agreement, on January 12, 2018, the Company issued to ESW Holdings, Inc. a warrant to purchase 25,000 shares of the Company's common stock. On February 28, 2018, the Company agreed with ESW to amend and restate the warrant to add a limitation on the number of shares issuable upon exercise of the warrant due to anti-dilution adjustments. That amended and restated warrant is summarized below.

The warrant has an exercise price of \$1.96 per share (subject to anti-dilution adjustments), an expiration date of January 12, 2028, and is transferable. Simultaneously with any adjustment to the exercise price described as a result of anti-dilution adjustments, the number of shares of the Company's common stock that may be purchased upon exercise of the warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate exercise price payable under the warrant for the increased or decreased number of warrant shares shall be the same as the aggregate exercise price in effect immediately prior to such adjustment. However, in the case of an adjustment to the exercise price due to a "Dilutive Issuance" (as defined in the warrant), the number of warrant shares shall not be increased in excess of 1,878,049 (subject to adjustment as provided in the warrant for other adjustments not relating to Dilutive Issuances).

Upon a "Fundamental Transaction," essentially the sale of the Company as defined in the warrant agreement, the warrant holder has the right thereafter to receive, upon exercise of the warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if the holder had been, immediately prior to such Fundamental Transaction, the holder of the number of common shares then issuable upon such exercise of the warrant. Alternatively, the holder may require the Company to purchase the warrant from the holder thereof for a cash amount equal to the greater of the Original Issuance Value (\$1,936,535) in respect of the remaining unexercised portion of the warrant and the Black-Scholes value of the remaining unexercised portion of the warrant through the date of consummation of the Fundamental Transaction. Pursuant to the terms of the warrant, the Company will file and cause to be effective a registration statement to register the resale of the shares of common stock underlying the warrant.

**Summary of Cash Flows.** A summary of cash flows is as follows (in thousands):

	Year Ended December 31,		
	2017	2016	2015
Cash flows from (used in):			
Operating activities	\$ (2,012)	\$ (9,484)	\$ (23,227)
Investing activities	(24)	6,174	18,923
Financing activities	(747)	6,956	(228)
Effect of exchange rate changes on cash	109	(354)	(80)
Net change in cash and cash equivalents	\$ (2,674)	\$ 3,292	\$ (4,612)
Net change in marketable securities and restricted cash	\$ —	\$ (6,249)	\$ (19,537)

*Operating activities*

Net cash used in operating activities was \$2.0 million for 2017 compared to \$9.5 million for 2016.

The change in operating cash flows for the 2017 period as compared to the 2016 period was due to the reduction the Company's operating loss and the favorable impacts of changes in accounts payable and other accrued liabilities, deferred revenue, prepaid expenses and other current assets, and accrued compensation.

*Investing activities*

Net cash used by investing activities totaled, in the aggregate, \$24,000 for 2017 compared to net cash provided of \$6.2 million in 2016. Primarily driving the use of cash in 2017 were purchases of property and equipment. The \$6.2 million cash provided by investing activities in 2016 resulted from maturities of marketable securities of \$6.3 million, net of related purchases, partially offset by purchases of property and equipment of \$76,000.

*Financing activities*

Financing activities used net cash of \$747,000 during 2017, primarily consisting of cash used for payments on financing obligations of \$505,000 and payments for fees to amend the Company's credit agreement with Hale Capital Partners, LP of \$225,000. Financing activities provided \$7.0 million of cash in the comparable period in 2016, primarily from net proceeds from the debt financing of \$7.5 million, offset in part by cash used for payments on financing obligations of \$513,000.

Since October 2010, the Company's Board of Directors has approved common stock repurchases of up to 3,500,000 shares. Shares may be purchased at prevailing market prices in the open market or in private transactions, subject to market conditions, share price, trading volume and other factors. The repurchase program has been funded to date using cash on hand and may be discontinued at any time. The Company did not repurchase any shares of its common stock under the repurchase program during the years ended December 31, 2017, 2016 and 2015. As of December 31, 2017, the Company had 778,365 shares available for repurchase under the authorizations. While the current authorization remains in effect, the Company expects its primary use of cash will be to fund operations in support of the Company's goals for revenue growth and operating margin improvement. Under the ESW Credit Agreement, the Company is prohibited from repurchasing or redeeming its stock, subject to certain exceptions for relating to the exercise or vesting of equity awards.

The Company did not declare or pay any dividends during the years ended December 31, 2017, 2016 and 2015. Under the ESW Credit Agreement, the Company is prohibited from declaring or paying any dividends.

**Contractual Obligations.** The following table summarizes the Company's contractual cash obligations at December 31, 2017, and the net effect such obligations are expected to have on liquidity and cash flow in future periods. Some of the amounts included in this table are based on management's estimates and assumptions about these obligations, including their duration, the possibility of renewal, anticipated actions by third parties and other factors. Because these estimates and assumptions are necessarily subjective, the amounts the Company will actually pay in future periods may vary from those reflected in the table.

(In thousands)

Contractual Obligations	Payments Due by Period						
	2018	2019	2020	2021	2022	Thereafter	Total
Term loan <sup>(1)</sup>	\$ 2,727	\$ 5,273	\$ —	\$ —	\$ —	\$ —	\$ 8,000
Pre-payment penalty on term loan <sup>(2)</sup>	273	—	—	—	—	—	273
Operating leases	889	538	298	300	306	26	2,357
Capital leases and other financing obligations <sup>(3)</sup>	255	3	—	—	—	—	258
Purchase obligations <sup>(4)</sup>	455	35	—	—	—	—	490
Income tax liabilities under ASC 740 <sup>(5)</sup>	—	—	—	—	—	—	—
<b>Total contractual cash obligations</b>	<b>\$ 4,599</b>	<b>\$ 5,849</b>	<b>\$ 298</b>	<b>\$ 300</b>	<b>\$ 306</b>	<b>\$ 26</b>	<b>\$ 11,378</b>

<sup>(1)</sup> Amounts include principal payments as set forth in Amendment No. 2 to the Company's credit agreement with Hale Capital Partners, LP ("Amendment No. 2").

<sup>(2)</sup> Amount for 2018 consists of a pre-payment penalty contractually required under the payment schedule set forth in Amendment No. 2.

<sup>(3)</sup> Amounts include principal and interest.

<sup>(4)</sup> Purchase obligations include all commitments to purchase goods or services that meet one or both of the following criteria: (1) they are non-cancelable or (2) the Company must make specified minimum payments even if it does not take delivery of the contracted products or services. If the obligation is non-cancelable, the entire value of the contract is included in the table.

<sup>(5)</sup> The Company does not currently expect any income tax liabilities accrued under ASC 740 as of December 31, 2017 to be paid to the applicable tax authorities in 2018. The full balance of unrecognized tax benefits under ASC 740 of \$1.1 million at December 31, 2017, has been excluded from the above table as the period of payment or reversal cannot be reasonably estimated. This amount is before reduction for deferred federal benefits of uncertain tax positions and also excludes potential interest and penalties.

## New Accounting Pronouncements

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers*, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The ASU will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. The FASB has issued numerous amendments to ASU 2014-09 from August 2015 through January 2018, which provide supplemental and clarifying guidance, as well as amend the effective date of the new standard. The new standard is effective for the Company on January 1, 2018.

The new revenue standard may be applied using either of the following transition methods: a full retrospective approach reflecting the application of the standard in each prior reporting period with the option to elect certain practical expedients, or a modified retrospective approach with the cumulative effect of initially adopting the standard recognized at the date of adoption (which includes additional footnote disclosures). The Company will adopt the standard in the first quarter of 2018 utilizing the modified retrospective (cumulative effect) method. Such method provides that the cumulative effect from prior periods upon applying the new guidance is recognized in the Company's consolidated balance sheets as of the date of adoption, including an adjustment to retained earnings. Prior periods will not be retrospectively adjusted. While the Company continues to assess all potential impacts of this new standard, it currently believes the most significant impacts relate to the accounting for the timing of revenue recognition of subscription, or term-based, software license arrangements. Specifically, under the new standard:

- Software revenue associated with non-cancellable subscription or, term-based, software license arrangements will generally be recognized upon delivery of the license. Historically, these arrangements have been material, and the Company currently recognizes this revenue ratably over the term of the software license; and
- The Company expects that the accounting for software revenue derived from perpetual based licensing arrangements and associated services revenues will not be materially impacted.

At the date of adoption of this new guidance, the Company expects to record a cumulative adjustment to the Company's consolidated balance sheet, including an adjustment to retained earnings, to adjust for the aggregate impact of these revenue items, as calculated under the new guidance. The Company currently estimates the amount of such adjustment to retained earnings to be approximately \$1.1 million, or 4% of its annual 2017 revenues. Such estimate is preliminary and subject to change as the Company finalizes its implementation process.

The adoption of the standard required the implementation of enhanced accounting systems and processes, including an advanced revenue module to the Company's ERP system to assist in maintaining multi-books (i.e., ASC 606 and ASC 605) to aid in monitoring and reporting on the cumulative impact of the adoption on a going forward basis. This implementation will impact the Company's internal controls over revenue recognition and financial reporting. The Company has implemented revised controls in anticipation adopting the new standard January 1, 2018.

The Company's analysis and evaluation of the new standard will continue through the filing of its first quarter 2018 consolidated financial statements.

***ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK***

**Foreign Currency Translation.** As of December 31, 2017, the Company is exposed to market risk primarily from foreign exchange rate fluctuations of the British Pound Sterling, Japanese Yen and Singapore Dollar to the U.S. Dollar as the financial position and operating results of the Company's foreign subsidiaries are translated into U.S. dollars for consolidation. Resulting translation adjustments are recorded as a separate component of stockholders' equity.

**Interest Rates.** Upon execution of the ESW Credit Agreement on January 12, 2018, the Company is required to accrue interest, compounding monthly, at a variable rate per annum equal to the prime rate plus 4%, due at maturity on January 10, 2020. Changes in interest rates would impact the Company's cash reserves upon payment of accrued interest. A 100-basis point increase in the prime rate would increase the Company's annual pre-tax interest expense by approximately \$100,000.

*ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA*

**Financial Statements**

	<b>Page in Annual Report on Form 10-K For Year Ended December 31, 2017</b>
<a href="#"><u>Report of Independent Registered Public Accounting Firm</u></a>	<a href="#"><u>34</u></a>
<a href="#"><u>Consolidated Balance Sheets</u></a>	<a href="#"><u>35</u></a>
<a href="#"><u>Consolidated Statements of Operations</u></a>	<a href="#"><u>36</u></a>
<a href="#"><u>Consolidated Statements of Comprehensive Income (Loss)</u></a>	<a href="#"><u>37</u></a>
<a href="#"><u>Consolidated Statements of Stockholders' Equity</u></a>	<a href="#"><u>38</u></a>
<a href="#"><u>Consolidated Statements of Cash Flows</u></a>	<a href="#"><u>39</u></a>
<a href="#"><u>Notes to Consolidated Financial Statements</u></a>	<a href="#"><u>41</u></a>

## Report of Independent Registered Public Accounting Firm

The Stockholders and Board of Directors  
Qumu Corporation:

### Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Qumu Corporation and subsidiaries (the Company) as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2017, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

### Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 1989.

Minneapolis, Minnesota  
March 23, 2018

**QUMU CORPORATION AND SUBSIDIARIES**  
**Consolidated Balance Sheets**  
(In thousands, except share data)

	December 31,	
	2017	2016
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 7,690	\$ 10,364
Receivables, net	5,529	7,495
Income tax receivable	156	317
Prepaid expenses and other current assets	1,830	2,470
Total current assets	15,205	20,646
Property and equipment, net	911	1,827
Intangible assets, net	6,295	8,110
Goodwill	7,390	6,749
Deferred income taxes, non-current	77	70
Other assets, non-current	4,398	4,827
Total assets	\$ 34,276	\$ 42,229
<b>Liabilities and Stockholders' Equity</b>		
Current liabilities:		
Accounts payable and other accrued liabilities	\$ 3,878	\$ 2,394
Accrued compensation	1,824	2,361
Deferred revenue	8,923	8,992
Deferred rent	181	283
Financing obligations	1,047	508
Warrant liability	819	893
Total current liabilities	16,672	15,431
Long-term liabilities:		
Deferred revenue, non-current	141	423
Income taxes payable, non-current	3	6
Deferred tax liability, non-current	153	294
Deferred rent, non-current	507	712
Financing obligations, non-current	3	170
Term loan, non-current	7,605	6,617
Total long-term liabilities	8,412	8,222
Total liabilities	25,084	23,653
Commitments and contingencies (Note 4)		
Stockholders' equity:		
Preferred stock, \$0.01 par value, authorized 250,000 shares, no shares issued and outstanding	—	—
Common stock, \$0.01 par value, authorized 29,750,000 shares, issued and outstanding 9,364,804 and 9,227,247, respectively	94	92
Additional paid-in capital	68,035	66,864
Accumulated deficit	(56,197)	(44,473)
Accumulated other comprehensive loss	(2,740)	(3,907)
Total stockholders' equity	9,192	18,576
Total liabilities and stockholders' equity	\$ 34,276	\$ 42,229

See accompanying notes to consolidated financial statements.

**QUMU CORPORATION AND SUBSIDIARIES**  
**Consolidated Statements of Operations**  
(In thousands, except per share data)

	Year Ended December 31,		
	2017	2016	2015
<b>Revenues:</b>			
Software licenses and appliances	\$ 5,982	\$ 5,839	\$ 9,456
Service	22,185	25,843	24,998
Total revenues	<u>28,167</u>	<u>31,682</u>	<u>34,454</u>
<b>Cost of revenues:</b>			
Software licenses and appliances	2,407	2,474	2,949
Service	7,855	9,886	14,550
Total cost of revenues	<u>10,262</u>	<u>12,360</u>	<u>17,499</u>
Gross profit	<u>17,905</u>	<u>19,322</u>	<u>16,955</u>
<b>Operating expenses:</b>			
Research and development	7,279	8,541	10,689
Sales and marketing	10,026	11,529	17,994
General and administrative	8,567	9,722	16,878
Amortization of purchased intangibles	904	891	798
Total operating expenses	<u>26,776</u>	<u>30,683</u>	<u>46,359</u>
Operating loss	<u>(8,871)</u>	<u>(11,361)</u>	<u>(29,404)</u>
<b>Other income (expense):</b>			
Interest income (expense), net	(2,852)	(287)	7
Change in fair value of warrant liability	74	137	—
Other, net	(433)	84	(131)
Total other expense, net	<u>(3,211)</u>	<u>(66)</u>	<u>(124)</u>
Loss before income taxes	<u>(12,082)</u>	<u>(11,427)</u>	<u>(29,528)</u>
Income tax benefit	<u>(358)</u>	<u>(252)</u>	<u>(839)</u>
Net loss from continuing operations	<u>(11,724)</u>	<u>(11,175)</u>	<u>(28,689)</u>
Net loss from discontinued operations, net of tax	<u>—</u>	<u>—</u>	<u>(10)</u>
Net loss	<u>\$ (11,724)</u>	<u>\$ (11,175)</u>	<u>\$ (28,699)</u>
<b>Net loss per share – basic:</b>			
Net loss from continuing operations per share – basic	\$ (1.25)	\$ (1.21)	\$ (3.11)
Net loss from discontinued operations per share – basic	\$ —	\$ —	\$ —
Net loss per share – basic	<u>\$ (1.25)</u>	<u>\$ (1.21)</u>	<u>\$ (3.11)</u>
Weighted average shares outstanding – basic	<u>9,347</u>	<u>9,232</u>	<u>9,235</u>
<b>Net loss per share – diluted:</b>			
Net loss from continuing operations per share – diluted	\$ (1.25)	\$ (1.23)	\$ (3.11)
Net loss from discontinued operations per share – diluted	\$ —	\$ —	\$ —
Net loss per share – diluted	<u>\$ (1.25)</u>	<u>\$ (1.23)</u>	<u>\$ (3.11)</u>
Weighted average shares outstanding – diluted	<u>9,347</u>	<u>9,232</u>	<u>9,235</u>

See accompanying notes to consolidated financial statements.

