
FORM 10-K

U.S. SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934
FOR THE FISCAL YEAR ENDED **December 31, 2020**

OR

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

QUMU

QUMU CORPORATION

(Exact name of registrant as specified in its charter)

Minnesota

(State or other jurisdiction of
incorporation or organization)

400 S 4th St, Suite 401-412

Minneapolis, Minnesota

(Address of principal executive offices)

41-1577970

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

55415

(Zip Code)

(612) 638-9100

(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, \$0.01 par value	QUMU	The Nasdaq Stock Market LLC

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 every Interactive Data File required to be submitted 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 such files). **Yes** **No**

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 \$41,459,000.

As of March 5, 2021, the registrant had 17,579,929 outstanding shares of common stock.

DOCUMENTS INCORPORATED BY REFERENCE

Part III: Proxy Statement for the 2021 Annual Meeting of Shareholders to be filed not later than 120 days after the end of the fiscal year covered by this Form 10-K.

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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, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). 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", "Company" or "we") provides the tools to create, manage, secure, distribute and measure the success of live and on-demand video for enterprises. 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. Qumu's customers, which include some of the world's largest organizations, leverage the Qumu platform for a variety of cloud, on-premise and hybrid deployments. Use cases include self-service webcasting, sales enablement, internal communications, product training, regulatory compliance and customer engagement. The Company and its channel partners market Qumu's products to customers primarily in North America, Europe and Asia.

The Company generates revenue through the sale of enterprise video content management software, 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 a single year agreement for thousands of dollars to a multi-year agreement for over a million dollars.

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

	Year Ended December 31,			Increase (Decrease)		Percent Increase (Decrease)	
	2020	2019	2018	2019 to 2020	2018 to 2019	2019 to 2020	2018 to 2019
Software licenses and appliances	\$ 6,762	\$ 4,903	\$ 5,814	\$ 1,859	\$ (911)	38 %	(16)%
Service	22,310	20,459	19,199	1,851	1,260	9 %	7 %
Total revenues	\$ 29,072	\$ 25,362	\$ 25,013	\$ 3,710	\$ 349	15 %	1 %

In the third quarter we began the initial implementation phase of our long-term strategic roadmap, which is designed to position Qumu as a focused, cloud-first organization driving improved, high-margin recurring revenue. As part of these initiatives, in the third and fourth quarter of 2020, we have:

- Expanded our leadership team with the hiring of TJ Kennedy, our President and Chief Executive Officer and Jason Karp, our Chief Commercial Officer/Chief Counsel;

- Aligned our personnel to our new focus and created new roles consistent with that focus, including hiring a Chief Marketing Officer, Chief Revenue Officer and Vice President of Strategy
- Launched a new Qumu app for Zoom, enabling self-service streaming of Zoom events to audiences of 100,000+ while adding comprehensive video content management and enterprise-grade security
- Released the Qumu Cloud Build and Price Tool, which allows users to customize their own annual cloud video subscription based on parameters such as storage and bandwidth needs, user counts, live streams, distribution preferences and so on
- Launched Qumu Cloud for Audio Streaming, a large-scale audio streaming service that provides enterprises with secure, high-quality audio-only call delivery and management at a significantly lower cost than standard audio-conferencing services
- Introduced Qumu Video Control Center (VCC) version 10.5, the customer-hosted deployment of Qumu's intelligent Enterprise Video platform, adding key features such as the Qumu Analytics Engine (QAE), which provides comprehensive, real-time and historical usage reporting of both live and on demand video content.

Enterprise Video Content Management and Delivery Software

To increase communication, engagement and collaboration between employees and stakeholders, organizations are accelerating technology investments to improve the engagement and connectivity of remote work forces, offices, conference rooms, computers and portable devices. As part of this shift in technology investment, enterprises are quickly embracing video as the primary communication and collaboration medium.

Qumu is a leading provider of best-in-class tools to create, manage, secure, distribute and measure the success of live and on-demand video for the enterprise. As a trusted adviser to clients and partners, Qumu is an innovation leader when scalability, reliability and security are critical. Backed by one of the most talented and experienced teams in the industry, 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. We integrate with and extend the reach of video conferencing solutions such as Zoom, WebEx and Microsoft Teams, supporting the distribution of video via collaboration tools such as Slack and Social Chorus.

Many of the world's largest organizations leverage the Qumu platform for a variety of cloud, on-premise or hybrid deployments. These uses include executive webcasting, corporate communications, training and onboarding, employee collaboration, external sales, marketing communications, collaborative captioning and subtitling and centrally managing content for iPTV and digital signage solutions.

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

The Qumu Enterprise Video Platform

Qumu offers an end-to-end video creation, management and delivery solution for enterprises. The Qumu platform offers a scalable and extensible platform that organizations can use to improve stakeholders' engagement both internally and externally.

Qumu's implementations can range in size from thousands to millions of dollars. The Qumu platform integrates with customers' existing video services (e.g., videoconferencing systems), SaaS business applications (e.g., Zoom, Cisco WebEx, Microsoft Teams and Socialive) and broader IT infrastructures using Qumu's extensive application services or "APIs." Deployments range from a single customer location to global infrastructures serving over one hundred thousand corporate employees. Qumu's 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.

The Qumu platform 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 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 popular unified communications solutions such as Zoom, Cisco WebEx, Microsoft Teams and Socialive, to hardware-intensive conference room systems, such as Zoom Rooms, Polycom and Cisco.

Qumu brings streaming and video content management to these video communications tools, raising the capabilities that they can bring to the enterprise. As video conferencing becomes a common 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 live and on-demand corporate 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 the platform's notable functionality includes:

Creation & Editing

The Qumu platform 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

The Qumu platform 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

Qumu provides a diverse, flexible and robust series of solutions for enterprise delivery of live streaming or on-demand video. At the core of the Qumu platform 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.

Qumu'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

The Qumu platform is designed to be customizable, enhancing the customer's enterprise communication and collaboration solution. With its service-based extensible architecture, Qumu's technology can be built upon by third-party developers. Current integrations and extensions from Qumu and its partners include Zoom, Cisco WebEx, Socialive, CaptionHub, Microsoft Office 365, Teams, SharePoint, Yammer, IPTV, Jive, IBM Connections, Polycom, Hive, Pexip and Citrix.

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. The Qumu platform offers robust REST APIs for both user and administrative functions, allowing customers to develop integrations of their own on top of the Qumu platform. At the present time Qumu has available extensions and add-ons for live captioning, speech search, advanced analytics, content syndication, WebRTC and several other functions.

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, with 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 targets enterprises with 5,000+ employees. Across all deployment types (cloud, on-premise and hybrid) and in all five markets, Qumu's customers include many of 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. Qumu has been identified as a leader by multiple industry analysts, some examples of which include:

- Gartner named Qumu a leader in the most recent Magic Quadrant for Enterprise Video Content Management.
- Aragon Research named Qumu a leader in the most recent Globe Report for Enterprise Video Content Management 2021, as well as a new contender in the most recent Globe Report for Web and Video Conferencing.
- Wainhouse Research has positioned Qumu as a leader in the Enterprise Streaming Market on multiple occasions.
- Streaming Media Magazine recognized Qumu as one of the 50 companies that matter most in online video.
- CIO Applications recognized Qumu for reliable, unifying, easy-to-use communication tools that facilitate flexible work environments for distributed and remote employees.

As indicated by these honors, we believe Qumu is among the leading enterprise video platform vendors in the space.

Qumu sells products and services internationally through its U.S. operation and its subsidiaries in the United Kingdom and Japan. International sales comprised approximately 31%, 35% and 33% of revenues for the years ended December 31, 2020, 2019 and 2018, respectively. During the year ended December 31, 2020, the Company had one customer that accounted for more than 10% of its revenues; no single customer accounted for more than 10% of the Company's revenues for the years ended December 31, 2019 and 2018.

Competition

Major competitors of Qumu include Kaltura, Brightcove, MediaPlatform, Vbrick and Panopto. Qumu competes with these other companies based primarily upon its full-stack, end-to-end solution for a complete video infrastructure that includes support for mobile devices and leverages existing IT infrastructure. Qumu also encounters organizations utilizing Zoom, Cisco's WebEx and Microsoft's Teams technologies for video. While some view Zoom, WebEx and Teams as competitors to Qumu and some customers view their products as a complete alternative to Qumu's technology, their focus is individual and workgroup video conferencing. We believe that the Zoom, WebEx and Teams and Qumu technologies can be seamlessly integrated and provide the customer with greater scale, security and flexibility and improved manageability than use of those technologies alone. 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.

Qumu also differentiates itself from competitors through its agnostic video delivery technology, as well as its flexible deployment models—on-premise, cloud and hybrid—which Qumu customers can choose from and customize based on their own unique organizational needs for video.

Research and Development

Qumu develops its software internally and licenses or purchases software from third parties. Research and development expense was \$8.3 million, \$7.4 million and \$7.0 million for the years ended December 31, 2020, 2019 and 2018, respectively.

As of December 31, 2020, the Company employed 36 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 four U.S. patents. 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 the software using those programs. Contractual obligations with respect to such licenses will require cash payments of \$50,000 in 2021.

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," "Enterprise Video as a Service (EVaaS)", "VideoNet Edge," "Pathfinder" and "How Business Does Video." 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.

Regulation of Our Product

Qumu is subject to several U.S. federal and state and international laws and regulations relating to the operation of our business. These laws and regulations may involve privacy, data protection, data security, intellectual property, competition, anticorruption protection, export controls, online payment services, labor and employment and other matters relating to general business operations. Many laws and regulations to which the Company is subject are still evolving, particularly in the privacy and data protection area, and are being tested in practice and in domestic and international judicial tribunals. In addition, such laws and regulations may be interpreted and applied inconsistently country to country or in the U.S. state to state. As a result, the application, interpretation and enforcement of these laws and regulations creates some uncertainty, particularly relating to our rapidly evolving industry and given the new challenges relating to remote work in light of the Covid-19 pandemic. Given the untested application, ongoing evolution and interpretation of these regulations, we may incur increased compliance costs, we may incur increased research and development costs to enhance our products and services, and/or our products and services may not at all times be in full compliance with such applicable laws and regulations.

For example, the General Data Protection Regulation ("GDPR"), which took effect in May 2018, the United Kingdom's transposition of GDPR into its domestic laws post Brexit in January 2021, and the California Consumer Privacy Act ("CCPA"), which took effect in January 2020, apply to all of our products and services used by people in Europe, the United Kingdom and California, respectively. These laws impose enhanced data protection requirements on companies, including Qumu, that receive or process the personal data of people in the relevant geographies. The Company may be subject to substantial monetary sanctions for violations of these laws and regulations. Similarly, there are a number of legislative proposals in the European Union, the United States, at both the federal and state level, as well as other jurisdictions that could impose new privacy and data security obligations or limitations affective our business and our products.

These and other laws create an increasingly complex framework and set of compliance obligations which may impact Qumu it's customers. Our failure to comply with applicable privacy or data security laws, regulations, and policies, or to protect personal data, or perception of the same, could result in possible enforcement and legal actions and significant penalties against the Company, which could result in negative publicity, increased costs, lost revenue, and/or have a material adverse effect on Qumu's business, financial condition and results of operations. The Company is also aware of increased scrutiny on Qumu's customer base in regulated industries such as banking, insurance and healthcare concerning data protection and privacy and this

has led to more complex customer negotiations and onboarding processes as we are required to provide these organizations with sufficient comfort in our compliance and security procedures. Privacy and data security concerns are also factors that may affect a potential customer's decision to subscribe to our products and services. To the extent we are unable to meet with our customers' data protection and security contract requirements, we may lose the customer opportunity or, in the case of an existing customer, we could face claims by, loss of revenue from, loss of confidence, or other adverse consequences from our customers.

For more information, see "Item 1A. Risk Factors Risk Factors – Risks Related to Our Business and Industry".

Human Capital

Qumu's single most important and valuable resource is its people. Ensuring a happy, engaged and productive workforce is paramount to the Company's success and Qumu is committed to creating a culture of engagement, integrity, diversity, professional development, transparency, and accountability. Qumu offers a variety of programs and benefits to create a compelling value proposition for attracting and retaining qualified employees. In 2020, Qumu introduced its "Work from Wherever, Forever" policy. This allows Qumu attract and retain top notch talent without geographic limitations.

Diversity and Inclusion: Talent unbridled by geographic limitations also creates the opportunity for greater diversity. Qumu is dedicated to increasing diversity of its workforce and working with partners who emphasize the importance and benefits of a diverse workforce. In 2020, Qumu established a new Diversity, Equity and Inclusion ("DE&I") Committee comprised of employees from all functions and levels of the company. The Committee is charged with recommending and helping implement Qumu's DE&I vision to ensure Qumu is leveraging a diverse set of viewpoints, perspectives and skills sets to make Qumu a stronger and more inclusive enterprise. Beginning in February 2021, the Governance Committee of the Company's Board of Directors (the "Board") is responsible for oversight of Qumu's Environmental, Social and Governance (ESG) programs, including DE&I initiatives. We believe this Governance Committee level of oversight demonstrates Qumu's commitment to achieving diversity and inclusiveness.

Development and Training: Qumu employs a 360 degree review and communications tool which helps us streamline our personnel review process and emphasize the importance of candid and timely feedback for everyone in the organization. Through this tool, we have implemented:

- 360 degree reviews
- Real-time feedback and engagement
- 1:1 check-ins with customizable templates and shared meeting agendas
- Goal setting at organizational, departmental, & individual level
- Employee engagement tools, including in-depth surveys and quick pulse surveys, and
- Growth plan development

All employees are strongly encouraged to use this tool as part of the Company's commitment to transparency, growth and development.

In addition, Qumu believes in regular and ongoing compliance and development training and is committed to offering opportunities for training development and ensuring compliance with applicable rules and regulations.

Health and Wellness: With the increase in remote work, in particular due to the Covid-19 pandemic, in person interactions have decreased and the Company expects even after the pandemic is under control, its work force will have reduced levels of in-person interactions compared to pre-pandemic levels. As such, Qumu has adjusted its approach to interacting with employees and has focused on new health and wellness initiatives to ensure employees remain healthy and productive as they conduct their work. Some of these measures include communicating appropriate social distancing and mask wearing guidelines consistent with state and CDC guidance; leveraging multimedia communications, including video, to conduct most daily business operations, and weekly tips and guidance on maintaining both physical and mental health. In addition, to help employees remain productive and enable more focused work, Qumu has implemented the "Focus Fridays" program where all non-necessary video and conference calls have been eliminated, freeing up time to enable Qumu personnel to focus on productive, priority work on Fridays without unnecessary distractions.

In addition, in 2020, Qumu closed its three major physical office locations and instituted a "Work from Wherever, Forever" policy. Our employees are able to work from just about anywhere, which affords them a greater work - life balance. Commutes have all but been eliminated and business travel, due in part to the COVID-19 pandemic, has been significantly reduced. The Company anticipates reduced travel will continue throughout 2021 and will closely monitor CDC guidelines for travel guidance.

Culture and Values: The successful business operation and reputation of Qumu is built upon the principles of fair dealing and ethical conduct of its employees. We believe Qumu's reputation for integrity and excellence requires careful observance of the spirit and letter of all applicable laws and regulations, as well as a scrupulous regard for the highest standards of conduct and personal integrity. We believe Qumu promotes a culture in which its values are clearly visible to all and its actions are uncompromised. We believe it is essential for each of our directors, officers, employees and other representatives to act at all times with honesty and propriety, to exercise good judgment and to conduct business in a manner that such action can be supported without reservation or apology.

Qumu maintains a code of business ethics applicable to all directors, officers, employees and other representatives of Qumu. The Company's third-party partners, vendors and suppliers are informed of these code requirements and we endeavor to incorporate key elements of such requirements into our contracting process. In addition, Qumu maintains a set of key core values that reflect who we are and the way our employees interact with one another, our customers, partners, suppliers, and shareholders. These core values include:

- *Innovation* – We continually seek to transform our products and service, by anticipating future market and customer needs
- *Collaboration* – We use the latest tools and technologies with the philosophy to connect employees, teams, and customers across the globe to operate seamlessly
- *Transparency* – We foster visibility into our departments, processes, key decisions, philosophies and company approaches and welcome questions and feedback
- *Accountability* – We take ownership of our actions, roles and results and accept responsibility, as well as seek to continually improve
- *Mindfulness* – We make sure every decision, no matter the size, is in the best interest of the company, our customers, our shareholders, and our partners, ensuring we take care of our people along the way

The continued success of Qumu is dependent upon our customers' trust and we are dedicated to preserving that trust. Qumu's expectation is that employees will use good judgment and respond to each situation in an ethical and legal manner consistent with these core principles.

Competitive Pay and Benefits: Qumu is committed to providing a total compensation package that will attract, retain, motivate and reward quality employees who must operate in a highly competitive, high growth, tech/SaaS environment. We do this by making available multiple compensation elements aligned with overall company performance, including both cash and equity components depending on employee level and role. The emphasis on overall company performance aligns each employee's financial interests with Company results and the interests of our shareholders. Qumu also regularly seeks to ensure equity in total compensation by using both internal and external comparisons and data to ensure both internal and external competitiveness and fairness.

Qumu's commitment to providing comprehensive benefit options include periodic reviews of benefits with a focus on offering benefits that will allow our employees and their families to live healthier and more secure lives. Examples of benefits offered include: Qumu's "Work from Wherever, Forever" policy, medical insurance, prescription drug benefits, dental insurance, vision insurance, life insurance, disability insurance, health savings accounts, flexible spending accounts, adoption reimbursement, unlimited PTO for exempt employees, availability of legal services, identity theft insurance, 401(k) with company match, "work from home" equipment supplied along with a monthly stipend.

Employee Recruitment: Attracting the best talent is a core priority at Qumu. The Company leverages a diverse range of sources in order to meet the current and future demands of our business. We use various online recruiting platforms, social media platforms and specialized recruiters as appropriate, as well as internal employee networks and referrals, which is one of our most prolific recruiting assets. Qumu has implemented a robust internal recruiting and employee referral program where employees receive substantial financial rewards for referrals that are hired and remain with the company for at least one year.

We believe Qumu is in the midst of a unique and positive transformation – providing a compelling employee value proposition that includes exciting work and professional development opportunities, a culture of transparency, communication and collaboration, a shared understanding of our company goals and direction, and a shared sense of purpose and ownership in the company and its success. In addition, through our "Work from Wherever, Forever" policy, Qumu is able to offer new work opportunities to individuals who, based on location alone, may not have otherwise been eligible for such positions in the past, greatly expanding the pool of great talent available to Qumu and making the opportunities at Qumu more broadly available to a global audience.

As of December 31, 2020, the Company had 102 employees, all of which were full-time employees and of which 36 were involved in research and development, 28 in sales and marketing, 21 in service and support and 17 in administration and

management. Of the 102 employees, 55 reside in North America, 31 reside in Europe and 16 reside in India. Of this headcount, 19 were comprised of women and 23 were considered diverse from an ethnicity perspective based on country.

Qumu defines diversity as a self-reported characteristic which is non-White or White plus another race/ethnicity based on the population make-up of the country. Our diversity numbers as of December 31, 2020 reflect 19% women and 23% reflected ethnic/racial diversity. Also, our employees located in India are all considered Indian nationals and therefore do not meet the definition of diverse in India and therefore are not included in the noted percentage.

None of Qumu's employees are represented by a labor union or covered by a collective bargaining agreement.

In the third quarter of 2020, we began the initial implementation phase of our long-term strategic roadmap, and as part of these initiatives, we intend to significantly expand our employee base. In 2021, we are targeting to add employees in research and development, sales and marketing, service and support and administration and management. Pending some of these hires, we may use outside consultants to expand our human capital resources.

Available Information

The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers, like Qumu, that file electronically with the SEC. The SEC's website is www.sec.gov.

Qumu also maintains a website at www.qumu.com. Qumu's 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 Exchange Act are available on Qumu's website as soon as reasonably practicable after these documents are filed electronically with the SEC. To obtain copies of these reports, go to www.qumu.com and click on "About," then click on "Investor Relations," then "SEC Filings" to view all of Qumu's current EDGAR reports.

ITEM 1A. RISK FACTORS

If any of the following risks actually occur, our business, results of operations and financial condition 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 future revenue, product mix, cash flow and cash balances, 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.

Risks Related to Our Business and Our Industry

We may not be successful at implementing our long-term strategic roadmap.

In July 2020, we began the process of developing our long-term strategic roadmap and late in the third quarter of 2020, we began the initial implementation phase of our long-term strategic roadmap. This strategy is aimed at transforming Qumu as a more focused, cloud-first organization driving improved, high-margin recurring revenues.

We cannot ensure that our long-term strategic roadmap will be successful either in the short-term or in the long-term, or that this strategy will generate the intended operational or financial results within the timeframes expected or at all. Further, if customer preferences and the use of video in the enterprise do not evolve as we believe they will, many of our strategic initiatives and investments may be of limited value.

Moreover, we may not execute our long-term strategic roadmap successfully because of errors in planning or timing, technical hurdles that we fail to overcome in a timely fashion, or lack of appropriate resources. Our failure to successfully execute on the initiatives within our long-term strategic roadmap, even if the strategy is sound, could result in loss of market share and sales. Additionally, if we do not effectively communicate our long-term strategic roadmap to our investors and stakeholders, we may not realize the full benefits that we would otherwise gain through successful execution of that strategy.

We have and intend to continue to implement our long-term strategic roadmap by investing in our cloud platform, in our go-to-market initiatives, targeted channel strategies, the development of new applications, products and features, and other initiatives that we have identified or that have yet to be developed. The process of identifying the specific initiatives to align with our long-term strategic roadmap and the process of implementing these initiatives is complex and uncertain. Additionally, we must

commit significant resources to these initiatives before knowing whether our investments will result in the operational or financial results we expect or intend. The return on our investments in initiatives may be lower, or may develop more slowly, than we expect. For example, as Qumu continues to expand its SaaS salesforce, our operating expenses will increase in the first half of 2021 as compared to the first half of 2020 and we expect our revenue growth rate to accelerate in the second half of 2021 as compared to the first half of 2021. If we are not able to hire, train or integrate our SaaS sales force in the timeframes we expect or if they do not become productive in the timeframes we expect, our revenue growth may not accelerate as we expect. If we do not achieve the benefits anticipated from these investments or if the achievement of these benefits is delayed, our operating results may be adversely affected. There can be no assurance that we will develop and implement initiatives will advance the goals of our long-term strategic roadmap in a cost-effective or timely manner or at all.

The COVID-19 pandemic has significantly impacted worldwide business practices and economic conditions and could have a material effect on Qumu's business, financial condition and operating results.

As a result of the COVID-19 pandemic, governmental authorities have implemented and are continuing to implement numerous and constantly evolving measures to try to contain the virus, such as vaccine distribution, travel bans and restrictions, limits on gatherings, quarantines, shelter-in-place orders, and business shutdowns.

In response to these developments, we have modified our business practices by restricting employee travel, moving to remote work, cancelling in-person attendance at events and conferences, and implementing social distancing. The resources available to our employees working remotely may not enable them to maintain the same level of productivity and efficiency, particularly our sales employees whose in-person access to our customers and customer prospects has been significantly limited. While we have experienced only limited absenteeism from employees, absenteeism may increase in the future and may harm our productivity. Due to customer demand, Qumu has and may in the future rely upon outsourced professional services, which could negatively impact margins.

The COVID-19 pandemic also has changed worldwide business practices as companies have implemented COVID-19 travel restrictions, work-from-home requirements and social distancing protocols. As part of these changes, enterprises of all sizes are implementing technology plans to virtualize customer meetings, employee communications and major events – as well as record and store video assets for on-demand viewing.

Qumu believes that the COVID-19 crisis will act as a tipping point for the use and acceptance of video as a primary communication channel within the enterprise. As video content and software to manage video content achieve high levels of acceptance within the enterprise, we believe this will drive demand and market adoption for Qumu's video platform and tools. Widespread adoption and use of video in the enterprise is critical to Qumu's future growth and success. However, there is no assurance that the COVID-19 crisis will result in substantial and sustained increased in use and acceptance of video as a primary communication channel or that this increased in use and acceptance of video will result in an increased demand among customers for Qumu's video platform and tools.

Restrictions on the manufacturing, operations or workforce of our vendors and suppliers could limit our ability to meet customer demand for hardware purchased as a component of the overall Qumu solution, which would harm our ability to meet our delivery and installation obligations to customers and result in delayed or lost revenue and cash flow from collections. Furthermore, restrictions or disruptions of transportation, such as reduced availability of air transport, port closures and increased border controls or closures, may result in higher costs and delays for supply of hardware, which could reduce our margins on hardware.

The current spread of COVID-19 across many countries has caused a significant global recession with a high proportion of economies of many nations experiencing the recession. Unfavorable changes in economic conditions, including recession, inflation, lack of access to capital, or other changes, have in the past resulted in and may in the future result in lower corporate spending among our customers and target customer. At this time, it is uncertain whether the COVID-19 driven recession would result in lower spending by our customers and target customers on video technologies or soften the 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.

The degree to which COVID-19 impacts our results will depend on future developments, which are highly uncertain and cannot be predicted, including, but not limited to, the duration and geographic spread of the outbreak, its severity, the actions to contain the virus and address its impact, travel restrictions imposed, business closures or business disruption, and the actions taken throughout the world, to contain COVID-19 or treat its impact.

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 Qumu expects, including as a result of COVID-19 impacts, Qumu's 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 the use of video will achieve high levels of long-term acceptance. Widespread adoption and use of video in the enterprise is critical to Qumu's future growth and success. Likewise, it is uncertain whether video content management software will achieve high levels of demand and market adoption. Qumu's 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. Qumu believes that the COVID-19 crisis will act as a tipping point for the use and acceptance of video as a primary communication channel within the enterprise. As video content and software to manage video content achieve high levels of acceptance within the enterprise, we believe this will drive demand and market adoption for Qumu's video platform and tools. In particular, we have noted a trend toward new customers choosing Qumu's cloud-based enterprise video solution or existing customers converting to a cloud-based solution.

Despite the changes in business practices caused by the COVID-19 pandemic, 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 Qumu's 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 Qumu's video content management software or force Qumu to reduce the prices Qumu charges for its 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 Qumu's video content management software.

If customers do not perceive the benefits of Qumu's 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 Qumu's software might not continue to develop or might develop more slowly than Qumu expects, either of which would significantly adversely affect Qumu's financial results and prospects.

Further, there is no assurance that the COVID-19 crisis will result in substantial and sustained increased in use and acceptance of video as a primary communication channel or that this increased in use and acceptance of video will result in an increased demand among customers for Qumu's video platform and tools, either of which would significantly adversely affect Qumu's financial results and prospects.

If we are unable to attract new customers, retain existing customers and sell additional products and services to our existing and new customers, our revenue growth and profitability will be adversely affected.

To increase our revenues and achieve profitability, we must regularly add new customers, retain our existing customers, ensure high rates of renewals among our existing customers, sell additional products and services to new and existing customers, or convert existing customers to our latest SaaS solution.

We intend to grow our business by developing and improving our product offerings, ensuring high levels of customer satisfaction, competing effectively with products and services offered by others, retaining and attracting talent, developing relationships with channel partners and increasing our marketing activities.

If we fail to add new customers or lose existing customers, or if our existing customers do not renew their subscriptions at the same levels or do not increase their purchases of products and services, we will not grow our revenue as expected and our operating results will suffer.