**QUMU CORPORATION AND SUBSIDIARIES**  
**Consolidated Statements of Comprehensive Income (Loss)**  
(In thousands)

	Year Ended December 31,		
	2017	2016	2015
Net loss	\$ (11,724)	\$ (11,175)	\$ (28,699)
Other comprehensive income (loss):			
Net change in foreign currency translation adjustments	1,167	(2,387)	(749)
Change in net unrealized loss on marketable securities, net of tax	—	1	13
Total other comprehensive income (loss)	1,167	(2,386)	(736)
Total comprehensive loss	\$ (10,557)	\$ (13,561)	\$ (29,435)

See accompanying notes to consolidated financial statements.

**QUMU CORPORATION AND SUBSIDIARIES**  
**Consolidated Statements of Stockholders' Equity**  
(In thousands)

	Common Stock		Additional Paid-in Capital	Retained Earnings (Accum Deficit)	Accumulated Other Comprehensive Income (Loss)	Total
	Shares	Amount				
Balance at December 31, 2014	9,127	\$ 91	\$ 63,566	\$ (4,599)	\$ (785)	\$ 58,273
Net loss	—	—	—	(28,699)	—	(28,699)
Other comprehensive loss, net of taxes	—	—	—	—	(736)	(736)
Issuance of restricted stock	48	1	(1)	—	—	—
Stock issued in stock option exercise	20	—	142	—	—	142
Redemption of stock to cover tax withholding for employee stock plans	(6)	—	(50)	—	—	(50)
Net tax reductions relating to exercise and expiration of stock options	—	—	(7)	—	—	(7)
Stock-based compensation	—	—	1,834	—	—	1,834
Balance at December 31, 2015	9,189	\$ 92	\$ 65,484	\$ (33,298)	\$ (1,521)	\$ 30,757
Net loss	—	—	—	(11,175)	—	(11,175)
Other comprehensive loss, net of taxes	—	—	—	—	(2,386)	(2,386)
Issuance of restricted stock	45	—	—	—	—	—
Redemption of stock to cover tax withholding for employee stock plans	(7)	—	(26)	—	—	(26)
Net tax reductions relating to expiration of stock options	—	—	(15)	—	—	(15)
Stock-based compensation	—	—	1,421	—	—	1,421
Balance at December 31, 2016	9,227	\$ 92	\$ 66,864	\$ (44,473)	\$ (3,907)	\$ 18,576
Net loss	—	—	—	(11,724)	—	(11,724)
Other comprehensive income, net of taxes	—	—	—	—	1,167	1,167
Issuance of restricted stock	144	2	(2)	—	—	—
Redemption of stock to cover tax withholding for employee stock plans	(6)	—	(17)	—	—	(17)
Stock-based compensation	—	—	1,190	—	—	1,190
Balance at December 31, 2017	9,365	\$ 94	\$ 68,035	\$ (56,197)	\$ (2,740)	\$ 9,192

See accompanying notes to consolidated financial statements.

**QUMU CORPORATION AND SUBSIDIARIES**  
**Consolidated Statements of Cash Flows**  
(In thousands)

	Year Ended December 31,		
	2017	2016	2015
Operating activities:			
Net loss	\$ (11,724)	\$ (11,175)	\$ (28,699)
Net income (loss) from discontinued operations, net of tax	—	—	(10)
Net loss from continuing operations	(11,724)	(11,175)	(28,689)
Adjustments to reconcile net loss to net cash used in continuing operating activities:			
Depreciation and amortization	3,045	3,303	3,118
Stock-based compensation	1,190	1,421	1,834
Accretion of debt discount and issuance costs	2,013	152	—
Loss on disposal of property and equipment	—	4	108
Loss on lease contract termination	72	—	—
Change in fair value of warrant liability	(74)	(137)	—
Deferred income taxes	(166)	(229)	(564)
Changes in operating assets and liabilities:			
Receivables	2,101	3,244	(1,331)
Income taxes receivable / payable	167	266	(378)
Prepaid expenses and other assets	1,166	(138)	748
Accounts payable and other accrued liabilities	1,656	(1,406)	443
Accrued compensation	(574)	(1,575)	(2,184)
Deferred revenue	(573)	(2,673)	2,729
Deferred rent	(311)	(265)	48
Other non-current liabilities	—	(226)	226
Net cash used in continuing operating activities	(2,012)	(9,434)	(23,892)
Net cash provided by (used in) discontinued operating activities	—	(50)	665
Net cash used in operating activities	(2,012)	(9,484)	(23,227)
Investing activities:			
Sales and maturities of marketable securities	—	6,250	27,465
Purchases of marketable securities	—	—	(10,250)
Purchases of property and equipment	(24)	(76)	(635)
Proceeds from sale of property and equipment	—	—	43
Net cash provided by (used in) continuing investing activities	(24)	6,174	16,623
Net cash provided by discontinued investing activities, including proceeds from sale of business	—	—	2,300
Net cash provided by (used in) investing activities	(24)	6,174	18,923
Financing activities:			
Proceeds from term loan and warrant issuance	—	8,000	—
Payments for term loan and warrant issuance costs	(225)	(505)	—
Principal payments on capital lease obligations	(505)	(513)	(320)
Common stock repurchases to settle employee withholding liability	(17)	(26)	(50)
Proceeds from employee stock plans	—	—	142
Net cash provided by (used in) financing activities	(747)	6,956	(228)
Effect of exchange rate changes on cash	109	(354)	(80)
Net increase (decrease) in cash and cash equivalents	(2,674)	3,292	(4,612)
Cash and cash equivalents, beginning of year	10,364	7,072	11,684
Cash and cash equivalents, end of year	\$ 7,690	\$ 10,364	\$ 7,072

See accompanying notes to consolidated financial statements.

**QUMU CORPORATION AND SUBSIDIARIES**  
**Consolidated Statements of Cash Flows**  
**Supplemental Cash Flow Disclosures**  
(In thousands)

	Years Ended December 31,		
	2017	2016	2015
Supplemental disclosures of net cash paid (received) during the year:			
Income taxes	\$ (190)	\$ 22	\$ (22)
Interest	\$ 853	\$ 211	\$ 33
Non-cash investing and financing activities:			
Term loan debt issuance costs included in accrued liabilities	\$ 800	\$ —	\$ —
Financing obligations related to prepaid expenses and other assets	\$ 73	\$ 182	\$ 402
Financing obligations related to property and equipment	\$ —	\$ —	\$ 927
Accrued liabilities and other non-current liabilities related to leasehold improvements	\$ —	\$ —	\$ 689

See accompanying notes to consolidated financial statements.

**QUMU CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**1) Nature of Business and Summary of Significant Accounting Policies**

**Nature of Business**

Qumu Corporation ("Qumu" or the "Company") provides the tools to create, manage, secure, distribute and measure the success of live and on-demand video for the enterprise. The Qumu platform enables global organizations to drive employee engagement, increase access to video, and modernize the workplace by providing a more efficient and effective way to share knowledge. The world's largest organizations leverage the Qumu platform for a variety of cloud-based, on premise and hybrid use cases including self-service webcasting, sales enablement, internal communications, product training, regulatory compliance and customer engagement. The Company markets its products to customers primarily in North America, Europe and Asia.

The Company views its operations and manages its business as one segment and one reporting unit. Factors used to identify the Company's single operating segment and reporting unit include the financial information available for evaluation by the chief operating decision maker in making decisions about how to allocate resources and assess performance. The Company manages the marketing of its products and services through regional sales representatives and independent distributors in the United States and international markets.

The Company previously conducted its operations through two businesses consisting of 1) its enterprise video content management software business and 2) its disc publishing business. On June 27, 2014, the Company's shareholders approved the sale of the disc publishing assets and on July 1, 2014, the sale was completed. As a result, effective June 27, 2014, the disc publishing business was classified as held for sale and qualified for presentation as discontinued operations effective with the reporting of the Company's financial results for the second quarter of 2014. Accordingly, effective June 27, 2014, the Company had one remaining reportable segment, the enterprise video content management software business. The operational results of the disc publishing business are presented in the "Net loss from discontinued operations, net of tax" line item on the consolidated statements of operations. All remaining amounts presented in the accompanying consolidated financial statements and notes reflect the financial results and financial position of the Company's continuing enterprise video content management software business, other than consolidated amounts reflecting operating results and balances for both the continuing and discontinued operations.

**Principles of Consolidation**

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated.

**Use of Estimates**

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 at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

**Liquidity**

The Company has experienced recurring operating losses and negative cash flows from operating activities and, during the fourth quarter of 2017, it was difficult for management to reliably project future compliance with certain covenants in its credit agreement with Hale Capital Partners, LP under certain financial scenarios. If the Company is not able to maintain compliance with its covenants that results in an Event of Default, a lender may accelerate the repayment of outstanding principal, which could negatively impact the Company's ability to fund its working capital requirements, capital expenditures and general corporate expenses. Subsequent to year end, the Company replaced its credit agreement, as described in Note 4—"Commitments and Contingencies," and is projecting future compliance with its covenants with an operating plan that, when combined with its expense reduction program, further aligns spending with revenue.

**Fair Value of Financial Instruments**

The Company's financial instruments consist primarily of cash, cash equivalents and marketable securities, for which the current carrying amounts approximate fair market values based on quoted market prices or net asset value; the warrant liability, for which the fair value is based on the Company's estimates of assumptions that market participants would use in pricing the

liability; and the term loan, for which the fair value is estimated using a discounted cash flow analysis based on the Company's current incremental borrowing rate and the contractual terms of the loan.

### **Revenue Recognition**

The Company generates revenue through the sale of enterprise video content management software solutions, hardware, maintenance and support, and professional and other services. Software sales may take the form of a perpetual software license, a cloud-hosted software as a service (SaaS) or a term software license. Software licenses and appliances revenue includes sales of perpetual software licenses and hardware. Service revenue includes term software licenses, SaaS, maintenance and support, and professional and other services. The Company commences revenue recognition when all of the following conditions are met: there is persuasive evidence of an arrangement; the product has been delivered or the services have been provided to the customer; the collection of the fees is reasonably assured; and the amount of fees to be paid by the customer is fixed or determinable. More specifically:

- Revenue from perpetual software licenses and hardware are generally recognized when the product has been delivered.
- Revenue from subscription, maintenance and support, which includes term software licenses, cloud-hosted software as a service and maintenance and support, are generally recognized ratably over the contract term beginning on the commencement date of each contract, which is the date the Company's product has been delivered or service is made available to customers.
- Revenue from professional and other services, which are not essential to the functionality of the software, are generally recognized as the services are provided to customers.

The Company allocates revenue to the software-related and non-software elements under one arrangement based on the relative selling price. In such circumstances, the selling price for a deliverable is based on the following hierarchy: i) vendor-specific objective evidence ("VSOE"), if available, ii) third-party evidence ("TPE"), if VSOE is not available, or iii) estimated selling price ("ESP"), if neither VSOE nor TPE is available. The Company determines VSOE of the selling price for software-related elements, including professional services and software maintenance and support contracts, based on the price charged for the deliverable when sold separately. After the arrangement consideration has been allocated to the software-related and non-software related elements, the Company accounts for each respective element as follows:

- Revenue for each of the non-software elements is allocated based on the selling price hierarchy and recognized as noted above provided all other criteria required for revenue recognition have been met.
- Revenue for each of the software-related elements is allocated based on the VSOE of each element and recognized as noted above provided all other criteria required for revenue recognition have been met. In software-related arrangements for which the Company does not have the VSOE of the fair value for all elements, revenue is deferred until the earlier of when the VSOE is determined for the undelivered elements (residual method) or when all elements for which the Company does not have the VSOE of the fair value have been delivered, unless the only undelivered element is maintenance and support, in which case the entire amount of revenue is recognized over the maintenance and support period.

Other items relating to charges collected from customers:

- Shipping and handling charges collected from customers as part of the Company's sales transactions are included in revenues and the associated costs are included in cost of revenues.
- Sales taxes charged to and collected from customers as part of the Company's sales transactions are excluded from revenues and recorded as a liability to the applicable governmental taxing authority.

### **Deferred Revenue**

Deferred revenue consists of billings or payments received in advance of revenue recognition and is recognized as the revenue recognition criteria are met. The deferred revenue balance does not represent the total contract value of annual or multi-year, non-cancelable subscription agreements. Deferred revenue that will be recognized during the succeeding 12-month period is recorded as current deferred revenue, and the remaining portion is recorded as non-current deferred revenue.

## Deferred Commissions

Sales commissions represent the direct incremental costs related to the acquisition of customer contracts. The Company recognizes commissions as sales and marketing expense at the time the associated product revenue is recognized, requiring establishment of a deferred cost in the event a commission is paid prior to recognition of revenue. The deferred commission amounts are recoverable through the related future revenue streams under non-cancelable customer contracts and also commission clawback provisions in the Company's sales compensation plans. Deferred commission costs included in prepaid expenses and other assets were \$309,000 and \$411,000 at December 31, 2017 and 2016, respectively. Deferred commission costs in other assets, non-current were \$46,000 and \$148,000 at December 31, 2017 and 2016, respectively.

## Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents. Cash and cash equivalents are stated at fair value. As of December 31, 2017, cash and cash equivalents include certain funds required to be segregated for debt repayment, as described in Note 4—"Commitments and Contingencies." Such funds were under the Company's control as of December 31, 2017 and were subsequently released from such requirement upon the Company's refinancing of its term loan on January 12, 2018.

## Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are initially recorded at a selling price, which approximates fair value upon the sale of goods or services to customers. The Company maintains an allowance for doubtful accounts to reflect accounts receivable at net realizable value. In judging the adequacy of the allowance for doubtful accounts, the Company considers multiple factors, including historical bad debt experience, the general economic environment, the need for specific client reserves and the aging of the Company's receivables. A portion of this provision is included in operating expenses as a general and administrative expense and a portion of this provision is included as a reduction of license revenue. A considerable amount of judgment is required in assessing these factors. If the factors utilized in determining the allowance do not reflect future performance, then a change in the allowance for doubtful accounts would be necessary in the period such determination has been made, which would impact future results of operations.

Changes to the allowance for doubtful accounts consisted of the following (in thousands):

Allowance for Doubtful Accounts:	Year Ended December 31,		
	2017	2016	2015
Balance at beginning of year	\$ 34	\$ 24	\$ 55
Write-offs	(11)	(11)	—
Change in provision	(2)	21	(31)
Balance at end of year	\$ 21	\$ 34	\$ 24

## Inventories

Inventories are stated at the lower of cost or market. Cost is determined on a first-in, first-out basis. The Company records provisions for potential excess, obsolete and slow-moving inventory. Results could be different if demand for the Company's products decreased because of economic or competitive conditions, or if products became obsolete because of technical advancements in the industry or by the Company. Inventory included in prepaid expenses and other current assets was \$227,000 and \$204,000 as of December 31, 2017 and 2016, respectively.

## Property and Equipment

Property and equipment are stated at cost and depreciated on a straight-line basis over estimated useful lives ranging from one to seven years for most assets. Leasehold improvements are amortized using the straight-line method over the shorter of the property's useful life or the term of the underlying lease. Repairs and maintenance costs are charged to operations as incurred. The asset cost and related accumulated depreciation or amortization are adjusted for asset retirement or disposal, with the resulting gain or loss, if any, credited or charged to results of operations.

## Long-lived Assets

The Company continually monitors events and changes in circumstances that could indicate that carrying amounts of its long-lived assets, including property and equipment and intangible assets may not be recoverable. When such events or changes in circumstances occur, the Company assesses the recoverability of long-lived assets by determining whether the carrying value of such assets will be recovered through their undiscounted expected future cash flows. If the future undiscounted cash flows are

less than the carrying amount of these assets, the Company recognizes an impairment loss based on the excess of the carrying amount over the fair value of the assets.

#### **Goodwill**

The Company records goodwill when consideration paid in a purchase acquisition exceeds the fair value of the net tangible assets and the identified intangible assets acquired. Goodwill is not amortized, but rather is tested for impairment annually or more frequently if facts and circumstances warrant a review. The Company has determined that there is a single reporting unit for the purpose of goodwill impairment tests. For purposes of assessing the impairment of goodwill, the Company annually, at its fiscal year end, estimates the fair value of the reporting unit and compares this amount to the carrying value of the reporting unit. If the Company determines that the carrying value of the reporting unit exceeds its fair value, an impairment charge is recognized in the amount by which the carrying amount of the asset exceeds its fair value. As of December 31, 2017, the Company completed its annual impairment test of goodwill. Based upon that evaluation, the Company determined that its goodwill was not impaired. See Note 3—"Intangible Assets and Goodwill."

#### **Investment in Nonconsolidated Company**

As of December 31, 2017 and 2016, the Company held an investment totaling \$3.1 million in convertible preferred stock of BriefCam, Ltd. ("BriefCam") a privately-held Israeli company that develops video synopsis technology to augment security and surveillance systems to facilitate review of surveillance video. The investment is included in other non-current assets. Qumu's ownership interest is less than 20%. Qumu accounts for this equity investment using the cost method. Equity securities accounted for under the cost method are reviewed quarterly for changes in circumstances or the occurrence of events that suggest the Company's investment may not be fully recoverable. If an unrealized loss for the investment is considered to be other-than-temporary, the loss will be recognized in the consolidated statements of operations in the period the determination is made. Qumu monitors BriefCam's results of operations, business plan and capital raising activities and is not aware of any events or circumstances that would indicate a decline in the fair value below the carrying value of its investment.

#### **Derivative Liability**

In conjunction with debt financing completed in October 2016, the Company issued a warrant for the purchase of up to 14,286 shares of the Company's common stock, the entire portion of which remained unexercised and outstanding at December 31, 2017. The Company accounts for the warrant, a derivative financial instrument issued in conjunction with the Company's 2016 debt financing, as a current liability based upon the characteristics and provisions of the instrument. The warrant was determined to be ineligible for equity classification because of provisions that allow the holder under certain circumstances, essentially the sale of the Company as defined in the warrant agreement, to elect to receive a minimum cash payment in lieu of the Company's common shares. The warrant liability was recorded in the Company's consolidated balance sheets at its fair value on the date of issuance and is revalued on each subsequent balance sheet date until such instrument is exercised or expires, with any changes in the fair value between reporting periods recorded as other income or expense. The Company estimates the fair value of this liability using an option pricing model that is based on the individual characteristics of the warrant on the valuation date, which includes assumptions for expected volatility, expected life and risk-free interest rate, as well as the present value of the minimum cash payment component of the instrument. Changes in the assumptions used could have a material impact on the resulting fair value. The primary inputs affecting the value of the warrant liability are the Company's stock price and volatility in the Company's stock price. Increases in the fair value of the underlying stock or increases in the volatility of the stock price generally result in a corresponding increase in the fair value of the warrant liability; conversely, decreases in the fair value of the underlying stock or decreases in the volatility of the stock price generally result in a corresponding decrease in the fair value of the warrant liability.

#### **Stock-Based Compensation**

The Company measures stock-based compensation based on the fair value of the award at the date of grant. The Company recognizes stock-based compensation on a straight-line basis over the requisite service period for the entire award. Compensation cost is recognized for all awards over the vesting period to the extent the requisite service requirements are met, whether or not the award is ultimately exercised. Conversely, when the requisite service requirements are not met and the award is forfeited prior to vesting, any compensation expense previously recognized for the award is reversed.

#### **Research and Development Costs**

Costs related to research, design and development of products are charged to research and development expense as incurred. Software development costs are capitalized beginning when a product's technological feasibility has been established and ending when a product is available for general release to customers. The Company uses the working model approach to determine technological feasibility. The Company's products are released soon after technological feasibility has been

established. As a result, the Company has not capitalized any software development costs because such costs have not been significant.

#### **Royalties for Third-Party Technology**

Royalties for third-party technology are either paid in advance and capitalized as prepaid royalties or are accrued as incurred and subsequently paid. These royalties are generally expensed to cost of revenue at the greater of a rate based on the contractual or estimated term or an effective royalty rate based on the total projected net revenue for contracts with guaranteed minimums. Each quarter, the Company also evaluates the expected future realization of its prepaid royalties, as well as any minimum commitments not yet paid to determine amounts it deems unlikely to be realized through product sales. Any impairments or losses determined before the launch of a product are generally charged to general and administrative expense, and any impairments or losses determined post-launch are charged to cost of revenue. Unrecognized minimum royalty-based commitments are accounted for as executory contracts and, therefore, any losses on these commitments are recognized when the underlying intellectual property is abandoned (i.e., cease use) or the contractual rights to use the intellectual property are terminated.

During the quarter ended December 31, 2015, the Company recognized a loss relating to a third-party license agreement of \$1.2 million to general and administration expense which included the write-off of a \$606,000 prepaid royalty and the accrual of the remaining \$606,000 minimum royalty payments.

#### **Income Taxes**

The Company provides for income taxes using the asset and liability method, which requires recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Deferred tax assets are reduced by a valuation allowance when it is more likely than not that some component or all of the deferred tax assets will not be realized. Tax rate changes are reflected in income during the period such changes are enacted.

#### **Foreign Currency Translation**

The functional currency for each of the Company's international subsidiaries is the respective local currency. The Company translates its financial statements of consolidated entities whose functional currency is not the U.S. dollar into U.S. dollars. The Company translates its assets and liabilities at the exchange rate in effect as of the financial statement date and translates statement of operations accounts using the average exchange rate for the period. Exchange rate differences resulting from translation adjustments are accounted for as a component of accumulated other comprehensive loss. Gains or losses, whether realized or unrealized, due to transactions in foreign currencies are reflected in the consolidated statements of operations under the line item other income (expense). The net gains (losses) on foreign currency transactions for the year ended December 31, 2017, 2016 and 2015 were \$(356,000), \$162,000 and \$(131,000), respectively, and are included in other income (expenses) in the consolidated statements of operations.

#### **Net Loss Per Share**

Basic net loss per common share is computed by dividing net loss by the weighted-average number of common shares outstanding during the period. Diluted net loss per share is calculated by adjusting both the numerator (net loss) and the denominator (weighted-average number of shares outstanding), giving effect to all potentially dilutive common shares from the warrant, options and restricted stock units. The treasury stock method is used for computing potentially dilutive common shares. Under this method, consideration that would be received upon exercise (as well as remaining compensation cost to be recognized for awards not yet vested) is assumed to be used to repurchase shares of stock in the market, with the net number of shares assumed to be issued added to the denominator. In addition, the numerator is adjusted to exclude the changes in the fair value of the warrants that are classified as a liability, but may be settled in shares. For the year ended December 31, 2016, the Company reported diluted net loss as the impact of excluding the warrant income and related potentially dilutive shares was dilutive. Basic and diluted net loss per common share was the same for the years ended December 31, 2017 and 2015 as the impact of all potentially dilutive securities outstanding was anti-dilutive.

#### **Comprehensive Income (Loss)**

Comprehensive income (loss) includes net income and items defined as other comprehensive income, such as unrealized gains and losses on certain marketable securities and foreign currency translation adjustments. Such items are reported in the consolidated statements of comprehensive income (loss).

## New Accounting Pronouncements

In January 2017, the FASB issued ASU 2017-04, *Intangibles – Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*. The purpose of the amendment is to simplify how an entity is required to test goodwill for impairment by eliminating Step 2 from the goodwill impairment test. Step 2 measures a goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of that goodwill. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. The Company does not believe the impact of adopting this standard will be material to its consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases*, which will supersede the existing lease guidance and will require all leases with a term greater than 12 months to be recognized in the statements of financial position and eliminate current real estate-specific lease guidance, while maintaining substantially similar classification criteria for distinguishing between finance leases and operating leases. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018, with early adoption permitted. The Company is currently evaluating the impact on its consolidated financial statements of adopting this standard, which will require right-of-use assets and lease liabilities be recorded in the consolidated balance sheet for operating leases.

In January 2016, the FASB issued ASU 2016-01, *Financial Instruments - Overall*, which requires entities to measure equity instruments at fair value and recognize any changes in fair value in net income (loss). Entities may estimate the fair value of certain equity securities that do not have readily determinable fair value or may choose a practical expedient. If the practical expedient is elected, these investments would be recorded at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. The guidance also updates certain presentation and disclosure requirements. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017. The Company is currently evaluating the impact of adopting this standard, which could be material to its consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers*, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The ASU will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. The FASB has issued numerous amendments to ASU 2014-09 from August 2015 through January 2018, which provide supplemental and clarifying guidance, as well as amend the effective date of the new standard. The new standard is effective for the Company on January 1, 2018.

The new revenue standard may be applied using either of the following transition methods: a full retrospective approach reflecting the application of the standard in each prior reporting period with the option to elect certain practical expedients, or a modified retrospective approach with the cumulative effect of initially adopting the standard recognized at the date of adoption (which includes additional footnote disclosures). The Company will adopt the standard in the first quarter of 2018 utilizing the modified retrospective (cumulative effect) method. Such method provides that the cumulative effect from prior periods upon applying the new guidance is recognized in the Company's consolidated balance sheets as of the date of adoption, including an adjustment to retained earnings. Prior periods will not be retrospectively adjusted. While the Company continues to assess all potential impacts of this new standard, it currently believes the most significant impacts relate to the accounting for the timing of revenue recognition of subscription, or term-based, software license arrangements. Specifically, under the new standard:

- Software revenue associated with non-cancellable subscription or, term-based, software license arrangements will generally be recognized upon delivery of the license. Historically, these arrangements have been material, and the Company currently recognizes this revenue ratably over the term of the software license; and
- The Company expects that the accounting for software revenue derived from perpetual based licensing arrangements and associated services revenues will not be materially impacted.

At the date of adoption of this new guidance, the Company expects to record a cumulative adjustment to the Company's consolidated balance sheet, including an adjustment to retained earnings, to adjust for the aggregate impact of these revenue items, as calculated under the new guidance. The Company currently estimates the amount of such adjustment to retained earnings to be approximately \$1.1 million, or 4% of its annual 2017 revenues. Such estimate is preliminary and subject to change as the Company finalizes its implementation process.

The adoption of the standard required the implementation of enhanced accounting systems and processes, including an advanced revenue module to the Company's ERP system to assist in maintaining multi-books (i.e., ASC 606 and ASC 605) to aid in monitoring and reporting on the cumulative impact of the adoption on a going forward basis. This implementation will impact the Company's internal controls over revenue recognition and financial reporting. The Company has implemented revised controls in anticipation adopting the new standard January 1, 2018.

The Company's analysis and evaluation of the new standard will continue through the filing of its first quarter 2018 consolidated financial statements.

## 2) Property and Equipment

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

	December 31,	
	2017	2016
Computer, network equipment and furniture	\$ 3,681	\$ 3,639
Leasehold improvements	1,908	1,899
Total property and equipment	5,589	5,538
Less accumulated depreciation and amortization	(4,678)	(3,711)
Total property and equipment, net	\$ 911	\$ 1,827

Depreciation and amortization expense associated with property and equipment was \$944,000, \$1,161,000 and \$1,052,000 for the years ended December 31, 2017, 2016 and 2015, respectively.

## 3) Intangible Assets and Goodwill

### Intangible Assets

The Company's amortizable intangible assets consisted of the following (in thousands):

	December 31, 2017			
	Customer Relationships	Developed Technology	Trademarks / Trade-Names	Total
Original cost	\$ 4,928	\$ 8,225	\$ 2,184	\$ 15,337
Accumulated amortization	(2,194)	(6,043)	(805)	(9,042)
Net identifiable intangible assets	\$ 2,734	\$ 2,182	\$ 1,379	\$ 6,295
Weighted-average useful lives (years)	10	6	15	9

  

	December 31, 2016			
	Customer Relationships	Developed Technology	Trademarks / Trade-Names	Total
Original cost	\$ 4,759	\$ 7,917	\$ 2,178	\$ 14,854
Accumulated amortization	(1,577)	(4,509)	(658)	(6,744)
Net identifiable intangible assets	\$ 3,182	\$ 3,408	\$ 1,520	\$ 8,110
Weighted-average useful lives (years)	10	6	15	9

Changes to the carrying amount of net amortizable intangible assets for the year ended December 31, 2017 consisted of the following (in thousands):

	Year Ended December 31, 2017
Balance, beginning of year	\$ 8,110
Amortization expense	(2,101)
Currency translation	286
Balance, end of year	\$ 6,295

Amortization expense of intangible assets consisted of the following (in thousands):

	Year Ended December 31,		
	2017	2016	2015
Amortization expense associated with the developed technology included in cost of revenues	\$ 1,197	\$ 1,251	\$ 1,268
Amortization expense associated with other acquired intangible assets included in operating expenses	904	891	798
Total amortization expense	\$ 2,101	\$ 2,142	\$ 2,066

The Company estimates that amortization expense associated with intangible assets will be as follows (in thousands):

Year Ending December 31,		
2018	\$	1,938
2019		1,252
2020		968
2021		749
2022		550
Thereafter		838
Total	\$	<u>6,295</u>

#### Goodwill

On October 3, 2014, the Company completed the acquisition of Kulu Valley, Ltd., subsequently renamed Qumu Ltd, and recognized \$8.8 million of goodwill and \$6.7 million of intangible assets. The goodwill balance of \$7.4 million at December 31, 2017 reflects the impact of foreign currency exchange rate fluctuations since the acquisition date. The gross carrying amount of goodwill related to the 2011 acquisition of Qumu, Inc. of \$22.2 million was fully impaired in 2012.