We have a history of losses, and while we are investing heavily in sales, marketing and research and development to enhance revenue growth and become cash flow positive in late 2022, we may not achieve those goals or achieve or sustain cash flows or profitability in the future.

We experienced consolidated net losses of \$9.2 million, \$6.4 million and \$3.6 million for the years ended December 31, 2020, 2019 and 2018, respectively. While we generated positive cash flows from operations during 2020, we have historically not generated sufficient operating cash flow to fund our operations. In executing our long-term strategic roadmap, our strategy of driving improved, high-margin recurring revenues requires us to expand our SaaS sales force, hire additional personnel, and implement new software programs and systems. Accordingly, we expect our operating expenses will increase significantly in the first half of 2021 as compared to the first half of 2020, and we expect our revenue growth rate to accelerate in the second half of 2021 as compared to the first half of 2021. However, even if revenues grow as expected in 2021, we may not achieve cash flow positivity in 2022.

In order 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). In 2021, Qumu expects cash flows from operating activities to be significantly affected by expenditures associated with the execution of our strategic roadmap, as well as those factors that have historically impacted operating cash flows – fluctuations in revenues, timing of customer payments, personnel costs, outside service providers, and the amount and timing of royalty payments and equipment purchases as Qumu continues to support the growth of its business.

We cannot assure you that we will achieve our goal to improve cash flow in the second half of 2021 compared to the first half of 2021 nor that we will achieve cash flow positivity in 2022. 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.

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 adoption of our enterprise video content management software products by 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, Brightcove, MediaPlatform, Vbrick and Panopto who deliver video solutions to businesses. Qumu also encounters organizations utilizing Zoom, Cisco's WebEx and Microsoft's Teams technologies for video. While some view Zoom, WebEx and Teams as competitors to Qumu and some customers view their products as a complete alternative to Qumu's technology, we believe that the Zoom, WebEx and Teams and Qumu technologies can be seamlessly integrated and provide the customer with greater scale, security and flexibility and improved manageability than use of those technologies alone. 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 operating within an evolving marketplace, 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.

Economic and market 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 grow and optimize our sales infrastructure in order to grow our customer base and our revenues. 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 and customer success models that focus on different sales strategies

tailored to different customer types and stages of our customers lifecycles. 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 may not 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.

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;
- public health emergencies, such as the recent coronavirus outbreak and the subsequent public health measures, may affect our employees, suppliers, customers and our ability to provide services and maintenance in the affected regions;
- 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.

Risks Relating to Our Technology

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 our 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 have a material adverse effect on our business, results of operations and financial condition.

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.

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.

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. Likewise, the California Consumer Privacy Act is a state law intended to enhance privacy rights and consumer protection that may impact our ability to profitably operate across the United States given that our customers' employees may be resident in California or to offer products that meet the needs of customers subject to California 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.

Computer malware, viruses, hacking, phishing attacks, spamming, and other cyber-threats could harm our business and cause customers to lose confidence in us and our products, which could significantly impact our business and results of operations.

Computer malware, viruses, computer hacking, phishing attacks, social engineering, and other electronic threats have become more prevalent, have occurred on our systems in the past, and may occur on our systems in the future. While we are taking measures to safeguard our solutions and services from cybersecurity threats and vulnerabilities, cyber-attacks and other security incidents continue to evolve in sophistication and frequency. The connection of our software solutions to our customers and their information technology environments could present the opportunity for an attack on our systems to serve as a way to obtain access into our customers' systems, which could have a material adverse effect on our financial condition and growth prospects. Our security measures may also be breached due to employee or other error, intentional malfeasance and other third-party acts, and system errors or vulnerabilities, including vulnerabilities of our third party vendors, customers, or otherwise. Businesses have experienced material sales declines after discovering data breaches, and our business could be similarly impacted. The costs to continuously improve the security of our solutions and reduce the likelihood of a successful attack are high and may continue to increase. Furthermore, some U.S. states and international jurisdictions have enacted laws requiring companies to notify consumers of data security breaches involving their personal data. These mandatory disclosures regarding a security breach often lead to widespread negative publicity, which may cause our customers to lose confidence in the effectiveness of the data security measures of our solutions. Any negative incidents can quickly erode trust and confidence, particularly if they result in adverse mainstream and social media publicity, governmental investigations or litigation. Though it is difficult to determine what, if any, harm may directly result from any specific interruption or attack, any failure to maintain performance, reliability, security and availability of our products and technical infrastructure to the satisfaction of our customers may harm our reputation, impair our ability to retain existing customers and attract new customers and expose us to legal claims and government action, each of which could have a material adverse impact on our business, results of operations and financial condition.

Risks Related to our Common Stock

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;
- timing of customer payments, including customer decisions to pre-pay;
- 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 trading volume of our common stock could affect your ability to sell your shares at a satisfactory price.

We have historically experienced a limited trading volume in our common stock. 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 plan allowing for the acceleration of vesting or payments of awards granted under the plan in the event of specified events that result in a “change in control” and the provisions of our outstanding awards requiring acceleration of vesting or payments of those awards in the event of a “change in control”;
- the provisions of our agreements provide for severance payments to our executive officers and other officers in the event of certain terminations following a “change in control”; and
- the provisions of our mutual termination agreement dated June 29, 2020 with Synacor, Inc. that requires the payment to Synacor of \$1,450,000 in the event of certain acquisitions of Qumu prior to September 29, 2021.

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

Our corporate headquarters is located in Minneapolis, Minnesota. We lease all of our facilities and do not own any real property. In December 2020, the Company transitioned to permanent remote work for all of its personnel as part of its “Work from Wherever, Forever” policy. The Company closed three of its four offices due to its new remote work policy. In connection with this the Company entered into flexible shared workspace arrangements, in Minneapolis, Minnesota, and London, England and Hyderabad, India. The Company intends to continue to pay all rental payments due and payable by the Company pursuant to the leases governing the leased premises. We believe that our facilities are generally suitable to meet our current and future needs, and our “Work from Wherever, Forever” policy will allow the Company to enter new geographic markets as needed to accommodate any such growth.

Location of Property	Use of Property	Approximate Monthly Rent (USD)	Approximate Leased Square Footage	Lease Expiration Date
Minneapolis, Minnesota (Headquarters)	Administration and co-working space	\$ 2,800	350	June 2022
Burlingame, California	Engineering and technology storage	\$ 16,000 ⁽¹⁾	3,800	September 2022

⁽¹⁾The agreement has escalating lease payments ranging from approximately \$16,000 to \$17,000 per month during the course of the lease.

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 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 Capital Market under the symbol "QUMU."

Shareholders

As of March 5, 2021, there were 92 shareholders of record of Qumu's common stock.

Dividends

The Company did not pay a dividend in 2020 or 2019 and does not expect to pay a dividend in 2021. 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.

Pursuant to the terms of the Loan and Security Agreements dated January 15, 2021 (the "Loan Agreement"), by and between the Company and Wells Fargo Bank, National Association, 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, 2020, 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, 2020 was associated with satisfaction of employee tax withholding requirements on vesting of restricted stock awards and restricted stock units.

Information on the Company's repurchases of its common stock during each month of the fourth quarter ended December 31, 2020, 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 2020	74	\$ 4.50	—	778,365
November 2020	216	\$ 4.96	—	778,365
December 2020	4,857	\$ 5.76	—	778,365

Securities Authorized for Issuance Under Equity Compensation Plans

The following table sets forth information regarding Qumu's equity compensation plans in effect as of December 31, 2020. 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 ⁽¹⁾
Equity compensation plans approved by shareholders	806,813	\$ 3.21	640,205
Equity compensation plans not approved by shareholders ⁽²⁾	457,692	\$ 4.90	—
Total	1,264,505	\$ 3.82	640,205

⁽¹⁾ Excludes shares of common stock listed in the first column.

⁽²⁾ Consists of an outstanding non-qualified stock option grant to TJ Kennedy, the Company's President and Chief Executive Officer, on July 22, 2020, which was the first date of an open window period following the first day of employment with Qumu. The stock option was granted outside of the Company's current equity incentive plan, the 2007 Stock Incentive Plan, as an "inducement award" pursuant to Nasdaq Listing Rules. The option has an exercise price equal to the closing price of the Company's common stock as reported by the Nasdaq Stock Market on the grant date, vests in three equal installments on each of the first three anniversaries of the date of grant, and has a term of seven years. In other respects, the option was structured to mirror the terms of options granted under the Company's 2007 Stock Incentive Plan and is subject to a stock option plan and agreement entered into by and between the Company and Mr. Kennedy.

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

The Company generates revenue through the sale of enterprise video content management software, 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, 2020, 2019 and 2018, the Company generated revenues of \$29.1 million, \$25.4 million and \$25.0 million, respectively.

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 generates revenue through the sale of enterprise video content management software, 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. Sales can range from a single year agreement for thousands of dollars to a multi-year agreement for over a million dollars.

The Company follows a five-step model to assess a sale to a customer: identify the legally binding contract, identify the performance obligations, determine the transaction price, allocate the transaction price, and determine whether revenue will be recognized at a point in time or over time.

Revenue is recognized upon transfer of control of promised products or services (i.e., performance obligations) to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for promised goods or services. The Company's performance obligations are satisfied either over time (for cloud-hosted software as a service, maintenance and support, and other services) or at a point in time (for software licenses and hardware).

The Company enters into contracts that can include various combinations of software licenses, appliances, maintenance and services, some of which are distinct and are accounted for as separate performance obligations. For contracts with multiple performance obligations, the Company allocates the transaction price of the contract to each distinct performance obligation, on a relative basis using its standalone selling price.

The Company determines the standalone selling price (SSP) for software-related elements, including professional services and software maintenance and support contracts, based on the price charged for the deliverable when sold separately. The Company

estimates SSP by maximizing use of observable prices such as the prices charged to customers on a standalone basis, established prices lists, contractually stated prices, profit margins and other entity-specific factors, or by using information such as market conditions and other observable inputs. However, the selling prices of its software licenses and cloud-hosted SaaS arrangements are highly variable. Thus, the Company estimates SSP for software licenses and cloud-hosted SaaS arrangements using the residual approach, determined based on total transaction price less the SSP of other goods and services promised in the contract.

Other items relating to charges collected from customers include reimbursable expenses, shipping and handling charges and sales taxes charges. 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.

Perpetual software licenses

The Company's perpetual software license arrangements grant customers the right to use the software indefinitely as it exists at the time of purchase. The Company recognizes revenue for distinct software licenses once the license period has begun and the software has been made available to the customer. Payments for perpetual software license contracts are generally received upon fulfillment of the software product.

Term software licenses

The Company's term software licenses differ from perpetual software licenses in that the customer's right to use the licensed product has a termination date. Term software licenses are recognized upon transfer of control, which is typically at fulfillment, resulting in up-front revenue recognition. The Company categorizes revenue from term software licenses as subscription, maintenance and support revenue in service revenues. Payments are generally received quarterly or annually in equal or near equal installments over the term of the agreement.

Cloud-hosted software as a service

Cloud-hosted software as a service (SaaS) arrangements grant customers the right to access and use the licensed products at the outset of an arrangement via third-party cloud providers. Updates are generally made available throughout the entire term of the arrangement, which is generally one to three years. The Company provides an online library and technical support resources in these cloud-hosted SaaS arrangements, which in conjunction with the SaaS license constitute a single, combined performance obligation, and revenue is recognized over the term of the license. Payments are generally received annually in advance of the service period.

Hardware

The Company sells appliances that are typically drop shipped from third-party suppliers selected by the Company. The transaction price allocated to the appliance is generally recognized as revenue at fulfillment when the customer obtains control of the product. Payments for appliances are generally received upon delivery of the hardware product.

Maintenance and support

Maintenance and support arrangements grant customers the right to software updates and technical support over the term of the maintenance and support contract. Revenue from maintenance and support is generally recognized ratably over the contract term beginning on the commencement date of each contract, which is upon fulfillment of the software obligation. Payments are generally received annually in advance of the service period.

Professional services and training

Professional services and training generally consist of software implementation, on-boarding services and best practices consulting. Revenue from professional services contracts is typically recognized as performed, generally using hours expended to measure progress. Services are generally invoiced monthly for work performed.

Leases

The Company is a lessee in several non-cancellable operating leases for office space and finance leases, for certain IT equipment, that expire at various dates over the next three years. The Company determines if an arrangement is or contains a lease at contract inception and recognizes a right of use (ROU) asset and a lease liability at the lease commencement date.

For operating leases, the lease liability is initially and subsequently measured at the present value of the unpaid lease payments at the lease commencement date. For finance leases, the lease liability is initially measured in the same manner and at the same date as for operating leases, and is subsequently measured at amortized cost using the effective interest method. The ROU asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for lease payments made at or before the lease commencement date, plus any initial direct costs incurred less any lease incentives received. Lease expense for lease payments is recognized on a straight-line basis over the earlier of the useful life or the lease term.

Key estimates and judgments in accounting for leases under Topic 842 include how the Company determines (1) the discount rate it uses to discount the unpaid lease payments to present value, (2) lease term and (3) lease payments. The Company has elected not to recognize ROU assets and lease liabilities for short-term leases that have a lease term of 12 months or less. The Company recognizes the lease payments associated with its short-term leases as an expense on a straight-line basis over the lease term. Because at the inception of the leases the Company was not reasonably certain to exercise the options, the options were not considered in determining the lease terms under Topic 842, which was adopted January 1, 2019. Many of the Company's leases include escalation clauses, renewal options and/or termination options that are factored into its determination of lease payments under Topic 842 when reasonably certain. These options to extend or terminate a lease are at the Company's discretion. The Company has elected to take the practical expedient and not separate lease and non-lease components of contracts. The Company estimates its incremental borrowing rate to discount the lease payments based on information available at lease commencement under Topic 842. The Company's lease agreements do not contain any material residual value guarantees.