As of December 31, 2017, the Company's market capitalization, without a control premium, was greater than its book value and, as a result, the Company concluded there was no goodwill impairment. Declines in the Company's market capitalization or a downturn in its future financial performance and/or future outlook could require the Company to record goodwill and other impairment charges. While a goodwill impairment charge is a non-cash charge, it would have a negative impact on the Company's results of operations.

#### 4) Commitments and Contingencies

##### Leases and Other Financing Obligations

Balances for assets acquired under capital lease obligations and included in property and equipment were as follows (in thousands):

	December 31,	
	2017	2016
Computer and network equipment	\$ 511	\$ 511
Furniture	287	287
Assets acquired under capital lease obligations	798	798
Accumulated depreciation	(613)	(372)
Assets acquired under capital lease obligations, net	<u>\$ 185</u>	<u>\$ 426</u>

The current and long-term portions of capital leases and other financing obligations were as follows (in thousands):

	December 31,	
	2017	2016
Capital leases and other financing obligations, current	\$ 1,047	\$ 508
Capital leases and other financing obligations, noncurrent	3	170
Total capital leases and other financing obligations	<u>\$ 1,050</u>	<u>\$ 678</u>

The Company leases certain of its facilities and some of its equipment under non-cancelable operating lease arrangements. The rental payments under these leases are charged to expense on a straight-line basis over the non-cancelable term of the lease.

Future minimum payments under capital lease obligations, other financing obligations, and non-cancelable operating leases, excluding property taxes and other operating expenses as of December 31, 2017 are as follows (in thousands):

	Capital leases and other financing obligations	Operating leases	Total
Years ending December 31,			
2018	\$ 255	\$ 889	\$ 1,144
2019	3	538	541
2020	—	298	298
2021	—	300	300
2022	—	306	306
Thereafter	—	26	26
Total minimum lease payments	258	\$ 2,357	\$ 2,615
Less amount representing interest	(8)		
Present value of net minimum lease payments	250		
Prepayment fee on term note payable with Hale Capital Partners, LP	800		
Total capital leases and other financing obligations	\$ 1,050		

On March 5, 2015, the Company entered into an office facility lease agreement for space that serves as its corporate headquarters. The eighty-nine month lease commenced on September 1, 2015, provides the Company approximately 16,474 square feet in Minneapolis, Minnesota, with the initial term expiring January 31, 2023. Total base rent payable over the lease period is \$1.8 million. The Company has one option to extend the term of the lease for an additional five-year period with respect to the leased premises. The lease agreement allowed the Company to construct leasehold improvements to the new space prior to the effective date of the lease. As the leasehold improvements are the property of the Company, the associated costs, amounting to approximately \$713,000, were capitalized in property and equipment as of September 30, 2015 and are being depreciated over the term of the lease. As an incentive to enter into the lease agreement, the lessor provided the Company a one-time tenant improvement allowance of \$689,000 to apply against the cost of the leasehold improvements. The one-time tenant improvement allowance is included in deferred rent and is being amortized as a reduction of rent expense over the term of the lease.

During the third quarter 2015, the Company recognized an equipment operating lease loss of \$1.0 million relating to equipment the Company no longer utilizes as part of its managed services offerings.

Rent expense under operating leases amounted to approximately \$1.3 million, \$1.3 million and \$1.0 million for the years ended December 31, 2017, 2016 and 2015, respectively.

#### Lease Contract Termination

During 2017, the Company determined that one of its two office spaces in London, England was no longer needed and, in December 2017, ceased using the leased space, subsequently making it available for sublessee occupancy. Also in December 2017, the Company entered into a sublease agreement, having a term beginning January 1, 2018 and extending through September 2019, and received the first year's sublease payment of \$122,000. Accordingly, the Company recorded a liability at fair value of \$194,000, which is reported in accrued liabilities as of December 31, 2017, for the future contractual lease payments, net of expected sublease receipts. The Company also recorded a loss related to the exit activity of \$72,000, which is included in other income (expenses) for the year ended December 31, 2017.

## Term Loans

### *Hale Capital Partners, LP*

On October 21, 2016, the Company entered into a term loan credit agreement (the "Hale credit agreement") with HCP-FVD, LLC as lender and Hale Capital Partners, LP as administrative agent (the "Administrative Agent"). HCP-FVD, LLC is an affiliate of Hale Capital Partners, LP. As further described in Note 13—"Subsequent Events" under "ESW Holdings, Inc.," on January 12, 2018, the Company entered into a term loan credit agreement (the "ESW credit agreement") with ESW Holdings, Inc. as lender and administrative agent pursuant to which the Company borrowed \$10.0 million in the form of a term loan, the proceeds of which were primarily used to extinguish the outstanding balance on the term loan with Hale Capital Partners, LP. A warrant issued in connection with the Hale credit agreement, as described in Note 5—"Fair Value Measurements," remained outstanding subsequent to the extinguishment of the term loan under the Hale credit agreement.

Pursuant to the Hale credit agreement, the Company borrowed \$8.0 million as a term loan on October 21, 2016. The term loan was scheduled to mature on October 21, 2019 and required payment of interest monthly at the prime rate plus 6.0%. As of December 31, 2017, interest was payable at 10.5%.

Upon issuance, the term loan was recorded in the Company's consolidated balance sheet net of an original issue discount of \$1.0 million, which represented the fair value of the warrant issued in connection with the debt financing. Also upon issuance, the Company recorded debt issuance costs of \$440,000, which were net of \$65,000 of costs allocated to the warrant liability and were recorded as a reduction to the carrying value of the term loan.

The term loan is reported in the Company's consolidated balance sheets as follows (in thousands):

	December 31,	
	2017	2016
Term loan, at face value	\$ 8,000	\$ 8,000
Unamortized original issue discount	(121)	(967)
Unamortized debt issuance costs	(274)	(416)
Term loan	<u>\$ 7,605</u>	<u>\$ 6,617</u>

The term loan had an estimated fair value of \$8.0 million as of December 31, 2017. The fair value of the term loan is estimated using a discounted cash flow analysis based on the Company's current incremental borrowing rate. As the contractual terms of the loan provide all the necessary inputs for this calculation, the term loan is classified as Level 2. The estimated fair value is not necessarily indicative of the amount that would be realized in a current market exchange.

The Hale credit agreement provided for the Company to prepay the term loan at any time with the payment of a pre-payment fee. The Company was obligated to prepay the term loan, with the payment of the applicable pre-payment fee, with the net proceeds from certain dispositions, issuances of equity or debt securities, extraordinary transactions or upon a change of control.

In connection with the Hale credit agreement, the Company granted a first priority security interest in substantially all of its properties, rights and assets and in the stock of Qumu, Inc. Pursuant to a charge over shares by deed by Qumu Corporation as Chargor and the Administrative Agent, the Company pledged to the Administrative Agent 65% of its shares in Qumu UK Holdings Ltd.

The Hale credit agreement contained affirmative and negative covenants and requirements relating to the Company and its operations. The negative covenants prohibited the Company from incurring debt, encumbering its assets, exceeding operating lease expense amounts, making dividends, distributions or payments on the Company's capital stock, being a party to any acquisition or any merger or consolidation or similar transaction, modifying its organizational documents, entering into certain transactions with affiliates, making certain transfers to or conducting certain business through foreign subsidiaries, and incentivizing accelerated customer payments. The negative covenants of the Hale credit agreement also required the Company to meet various financial covenants relating to a maximum cumulative net cash operating amount, minimum eligible accounts receivable and cash, minimum cash, minimum core bookings, maximum deferred revenue non-current, minimum subscription, maintenance and support revenue, and minimum subscription and maintenance and support dollar renewal rates.

On March 31, 2017, the Company and its wholly-owned subsidiary, Qumu, Inc., entered into an Amendment No. 1 to its Hale credit agreement dated October 21, 2016 with HCP-FVD, LLC as lender and Hale Capital Partners, LP as administrative agent. Through the Amendment No. 1, the parties agreed to reduce the minimum core bookings covenant from \$10 million to \$8 million for any computation period ending prior to June 30, 2018 (returning to \$10 million for any computation period ending on or after June 30, 2018) and to increase the covenant relating to minimum amount of eligible accounts receivable and cash

from 100% to 118% of outstanding obligations. The parties also amended the Hale credit agreement to require prepayment of 100% of the net cash proceeds of any "Asset Disposition" as defined in the Hale credit agreement and to increase the prepayment fee to 10% of the principal amount prepaid if prepayment occurs at any time prior to October 21, 2019. In connection with the amendment, the Company paid the administrative agent an amendment fee of \$125,000, the unamortized portion of which is included in debt issuance costs as of December 31, 2017.

On November 6, 2017, the Company and its wholly-owned subsidiary, Qumu, Inc., entered into an Amendment No. 2 to its Hale credit agreement dated October 21, 2016. Through the Amendment No. 2, the parties agreed to amend the covenants of the Hale credit agreement to (a) reduce the minimum core bookings covenant to \$8 million for all future periods, (b) decrease the covenant relating to minimum amount of eligible accounts receivable and cash from 118% to 100% of outstanding obligations, (c) reduce the minimum subscription, maintenance and support revenue from \$18 million to \$15 million, and (d) reduce the minimum cash covenant to \$1 million at any time after May 7, 2018. The parties also amended one of the exclusions to the definition of "eligible accounts" relating to large accounts receivable and provided that the exclusion is not applicable during any period prior to November 30, 2018. On that date and thereafter, an account that exceeds 75% of the aggregate amount of all otherwise eligible accounts will be excluded from the definition of "eligible accounts" (but the portion of the accounts not in excess of the foregoing percentage may be deemed an eligible account). Under the Amendment No. 2, the Company also agreed to transfer \$3.0 million to a blocked cash account within thirty days and to make a payment of \$3.0 million (which is inclusive of the 10% prepayment fee) on May 7, 2018. In connection with the Amendment No. 2, the Company paid an amendment fee of \$100,000 on December 1, 2017.

Concurrent with amending the agreement on November 6, 2017, the Company commenced a plan to refinance the existing term loan with a new term loan to achieve financing terms more favorable to the Company. Subsequent to December 31, 2017, the Company entered into a term loan credit agreement with ESW Holdings, Inc., as described in Note 13—"Subsequent Events," on January 12, 2018, pursuant to which the Company borrowed \$10.0 million in the form of a term loan. The proceeds were primarily used to extinguish the outstanding balance on the term loan with Hale Capital Partners, LP. As a result, as of December 31, 2017, the Company accrued the requisite \$800,000 prepayment fee under "Other financing obligations – current" and classified the carrying amount of loan payable as "Term note, non-current," consistent with the maturity schedule under the credit agreement with ESW Holdings, Inc.

In connection with this refinancing plan, upon loan modification, the Company accelerated the amortization of deferred financing costs by recognizing the unamortized deferred financing costs over the expected remaining term of the Hale credit agreement. As a result of the loan modification, the Company had unamortized debt discount and debt issuance costs of \$2.0 million on November 6, 2017, of which it recognized \$1.6 million of interest expense for the amortization of deferred financing costs through December 31, 2017, resulting in unamortized debt discount and debt issuance costs of \$395,000 as of December 31, 2017. The balance of unamortized deferred financing costs will be recognized in 2018 during the year-to-date period ending January 12, 2018, to coincide with the extinguishment of the term note under the Hale credit agreement. As a result of the modification and the short period over which unamortized deferred financing costs were recognized, the computation of the effective interest rate on the loan as of December 31, 2017 did not yield a meaningful result.

The Company's monthly, quarterly and annual results of operations are subject to significant fluctuations due to a variety of factors, many of which are outside of the Company's control. These factors include the number and mix of products and solutions sold in the period, timing of customer purchase commitments, including the impact of long sales cycles and seasonal buying patterns, and variability in the size of customer purchases and the impact of large customer orders on a particular period. The foregoing factors are difficult to forecast, and these, as well as other factors, could adversely affect the Company's monthly, quarterly and annual results of operations. Failure to achieve its monthly, quarterly or annual forecasts may result in the Company being out of compliance with covenants or projecting noncompliance in the future. Management actively monitors its opportunity pipeline, forecast, and projected covenant compliance on an ongoing basis.

If at any time the Company's operating forecast projects non-compliance with its cash-related financial covenants, the Company would reduce its operating costs, including but not limited to headcount reductions, to achieve projected compliance. The Company has no legal or other restrictions that would materially limit its ability to execute on such operating cost reductions, nor does the Company believe that such reductions would materially impact the long-term prospects of the Company. However, there can be no assurance that any future expense reduction measures will result in the expected reductions in the timeframes necessary to achieve compliance with any cash-related financial covenant.

## **Warrants**

### ***Hale Capital Partners, LP***

In conjunction with the October 21, 2016 debt financing, the Company issued a warrant for the purchase of up to 14,286 shares of the Company's common stock, the entire portion of which remained unexercised and outstanding at December 31,

2017. The warrant, which expires on October 21, 2026, has an exercise price of \$2.80 per share and is transferrable. The warrant contains a cash settlement feature contingent upon the occurrence of certain events, essentially the sale of the Company as defined in the warrant agreement. As a result of this cash settlement feature, the warrant is subject to derivative accounting as prescribed under ASC 815. Accordingly, the fair value of the warrant on the date of issuance was recorded in the Company's consolidated balance sheets as a liability.

### Contingencies

The Company is exposed to a number of asserted and unasserted legal claims encountered in the ordinary course of its business. Although the outcome of any such legal actions cannot be predicted, management believes that there are no pending legal proceedings against or involving the Company for which the outcome is likely to have a material adverse effect upon its financial position or results of operations.

The Company's standard arrangements include provisions indemnifying customers against liabilities if the Company's products infringe a third-party's intellectual property rights. The Company has not incurred any costs in its continuing operations as a result of such indemnifications and has not accrued any liabilities related to such contingent obligations in the accompanying consolidated financial statements.

### 5) Fair Value Measurements

A hierarchy for inputs used in measuring fair value is in place that distinguishes market data between observable independent market inputs and unobservable market assumptions by the reporting entity. The hierarchy is intended to maximize the use of observable inputs and minimize the use of unobservable inputs by requiring that the most observable inputs be used when available. Three levels within the hierarchy may be used to measure fair value:

- Level 1: Inputs are unadjusted quoted prices in active markets for identical assets and liabilities.
- Level 2: Inputs include data points that are observable such as quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, and inputs (other than quoted prices) such as interest rates and yield curves that are observable for the asset or liability, either directly or indirectly.
- Level 3: Inputs are generated from model-based techniques that use significant assumptions not observable in the market. These unobservable assumptions reflect an entity's own estimates of assumptions that market participants would use in pricing the asset or liability.

The Company's assets and liabilities measured at fair value on a recurring basis and the fair value hierarchy utilized to determine such fair values is as follows (in thousands):

	Total Fair Value at December 31, 2017	Fair Value Measurements Using		
		Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Liabilities:</b>				
Derivative warrant liability	\$ 819	\$ —	\$ —	\$ 819

	Total Fair Value at December 31, 2016	Fair Value Measurements Using		
		Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Liabilities:</b>				
Derivative warrant liability	\$ 893	\$ —	\$ —	\$ 893

In conjunction with the October 21, 2016 debt financing, the Company issued a warrant for the purchase of up to 14,286 shares of the Company's common stock, the entire portion of which remained unexercised and outstanding at December 31, 2017. The warrant, which expires on October 21, 2026, has an exercise price of \$2.80 per share and is transferable. The warrant contains a cash settlement feature contingent upon the occurrence of certain events defined in the warrant agreement. As a result of this cash settlement feature, the warrant is subject to derivative accounting as prescribed under ASC 815. Accordingly, the fair value of the warrant on the date of issuance was recorded in the Company's consolidated balance sheets as a liability.

The warrant liability was recorded in the Company's consolidated balance sheets at its fair value on the date of issuance and is revalued on each subsequent balance sheet date until such instrument is exercised or expires, with any changes in the fair value

between reporting periods recorded as other income or expense. During the years ended December 31, 2017 and 2016, the Company recorded a non-cash gain from the change in fair value of the warrant liability of \$74,000 and \$137,000, respectively. The decrease in fair value during the year ended December 31, 2017 was primarily driven by decreased volatility in the Company's stock price and during the year ended December 31, 2016 was primarily driven by a decrease in the Company's stock price, each of which had a corresponding impact to the valuation of the warrant liability.

The Company estimates the fair value of this liability using an option pricing model that is based on the individual characteristics of the warrant on the valuation date, which includes assumptions for expected volatility, expected life and risk-free interest rate, as well as the present value of the minimum cash payment component of the instrument. Changes in the assumptions used could have a material impact on the resulting fair value. The primary inputs affecting the value of the warrant liability are the Company's stock price and volatility in the Company's stock price. Increases in the fair value of the underlying stock or increases in the volatility of the stock price generally result in a corresponding increase in the fair value of the warrant liability; conversely, decreases in the fair value of the underlying stock or decreases in the volatility of the stock price generally result in a corresponding decrease in the fair value of the warrant liability.

The Company classified the warrant liability as Level 3 due to the lack of relevant observable market data over fair value inputs such as the probability-weighting of the various scenarios in the arrangement. The following table represents a rollforward of the fair value of the Level 3 instrument (significant unobservable inputs):

Balance at December 31, 2016	\$	893
Change in fair value		(74)
Balance at December 31, 2017	\$	<u>819</u>

## 6) Stockholders' Equity

### Common Stock

Since October 2010, the Company's Board of Directors has approved common stock repurchases of up to 3,500,000 shares. Shares may be purchased at prevailing market prices in the open market or in private transactions, subject to market conditions, share price, trading volume and other factors. The repurchase program may be discontinued at any time. The repurchase program has been funded to date using cash on hand. The Company repurchased no shares under the share repurchase program during the years ended December 31, 2017, 2016 and 2015. As of December 31, 2017, 778,365 shares were available under the Board authorizations. Under the credit agreement, the Company is prohibited from repurchasing or redeeming its stock, subject to certain exceptions relating to the exercise or vesting of equity awards.

### 7) Stock-Based Compensation

The Company issues shares pursuant to the 2007 Stock Incentive Plan (the "2007 Plan") which provides for the grant of stock incentive awards in the form of incentive and non-qualified stock options, stock appreciation rights, restricted stock, restricted stock units, performance stock, performance units and other awards in stock and/or cash to certain key employees, non-employee directors and service providers. The exercise price of stock options granted under the 2007 Plan is equal to the market value on the date of grant. As of December 31, 2017, 2,730,320 shares are authorized under the 2007 Plan, of which 582,188 were available for future grant.

In addition to awards granted under the 2007 Plan, the Company granted non-qualified options to purchase 100,000 shares and 130,000 shares of its common stock to newly hired senior management level employees on November 26, 2012 and May 18, 2015, respectively, of which 165,000 remained outstanding as of December 31, 2017. The options were granted outside of any shareholder-approved plan as inducements to accept employment with the Company. The options have an exercise price equal to the closing price of the Company's common stock as reported by the Nasdaq Stock Market on the date of grant, vest in four equal installments on each of the first four anniversaries of the date of grant and have terms of seven years. In other respects, the options were structured to mirror the terms of the options granted under the 2007 Plan and are subject to stock option agreements between the Company and the employees.

The Company recognized the following amounts related to the Company's share-based payment arrangements (in thousands):

	Year Ended December 31,		
	2017	2016	2015
<b>Stock-based compensation cost charged against loss, before income tax benefit</b>			
Stock options	\$ 366	\$ 554	\$ 686
Restricted stock and restricted stock units	765	867	1,148
Performance stock units	59	—	—
Total expense included in continuing operations	<u>\$ 1,190</u>	<u>\$ 1,421</u>	<u>\$ 1,834</u>
<b>Stock-based compensation cost included in:</b>			
Cost of revenues	\$ 39	\$ 49	\$ 159
Operating expenses	1,151	1,372	1,675
Total expense included in continuing operations	<u>\$ 1,190</u>	<u>\$ 1,421</u>	<u>\$ 1,834</u>

As of December 31, 2017, total stock option compensation expense of \$587,000 and \$444,000 was not yet recognized related to non-vested option awards and related to non-vested shares and restricted share unit awards, respectively, and is expected to be recognized over a weighted average period of 2.5 years and 1.1 years, respectively.

### Stock Options

The fair value of each option award is estimated at the date of grant using the Black-Scholes option pricing model. The assumptions used to determine the fair value of stock option awards granted were as follows:

	Year Ended December 31,		
	2017	2016	2015
Expected life of options in years	4.75	4.75	4.75
Risk-free interest rate	1.7% - 2.0%	1.1% - 1.4%	1.3% - 1.6%
Expected volatility	64.2% - 66.2%	57.4% - 63.7%	34.5% - 53.2%
Expected dividend yield	—%	—%	—%

The Company reviews these assumptions at the time of each new option award and adjusts them as necessary to ensure proper option valuation. The expected life represents the period that the stock option awards are expected to be outstanding. Effective April 2008, the Company's Board of Directors approved a change in the contractual term of stock options granted to employees from ten to seven years. Given the reduction in the contractual term of its employee stock option awards and a lack of exercise history or other means to reasonably estimate future exercise behavior, the Company determined it was unable to rely on its historical exercise data as a basis for estimating the expected life of stock options granted to employees subsequent to this change. As such, the Company used the "simplified" method for determining the expected life of stock options granted to employees in 2017, 2016 and 2015, which bases the expected life calculation on the average of the vesting term and the contractual term of the awards. The risk-free interest rate is based on the yield of constant maturity U.S. treasury bonds with a remaining term equal to the expected life of the awards. The Company estimated the stock price volatility using weekly price observations over the most recent historical period equal to the expected life of the awards.

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

(In thousands, except per share data)	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value <sup>(1)</sup>
Options outstanding at December 31, 2014	1,635	\$ 12.84		
Granted	617	4.73		
Exercised	(20)	7.27		
Canceled	(419)	13.45		
Options outstanding at December 31, 2015	1,813	10.00		
Granted	374	2.86		
Exercised	—	—		
Canceled	(679)	12.66		
Options outstanding at December 31, 2016	1,508	7.03		
Granted	165	2.16		
Exercised	—	—		
Canceled	(385)	7.81		
Options outstanding at December 31, 2017	1,288	6.18	3.4	\$ —
Total vested and expected to vest as of December 31, 2017	1,288	6.18	3.4	\$ 35
Options exercisable as of:				
December 31, 2015	969	\$ 13.09		
December 31, 2016	703	10.06		
December 31, 2017	838	7.85	2.3	\$ —

<sup>(1)</sup> Aggregate intrinsic value includes only those options with intrinsic value (options where the exercise price is below the market value).

Other information pertaining to options is as follows (in thousands, except per share data):

	Year Ended December 31,		
	2017	2016	2015
Fair value of options granted	\$ 193	\$ 556	\$ 1,119
Per share weighted average fair value of options granted	\$ 1.17	\$ 1.49	\$ 1.81
Total intrinsic value of stock options exercised	\$ —	\$ —	\$ 131

#### Restricted Stock and Restricted Stock Units

Restricted stock and restricted stock units are valued based on the market value of the Company's shares on the date of grant, which was equal to the intrinsic value of the shares on that date. These awards vest and the restrictions lapse over varying periods from the date of grant. The Company recognizes compensation expense for the intrinsic value of the restricted awards ratably over the vesting period.

A summary of restricted stock and restricted stock units activity is presented in the table below (in thousands, except per share data):

	Number of Shares	Weighted Average Grant-Date Fair Value
Nonvested at December 31, 2014	214	\$ 14.59
Granted	129	9.96
Vested	(92)	14.52
Canceled	(76)	12.64
Nonvested at December 31, 2015	175	12.05
Granted	120	4.00
Vested	(76)	11.27
Canceled	(29)	13.03
Nonvested at December 31, 2016	190	7.13
Granted	213	2.44
Vested	(146)	5.67
Canceled	(39)	5.21
Nonvested at December 31, 2017	218	\$ 3.87

Other information pertaining to restricted stock and restricted stock units is as follows (in thousands, except per share data):

	Year Ended December 31,		
	2017	2016	2015
Per share weighted average grant-date fair value of restricted stock and restricted stock units granted	\$ 2.44	\$ 4.00	\$ 9.96
Total fair value of restricted stock and restricted stock units vested	\$ 392	\$ 294	\$ 667

#### Performance Stock Units

In connection with the Company's 2017 short-term incentive plan, the Company granted 166,149 performance stock units during the year ended December 31, 2017, of which 25,656 were forfeited during the year ended December 31, 2017. In settlement of the performance stock units, the Company issues a number of shares equal to the number of performance stock units issued multiplied by the total percentage achievement of the performance goals for the 2017 Incentive Plan. The percentage achievement for the performance stock units may not exceed 100%.

#### 8) 401(K) Savings Plan

The Company has a savings plan under Section 401(k) of the Internal Revenue Code. The plan allows employees to contribute up to 00% of pretax compensation. The Company matches a percentage of employees' contributions. Matching contributions totaled \$343,000, \$428,000 and \$359,000 for the years ended December 31, 2017, 2016 and 2015, respectively.

#### 9) Income Taxes

The components of loss before income taxes consist of the following (in thousands):

	Year Ended December 31,		
	2017	2016	2015
Loss before income taxes:			
Domestic	\$ (11,524)	\$ (10,834)	\$ (26,889)
Foreign	(558)	(593)	(2,639)
Total loss before income taxes	\$ (12,082)	\$ (11,427)	\$ (29,528)

The provision for income tax expense (benefit) consists of the following (in thousands):

	Year Ended December 31,		
	2017	2016	2015
<b>Current:</b>			
U.S. Federal	\$ (175)	\$ (6)	\$ (3)
State	35	50	27
Foreign	(211)	(249)	(817)
<b>Total current</b>	<b>(351)</b>	<b>(205)</b>	<b>(793)</b>
<b>Deferred:</b>			
U.S. Federal	—	—	1
State	(12)	12	(47)
Foreign	5	(59)	—
<b>Total deferred</b>	<b>(7)</b>	<b>(47)</b>	<b>(46)</b>
<b>Total provision for income tax benefit</b>	<b>\$ (358)</b>	<b>\$ (252)</b>	<b>\$ (839)</b>

Total income tax benefit differs from the expected income tax benefit, computed by applying the federal statutory rate of 34% to earnings before income taxes as follows (in thousands):

	Year Ended December 31,		
	2017	2016	2015
Expected income tax benefit	\$ (4,107)	\$ (3,885)	\$ (10,040)
State income taxes, net of federal tax effect	(306)	(789)	(830)
Effect of deferred rate change	11,851	(162)	48
Foreign tax	(87)	(105)	80
Non-deductible stock issuance costs	186	(24)	—
Federal R&D credit	(24)	(17)	(82)
Foreign unremitted earnings	(20)	58	—
Change in valuation allowance	(7,764)	4,566	9,906
Refundable AMT credit	(172)	—	—
Other, net	85	106	79
<b>Total provision for income tax benefit</b>	<b>\$ (358)</b>	<b>\$ (252)</b>	<b>\$ (839)</b>

The tax effects of temporary differences that give rise to significant portions of deferred tax assets (liabilities) are presented below (in thousands):

	December 31,	
	2017	2016
<b>Deferred tax assets:</b>		
Inventory provisions and uniform capitalization	\$ 42	\$ —
Accounts receivable allowances	3	12
Non-qualified stock option and restricted stock expense	447	961
Deferred revenue	147	408
Loss and credit carryforwards of U.S. subsidiary	23,996	33,673
Loss carryforward of foreign subsidiaries	430	1
Other accruals and reserves	407	674
Other	58	(349)
Total deferred tax assets before valuation allowance	25,530	35,380
Less valuation allowance	(24,285)	(32,930)
<b>Total deferred tax assets</b>	<b>\$ 1,245</b>	<b>\$ 2,450</b>
<b>Deferred tax liabilities:</b>		
Acquired intangibles	\$ (1,321)	\$ (2,526)
Fixed Assets	—	(148)
<b>Total deferred tax liabilities</b>	<b>\$ (1,321)</b>	<b>\$ (2,674)</b>
<b>Total net deferred tax assets (liabilities)</b>	<b>\$ (76)</b>	<b>\$ (224)</b>

As of December 31, 2017, the Company had \$85.6 million of net operating loss carryforwards for U.S. federal tax purposes and \$62.3 million of net operating loss carryforwards for various states. The loss carryforwards for federal tax purposes will expire between 2022 and 2037 if not utilized. The loss carryforwards for state tax purposes will expire between 2022 and 2037 if not utilized.

As of December 31, 2017, the Company had federal and state research and development credit carryforwards of \$3.1 million, net of Section 383 limitations, which will begin to expire in 2022 if not utilized.

As a result of its acquisition of Qumu, Inc. in October 2011, utilization of U.S. net operating losses and tax credits of Qumu, Inc. are subject to annual limitations under Internal Revenue Code Sections 382 and 383, respectively. The Company has not completed an IRC Section 382 study since 2011. It is possible additional ownership changes have occurred, which may result in additional Section 382 and 383 limitations. Due to the valuation allowance, it is not expected that any such limitation will have an impact on the results of operations of the Company.

The Company assessed that the valuation allowance against its U.S. deferred tax assets is still appropriate as of December 31, 2017, based on the consideration of all available positive and negative evidence, using the “more likely than not” standard required by ASC 740, *Income Taxes*. The valuation allowance will be reviewed quarterly and will be maintained until sufficient positive evidence exists to support the reversal of the valuation allowance.

The Company generally believes that it is more likely than not that the future results of the operations of its subsidiaries in the U.K. will generate sufficient taxable income due to the reversal of deferred tax liabilities to realize the tax benefits related to its deferred tax assets. As of December 31, 2017, the Company had a cumulative foreign tax loss carryforward of \$1.9 million in the U.K. This amount can be carried forward indefinitely.