During December 2020, the Company transitioned to permanent remote work for all of its personnel as part of its "Work from Wherever, Forever" policy. The Company notified its landlords that it was surrendering its right to occupy the office space as it closed three of its four offices due to its new remote work policy. The Company had early termination clauses for two of the three office leases which were closed. The Company notified its landlords for the two leases with these clauses that it would not be exercising its option to renew and would be exercising the leases' early termination clauses allowing the lease terms to end in May 2022 and August 2022. The impact of the reduction of the lease terms reduced the Company's operating lease liabilities by \$433,000. Effective December 31, 2020, the Company will no longer occupy the leased office space in Minneapolis, Minnesota and London, England, which were primarily used for engineering, service, sales, marketing and administration, and the leased office space in Hyderabad, India, which was primarily used for software development and testing. The Company will continue to occupy its leased space in Burlingame, California, primarily for technology storage and research and development. Given the transition to permanent remote work, the Company recorded in the fourth quarter of 2020 a non-cash expense of approximately \$637,000 related to the right of use assets—operating leases for the three surrendered office leases. Additionally, the Company incurred a non-cash expense of \$280,000 in the fourth quarter of 2020 related to the surrender of certain leasehold improvements, office and computer equipment, and furniture at the leased premises.

During December 2020, the Company also entered into lease agreements associated with flexible shared workspace arrangements in Minneapolis, Minnesota, and London, England, and Hyderabad, India. The flexible shared workspace arrangement in Minneapolis, Minnesota has a lease term of 18 months and therefore is considered a lease under Topic 842. The other two flexible shared workspace arrangements are 12 months or less, and thus the Company has elected the practical expedient method and recognize the lease payments associated with its short-term leases as an expense on a straight-line basis over the lease term.

The Company intends to continue to pay all rental payments due and payable by the Company pursuant to the leases governing the leased premises.

Warrant Liability

In conjunction with the debt financings completed in October 2016 and January 2018, the Company issued two warrants for the purchase of up to an aggregate of 1,239,286 shares of the Company's common stock, of which one representing 314,286 shares remained outstanding as of December 31, 2020. Subsequent to year end, a portion of the warrants were exercised in a cashless exercise. The exercise resulted in the issuance by the Company of 50,000 shares of common stock and an overall reduction of 75,703 warrant shares. On May 1, 2020, the Company canceled the ESW warrant in exchange for a note payable (see Note 4—"Commitments and Contingencies" of the accompanying consolidated financial statements) which contained an embedded derivative liability that is measured on a recurring basis at fair value. On August 31, 2018, the Company issued a separate warrant to a sales partner for the purchase of up to 100,000 shares of the Company's common stock, which remained outstanding as of December 31, 2020. The Company accounts for the warrants, which are derivative financial instruments, as a current liability based upon the characteristics and provisions of the instruments. The warrants were 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 agreements, to receive cash payment or other consideration at the option of the holder in lieu of the Company's common shares.

A warrant liability is 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 option pricing models that are based on the individual characteristics of the warrants on the valuation date, which include the Company's stock price and 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 for the warrants, when applicable. Changes in the assumptions used could have a material impact on the resulting fair value of each warrant. The primary inputs affecting the value of the warrant liability are the Company's stock price and volatility in the Company's stock price, as well as assumptions about the probability and timing of certain events, such as a change in control or future equity offerings. 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.

Results of Operations

The percentage relationships to revenues of certain income and expense items for the years ended December 31, 2020, 2019 and 2018, and the percentage changes in these income and expense items between years, are contained in the following table:

	Percentage of Revenues			Percent Increase (Decrease)	
	2020	2019	2018	2019 to 2020	2018 to 2019
Revenues	100.0 %	100.0 %	100.0 %	15 %	1 %
Cost of revenues	(28.7)	(27.8)	(34.0)	18	(17)
Gross profit	71.3	72.2	66.0	13	11
Operating expenses:					
Research and development	28.4	29.0	27.9	12	5
Sales and marketing	31.1	34.3	33.6	4	4
General and administrative	34.6	26.8	28.5	48	(5)
Amortization of purchased intangibles	2.3	3.0	3.6	(13)	(16)
Total operating expenses	96.4	93.1	93.6	19	1
Operating loss	(25.1)	(20.9)	(27.6)	38	(23)
Other income (expense), net	(7.6)	(5.3)	14.3	66	(137)
Loss before income taxes	(32.7)	(26.2)	(13.3)	43	100
Income tax expense (benefit)	(1.1)	(0.8)	1.2	58	(165)
Net loss	(31.6)%	(25.4)%	(14.5)%	43 %	78 %

Revenues

The Company generates revenue through the sale of enterprise video content management software, 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 (dollars in thousands):

	Year Ended December 31,			Increase (Decrease)		Percent Increase (Decrease)	
	2020	2019	2018	2019 to 2020	2018 to 2019	2019 to 2020	2018 to 2019
Software licenses and appliances	\$ 6,762	\$ 4,903	\$ 5,814	\$ 1,859	\$ (911)	38 %	(16)%
Service							
Subscription, maintenance and support	19,555	18,249	17,132	1,306	1,117	7	7
Professional services and other	2,755	2,210	2,067	545	143	25	7
Total service	22,310	20,459	19,199	1,851	1,260	9	7
Total revenues	\$ 29,072	\$ 25,362	\$ 25,013	\$ 3,710	\$ 349	15 %	1 %

Revenues can vary year to year based on the type of contract the Company enters into with each customer. The \$3.7 million, or 15%, increase in total revenues from 2019 to 2020 was primarily driven by revenue attributable to a large customer order received at the end of the first quarter 2020, which the customer identified as specifically driven by the change in working environment due to COVID-19, resulting in increases in both software licenses and appliances revenues and service revenues.

The \$1.9 million increase in service revenues from 2019 to 2020 primarily resulted from a \$1.3 million increase in subscription, maintenance and support revenues due to the aforementioned large customer order received in 2020, partially offset by the recognition of large term license sales in 2019 that were absent in the comparable period of 2020. Also contributing to the increase in service revenues was a \$545,000, or 25%, increase in professional services revenues, which benefited from large software and appliances sales during 2020.

The \$349,000 increase in total revenues from 2018 to 2019 reflects a \$1.3 million increase in service revenues and a \$911,000 decrease in software licenses and appliances revenues. The \$1.3 million increase in service revenues from 2018 to 2019 resulted from a \$1.1 million increase in subscription, maintenance and support revenues and a \$143,000 increase in professional services revenues. The decrease in software licenses and appliances revenues in 2019 compared to 2018 was driven by a decrease in perpetual software license and appliance sales to both new and existing customers. The increase in subscription, maintenance and support revenues in 2019 compared to 2018 primarily resulted from significant first quarter 2019 term software license sales for which revenue is recognized up front, as well as the revenue attributable to new subscription, maintenance and support agreements from new and existing customers.

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, term or SaaS licenses, which impacts the timing of revenue recognition. Other factors that will influence future consolidated revenues include the timing of customer orders and renewals, the product and service mix of customer orders, the impact of changes in economic conditions and the impact of foreign currency exchange rate fluctuations.

Gross Profit and Gross Margin

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)	
	2020	2019	2018	2019 to 2020	2018 to 2019	2019 to 2020	2018 to 2019
Gross profit:							
Software licenses and appliances	\$ 4,234	\$ 2,992	\$ 3,537	\$ 1,242	\$ (545)	42 %	(15)%
Service	16,485	15,311	12,983	1,174	2,328	8	18
Total gross profit	\$ 20,719	\$ 18,303	\$ 16,520	\$ 2,416	\$ 1,783	13 %	11 %
Gross margin:							
Software licenses and appliances	62.6 %	61.0 %	60.8 %	1.6 %	0.2 %		
Service	73.9 %	74.8 %	67.6 %	(0.9)%	7.2 %		
Total gross margin	71.3 %	72.2 %	66.0 %	(0.9)%	6.2 %		

For the years ended December 31, 2020, 2019 and 2018, gross margins are inclusive of the impact of approximately \$286,000, \$455,000 and \$1.0 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 21, 19 and 18 service personnel at December 31, 2020, 2019 and 2018, respectively.

Gross margin percentages decreased in total in 2020 as compared to 2019. The 0.9% decrease in gross margin in 2020, compared to 2019, was primarily driven by a 0.9% decrease in service gross margin in 2020 compared to 2019 due to lower term license revenue, which generally carries higher margins. Additionally, 2020 included outsourced professional services expenses for certain customer-specific projects, which negatively impacted services gross margin.

The 6.2% improvement in gross margin in 2019, compared to 2018, was primarily driven by a 7.2% improvement in service gross margin due to an increase in term software license revenue, decreased amortization expense as certain purchased intangible assets became fully amortized during 2018, and lower royalty expense associated with third-party software licenses.

Future gross profit margins will fluctuate quarter to quarter and will be impacted by the Company's continued expansion into new market opportunities, as well as, 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 2021 is expected to include approximately \$0.1 million of amortization expense for purchased intangibles.

Operating Expenses

The following is a summary of operating expenses (dollars in thousands):

	Year Ended December 31,			Increase (Decrease)		Percent Increase (Decrease)	
	2020	2019	2018	2019 to 2020	2018 to 2019	2019 to 2020	2018 to 2019
Operating expenses:							
Research and development	\$ 8,252	\$ 7,360	\$ 7,013	\$ 892	\$ 347	12 %	5 %
Sales and marketing	9,055	8,709	8,394	346	315	4	4
General and administrative	10,059	6,787	7,122	3,272	(335)	48	(5)
Amortization of purchased intangibles	657	757	904	(100)	(147)	(13)	(16)
Total operating expenses	\$ 28,023	\$ 23,613	\$ 23,433	\$ 4,410	\$ 180	19 %	1 %

Operating expenses increased 19% for 2020 compared to 2019 and represented 96.4%, 93.1%, and 93.6% of revenues for 2020, 2019 and 2018, respectively. Operating expenses for 2020 increased from 2019 by \$4.4 million, primarily driven by approximately \$1.6 million in one-time transaction expense associated with the Company's now terminated merger with Synacor, Inc. and approximately \$917,000 in one-time non-cash office lease charges resulting from adoption of the Company's remote work policy in the fourth quarter 2020. The Company incurred severance expense of \$647,000, \$152,000 and \$237,000 for 2020, 2019 and 2018, respectively, relating to cost reduction initiatives and personnel transitions and, in 2020, the departure of the Company's chief executive officer.

Research and development

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

	Year Ended December 31,			Increase (Decrease)		Percent Increase (Decrease)	
	2020	2019	2018	2019 to 2020	2018 to 2019	2019 to 2020	2018 to 2019
Compensation and employee-related	\$ 5,553	\$ 5,123	\$ 5,215	\$ 430	\$ (92)	8 %	(2)%
Overhead and other expenses	1,736	1,516	1,211	220	305	15	25
Outside services and consulting	823	589	409	234	180	40	44
Depreciation and amortization	4	2	28	2	(26)	100	(93)
Equity-based compensation	136	130	150	6	(20)	5	(13)
Total research and development expenses	\$ 8,252	\$ 7,360	\$ 7,013	\$ 892	\$ 347	12 %	5 %

Total research and development expenses for the years ended December 31, 2020, 2019 and 2018 represented 28%, 29% and 28% of revenues, respectively. The Company had 36, 36 and 34 research and development personnel at December 31, 2020, 2019 and 2018, respectively.

The \$892,000 increase in total expenses in 2020, compared to 2019, was primarily due to increased costs related to the mix of research and development personnel, incentive compensation costs and projects to support customers' increased usage of Qumu's cloud-based enterprise video solution due to COVID-19. The \$347,000 increase in total expenses in 2019, compared to 2018, was primarily due to transition costs related to the Company's in-process migration and consolidation of cloud hosting providers during 2019, impacting outside services and consulting expenses, as well as overhead and other expenses. Depreciation and amortization expense decreased during 2019 and 2018 as certain fixed assets became fully depreciated.

Sales and marketing

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

	Year Ended December 31,			Increase (Decrease)		Percent Increase (Decrease)	
	2020	2019	2018	2019 to 2020	2018 to 2019	2019 to 2020	2018 to 2019
Compensation and employee-related	\$ 7,006	\$ 6,822	\$ 6,199	\$ 184	\$ 623	3 %	10 %
Overhead and other expenses	826	1,022	1,230	(196)	(208)	(19)	(17)
Outside services and consulting	1,088	781	802	307	(21)	39	(3)
Depreciation and amortization	35	11	12	24	(1)	218	(8)
Equity-based compensation	100	73	151	27	(78)	37	(52)
Total sales and marketing expenses	\$ 9,055	\$ 8,709	\$ 8,394	\$ 346	\$ 315	4 %	4 %

Total sales and marketing expenses for the years ended December 31, 2020, 2019 and 2018 represented 31%, 34% and 34% of revenues, respectively. The Company had 28, 32 and 27 sales and marketing personnel at December 31, 2020, 2019 and 2018, respectively.

The \$346,000 increase in total sales and marketing expense in 2020 as compared to 2019 was primarily driven by increased costs for outside services and consulting associated with the implementation of the Company's strategic plan in 2020, higher compensation costs associated with changes in sales and marketing personnel, and increased commissions expense, partially offset by cost savings resulting from sales activities and customer marketing events that were conducted virtually rather than in person. The \$315,000 increase in total sales and marketing expense in 2019 as compared to 2018 was driven primarily driven by increased compensation and employee-related costs due to higher commissions expense and the mix and number of sales and marketing personnel, partially offset by a decrease in overhead and other expenses impacted by continued cost reduction initiatives. Sales and marketing expenses for 2020, 2019 and 2018 included severance expense of \$145,000, \$152,000 and \$111,000, respectively, relating to cost reduction initiatives and personnel transitions.