On December 22, 2017, the Tax Cuts and Jobs Act (the Tax Act) was enacted, significantly altering U.S. corporate income tax law. The SEC issued Staff Accounting Bulletin 118, which allows companies to record reasonable estimates of enactment impacts where all of the underlying analysis and calculations are not yet complete. The provisional estimates must be finalized within a one-year measurement period.

The Company recorded a provision tax benefit of \$172,000 for the impact of the Tax Act. The tax benefit primarily relates to the future cash refund of excess AMT credits due to the repeal of the corporate AMT system. AMT credits previously had a full valuation allowance recorded, however a benefit was recorded as the AMT credits are now expected to be realized. The estimated refundable AMT credit is included in other noncurrent assets. The Company also reduced its net domestic deferred tax asset balance by \$11.9 million due to the reduction in corporate tax rate from 34% to 21% and reversed its deferred tax liability of \$58,000 previously accrued for future tax on foreign earnings given that the future tax consequences of a repatriation are expected to be insignificant. These adjustments are fully offset by a change in the Company’s U.S. valuation

allowance. Additionally, no tax expense was provided for the mandatory repatriation provisions, as the Company has estimated there to be no untaxed accumulated E&P. The Company notes that the final impacts of the Tax Act may differ from the provisional estimates, possibly materially, due to, among other things, changes in interpretations and assumptions the Company has made and additional guidance that may be issued.

The Company may repatriate cash associated with undistributed earnings of its foreign subsidiaries, such that they are not reinvested indefinitely. The repatriation of cash and cash equivalents held by the Company's international subsidiaries would not result in an adverse tax impact to the Company as a result of the mandatory repatriation included in the Tax Act and an expectation of immaterial withholding taxes on any repatriation.

A reconciliation of the beginning and ending amounts of gross unrecognized tax benefits is presented in the table below (in thousands):

	Year Ended December 31,	
	2017	2016
Gross unrecognized tax benefits at beginning of year	\$ 1,042	\$ 970
Increases related to:		
Prior year income tax positions	70	58
Current year income tax positions	24	14
Gross unrecognized tax benefits at end of year	\$ 1,136	\$ 1,042

Included in the balance of unrecognized tax benefits at December 31, 2017 are potential benefits of \$3,000 that if recognized, would affect the effective tax rate. The Company does not anticipate that the total amount of unrecognized tax benefits as of December 31, 2017 will change significantly by December 31, 2018.

The Company recognizes accrued interest and penalties related to unrecognized tax benefits as a component of income tax expense. Total accrued interest and penalties amounted to \$1,400 and \$3,000 on a gross basis at December 31, 2017 and 2016, respectively, and are excluded from the reconciliation of unrecognized tax benefits presented above. Interest and penalties recognized in the consolidated statements of operations related to uncertain tax positions amounted to net tax expense of \$1,300 and \$1,000 in 2017 and 2016, respectively.

The Company files income tax returns in the U.S. federal jurisdiction and various state and foreign jurisdictions. As of December 31, 2017, the Company was no longer subject to income tax examinations for taxable years before 2015 in the case of U.S. federal taxing authorities, and taxable years generally before 2013 in the case of state taxing authorities, consisting primarily of Minnesota and California.

## 10) Computation of Net Loss From Continuing Operations Per Share of Common Stock

The following table identifies the components of net loss from continuing operations per basic and diluted share (in thousands, except for per share data):

	Year Ended December 31,		
	2017	2016	2015
<b>Net loss per share from continuing operations – basic</b>			
Net loss from continuing operations	\$ (11,724)	\$ (11,175)	\$ (28,689)
Weighted average shares outstanding – basic	9,347	9,232	9,235
Net loss per share from continuing operations – basic	\$ (1.25)	\$ (1.21)	\$ (3.11)
<b>Net loss per share from continuing operations – diluted</b>			
Loss from continuing operations attributable to common shareholders:			
Net loss from continuing operations	\$ (11,724)	\$ (11,175)	\$ (28,689)
Numerator effect of dilutive securities			
Warrant	—	(137)	—
Loss from continuing operations attributable to common shareholders	\$ (11,724)	\$ (11,312)	\$ (28,689)
Weighted averages shares outstanding – diluted:			
Weighted average shares outstanding – basic	9,347	9,232	9,235
Denominator effect of dilutive securities			
Warrant	—	—	—
Weighted average shares outstanding – diluted	9,347	9,232	9,235
Net loss per share from continuing operations – diluted	\$ (1.25)	\$ (1.23)	\$ (3.11)

Stock options, warrant and restricted stock units to acquire common shares excluded from the computation of diluted weighted-average common shares as their effect is anti-dilutive were as follows (in thousands):

	Year Ended December 31,	
	2017	2016
Stock options	1,507	1,420
Warrant	314	—
Restricted stock units	139	91
Total anti-dilutive	1,960	1,511

## 11) Significant Customers and Geographic Data

One customer accounting for more than 10% of the Company's total revenue is as follows (in thousands):

Revenues	Years Ended December 31,		
	2017	2016	2015
Customer A	\$ 4,945	\$ 4,402	\$ 4,375

Customers accounting for more than 10% of the Company's accounts receivable are as follows (in thousands):

Accounts Receivable	December 31,		
	2017	2016	2015
Customer A	*	\$ 1,099	*
Customer B	\$ 814	\$ 748	*
Customer C	*	*	\$ 1,173
Customer D	*	*	\$ 1,144

\* Accounts receivable balance did not exceed 10%

The Company's revenues from each of its principal geographic regions are presented based on customer location as follows (in thousands):

	Years Ended December 31,		
	2017	2016	2015
North America	\$ 20,494	\$ 23,089	\$ 25,254
Europe	6,914	7,924	8,128
Asia	759	669	1,072
Total	\$ 28,167	\$ 31,682	\$ 34,454

Net property and equipment of the Company were located as follows (in thousands):

	December 31,	
	2017	2016
North America	\$ 855	\$ 1,732
Europe	56	95
Total	\$ 911	\$ 1,827

## 12) Supplemental Quarterly Data – Unaudited (In thousands, except per share data)

	2016				2017			
	First	Second	Third	Fourth	First	Second	Third	Fourth
Revenues	\$ 8,736	\$ 6,515	\$ 7,110	\$ 9,321	\$ 6,711	\$ 6,654	\$ 7,573	\$ 7,229
Cost of revenues	3,818	2,954	2,857	2,731	2,584	2,286	2,911	2,481
Gross profit	4,918	3,561	4,253	6,590	4,127	4,368	4,662	4,748
Operating expenses:								
Research and development	2,350	2,410	1,986	1,795	2,109	1,798	1,769	1,603
Sales and marketing	3,532	2,978	2,435	2,584	2,451	2,524	2,509	2,542
General and administrative	2,970	2,265	2,109	2,378	2,460	2,009	2,083	2,015
Amortization of intangibles	226	227	221	217	223	226	226	229
Total operating expenses	9,078	7,880	6,751	6,974	7,243	6,557	6,587	6,389
Operating loss	(4,160)	(4,319)	(2,498)	(384)	(3,116)	(2,189)	(1,925)	(1,641)
Other income (expense):								
Interest income (expense), net	(12)	(15)	(13)	(247)	(317)	(334)	(343)	(1,858)
Change in fair value of warrant liability	—	—	—	137	(78)	11	15	126
Other, net	36	(47)	(13)	108	(55)	(124)	(166)	(88)
Total other income (loss), net	24	(62)	(26)	(2)	(450)	(447)	(494)	(1,820)
Loss before income taxes	(4,136)	(4,381)	(2,524)	(386)	(3,566)	(2,636)	(2,419)	(3,461)
Income tax benefit	(4)	(90)	(39)	(119)	(4)	(25)	(110)	(219)
Net loss	\$ (4,132)	\$ (4,291)	\$ (2,485)	\$ (267)	\$ (3,562)	\$ (2,611)	\$ (2,309)	\$ (3,242)
Net loss per share – basic <sup>(1)</sup>	\$ (0.45)	\$ (0.46)	\$ (0.27)	\$ (0.03)	\$ (0.39)	\$ (0.28)	\$ (0.25)	\$ (0.35)
Net loss per share – diluted <sup>(1)</sup>	\$ (0.45)	\$ (0.46)	\$ (0.27)	\$ (0.04)	\$ (0.39)	\$ (0.28)	\$ (0.25)	\$ (0.35)

<sup>(1)</sup> Due to the averaging of shares, quarterly earnings per share may not add to the total for the full year.

### 13) Subsequent Events

#### *Credit Agreement – ESW Holdings, Inc.*

On January 12, 2018, Qumu Corporation (the “Company”) and its wholly-owned subsidiary, Qumu, Inc., entered into a term loan credit agreement (the “ESW Credit Agreement”) with ESW Holdings, Inc. as lender and Administrative Agent pursuant to which the Company borrowed \$10.0 million in the form of a term loan.

The term loan is scheduled to mature on January 10, 2020. Interest will accrue and compound monthly at a variable rate per annum equal to the prime rate plus 4%. The Company may prepay the term loan at any time with the payment of a pre-payment fee of 10% of the amount prepaid. The Company is obligated to prepay the term loan, with the payment of the applicable pre-payment fee, with the net proceeds from certain dispositions, issuances of equity or debt securities, extraordinary transactions and upon a change of control. Notwithstanding the foregoing, the disposition of the Company’s interest in BriefCam, Ltd. will not trigger a mandatory pre-payment and the pre-payment fee will not attach to a voluntary pre-payment from proceeds of the disposition of BriefCam, Ltd.

The ESW Credit Agreement contains affirmative and negative covenants and requirements relating to the Company and its operations. The affirmative covenants require, among other things, that the Company deliver to the Administrative Agent financial statements, annual operating plan, updated schedules, various reports, compliance certificates and other information. There are also affirmative covenants relating to access to collateral and the Company’s books and records, insurance, compliance with laws, payment of taxes, maintenance of existence, employee benefit plans, maintenance of accounts, and environmental matters. The negative covenants prohibit the Company from incurring debt, encumbering its assets, exceeding operating lease expense amounts, making dividends, distributions or payments on the Company’s capital stock, being a party to any acquisition or any merger or consolidation or similar transaction, modifying its organizational documents, entering into certain transactions with affiliates, making certain transfers to or conducting certain business through foreign subsidiaries, and incentivizing accelerated customer payments. The negative covenants of the ESW Credit Agreement also require the Company to meet financial covenants beginning with the quarter ended September 30, 2018 relating to minimum core bookings, maximum deferred revenue non-current, minimum subscription, and maintenance and support revenue and minimum subscription and maintenance and support dollar renewal rates.

Upon certain events of default relating to bankruptcy or insolvency, the obligations under the ESW Credit Agreement will become immediately due and payable. Upon other events of default – including relating to non-payment of the term loan obligations, non-payment of other debt, default of other material obligations, non-compliance with loan documents, breach of representations or warranties, certain pension plan events, certain judgments, invalidity of collateral documents, termination of the Company’s reporting obligations to the Securities and Exchange Commission or failure to be listed on any national stock exchange, material adverse effect and cessation of business – the Administrative Agent may declare all or any part of the obligations under the ESW Credit Agreement to be due and payable.

Pursuant to a Guaranty and Collateral Agreement dated January 12, 2018 in favor of the Administrative Agent, the Company granted a first priority security interest in substantially all of its properties, rights and assets (including equity interests of the Company’s subsidiaries) and Qumu, Inc. provided a full and unconditional guaranty of the Company’s obligations under the ESW Credit Agreement.

#### *Warrant – ESW Holdings, Inc.*

In conjunction with the January 12, 2018 debt financing, the Company issued a warrant for the purchase of up to 25,000 shares of the Company’s common stock. The warrant, which expires on January 12, 2028, has an exercise price of \$1.96 per share (subject to anti-dilution adjustments) and is transferrable. The warrant contains a cash settlement feature contingent upon the occurrence of certain events, essentially the sale of the Company as defined in the warrant agreement. As a result of this cash settlement feature, the warrant is subject to derivative accounting as prescribed under ASC 815. Accordingly, the fair value of the warrant on the date of issuance will be recorded in the Company’s consolidated balance sheets as a liability in the first quarter of 2018.

### **ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

None.

## ITEM 9A. CONTROLS AND PROCEDURES

### a) Evaluation of Disclosure Controls and Procedures

Our Chief Executive Officer, Vernon J. Hanzlik, and our Chief Financial Officer, David G. Ristow, have evaluated the Company's disclosure controls and procedures as of December 31, 2017. Our Chief Executive Officer and our Chief Financial Officer used the definition of "disclosure controls and procedures" as set forth in Rule 13a-15(e) under the Exchange Act in making their conclusion as to the effectiveness of such controls and procedures.

Based upon such evaluation, our Chief Executive Officer and our Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of December 31, 2017.

### b) Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Under the supervision of our Chief Executive Officer and our Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that:

- (i) Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company;
- (ii) Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and
- (iii) Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Based on our assessment and those criteria, management believes that the Company's internal control over financial reporting was effective as of December 31, 2017.

### c) Changes in Internal Control Over Financial Reporting

There have been no changes in internal controls over financial reporting that occurred during the fourth quarter ended December 31, 2017 that have materially affected, or are reasonable likely to materially affect, the Company's internal control over financial reporting.

## ITEM 9B. OTHER INFORMATION

### 2017 Incentive Plan Payouts

On February 5, 2018, the Company's Compensation Committee approved determinations under the 2017 short-term incentive plan adopted by the Compensation Committee on March 8, 2017 (the "2017 Incentive Plan"). The Company's President and Chief Executive Officer, Vern Hanzlik, is the only executive officer eligible to participate in the 2017 Incentive Plan. The Compensation Committee's determinations under the 2017 Incentive Plan were conditioned upon final calculations of the four performance goals established by the Compensation Committee under the 2017 Incentive Plan, which occurred concurrently with the filing of this Annual Report on Form 10-K.

For 2017, the Company's core bookings, revenue, adjusted EBITDA, and cash flow from operations were \$11,646,000, \$28,167,000, \$(4,636,000) and \$(2,012,000), respectively. After reviewing our actual 2017 cash flow from operations, the Compensation Committee determined to exercise its discretion to reduce this amount for the purposes of the 2017 Incentive Plan by \$1,000,000. After applying weighting, the total percentage achievement of the performance goals for the 2017 Incentive Plan was approximately 22.1%. As a result, we will issue Mr. Hanzlik 23,395 shares on March 23, 2018 (the filing

date of this Form 10-K) in settlement of the award of 105,642 performance stock units. We also will issue 2,331 shares on March 23, 2018 to another non-executive officer participant in the 2017 Incentive Plan in settlement of outstanding performance stock units.

#### **Adoption of 2018 Incentive Plan**

On March 20, 2018, the Company's Compensation Committee adopted the Company's short-term incentive program for 2018 (the "2018 Incentive Plan") and set the cash incentive pay opportunities under the 2018 Incentive Plan for the Company's eligible employees, including the Company's executive officers: Vern Hanzlik, President and Chief Executive Officer, and David G. Ristow, Chief Financial Officer.