General and administrative

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

	Year Ended December 31,			Increase (Decrease)		Percent Increase (Decrease)	
	2020	2019	2018	2019 to 2020	2018 to 2019	2019 to 2020	2018 to 2019
Compensation and employee-related	\$ 3,578	\$ 3,147	\$ 2,797	\$ 431	\$ 350	14 %	13 %
Overhead and other expenses	1,109	1,127	1,028	(18)	99	(2)	10
Outside services and consulting	1,670	1,584	2,159	86	(575)	5	(27)
Depreciation and amortization	256	301	391	(45)	(90)	(15)	(23)
Equity-based compensation	906	628	747	278	(119)	44	(16)
Non-cash office lease surrender costs	917	—	—	917	—	n/m	n/m
Transaction-related expenses	1,623	—	—	1,623	—	n/m	n/m
Total general and administrative expenses	\$ 10,059	\$ 6,787	\$ 7,122	\$ 3,272	\$ (335)	48 %	(5)%

Total general and administrative expenses for the years ended December 31, 2020, 2019 and 2018 represented 35%, 27% and 29% of revenues, respectively. The Company had 17, 18 and 18 general and administrative personnel at December 31, 2020, 2019 and 2018, respectively.

The \$3.3 million increase in total expenses in 2020 as compared to 2019 was driven primarily by transaction-related expenses related to the Company's merger agreement and subsequent merger termination with Synacor, Inc. totaling \$1.6 million in 2020, \$917,000 in non-cash charges resulting from the adoption of the Company's remote work policy in the fourth quarter 2020, and \$0.4 million of severance costs incurred with the departure of the Company's chief executive officer in 2020. The \$335,000 decrease in total expenses in 2019 as compared to 2018 was driven primarily by lower outside services costs resulting from decreased legal expenses, a reduction in audit fees and lower contractor costs.

Amortization of Purchased Intangibles

Operating expenses include \$657,000, \$757,000 and \$904,000 in 2020, 2019 and 2018, 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 2021 are expected to include approximately \$0.7 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)	
	2020	2019	2018	2019 to 2020	2018 to 2019	2019 to 2020	2018 to 2019
Interest expense, net	\$ (73)	\$ (754)	\$ (1,809)	\$ 681	\$ 1,055	(90)%	(58)%
Decrease in fair value of derivative liability	103	—	—	103	—	n/m	n/m
Decrease (increase) in fair value of warrant liability	(1,826)	(141)	368	(1,685)	(509)	1,195	(138)
Gain on sale of BriefCam, Ltd.	—	41	6,602	(41)	(6,561)	(100)	(99)
Loss on extinguishment of debt	—	(348)	(1,189)	348	841	(100)	(71)
Other expense, net	(406)	(125)	(378)	(281)	253	225	(67)
Total other income (expense), net	\$ (2,202)	\$ (1,327)	\$ 3,594	\$ (875)	\$ (4,921)	66 %	(137)%

Interest expense, net

The Company recognized interest expense, net, of \$73,000, \$754,000 and \$1.8 million in 2020, 2019 and 2018, respectively, primarily related to its note payable, term loans and capital leases, including the amortization of deferred financing costs. The decrease in interest expense in 2020 and 2019, compared to the respective prior years, was primarily due to a decrease in term loan debt resulting from the Company's \$6.0 million principal balance repayment in July 2018 on the \$10.0 million credit agreement with ESW Holdings, Inc., and the Company's \$4.0 million remaining principal balance payment on November 12, 2019.

Change in fair values of derivative liability and warrant liability

In conjunction with the debt financings completed in October 2016 and January 2018, the Company issued two transferable warrants for the purchase of up to an aggregate of 1,239,286 shares of the Company's common stock, of which one representing 314,286 shares remained unexercised and outstanding at December 31, 2020. On May 1, 2020, the Company canceled the ESW warrant in exchange for a note payable (see Note 4—"Commitments and Contingencies" of the accompanying consolidated financial statements) which contained an embedded derivative liability that is measured on a recurring basis at fair value. The Company recorded non-cash income of \$103,000 for the year ended December 31, 2020 resulting from the change in fair value of the derivative liability. Additionally, on August 31, 2018, the Company issued a transferable warrant to a sales partner, iStudy Co., Ltd., (iStudy warrant) for the purchase of up to 100,000 shares of the Company's common stock.

During 2020 and 2019, the Company recorded non-cash expense of \$1.8 million and \$141,000, respectively, and during 2018 the Company recorded non-cash income of \$368,000, resulting from the change in fair value of the warrant liability. See Note 4—"Commitments and Contingencies" of the accompanying consolidated financial statements for a description of inputs impacting changes in fair value. The non-cash expense of \$1.8 million in 2020 primarily resulted from an increase in the Company's stock price to \$7.99 per share at December 31, 2020 from \$2.61 per share at December 31, 2019.

Gain on sale of BriefCam, Ltd.

During 2018, Canon Inc. ("Canon") acquired all of the outstanding shares of BriefCam, Ltd. ("BriefCam"), a privately-held Israeli company, and the Company received \$9.7 million from the closing proceeds for its convertible preferred shares of BriefCam, as well as received \$100,000 following the satisfaction of a contingency, resulting in a gain on sale of \$6.6 million during the year ended December 31, 2018. Additionally, during the year ended December 31, 2019, the Company recognized a gain of \$41,000 related to the release of cash from escrow in connection with the sale.

Loss on extinguishment of debt

On July 19, 2018, the Company paid \$6.5 million on its outstanding term loan from ESW Holdings, Inc. under its term loan credit agreement dated January 12, 2018. The payment was comprised of principal of \$6.0 million and accrued interest of \$463,000 for the period January 12, 2018 to the payment date of July 19, 2018. The Company used a portion of the net proceeds from the sale of its investment in BriefCam to fund the prepayment. The Company determined that the prepayment of principal constituted a partial extinguishment of debt and, as such, recognized a \$1.2 million loss related to the write down of unamortized debt discount and issuance costs in 2018.

On November 12, 2019, the Company paid the remaining \$4.8 million due on its outstanding term loan from ESW Holdings, Inc. The payment was comprised of principal of \$4.0 million and accrued interest of \$528,000 for the period July 19, 2018 to the payment date of November 12, 2019. The Company used a portion of the \$8.2 million in net proceeds from the issuance of common stock on November 7, 2019 to fund the payment. The Company determined that the payment of principal constituted an extinguishment of debt and, as such, recognized a \$348,000 loss related to the write down of \$98,000 of unamortized debt discount and issuance costs and recognition of a \$250,000 prepayment fee upon payment of the remaining term loan balance.

Other expense, net

The Company determined that it had excess capacity at its Minneapolis, Minnesota headquarters and effective May 1, 2018 ceased using a portion of its leased space, subsequently making it available for occupancy by a sublessee. The Company also recorded a loss related to the exit activity of \$177,000 (net of adjustments for the derecognition of leasehold improvement and deferred rent balances related to the exit activity), which is included in other income (expense) for the year ended December 31, 2018.

Other expense, net, includes sublease income from the Company's subleases of \$105,000 and \$160,000 for the years ended December 31, 2019 and 2018. No sublease income was recognized for the year ended December 31, 2020.

Other expense, net, also includes net losses on foreign currency transactions of \$406,000, \$260,000 and \$55,000 in 2020, 2019 and 2018, 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. Net income tax benefit was \$306,000 and \$194,000 for the years ended December 31, 2020 and 2019, respectively, and net income tax expense was \$298,000 for the year ended December 31, 2018.

On December 22, 2017, the Tax Cuts and Jobs Act (the Tax Act) was enacted, significantly altering U.S. corporate income tax law. Many of the new elements of the Tax Act became effective during 2018, including limitations on the deductibility of interest expense, limitations on executive compensation, as well as international provisions. The Company has considered and incorporated the new provisions into its tax calculations. Such provisions included in the Tax Act did not significantly impact the Company in 2020 and 2019, due to the full valuation allowance on deferred tax assets. For further discussion of the Tax Act and its impact on the Company's consolidated financial statements, see Note 11—"Income Taxes" of the accompanying consolidated financial statements.

The net income tax benefit for 2020 and 2019 was impacted by the tax benefit for refundable research credits from the United Kingdom operations. The net income tax expense for 2018 was impacted by an increase in reserves for unrecognized tax benefits, partially offset by a tax benefit for refundable research credits from United Kingdom operations.

Liquidity and Capital Resources

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

	December 31,	
	2020	2019
Cash and cash equivalents	\$ 11,878	\$ 10,639
Working capital	\$ (2,918)	\$ 829
Financing obligations	\$ 481	\$ 240
Operating lease liabilities	1,289	2,174
Note payable	1,800	—
Financing obligations, operating lease liabilities and note payable	\$ 3,570	\$ 2,414

The Company expects it will be able to maintain current operations and anticipated capital expenditure requirements for at least the next 12 months through any cash flows generated from current operations, cash reserves, and additional resources including the approximately \$23.1 million in net proceeds from the Company's issuance of common stock and \$10.0 million revolving credit facility both of which closed in January 2021. See Note 15—"Subsequent Events" of the accompanying consolidated financial statements.

At December 31, 2020, the Company had aggregate negative working capital of \$2.9 million, compared to positive working capital of \$829,000 at December 31, 2019. Working capital includes current deferred revenue of \$12.9 million and \$10.1 million at December 31, 2020 and 2019, respectively. The decrease in working capital as of December 31, 2020, as compared to December 31, 2019, is primarily due to the timing of cash receipts from customers and disbursements made to vendors.

Financing obligations as of December 31, 2020 and 2019 primarily consisted of finance leases related to the acquisition of computer and network equipment. Operating lease liabilities consists of liabilities related to the Company's office leases, which decreased by \$433,000 due to the reassessment of the lease term of two office leases in coordination with the implementation of the Company's "Work from Wherever, Forever" policy. The note payable to ESW Holdings, Inc., which was non-interest bearing having a face amount of \$1.83 million and maturing on April 1, 2021, was repaid upon the Company's closing of its revolving credit facility in January 2021.

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 \$1.6 million as of December 31, 2020. 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 Cash Flows. A summary of cash flows is as follows (in thousands):

	Year Ended December 31,		
	2020	2019	2018
Cash flows from (used in):			
Operating activities	\$ 1,570	\$ (1,538)	\$ (2,843)
Investing activities	(128)	(127)	9,651
Financing activities	(120)	3,602	(5,743)
Effect of exchange rate changes on cash	(83)	66	(119)
Net change in cash and cash equivalents	\$ 1,239	\$ 2,003	\$ 946

Operating activities

Net cash provided from operating activities was \$1.6 million for 2020 compared to net cash used in operating activities of \$1.5 million in 2019. The operating cash flows for the 2020 were favorably impacted by the change in deferred revenue, offset by the net loss for 2020. The operating cash flows for 2019 and 2018 were primarily impacted by the net losses for those years.

Investing activities

Net cash used in investing activities for the purchases of property and equipment totaled \$128,000, \$168,000 and \$127,000 in 2020, 2019 and 2018, respectively. Net cash provided by investing activities from the sale of the Company's investment in BriefCam totaled \$41,000 in 2019 compared to \$9.8 million in 2018.

Financing activities

Financing activities used net cash of \$120,000 in 2020, primarily impacted by principal payments on finance leases and other financing obligations, offset by net proceeds from issuance of common stock under employee stock plans. During 2019, financing activities provided net cash of \$3.6 million in 2019, primarily consisting \$8.2 million in net proceeds from the issuance of common stock, partially offset by cash used for payments on the Company's term note, capital leases and other financing obligations; financing cash outflows included a principal payment of \$4.0 million, accrued interest of \$528,000 for the period July 19, 2018 to the payment date of November 12, 2019, and prepayment fee of \$250,000 on the outstanding term loan with ESW Holdings, Inc. Additionally, during 2019, the Company made principal payments of \$320,000 on capital leases and other financing obligations.

Financing activities used net cash of \$5.7 million in 2018, primarily consisting of a principal payment of \$6.0 million on the outstanding term loan with ESW Holdings, Inc., principal payments of \$402,000 on capital leases and other financing obligations, a principal payment on the term loan credit agreement (Hale credit agreement) with HCP-FVD, LLC as lender and

Hale Capital Partners, LP as administrative agent, of \$8.0 million and a prepayment fee of \$800,000, offset by \$10.0 million in proceeds from the term loan with ESW Holdings in January 2018, a portion of which was used to repay the term loan under the Hale credit agreement.

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, 2020, 2019 and 2018. As of December 31, 2020, 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.

The Company did not declare or pay any dividends during the years ended December 31, 2020, 2019 and 2018.

Contractual Obligations. The following table summarizes the Company's contractual cash obligations at December 31, 2020, 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.

Contractual Obligations	Payments Due by Period						Total
	2021	2022	2023	2024	2025	Thereafter	
Operating leases	\$ 811	\$ 552	\$ —	\$ —	\$ —	\$ —	\$ 1,363
Capital leases and other financing obligations ⁽¹⁾	420	42	37	—	—	—	499
Note payable ⁽²⁾	1,833	—	—	—	—	—	1,833
Purchase obligations ⁽³⁾	436	433	136	—	—	—	1,005
Income tax liabilities under ASC 740 ⁽⁴⁾	—	—	—	—	—	—	—
Total contractual cash obligations	\$ 3,500	\$ 1,027	\$ 173	\$ —	\$ —	\$ —	\$ 4,700

⁽¹⁾ Amounts include principal and interest.

⁽²⁾ On January 15, 2021, the Company closed on a \$10 million revolving credit facility with Wells Fargo Bank, maturing January 15, 2023; the Company received an advance of \$1.8 million and repaid the face amount of the note payable to ESW Holdings, Inc.

⁽³⁾ Purchase obligations include all commitments to purchase goods or services that meet one or both of the following criteria: (1) they are non-cancellable 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-cancellable, the entire value of the contract is included in the table.