Under the 2018 Incentive Plan, the Company's achievement quarterly positive adjusted EBITDA as a percent of revenue will determine a pool available for payment of cash incentive pay to all eligible employees, including the executive officers. Adjusted EBITDA is defined as the Company's net income (loss) excluding items related to interest income and expense, the impact of income-based taxes, depreciation and amortization, stock-based compensation, change in fair value of warrant liability, foreign currency gains and losses, the 2018 Incentive Plan amounts, and other non-operating income and expenses. The failure to achieve the minimum adjusted EBITDA for a particular quarter results in no incentive pay under the 2018 Incentive Plan for that quarter. Additionally, the failure to achieve the minimum adjusted EBITDA for the full year 2018, even if quarterly adjusted EBITDA targets are achieved, will result in no incentive pay under the 2018 Incentive Plan. The Compensation Committee retains the discretion to include or exclude items from adjusted EBITDA and to determine the amounts of adjusted EBITDA to be used in calculating incentive pay under the 2018 Incentive Plan.

For each participant in the 2018 Incentive Plan, the quarterly incentive pay opportunity will be determined by the participant's base salary multiplied by that participant's target incentive pay percentage. For Messrs. Hanzlik and Ristow, the target incentive pay percentages are 65% and 40%, respectively. The annual incentive pay opportunity of each participant, including the executive officers, will be pro-rated on a weighted average with all 2018 Incentive Plan participants based upon the aggregate pool such that the aggregate amount of incentive pay under the 2018 Incentive Plan will not exceed the aggregate pool as determined by the Compensation Committee.

The base salaries of Messrs. Hanzlik and Ristow were not changed from the base salaries in effect for 2017. As was the case for the 2017 Incentive Plan, for the purposes of determining incentive pay under the 2018 Incentive Plan to Mr. Hanzlik, the Compensation Committee will continue use Mr. Hanzlik's lower base salary unadjusted for the higher cost of living index in the San Francisco, California metropolitan area.

All incentive pay earned under the 2018 Incentive Plan will be determined in the first quarter of 2019 based upon the Company's audited financial results for 2018. A participant in the 2018 Incentive Plan, including an executive officer, must be employed by the Company as of December 31, 2018 and as of the payment date in order to receive any incentive pay under the 2018 Incentive Plan unless otherwise provided in the Company's letter agreement with the executive officer relating to severance and change in control benefits. Additionally, all incentive payments are subject to "clawback" to the extent required by federal law and the Company's Second Amended and Restated 2007 Stock Incentive Plan, as amended.

#### **March 2018 Equity Awards**

On March 23, 2018, the Company's Compensation Committee approved the award of an aggregate of 168,500 performance stock units to the Company's executive officers and members of senior management under the Company's Second Amended and Restated 2007 Stock Incentive Plan, as amended. The Compensation Committee approved an award to Vern Hanzlik, the Company's President and Chief Executive Officer, and to David G. Ristow, the Company's Chief Financial Officer, of 50,000 performance stock units and 30,274 performance stock units, respectively. In accordance with the Company's Policy Regarding the Granting of Equity-Based Compensation Awards, the grant date for the performance stock unit awards will be the first day of the next open window period.

The performance stock units represent a contractual right to receive shares of the Company's common stock upon the achievement of performance goals. Two-thirds of each award of performance stock units will vest based upon achievement of performance goals relating to 2018 revenue and renewal retention percentage, weighted equally. One-third of each award of performance stock units will vest based upon achievement of a performance goal relating to 2019 free cash flow from operations. In settlement of the performance stock units, the Company will issue a number of shares as is equal to the number of performance stock units for that performance period multiplied by the total percentage achievement of the performance goals for that performance period. The Compensation Committee will determine achievement of the performance goals following the end of the performance period and retains the discretion to include or exclude items from any of the performance goals. The shares issued will be restricted from transfer for a period of 364 days following issuance. The performance stock unit award and the restricted shares are subject to forfeiture for termination of employment for any reason. Upon a change of control, the

performance stock units and the restricted shares will vest in full and any restrictions will lapse. Additionally, the awards are subject to “clawback” to the extent required by federal law and the Company’s Second Amended and Restated 2007 Stock Incentive Plan, as amended.

The form of performance stock unit award agreement approved on March 23, 2018 is attached hereto as Exhibit 10.20 and incorporated by reference herein.

## PART III

### **ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

The information required by this item is incorporated herein by reference to the following sections of the Company's Proxy Statement for its 2018 Annual Meeting of Shareholders, which will be filed with the Securities and Exchange Commission pursuant to Regulation 14A within 120 days after the close of the fiscal year for which this report is filed (the "Proxy Statement"):

- Ownership of Voting Securities by Principal Holders and Management;
- Proposal 1—Election of Directors;
- Executive Officers;
- Executive Compensation;
- Section 16(a) Beneficial Ownership Reporting Compliance;
- Corporate Governance; and
- Code of Ethics.

### **ITEM 11. EXECUTIVE COMPENSATION**

The information required by this item is incorporated herein by reference to the sections of the Company's Proxy Statement entitled "Executive Compensation" and "Director Compensation."

### **ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

The information required by this item is incorporated herein by reference to the section of the Company's Proxy Statement entitled "Ownership of Voting Securities by Principal Holders and Management," and is incorporated herein by reference to Part II, Item 5 entitled "Market for Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities" of this Annual Report on Form 10-K.

### **ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE**

The information required by this item is incorporated by reference to the sections of the Company's Proxy Statement entitled "Certain Relationships and Related Person Transactions" and "Corporate Governance."

### **ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

The information required by this item is incorporated herein by reference to the section of the Company's Proxy Statement entitled "Relationship with Independent Registered Public Accounting Firm."

**PART IV**

***ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES***

- (a) (1) Financial Statements. See Part II, Item 8 of this report
- (2) Exhibits. See Index to Exhibits on page 69 of this report
- (b) See Index to Exhibits on page 69 of this report



## INDEX TO EXHIBITS

<b>Exhibit No.</b>	<b>Description</b>
<a href="#">2.1</a>	<a href="#">Asset Purchase Agreement dated April 24, 2014 by and among Equus Holdings, Inc., as Parent, Redwood Acquisition, Inc. as Buyer and Qumu Corporation as Seller (Incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K dated April 24, 2014).</a>
<a href="#">2.2</a>	<a href="#">Majority Share Purchase Agreement dated October 3, 2014 by and among Qumu Corporation and Sellers identified therein (Incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K dated October 3, 2014).</a>
<a href="#">2.3</a>	<a href="#">Form of Minority Share Purchase Agreement dated October 3, 2014 by and among Qumu Corporation and Sellers identified therein (Incorporated by reference to Exhibit 2.2 to the Company's Current Report on Form 8-K dated October 3, 2014).</a>
<a href="#">3.1</a>	<a href="#">1992 Restated Articles of Incorporation of Rimage Corporation.</a>
<a href="#">3.2</a>	<a href="#">Articles of Amendment to 1992 Restated Articles of Incorporation of Rimage Corporation (Incorporated by reference to Exhibit 4.2 to the Company's Registration Statement on Form S-8 (File No. 333-69550)).</a>
<a href="#">3.3</a>	<a href="#">Amended and Restated Bylaws of Rimage Corporation, as amended (Incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K dated March 7, 2007).</a>
<a href="#">3.4</a>	<a href="#">Articles of Amendment to Articles of Incorporation of Rimage Corporation as filed with the Minnesota Secretary of State effective as of September 16, 2013 (Incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K dated September 16, 2013).</a>
<a href="#">3.5</a>	<a href="#">Amendments effective March 2, 2016 to Bylaws of Qumu Corporation (Incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K dated March 2, 2016).</a>
<a href="#">10.1</a>	<a href="#">Second Amended and Restated 2007 Stock Incentive Plan * (Incorporated by reference to Appendix A to the Company's Proxy Statement for the 2016 Annual Meeting of Shareholders held on May 12, 2016).</a>
<a href="#">10.2</a>	<a href="#">Form of Non-Employee Director Restricted Stock Unit Agreement with Deferral Election *(Incorporated by reference to Exhibit 10.18 of the Company's Annual Report on Form 10-K dated March 12, 2010).</a>
<a href="#">10.3</a>	<a href="#">Amended and Restated Form of Severance/Change in Control Letter Agreement dated February 21, 2013, between the Company and certain executive officers * (Incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K dated February 21, 2013).</a>
<a href="#">10.4</a>	<a href="#">Agreement dated March 18, 2015 among Qumu Corporation and Dolphin Limited Partnership III, L.P., Dolphin Associates III, LLC, and Dolphin Holdings Corp. III (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated March 18, 2015).</a>
<a href="#">10.5</a>	<a href="#">Transition Agreement dated March 4, 2015 by and between Qumu Corporation and James R. Stewart * (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated March 4, 2015).</a>
<a href="#">10.6</a>	<a href="#">Form of Performance Stock Unit Award Agreement adopted under the 2017 Incentive Plan approved March 8, 2017 * (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated March 8, 2017).</a>
<a href="#">10.7</a>	<a href="#">Building Lease dated March 5, 2015 by and between Qumu Corporation, as Tenant, and Butler North, LLC, as Landlord (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated March 5, 2015).</a>
<a href="#">10.8</a>	<a href="#">Stock Option Agreement dated May 18, 2015 by and between Qumu Corporation and Peter J. Goepfrich * (Incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-8 (File No. 333-206270)).</a>
<a href="#">10.9</a>	<a href="#">Separation Letter Agreement dated October 19, 2015 by and between Qumu Corporation and Sherman L. Black * (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated October 19, 2015).</a>
<a href="#">10.10</a>	<a href="#">Term Loan Credit Agreement dated October 21, 2016 by and among Qumu Corporation, Qumu, Inc., the Lenders party thereto and Hale Capital Partners, LP as Administrative Agent (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated October 21, 2016).</a>
<a href="#">10.11</a>	<a href="#">Guaranty and Collateral Agreement dated October 21, 2016 by Qumu Corporation and Qumu, Inc. in favor of Hale Capital Partners, LP as administrative agent (Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K dated October 21, 2016).</a>
<a href="#">10.12</a>	<a href="#">Warrant to Purchase 314,286 shares of Common Stock issued by Qumu Corporation to HCP-FVD, LLC on October 21, 2016 (Incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K dated October 21, 2016).</a>
<a href="#">10.13</a>	<a href="#">Amendment No. 1 to Credit Agreement dated as of March 31, 2017 by and among Qumu Corporation, as Borrower, Qumu, Inc., as Guarantor, HCP-FVD, LLC, as Lender and Hale Capital Partners, LP, as Administrative Agent (Incorporated by reference to Exhibit 10.13 of the Company's Annual Report on Form 10-K dated March 31, 2017).</a>
<a href="#">10.14</a>	<a href="#">Amendment No. 2 to Credit Agreement dated November 6, 2017 by and among Qumu Corporation, as Borrower, Qumu, Inc. as Guarantor, HCP-FVD, LLC, as Lender and Hale Capital Partners, LP, as Administrative Agent (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated November 6, 2017).</a>
<a href="#">10.15</a>	<a href="#">Letter Agreement effective December 15, 2017 regarding Offer of Employment by Qumu Corporation and David Ristow * (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated December 15, 2017).</a>
<a href="#">10.16</a>	<a href="#">Standstill Agreement dated December 19, 2017 by and among Qumu Corporation, Harbert Discovery Fund, LP, Harbert Discovery Fund GP, LLC, Harbert Discovery Fund Advisors, Inc. and Harbert Management Corporation (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated December 19, 2017).</a>
<a href="#">10.17</a>	<a href="#">Term Loan Credit Agreement dated January 12, 2018 by and among Qumu Corporation, Qumu, Inc., the Lenders party thereto and ESW Holdings, Inc. as Administrative Agent (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated January 12, 2018).</a>

<b>Exhibit No.</b>	<b>Description</b>
<a href="#">10.18</a>	<a href="#">Guaranty and Collateral Agreement dated January 12, 2018 by Qumu Corporation and Qumu, Inc. in favor of ESW Holdings, Inc. as administrative agent (Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K dated January 12, 2018).</a>
<a href="#">10.19</a>	<a href="#">Amended and Restated Warrant No. 2R Dated January 12, 2018 to Purchase 925,000 shares of Common Stock Issued by Qumu Corporation to ESW Holdings, Inc. (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated February 28, 2018).</a>
<a href="#">10.20</a>	<a href="#">Form of Performance Stock Unit Award Agreement Approved March 23, 2018 *</a>
<a href="#">21.1</a>	<a href="#">Subsidiaries of Qumu Corporation.</a>
<a href="#">23.1</a>	<a href="#">Consent of KPMG LLP, Independent Registered Public Accounting Firm.</a>
<a href="#">31.1</a>	<a href="#">Certificate of Chief Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) of the Exchange Act.</a>
<a href="#">31.2</a>	<a href="#">Certificate of Chief Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) of the Exchange Act.</a>
<a href="#">32</a>	<a href="#">Certification pursuant to 18 U.S.C. §1350.</a>
101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.

\* Indicates a management contract or compensatory plan or arrangement

Effective September 16, 2013, Rimage Corporation changed its corporate name to Qumu Corporation.

**1992 RESTATED ARTICLES OF INCORPORATION**

**OF**

**RIMAGE CORPORATION**

**ARTICLE 1.  
NAME**

The name of the Corporation is Rimage Corporation.

**ARTICLE 2.  
REGISTERED OFFICE**

The address of the registered office of the Corporation is 7725 Washington Avenue South, Edina, Minnesota, 55439.

**ARTICLE 3.  
PURPOSES AND TERM**

The Corporation shall have general business purposes, and shall have perpetual existence.

**ARTICLE 4.  
SHARES**

The shares of capital stock of the Corporation shall be subject to the following:

(01) The Corporation is authorized to issue ten million (10,000,000) shares of One Cent (\$.01) per share par value capital stock, to be held, sold, and paid for at such times and in such manner as the Board of Directors may from time to time determine, in accordance with the laws of the State of Minnesota.

(02) Unless otherwise established by the Board of Directors, all shares of the Corporation are common shares entitled to vote and shall be of one class and one series having equal rights and preferred in all matters. Unless otherwise provided in these Articles, or in the Bylaws of the Corporation, or in the terms of the shares, a common shareholder has one (1) vote for each share held.

(03) The Board of Directors shall have the power to establish more than one class or series of shares and to fix the relative rights and preferences of any such different classes or series.

(04) The shareholders of the Corporation shall not have preemptive rights, unless with respect to some or all of the authorized and unissued shares, the Board of Directors grants preemptive rights.

(05) Cumulative voting for directors is not permitted.

**ARTICLE 5.  
DIRECTOR'S ACTION**

Any action of the Board of Directors, other than an action requiring shareholder approval, may be taken by written action signed by the number of directors that would be required to take the action at a meeting at which all directors were present.

**ARTICLE 6.  
AMENDMENT OF ARTICLES**

The shareholder vote required for adoption of an amendment to these Articles of Incorporation shall be the affirmative Vote of the holders of a majority of the voting power of the shares present and entitled to vote at a shareholder's meeting.