⁽⁴⁾ The Company does not currently expect any income tax liabilities accrued under ASC 740 as of December 31, 2020 to be paid to the applicable tax authorities in 2021. The full balance of unrecognized tax benefits under ASC 740 of \$1.8 million at December 31, 2020, 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.

Recently Adopted Accounting Standards and Recently Issued Accounting Standards Not Yet Adopted

For information about our recently adopted accounting standards and recently issued accounting standards not yet adopted, see Note 1 of the accompanying Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As a smaller reporting company, the Company is not required to provide information typically disclosed under this item.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Financial Statements

	Page in Annual Report on Form 10-K For Year Ended December 31, 2020
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Report of KPMG LLP, Independent Registered Public Accounting Firm	<u>38</u>
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Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
Qumu Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Qumu Corporation and its subsidiaries (the Company) as of December 31, 2020 and 2019, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity and cash flows, for the years then ended, and the related notes to the consolidated financial statements (collectively, the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's 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 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 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 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 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 financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.

Revenue Recognition

As described in Notes 1 and 7 to the consolidated financial statements, the Company's contracts with customers typically contain promises to transfer multiple products and services to a customer. The nature of the Company's products and services include perpetual and term software licenses, cloud-hosted software as a service, hardware, maintenance and support and professional services and training. For these contracts, the Company assesses the performance obligations and accounts for those obligations separately if they are distinct. In such cases, the transaction price is allocated to the distinct performance obligations on a relative standalone selling price (SSP) basis. Management exercises significant judgment in determining revenue recognition for these customer agreements as related to:

- Determination of whether each product or service is considered a distinct performance obligation
- Determination of standalone selling price for each distinct performance obligation

We identified the Company's allocation of transaction price to multiple performance obligations as a critical audit matter as the identification of distinct performance obligations in revenue contracts and the determination of standalone selling price for each distinct performance obligation requires a high degree of auditor judgment, subjectivity and effort in performing procedures to evaluate the audit evidence obtained.

Our audit procedures related to the Company's allocation of transaction price to multiple performance obligations included the following, among others:

- Tested a sample of revenue contracts by obtaining and reading contracts and related source documents to test the reasonableness of the performance obligations identified by management.
- Evaluated management's estimate of SSP for reasonableness and tested the completeness and accuracy of the data used in determining SSP through the independent review of contract source documents, standalone sales and recalculation of the observable SSP values and residual transaction price allocation.
- Tested the mathematical accuracy of management's revenue calculations and the associated timing of revenue recognized in the financial statements.

/s/ RSM US LLP

We have served as the Company's auditor since 2019.

Minneapolis, Minnesota

March 9, 2021

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
Qumu Corporation

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows of Qumu Corporation and subsidiaries (the Company) for the year ended December 31, 2018, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the results of the Company's operations and its cash flows for the year ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

Change in Accounting Principle

As discussed in Note 1 to the financial statements, the Company changed its method of accounting for revenue in 2018 due to the adoption of ASC 606 *Revenue from Contracts with Customers*.

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 audit. 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 audit 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. Our audit 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 audit 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 audit provides a reasonable basis for our opinion.

/s/ KPMG LLP

We served as the Company's auditor from 1989 to 2018.

Minneapolis, Minnesota
March 15, 2019

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

	December 31,	
	2020	2019
Assets		
Current assets:		
Cash and cash equivalents	\$ 11,878	\$ 10,639
Receivables, net	5,612	4,586
Contract assets	467	1,089
Income tax receivable	479	338
Prepaid expenses and other current assets	2,302	1,981
Total current assets	20,738	18,633
Property and equipment, net	249	596
Right of use assets – operating leases	332	1,746
Intangible assets, net	2,143	3,075
Goodwill	7,455	7,203
Deferred income taxes, non-current	19	21
Other assets, non-current	490	442
Total assets	\$ 31,426	\$ 31,716
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable and other accrued liabilities	\$ 2,705	\$ 2,816
Accrued compensation	2,145	1,165
Operating lease liabilities	735	587
Deferred revenue	12,918	10,140
Financing obligations	406	157
Note payable	1,800	—
Derivative liability	37	—
Warrant liability	2,910	2,939
Total current liabilities	23,656	17,804
Long-term liabilities:		
Deferred revenue, non-current	3,488	1,449
Income taxes payable, non-current	608	585
Operating lease liabilities, non-current	554	1,587
Financing obligations, non-current	75	83
Other non-current liabilities	160	—
Total long-term liabilities	4,885	3,704
Total liabilities	28,541	21,508
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 13,780,823 and 13,553,409, respectively	138	136
Additional paid-in capital	79,489	78,061
Accumulated deficit	(74,328)	(65,128)
Accumulated other comprehensive loss	(2,414)	(2,861)
Total stockholders' equity	2,885	10,208
Total liabilities and stockholders' equity	\$ 31,426	\$ 31,716

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,		
	2020	2019	2018
Revenues:			
Software licenses and appliances	\$ 6,762	\$ 4,903	\$ 5,814
Service	22,310	20,459	19,199
Total revenues	<u>29,072</u>	<u>25,362</u>	<u>25,013</u>
Cost of revenues:			
Software licenses and appliances	2,528	1,911	2,277
Service	5,825	5,148	6,216
Total cost of revenues	<u>8,353</u>	<u>7,059</u>	<u>8,493</u>
Gross profit	<u>20,719</u>	<u>18,303</u>	<u>16,520</u>
Operating expenses:			
Research and development	8,252	7,360	7,013
Sales and marketing	9,055	8,709	8,394
General and administrative	10,059	6,787	7,122
Amortization of purchased intangibles	657	757	904
Total operating expenses	<u>28,023</u>	<u>23,613</u>	<u>23,433</u>
Operating loss	<u>(7,304)</u>	<u>(5,310)</u>	<u>(6,913)</u>
Other income (expense):			
Interest expense, net	(73)	(754)	(1,809)
Decrease in fair value of derivative liability	103	—	—
Decrease (increase) in fair value of warrant liability	(1,826)	(141)	368
Gain on sale of BriefCam, Ltd.	—	41	6,602
Loss on extinguishment of debt	—	(348)	(1,189)
Other expense, net	(406)	(125)	(378)
Total other income (expense), net	<u>(2,202)</u>	<u>(1,327)</u>	<u>3,594</u>
Loss before income taxes	<u>(9,506)</u>	<u>(6,637)</u>	<u>(3,319)</u>
Income tax expense (benefit)	<u>(306)</u>	<u>(194)</u>	<u>298</u>
Net loss	<u>\$ (9,200)</u>	<u>\$ (6,443)</u>	<u>\$ (3,617)</u>
Net loss per share – basic:			
Net loss per share – basic	\$ (0.68)	\$ (0.62)	\$ (0.38)
Weighted average shares outstanding – basic	13,612	10,395	9,499
Net loss per share – diluted:			
Loss attributable to common shareholders	\$ (9,494)	\$ (6,548)	\$ (3,778)
Net loss per share – diluted	\$ (0.70)	\$ (0.63)	\$ (0.39)
Weighted average shares outstanding – diluted	13,627	10,414	9,606

See accompanying notes to consolidated financial statements.

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

	Year Ended December 31,		
	2020	2019	2018
Net loss	\$ (9,200)	\$ (6,443)	\$ (3,617)
Other comprehensive income (loss):			
Net change in foreign currency translation adjustments	447	427	(543)
Total comprehensive loss	<u>\$ (8,753)</u>	<u>\$ (6,016)</u>	<u>\$ (4,160)</u>

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, 2017	9,365	\$ 94	\$ 68,035	\$ (56,197)	\$ (2,740)	\$ 9,192
Adoption of ASC Topic 606	—	—	—	939	(5)	934
Net loss	—	—	—	(3,617)	—	(3,617)
Other comprehensive loss, net of taxes	—	—	—	—	(543)	(543)
Issuance of stock under employee stock plan, net of forfeitures	277	2	(12)	—	—	(10)
Redemption of stock related to tax withholdings on employee stock plan issuances	(18)	—	(33)	—	—	(33)
Stock-based compensation	—	—	1,082	—	—	1,082
Balance at December 31, 2018	9,624	\$ 96	\$ 69,072	\$ (58,875)	\$ (3,288)	\$ 7,005
Adoption of ASC Topic 842	—	—	—	190	—	190
Net loss	—	—	—	(6,443)	—	(6,443)
Other comprehensive income, net of taxes	—	—	—	—	427	427
Issuance of common stock, net of issuance costs	3,652	37	8,164	—	—	8,201
Issuance of stock under employee stock plan, net of forfeitures	304	3	43	—	—	46
Redemption of stock related to tax withholdings on employee stock plan issuances	(27)	—	(75)	—	—	(75)
Stock-based compensation	—	—	857	—	—	857
Balance at December 31, 2019	13,553	\$ 136	\$ 78,061	\$ (65,128)	\$ (2,861)	\$ 10,208
Net loss	—	—	—	(9,200)	—	(9,200)
Other comprehensive income, net of taxes	—	—	—	—	447	447
Issuance of stock under employee stock plan, net of forfeitures	284	2	438	—	—	440
Redemption of stock related to tax withholdings on employee stock plan issuances	(57)	—	(188)	—	—	(188)
Stock-based compensation	—	—	1,178	—	—	1,178
Balance at December 31, 2020	13,780	\$ 138	\$ 79,489	\$ (74,328)	\$ (2,414)	\$ 2,885

See accompanying notes to consolidated financial statements.

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

	Year Ended December 31,		
	2020	2019	2018
Operating activities:			
Net loss	\$ (9,200)	\$ (6,443)	\$ (3,617)
Adjustments to reconcile net loss to net cash provided by (used in) continuing operating activities:			
Depreciation and amortization	1,518	1,526	2,366
Stock-based compensation	1,178	857	1,082
Accretion of debt discount and issuance costs	85	471	1,321
Loss on debt extinguishment	—	348	1,189
Gain on sale of BriefCam, Ltd.	—	(41)	(6,602)
Gain on lease modification	—	(21)	—
Loss on lease contract termination	—	—	177
Decrease in fair value of derivative liability	(103)	—	—
Increase (decrease) in fair value of warrant liability	1,826	141	(368)
Deferred income taxes	2	31	(131)
Changes in operating assets and liabilities:			
Receivables	(938)	1,720	(786)
Contract assets	645	(604)	65
Income taxes receivable / payable	(102)	13	375
Prepaid expenses and other assets	157	522	449
Accounts payable and other accrued liabilities	682	174	(1,196)
Accrued compensation	972	(389)	(263)
Deferred revenue	4,688	181	3,092
Deferred rent	—	—	(144)
Other non-current liabilities	160	(24)	148
Net cash provided by (used in) operating activities	<u>1,570</u>	<u>(1,538)</u>	<u>(2,843)</u>
Investing activities:			
Proceeds from sale of BriefCam, Ltd.	—	41	9,778
Purchases of property and equipment	(128)	(168)	(127)
Net cash provided by (used in) investing activities	<u>(128)</u>	<u>(127)</u>	<u>9,651</u>
Financing activities:			
Proceeds from common stock issuance	—	8,201	—
Proceeds from issuance of common stock under employee stock plans	440	46	—
Proceeds from term loan and warrant issuance	—	—	10,000
Principal payments on term loans	—	(4,000)	(14,000)
Payments for term loan, warrant issuance and debt extinguishment costs	—	(250)	(1,308)
Principal payments on financing obligations	(372)	(320)	(402)
Common stock repurchases to settle employee tax withholding liability	(188)	(75)	(33)
Net cash provided by (used in) financing activities	<u>(120)</u>	<u>3,602</u>	<u>(5,743)</u>
Effect of exchange rate changes on cash	(83)	66	(119)
Net increase in cash and cash equivalents	1,239	2,003	946
Cash and cash equivalents, beginning of year	10,639	8,636	7,690
Cash and cash equivalents, end of year	<u>\$ 11,878</u>	<u>\$ 10,639</u>	<u>\$ 8,636</u>

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,		
	2020	2019	2018
Supplemental disclosures of net cash paid (received) during the year:			
Income taxes	\$ (248)	\$ (293)	\$ 52
Interest	\$ 14	\$ 546	\$ 505
Non-cash investing and financing activities:			
Financing obligations related to prepaid expenses and other assets	\$ 511	\$ 203	\$ 264
Financing obligations related to property and equipment	\$ 102	\$ 148	\$ 97

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 software solutions 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, on-premise and hybrid deployments. 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 markets its products and services through regional sales representatives and independent distributors in the United States and international markets.

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.

Fair Value of Financial Instruments

The Company's financial instruments consist primarily of cash and cash equivalents, for which the current carrying amounts approximate fair market values based on quoted market prices or net asset value; warrant liabilities, for which the fair value of \$2.9 million at both December 31, 2020 and 2019 is based on the Company's estimates of assumptions that market participants would use in pricing the liabilities.

Revenue Recognition

The Company generates revenue through the sale of enterprise video content management software, 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 a single year agreement for thousands of dollars to a multi-year agreement for over a million dollars.

The Company follows a five-step model to assess each sale to a customer: identify the legally binding contract, identify the performance obligations, determine the transaction price, allocate the transaction price and determine whether revenue will be recognized at a point in time or over time.

Revenue is recognized upon transfer of control of promised products or services (i.e., performance obligations) to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for promised goods or services. The Company's performance obligations are satisfied either over time (for cloud-hosted software as a service, maintenance and support, and other services) or at a point in time (for software licenses and hardware).

The Company enters into contracts that can include various combinations of software licenses, appliances, maintenance and services, some of which are distinct and are accounted for as separate performance obligations. For contracts with multiple

performance obligations, the Company allocates the transaction price of the contract to each distinct performance obligation, on a relative basis using its standalone selling price.

The Company determines the standalone 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.

The Company's on-premise term software licenses and technical support for its on-premise term software licenses are distinct from each other. As a result, the software license is recognized upon transfer of control, which is at fulfillment. The revenue allocable to technical support is recognized ratably over the non-cancellable committed term of the agreement.

Other items relating to charges collected from customers include reimbursable expenses, shipping and handling charges and sales taxes charges. 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-cancellable 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 Sales 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-cancellable customer contracts and commission clawback provisions in the Company's sales compensation plans. Deferred commission costs included in prepaid expenses and other assets were \$745,000 and \$380,000 at December 31, 2020 and 2019, respectively. Deferred commission costs in other assets, non-current were \$276,000 and \$138,000 at December 31, 2020 and 2019, respectively. The Company recognized commissions expense of \$2.2 million and \$1.9 million during the years ended December 31, 2020 and 2019, 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.

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,		
	2020	2019	2018
Balance at beginning of year	\$ 45	\$ 61	\$ 21
Write-offs	(28)	(6)	—
Change in provision	25	(10)	40
Balance at end of year	\$ 42	\$ 45	\$ 61

Inventories

Inventories are stated at the lower of cost or net realizable value. 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 \$184,000 and \$350,000 as of December 31, 2020 and 2019, 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 five 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, 2020, 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."

Leases

The Company is a lessee in several non-cancellable operating leases, primarily for office space, and finance leases, for certain IT equipment. Beginning January 1, 2019, the Company accounts for leases in accordance with ASU 2016-02, *Leases*, and the related amendments (collectively, "Topic 842"). The Company determines if an arrangement is or contains a lease at contract inception and recognizes a right of use (ROU) asset and a lease liability at the lease commencement date.

For operating leases, the lease liability is initially and subsequently measured at the present value of the unpaid lease payments at the lease commencement date. For finance leases, the lease liability is initially measured in the same manner and at the same date as for operating leases, and is subsequently measured at amortized cost using the effective interest method.

Key estimates and judgments in accounting for leases under Topic 842 include how the Company determines the discount rate it uses to discount the unpaid lease payments to present value, lease term and lease payments.

- ASC 842 requires a lessee to discount its unpaid lease payments using the interest rate implicit in the lease or, if that rate cannot be readily determined, its incremental borrowing rate. Generally, the Company cannot determine the interest rate implicit in the lease because it does not have access to the lessor's information. Therefore, the Company uses its incremental borrowing rate as the discount rate for the lease. The Company's incremental borrowing rate for a lease is the rate of interest it would have to pay on a collateralized basis to borrow an amount equal to the lease payments under similar terms.
- The lease term for all of the Company's leases includes the non-cancellable period of the lease plus any additional periods covered by either a Company option to extend the lease that the Company is reasonably certain to exercise, or an option to extend the lease controlled by the lessor.

- Lease payments included in the measurement of the lease liability include the fixed payments owed over the lease term, termination penalties, amounts expected to be payable under a residual-value guarantee, and the exercise price of an option to purchase the asset if the Company is reasonably certain to exercise the option.

The ROU asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for lease payments made at or before the lease commencement date, plus any initial direct costs incurred less any lease incentives received.

For operating leases, the ROU asset is subsequently measured throughout the lease term at the carrying amount of the lease liability, plus initial direct costs, plus any prepaid lease payments, less the unamortized balance of lease incentives received. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

For finance leases, the ROU asset is subsequently amortized using the straight-line method from the lease commencement date to the earlier of the end of its useful life or the end of the lease term.

The Company has elected not to recognize ROU assets and lease liabilities for short-term leases that have a lease term of 12 months or less. The Company recognizes the lease payments associated with its short-term leases as an expense on a straight-line basis over the lease term.

Derivatives Liability

In conjunction with the debt financings completed in October 2016 and January 2018, the Company issued two warrants for the purchase of up to an aggregate of 239,286 shares of the Company's common stock, of which one representing 314,286 shares remained outstanding as of December 31, 2020. Subsequent to year end, a portion of the warrants were exercised in a cashless exercise. The exercise resulted in the issuance by the Company of 50,000 shares of common stock and an overall reduction of 75,703 warrant shares. On May 1, 2020, the Company canceled the ESW warrant in exchange for a note payable (see Note 4—"Commitments and Contingencies") which contained an embedded derivative liability that is measured on a recurring basis at fair value. On August 31, 2018, the Company issued a separate warrant to a sales partner for the purchase of up to 100,000 shares of the Company's common stock, which remained outstanding as of December 31, 2020. The Company accounts for the warrants, which are derivative financial instruments, as a current liability based upon the characteristics and provisions of the instruments. The warrants were 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 agreements, to receive cash payment or other consideration at the option of the holder in lieu of the Company's common shares.

A warrant liability is 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 option pricing models that are based on the individual characteristics of the warrants on the valuation date, which include the Company's stock price and 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 for the warrants, when applicable. Changes in the assumptions used could have a material impact on the resulting fair value of each warrant. The primary inputs affecting the value of the warrant liability are the Company's stock price and volatility in the Company's stock price, as well as assumptions about the probability and timing of certain events, such as a change in control or future equity offerings. 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. For awards subject to time-based vesting, the Company recognizes stock-based compensation on a straight-line basis over the requisite service period for the entire award. Compensation cost is recognized 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.

For awards subject to performance conditions, the Company accounts for compensation expense based upon the grant-date fair value of the awards applied to the best estimate of ultimate performance against the respective targets on a straight-line basis over the requisite vesting period of the awards. The performance conditions require management to make assumptions regarding the likelihood of achieving certain performance goals. Changes in these performance assumptions, as well as differences in actual results from management's estimates, could result in estimated or actual values different from previously estimated fair values.

Research and Development Costs

Costs related to research, design and development of products are expensed to research and development 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 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.

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 losses on foreign currency transactions for the years ended December 31, 2020, 2019 and 2018 were \$406,000, \$260,000 and \$55,000, respectively, and are included in other income (expense) 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 warrants. 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 dilutive warrants that are classified as a liability but may be settled in shares. For the years ended December 31, 2020, 2019 and 2018, the Company reported diluted net loss, as the impact of excluding the warrant income and related potentially dilutive shares was dilutive.

Comprehensive Income (Loss)

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

Recently Adopted Accounting Standards

In August 2018, the FASB issued ASU 2018-13, *Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement (Topic 820)* which changes the fair value measurement disclosure requirements of ASC 820. The ASU is effective for all entities for fiscal years beginning after December 15, 2019, including interim periods therein. The Company adopted ASU 2018-13 effective January 1, 2020. The impact of adopting this standard was not material to the Company's consolidated financial statements or disclosures.

Accounting Standards Not Yet Adopted

In August 2020, the FASB issued ASU 2020-06, *Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40)*. This update amends the guidance on convertible instruments and the derivatives scope exception for contracts in an entity's own equity and improves and amends the related EPS guidance for both Subtopics. This standard is effective for fiscal years and interim periods within those fiscal years beginning after December 15, 2021. Early adoption is permitted but no earlier than fiscal years beginning after December 15, 2020, including interim periods within those fiscal years. The Company is currently evaluating the impact of ASU 2020-06 on its consolidated financial statements and related disclosures.

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*, which simplifies the accounting for income taxes by removing exceptions within the general principles of Topic 740 regarding the calculation of deferred tax liabilities, the incremental approach for intraperiod tax allocation, and calculating income taxes in an interim period. In addition, the ASU adds clarifications to the accounting for franchise tax (or similar tax) which is partially based on income, evaluating tax basis of goodwill recognized from a business combination, and reflecting the effect of any enacted changes in tax laws or rates in the annual effective tax rate computation in the interim period that includes the enactment date. The ASU is effective for fiscal years beginning after December 15, 2020, and will be applied either retrospectively or prospectively based upon the applicable amendments. Early adoption is permitted. The Company does not believe the impact of adopting this standard will be material to its consolidated financial statements and related disclosures.

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, 2022. Early adoption is permitted. The Company does not believe the impact of adopting this standard will be material to its consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, *Measurement of Credit Losses on Financial Instruments*, which supersedes current guidance requiring recognition of credit losses when it is probable that a loss has been incurred. The standard requires the establishment of an allowance for estimated credit losses on financial assets, including trade and other receivables, at each reporting date. The ASU will result in earlier recognition of allowances for losses on trade and other receivables and other contractual rights to receive cash. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2022. Early adoption is permitted. The Company does not believe the impact of adopting this standard will be material to its consolidated financial statements and related disclosures.

2) Property and Equipment

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

	December 31,	
	2020	2019
Computer, network equipment and furniture	\$ 1,602	\$ 2,381
Leasehold improvements	23	735
Total property and equipment	1,625	3,116
Less accumulated depreciation and amortization	(1,376)	(2,520)
Total property and equipment, net	\$ 249	\$ 596

Depreciation and amortization expense associated with property and equipment was \$575,000, \$314,000 and \$438,000 for the years ended December 31, 2020, 2019 and 2018, respectively. During the year ended December 31, 2020, the Company surrendered leased office facilities in Minneapolis, London and Hyderabad and recorded an expense of \$280,000 for depreciation and amortization related leasehold improvements and certain equipment and furniture resulting from the reduction in their estimated useful lives; see Note 4—"Commitments and Contingencies—Leases." In addition, during the year ended

December 31, 2020, the Company disposed of approximately \$979,000 of cost and accumulated depreciation of fully depreciated fixed assets.

3) Intangible Assets and Goodwill

Intangible Assets

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

	December 31, 2020			
	Customer Relationships	Developed Technology	Trademarks / Trade-Names	Total
Original cost	\$ 4,945	\$ 8,256	\$ 2,184	\$ 15,385
Accumulated amortization	(3,861)	(8,151)	(1,230)	(13,242)
Net identifiable intangible assets	\$ 1,084	\$ 105	\$ 954	\$ 2,143

	December 31, 2019			
	Customer Relationships	Developed Technology	Trademarks / Trade-Names	Total
Original cost	\$ 4,878	\$ 8,135	\$ 2,182	\$ 15,195
Accumulated amortization	(3,293)	(7,741)	(1,086)	(12,120)
Net identifiable intangible assets	\$ 1,585	\$ 394	\$ 1,096	\$ 3,075

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

	Year Ended December 31,		
	2020	2019	2018
Amortization expense associated with the developed technology included in cost of revenues	\$ 286	\$ 455	\$ 1,024
Amortization expense associated with other acquired intangible assets included in operating expenses	657	757	904
Total amortization expense	\$ 943	\$ 1,212	\$ 1,928

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

Year Ending December 31,	
2021	\$ 752
2022	552
2023	309
2024	141
2025	141
Thereafter	248
Total	\$ 2,143

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 \$7.5 million at December 31, 2020 reflects the impact of foreign currency exchange rate fluctuations since the acquisition date.

As of December 31, 2020, 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

The Company is obligated under finance leases covering certain IT equipment that expire at various dates over the next three years. The Company also has non-cancellable operating leases, primarily for office space, that expire over the next three years. The Company has two leases that each contain a renewal option for a period of five years. Because at the inception of the leases the Company was not reasonably certain to exercise the options, the options were not considered in determining the lease terms under Topic 842, which was adopted January 1, 2019. In December 2020, the Company notified landlords for the two leases that it was surrendering its right to occupy the office spaces and thereby would not be exercising its option to renew and would be exercising the leases early termination clauses allowing the lease terms to end in May 2022 and August 2022. The impact of the reduction of the lease terms reduced the Company's operating lease liabilities by \$433,000.

During December 2020, the Company transitioned to permanent remote work for all of its personnel as part of its "Work from Wherever, Forever" policy. The Company closed three of its four offices due to its new remote work policy. As part of the policy, the Company's management determined that, effective December 31, 2020, the Company will no longer occupy the leased office space in Minneapolis, Minnesota, and London, England, which were primarily used for engineering, service, sales, marketing and administration, and the leased office space in Hyderabad, India, which was primarily used for software development and testing. The Company will continue to occupy its leased space in Burlingame, California, primarily for technology storage and research and development. Given the transition to permanent remote work, the Company recorded in the fourth quarter of 2020 a non-cash expense of approximately \$637,000 related to the right of use assets—operating leases for the three surrendered office leases. Additionally, the Company incurred a non-cash expense of \$280,000 in the fourth quarter of 2020 related to the surrender of certain leasehold improvements, office and computer equipment, and furniture at the leased premises.

During December 2020, the Company also entered into lease agreements associated with flexible shared workspace arrangements in Minneapolis, Minnesota, and London, England, and Hyderabad, India. The flexible shared workspace arrangement in Minneapolis, Minnesota has a lease term of 18 months and therefore is considered a lease under Topic 842. The other two flexible shared workspace arrangements are 12 months or less, and thus the Company has elected the practical expedient method and recognize the lease payments associated with its short-term leases as an expense on a straight-line basis over the lease term.

The Company intends to continue to pay all rental payments due and payable by the Company pursuant to the leases governing the leased premises.

Many of the Company's leases include escalation clauses, renewal options and/or termination options that are factored into its determination of lease payments under Topic 842 when reasonably certain. These options to extend or terminate a lease are at the Company's discretion. The Company has elected to take the practical expedient and not separate lease and non-lease components of contracts. The Company estimates its incremental borrowing rate to discount the lease payments based on information available at lease commencement under Topic 842. The Company's lease agreements do not contain any material residual value guarantees.