**ARTICLE 7.  
FUNDAMENTAL CHANGES**

In any of the following types of actions or transactions with respect to which the law requires a vote of the outstanding shares of the Corporation, the affirmative vote of a majority of the shares entitled to vote shall be sufficient to authorize the action or transaction:

- (01) A merger with any other corporation or corporations;
- (02) An exchange of one or more classes or series of the shares of the Corporation for the shares of one or more classes or series of one or more other corporations;
- (03) The sale, lease, transfer, or other disposition of all, or substantially all, of the Corporation's property and assets, including its goodwill, not in the usual and regular courses of business;
- (04) The voluntary dissolution of the Corporation.

**ARTICLE 8.  
DIRECTOR LIABILITY**

A director of the Corporation shall not be personally liable to the Corporation or its shareholders for monetary damages for breach of fiduciary duty as a director, except for liability (a) for any breach of the director's duty of loyalty to the corporation or its shareholders, (b) for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law, (c) under section 302A.559 of the Minnesota Business Corporation Act or section 80A.23 of the Minnesota Securities Act, or (d) for any transaction from which the director derived an improper personal benefit. If the Minnesota Business Corporation Act is amended after approval by the shareholders of this Article to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the corporation shall be eliminated or limited to the fullest extent permitted by the Minnesota Business Corporation Act, as so amended. Any repeal or modification of the foregoing paragraph by the shareholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of such repeal or modification.

\* \* FILED SEPTEMBER 25, 1992

**QUMU CORPORATION**  
**PERFORMANCE STOCK UNIT AWARD AGREEMENT**

**Participant:** \_\_\_\_\_ **Grant:** \_\_\_\_\_ **Performance Stock Units**  
**Grant Date:** \_\_\_\_\_, 2018

THIS PERFORMANCE STOCK UNIT AWARD AGREEMENT (this "Agreement") is made as of the Grant Date set forth above, by and between Qumu Corporation, a Minnesota corporation (the "Company"), and the Participant named above ("Participant") setting forth the terms and conditions of an award of Performance Stock Units granted to Participant pursuant to the Qumu Corporation Second Amended and Restated 2007 Stock Incentive Plan, as amended and as may be further amended from time to time (the "Plan").

1. **Grant.** Effective on the Grant Date, Participant has been granted the number of Performance Stock Units indicated above, which entitles Participant to receive up to the same number of shares of common stock of the Company (the "Shares") in accordance with the provisions of this Agreement and the provisions of the Plan. Capitalized terms used herein and not defined shall have the meaning given such terms in the Plan.

2. **Performance Vesting; Forfeiture.**

- a. As used in this Agreement, the following terms shall have the respective meanings:
- i. "Determination Date" means the date of determination and certification by the Committee of achievement of the Percentage Achievement of the Performance Goals for Performance Period 1 or Performance Period 2.
  - ii. "Percentage Achievement" means the respective percentage achievement (which shall not be more than 100%) of the Performance Goals for Performance Period 1 and Performance Period 2, as determined by the Committee.
  - iii. "Performance Goals" mean those performance goals set forth on Exhibit A.
  - iv. "Performance Period 1" shall mean the period from January 1, 2018 to and including December 31, 2018.
  - v. "Performance Period 2" shall mean the period from January 1, 2019 to and including December 31, 2019.
- b. For Performance Period 1, two-thirds (2/3) of the Performance Stock Units will vest and no longer be subject to the restrictions of and risk of forfeiture under this Agreement on the Determination Date as to such number of Performance Stock Units multiplied by the Percentage Achievement, rounded down to the nearest whole Share.

- c. For Performance Period 2, one-third (1/3) of the Performance Stock Units will vest and no longer be subject to the restrictions of and risk of forfeiture under this Agreement on the Determination Date as to such number of Performance Stock Units multiplied by the Percentage Achievement, rounded down to the nearest whole Share.
- d. If Participant's employment with the Company and/or a subsidiary of the Company terminates for any reason, including, but not limited to death, Disability or Retirement, all Performance Stock Units at that time not vested shall be forfeited to the Company without payment of any consideration therefor as of the date of such termination unless the Committee determines that all or any part of the Performance Stock Units shall vest as of the date of such termination.
- e. Notwithstanding any other provision of this Agreement, if there is a Change in Control of the Company, the Performance Stock Units will fully (100%) vest and no longer be subject to the restrictions of, and risk of forfeiture under, this Agreement.

3. **Maturity and Issuance of Shares; Restricted Shares.** The "Maturity Date" for a particular Performance Stock Unit shall be the earliest date on which the Performance Stock Units vest and all restrictions described in Section 2 on such Performance Stock Units lapse. Upon the Maturity Date for a particular Performance Stock Unit, the Company shall, within 90 days of such date (30 days in the event of a Change in Control) issue and deliver to Participant one Share in settlement of that Performance Stock Unit and such Shares so earned and issued shall be subject to the Restrictions during the Restricted Period (as described herein) and upon issuance shall be referred to herein as the "Restricted Shares"; provided that notwithstanding the later delivery to Participant of Restricted Shares, Participant shall be deemed to be the record owner of such Restricted Shares on the Maturity Date. Certificates evidencing Restricted Shares shall be deposited with the Company to be held in escrow until such Shares are released to Participant or forfeited in accordance with this Agreement. If any Restricted Shares are forfeited, the Company shall direct the transfer agent of the Shares to make the appropriate entries in its records showing the cancellation of the certificate or certificates for such Restricted Shares and the Shares represented thereby shall have the status as authorized but unissued Shares.

4. **Restricted Shares.** During the period from the Maturity Date and prior to the lapse of the restrictions as set forth in Sections 5(b) and 6 (the "Restricted Period") and subject to earlier termination of the Restricted Period or forfeiture of the Restricted Shares, the Restricted Shares, and all rights with respect to the Restricted Shares, may not be sold, assigned, transferred, exchanged, pledged, hypothecated or otherwise encumbered or disposed of and shall be subject to the risk of forfeiture contained in Section 5 of this Agreement (such limitations on transferability and risk of forfeiture being herein referred to as "Restrictions"), but Participant shall have all other rights of a Company shareholder with respect to the Restricted Shares, including, but not limited to, the right to vote and receive dividends on the Restricted Shares.

5. **Forfeiture of Restricted Shares.**

(a) **Termination of Employment.** If Participant's employment with the Company and/or a subsidiary of the Company terminates for any reason, including, but not limited to death, Disability or Retirement, all Shares that at that time are Restricted Shares shall be forfeited to the Company without payment of any consideration therefor as of the date of such termination unless the Committee determines that the Restrictions shall lapse on all or any part of the Restricted Shares as of the date of such termination.

(b) **Change in Control.** Notwithstanding any other provision of this Agreement, if there is a Change in Control of the Company during the Restricted Period, the Restricted Shares will fully (100%) vest and the Restrictions shall lapse on the Restricted Shares to the extent such Restrictions have not already lapsed pursuant to Section 6 such that the Restricted Shares will no longer be subject to the restrictions of, and risk of forfeiture under, this Agreement.

6. **Lapse of Restrictions.** Except as provided in Section 5, the Restrictions on any Restricted Shares granted under this Agreement shall lapse as to such Restricted Shares on the 364th day from the Maturity Date relating to such Restricted Shares. Upon lapse of the Restrictions in accordance with this Section, the Company shall, as soon as practicable thereafter, deliver to Participant a certificate for the Shares with respect to which such Restrictions have lapsed or direct the transfer agent for the Shares to credit Participant's book entry account with such number of Shares.

7. **No Rights As Shareholder in Performance Stock Units.** Until Restricted Shares are issued in settlement of the Performance Stock Units on the Maturity Date, Participant will not be deemed for any purpose to be, or have rights as, a Company shareholder or receive dividends with respect to Shares issuable with respect to the Performance Stock Units, except as provided below. Participant is not entitled to vote any Shares by virtue of the award of Performance Stock Units until the Restricted Shares are issued in settlement of the Performance Stock Units.

8. **Dividend Equivalents.** During the period from the Grant Date to the Maturity Date, the Company shall accumulate a cash amount equal to dividends in cash or property paid from time to time on issued and outstanding Shares in an amount that is equivalent to the dividends which Participant would have received had Participant been the owner of the number of Shares equal to the number of Performance Stock Units granted hereunder. The cash shall accumulate as a book entry on the books of the Company and shall accrue interest until the Maturity Date computed using the one-year Treasury Bill rate as of January 1 of the calendar year for which interest is credited. A cash amount plus interest (collectively, "Dividends") shall be paid to Participant on the Maturity Date in respect of the number of Performance Stock Units vested on the Maturity Date. The payment of Dividends and interest hereunder shall be treated as additional compensation to Participant.

9. **No Transferability.** Neither the Performance Stock Units, nor the Restricted Shares nor any interest or right therein or part thereof shall be subject to disposition by transfer, alienation, anticipation, pledge, hypothecation, encumbrance, assignment or any other means, whether such disposition be voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect.

10. **Administration and Compliance with Section 409A of the Code.** This Agreement is intended to comply with Section 409A of the Code or be exempt from Section 409A of the Code and shall be construed and interpreted in accordance with such intent. Any provision of this Agreement that would fail to satisfy Section 409A of the Code shall be amended to comply with Section 409A of the Code on a timely basis, which may be made on a retroactive basis, in accordance with regulations and other guidance issued under Section 409A of the Code. This Agreement may be terminated by mutual agreement between Participant and the Company prior to the date all amounts have been distributed to Participant only if the termination complies with Section 409A of the Code.

11. **Successors and Heirs.** This Agreement shall be binding upon and inure to the benefit of the Company and its successors and assigns, and upon any person acquiring, whether by merger, consolidation, purchase of assets or otherwise, all or substantially all of the Company's assets and business. In the event of Participant's death, any Shares to which Participant may become entitled pursuant to this Agreement or the Plan will be delivered to his or her heirs or personal representative in accordance with the terms of the Plan.

12. **Governing Law.** This Agreement and any matter relating to the Performance Stock Units will be construed, administered and governed in all respects under and by the applicable laws of the State of Minnesota, excluding any conflicts or choice of law rule or principle that might otherwise refer construction or interpretation of this Agreement, the Plan, the award of Performance Stock Units, the issuance of Restricted Shares or the Shares to the substantive law of another jurisdiction.

13. **Tax Withholding.** The Company shall have the power and the right to deduct or withhold, or require Participant to remit to the Company, as a condition precedent for the delivery by the Company of the Shares in settlement of the Performance Stock Units or upon lapse of Restrictions on the Restricted Shares, an amount sufficient to satisfy federal, state and local taxes, domestic or foreign, required by law or regulation to be withheld with respect to any taxable event arising as a result of the grant, vesting or settlement of the Performance Stock Units or the grant, vesting or lapse of Restrictions on the Restricted Shares. Such tax withholding amount may be satisfied by Participant if a U.S. employee in cash or in Shares, either by delivery of Shares already owned by Participant or by authorizing the Company to retain the number of Shares from the Restricted Shares or the Shares issuable to Participant as the Company determines to be sufficient to satisfy such tax withholding obligation. Notwithstanding the foregoing, in no event shall payment of withholding taxes be made by retention of Shares by the Company unless the Company retains only Shares with a Fair Market Value equal to the minimum amount of taxes required to be withheld. The Company may also deduct from any award under the Plan payment of any other amounts due by Participant to the Company.

14. **Plan Controls.** Notwithstanding anything in this Agreement to the contrary, the terms of this Agreement shall be subject to the terms of the Plan. In accordance with the Plan, all decisions of the Committee shall be final and binding upon Participant and the Company.

IN WITNESS WHEREOF, the Company and Participant have each executed and delivered this Agreement as of the Grant Date.

QUMU CORPORATION

By: \_\_\_\_\_

Its: \_\_\_\_\_

PARTICIPANT:

\_\_\_\_\_  
[NAME OF PARTICIPANT]

EXHIBIT A

Performance Goals

The Company's revenue and renewal retention percentage for Performance Period 1 and the Company's free cash flow from operations for Performance Period 2 shall equal or exceed the following respective thresholds:

Performance Goals	Performance Period 1	Performance Period 2
Revenue		
Renewal Retention Percentage		
Free Cash Flow From Operations		

The Performance Goals shall be weighted equally within Performance Period 1. Revenue shall be determined in accordance with U.S. generally accepted accounting principles consistently applied. Renewal retention percentage and free cash flow from operations shall be determined by the Committee. In each case, such determinations are subject to such adjustments as the Committee shall determine in its sole discretion.

## SUBSIDIARIES OF QUMU CORPORATION AS OF DECEMBER 31, 2017

Name	Jurisdiction of Incorporation	Percent Owned
Qumu, Inc.	California	100.0%
Qumu UK Holdings, Ltd.	United Kingdom	100.0%
Qumu UK Limited	United Kingdom	100.0% <sup>(1)</sup>
Qumu Middle East FZ-LLC	Dubai	100.0% <sup>(1)</sup>
Qumu Ltd.	United Kingdom	100.0%
Qumu Japan Co., Ltd.	Japan	100.0%
Qumu (Singapore) Pte. Ltd	Singapore	100.0%

<sup>(1)</sup> 100% owned by Qumu UK Holdings, Ltd.

**Consent of Independent Registered Public Accounting Firm**

The Board of Directors and Stockholders  
Qumu Corporation:

We consent to the incorporation by reference in the registration statement (No. 333-215549, 333-206270, 333-197520, 333-161262, 333-147344, 333-34788, 333-53875, 333-69550, 333-106901, 333-127244, 333-176145, 333-177836, and 333-187616) on Form S-8 and 333-215551 and 333-213070 on Form S-3 of Qumu Corporation and subsidiaries of our report dated March 23, 2018, with respect to the consolidated balance sheets of Qumu Corporation as of December 31, 2017 and 2016, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2017, and the related notes (collectively, the consolidated financial statements), which report appears in the December 31, 2017 annual report on Form 10-K of Qumu Corporation.

/s/ KPMG LLP

Minneapolis, Minnesota  
March 23, 2018

**CERTIFICATION**

I, Vernon J. Hanzlik, certify that:

1. I have reviewed this Form 10-K of Qumu Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) 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;
  - (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(s) 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.

Dated: March 23, 2018

/s/ Vernon J. Hanzlik  
\_\_\_\_\_  
Chief Executive Officer

**CERTIFICATION**

I, David G. Ristow, certify that:

1. I have reviewed this Form 10-K of Qumu Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) 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;
  - (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(s) 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.

Dated: March 23, 2018

/s/ David G. Ristow

\_\_\_\_\_  
Chief Financial Officer

**CERTIFICATIONS**

The undersigned certify pursuant to 18 U.S.C. Section 1350, that:

- (1) The accompanying Qumu Corporation Annual Report on Form 10-K for the year ended December 31, 2017, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the accompanying report fairly presents, in all material respects, the financial condition and results of operations of the Company.

March 23, 2018

/s/ Vernon J. Hanzlik

Chief Executive Officer

/s/ David G. Ristow

Chief Financial Officer