The components of lease cost were as follows (in thousands):

	December 31,	
	2020	2019
Operating lease cost	\$ 1,041	\$ 526
Finance lease cost:		
Amortization of right of use assets	112	106
Interest on lease liabilities	7	11
Total finance cost	119	117
Total lease cost	\$ 1,160	\$ 643

The Company's ROU assets and lease liabilities were reported in the consolidated balance sheet as follows (in thousands):

Leases	Classification on Balance Sheet	December 31,	
		2020	2019
Assets			
Operating	Right of use assets – operating leases	\$ 332	\$ 1,746
Finance	Property and equipment	124	130
Total lease assets		<u>\$ 456</u>	<u>\$ 1,876</u>
Liabilities			
Current			
Operating	Operating lease liabilities	\$ 735	\$ 587
Finance	Financing obligations	110	83
Non-current			
Operating	Operating lease liabilities, non-current	554	1,587
Finance	Financing obligations, non-current	75	83
Total lease liabilities		<u>\$ 1,474</u>	<u>\$ 2,340</u>

Other information related to leases is as follows (in thousands):

	December 31,	
	2020	2019
Supplemental cash flow information:		
Reduction in operating lease right of use assets and lease liabilities due to reassessment of lease terms	\$ 433	\$ —
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash flow from operating leases	\$ 522	\$ 432
Financing cash flow from finance leases	83	77
ROU assets obtained in exchange for new lease obligations		
Operating leases	\$ 47	\$ —
Finance leases	106	148
Weighted-average remaining lease term:		
Operating leases	1.7 years	3.8 years
Finance leases	2.2 years	2.0 years
Weighted-average discount rate:		
Operating leases	10.0 %	10.0 %
Finance leases	6.2 %	6.2 %

Future payments used in the measurement of lease liabilities on the consolidated balance sheet as of December 31, 2020 are as follows (in thousands):

	Operating leases	Finance leases
2021	\$ 811	\$ 117
2022	552	42
2023	—	37
2024	—	—
2025	—	—
Thereafter	—	—
Total undiscounted lease payments	<u>1,363</u>	<u>196</u>
Less amount representing interest	(74)	(11)
Present value of lease liabilities	<u>\$ 1,289</u>	<u>\$ 185</u>

Subleases

The Company determined that it had excess capacity at its Minneapolis, Minnesota headquarters and effective May 1, 2018 ceased using a portion of its leased space, subsequently making it available for occupancy by a sublessee. The Company also recorded a loss related to the exit activity of \$177,000 (net of adjustments for the derecognition of leasehold improvement and deferred rent balances related to the exit activity), which is included in other income (expense) for the year ended December 31, 2018.

Sublease income from the Company's subleases was \$105,000 and \$160,000 for the years ended December 31, 2019 and 2018. No sublease income was recognized for the year ended December 31, 2020.

Credit Agreement – ESW Holdings, Inc.

During 2020, the Company entered into a secured promissory note to ESW Holdings, Inc. ("note payable") as consideration for cancellation of its outstanding warrant to ESW Holdings, Inc. ("ESW warrant"). On May 1, 2020, the Company canceled the ESW warrant, which was for the purchase of up to 925,000 shares of Qumu's common stock at an exercise price of \$1.96 per share and expiring January 2028. Additionally, the terms of the warrant provided for a cash settlement in the event of a change of control transaction referred to as a Fundamental Transaction, computed using a Black-Scholes option pricing model with specified inputs stipulated in the warrant agreement. The fair value of the warrant instrument has historically been reported as a liability in Qumu's consolidated financial statements, and, for certain historical reporting periods since its issuance, the shares underlying the warrant instrument were dilutive in the calculation of earnings per share.

As consideration for the warrant cancellation, the Company entered into a note payable, having a face amount of \$1,833,000, which was less than the cash settlement amount of \$1,983,000 computed under the terms of the warrant agreement, due on April 1, 2021 and bearing no interest. The payment obligation of the note would be accelerated upon a Fundamental Transaction, and Qumu would be required to pay an additional \$150,000 to ESW Holdings, Inc. upon the closing of a Fundamental Transaction. The note payable provided for prepayment at any time without penalty. The Company paid the note payable on January 12, 2021 (see Note 15—"Subsequent Events.")

The note payable was recorded at its present value of future cash flows of \$1,833,000 discounted at 7.25% (prime plus 4.00%), which was \$1,715,000 at May 1, 2020. The value of the note payable will be accreted up to its face value at maturity. As of December 31, 2020, the carrying value of the note payable was \$1,800,000, which also approximated its fair value.

The note payable contains a \$150,000 contingent payment obligation due upon the closing of a Fundamental Transaction on or prior to the April 1, 2021 maturity date. This contingent payment obligation qualifies as an embedded derivative in accordance with ASC Topic 815, *Derivatives and Hedging*. The embedded derivative is measured at fair value and is remeasured at fair value each subsequent reporting period and reported on the Company's consolidated balance sheet as a derivative liability. Changes in fair value are recognized in other income (expense) in the consolidated statement of operations as "Decrease (increase) in fair value of derivative liability." See Note 5—"Fair Value Measurements."

In connection with the note, the Company and ESW Holdings, Inc. entered into a security agreement dated May 1, 2020 providing for a future security interest in certain assets of the Company that would not attach unless and until the occurrence of the Triggering Event specified therein. The termination of the merger agreement with Synacor, Inc. represented a Triggering Event, resulting in ESW Holdings, Inc. securing an interest in certain of Qumu's cash deposit accounts.

Contingencies

The Company is exposed to a number of asserted and unasserted claims encountered in the normal course of business. Legal costs related to loss contingencies are expensed as incurred. In the opinion of management, the resolution of these matters will not have a material adverse effect on the Company's 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.

As of December 31, 2020 and 2019, the following warrants for the purchase of Qumu's common stock were outstanding and exercisable:

Description	Number of underlying warrant shares		Warrant exercise price (per share)	Warrant expiration date
	December 31,			
	2020	2019		
Warrant issued in conjunction with October 2016 debt financing ("Hale warrant")	314,286	314,286	\$ 2.80	October 21, 2026
Warrant issued in conjunction with January 2018 debt financing ("ESW warrant")	—	925,000	\$ 1.96	January 12, 2028
Warrant issued to sales partner, iStudy Co., Ltd. ("iStudy warrant")	100,000	100,000	\$ 2.43	August 31, 2028
Total warrants outstanding	414,286	1,339,286		

On May 1, 2020, the Company canceled the ESW warrant in exchange for a note payable (see Note 4—"Commitments and Contingencies") which contained an embedded derivative liability that is measured on a recurring basis at fair value. The Company recorded non-cash income of \$103,000 for the year ended December 31, 2020 resulting from the change in fair value of the derivative liability.

The Hale warrant and ESW warrant contain a cash settlement feature upon the occurrence of a certain events, essentially the sale of the Company as defined in the warrant agreements. Upon a sale of the Company, the holder of the iStudy warrant may exercise the warrant or may elect to receive the same consideration as it would have been entitled to receive upon the occurrence of such transaction if it had been the holder of the shares then issuable upon such exercise of the warrant. All warrants are transferable. As a result of these features, the warrants are subject to derivative accounting as prescribed under ASC 815. Accordingly, a warrant liability was recorded in the Company's consolidated balance sheets at its fair value on the respective dates of the warrants' 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 (expense) in the consolidated statement of operations as "Decrease (increase) in fair value of warrant liability." During 2020 and 2019, the Company recorded non-cash expense of \$1,826,000 and \$141,000, respectively, and during 2018 the Company recorded non-cash income of \$368,000, resulting from the change in fair value of the warrant liability.

The Company estimates the fair value of this liability using option pricing models that are based on the individual characteristics of the warrants on the valuation date, which include the Company's stock price and 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 for the warrants, when applicable. Changes in the assumptions used could have a material impact on the resulting fair value of each warrant. The primary inputs affecting the value of the warrant liability are the Company's stock price and volatility in the Company's stock price, as well as assumptions about the probability and timing of certain events, such as a change in control or future equity offerings. 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's liabilities measured at fair value on a recurring basis and the fair value hierarchy utilized to determine such fair values is as follows at December 31, 2020 and 2019 (in thousands):

	Total Fair Value at December 31, 2020	Fair Value Measurements Using		
		Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Liabilities:				
Warrant liability - Hale	\$ 2,245	\$ —	\$ —	\$ 2,245
Warrant liability - iStudy	665	—	—	665
Warrant liability	\$ 2,910	\$ —	\$ —	\$ 2,910
Derivative liability	\$ 37	\$ —	\$ —	\$ 37
Total	\$ 2,947	\$ —	\$ —	\$ 2,947

	Total Fair Value at December 31, 2019	Fair Value Measurements Using		
		Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Liabilities:				
Derivative warrant liability - ESW warrant	\$ 2,149	\$ —	\$ —	\$ 2,149
Derivative warrant liability - Hale warrant	645	—	—	645
Derivative warrant liability - iStudy	145	—	—	145
Derivative warrant liability	<u>\$ 2,939</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 2,939</u>

The Company's evaluation of the probability and timing of a change in control represents an unobservable input (Level 3) that shortens or lengthens the expected term input of the option pricing model for all warrants, and generally correspondingly increases or decreases, respectively, the discounted value of the minimum cash payment component of the Hale warrant and, prior to its cancellation, the ESW warrant. Consequently, as of December 31, 2020 and 2019, the liability related to each warrant was classified as a Level 3 liability.

The Company's evaluation of the probability and timing of a change in control represents an unobservable input (Level 3) that increases or decreases the likelihood of triggering the note payable agreement's Fundamental Transaction contingency, resulting in Level 3 classification of the derivative liability.

The following table represents the significant unobservable input used in the fair value measurement of Level 3 warrant liability instruments:

	December 31, 2020
Probability-weighted timing of change in control	4.9 years

The following table summarizes the changes in fair value measurements for the year ended December 31, 2020:

	Warrant liability	Derivative liability	Total
Balance at December 31, 2019	\$ 2,939	\$ —	\$ 2,939
Cancellation of ESW warrant liability (Note 4)	(1,855)	—	(1,855)
Issuance of derivative liability upon cancellation of ESW warrant	—	140	140
Change in fair value	1,826	(103)	1,723
Balance at December 31, 2020	<u>\$ 2,910</u>	<u>\$ 37</u>	<u>\$ 2,947</u>

6) Stockholders' Equity

Common Stock Offering

On November 7, 2019, the Company completed a public equity offering, selling a total of 3,652,000 shares of common stock, which included the full exercise of the underwriters' option to purchase additional shares, for net proceeds, after underwriting discounts and offering expenses, of \$8.2 million. A portion of the net proceeds from this offering was used to repay the \$4.8 million of outstanding principal, accrued interest and prepayment fee under the Company's term loan credit agreement with ESW Holdings, Inc. on November 12, 2019. The Company's use of the \$3.4 million of remaining net proceeds from this offering is for working capital and general corporate purposes. Subsequent to December 31, 2020, in January 2021 the Company completed an additional public equity offering of 3,708,750 shares of its common stock which included the full exercise of the underwriters' option to purchase additional shares, for net proceeds, after underwriting discounts and offering expenses, of \$23.1 million; see Note 15—"Subsequent Events."

Common Stock Repurchase Program

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, 2020, 2019 and 2018. As of December 31, 2020, there were 778,365 shares available under the Board authorizations.

7) Revenue

Nature of Products and Services

Perpetual software licenses

The Company's perpetual software license arrangements grant customers the right to use the software indefinitely as it exists at the time of purchase. The Company recognizes revenue for distinct software licenses once the license period has begun and the software has been made available to the customer. Payments for perpetual software license contracts are generally received upon fulfillment of the software product.

Term software licenses

The Company's term software licenses differ from perpetual software licenses in that the customer's right to use the licensed product has a termination date. Term software licenses are recognized upon transfer of control, which is typically at fulfillment, resulting in up-front revenue recognition. The Company categorizes revenue from term software licenses as subscription, maintenance and support revenue in service revenues. Payments are generally received quarterly or annually in equal or near equal installments over the term of the agreement.

Cloud-hosted software as a service

Cloud-hosted software as a service (SaaS) arrangements grant customers the right to access and use the licensed products at the outset of an arrangement via third-party cloud providers. Updates are generally made available throughout the entire term of the arrangement, which is generally one to three years. The Company provides an online library and technical support resources in these cloud-hosted SaaS arrangements, which in conjunction with the SaaS license constitute a single, combined performance obligation, and revenue is recognized over the term of the license. Payments are generally received annually in advance of the service period.

Hardware

The Company sells appliances that are typically drop shipped from third-party suppliers selected by the Company. The transaction price allocated to the appliance is generally recognized as revenue at fulfillment when the customer obtains control of the product. Payments for appliances are generally received upon delivery of the hardware product.

Maintenance and support

Maintenance and support arrangements grant customers the right to software updates and technical support over the term of the maintenance and support contract. Revenue from maintenance and support is generally recognized ratably over the contract term beginning on the commencement date of each contract, which is upon fulfillment of the software obligation. Payments are generally received annually in advance of the service period.

Professional services and training

Professional services and training generally consist of software implementation, on-boarding services and best practices consulting. Revenue from professional services contracts is typically recognized as performed, generally using hours expended to measure progress. Services are generally invoiced monthly for work performed.

Revenues by product category and geography

The Company combines its products and services into three product categories and three geographic regions, based on customer location, as follows (in thousands):

	Year Ended December 31,		
	2020	2019	2018
Software licenses and appliances	\$ 6,762	\$ 4,903	\$ 5,814
Service			
Subscription, maintenance and support	19,555	18,249	17,132
Professional services and other	2,755	2,210	2,067
Total service	22,310	20,459	19,199
Total revenues	\$ 29,072	\$ 25,362	\$ 25,013

	Year Ended December 31,		
	2020	2019	2018
North America	\$ 20,073	\$ 16,588	\$ 16,639
Europe	7,693	7,527	6,453
Asia	1,306	1,247	1,921
Total	\$ 29,072	\$ 25,362	\$ 25,013

Substantially all revenue from North America is sourced from customers in the United States. The Company has determined that reporting non-domestic revenue by country is not practicable.

Significant Judgments

The Company's contracts with customers typically contain promises to transfer multiple products and services to a customer. Judgment is required to determine whether each product and/or service is considered to be a distinct performance obligation that should be accounted for separately under the contract. The Company allocates the transaction price to the distinct performance obligations based on relative standalone selling price ("SSP"). The Company estimates SSP by maximizing use of observable prices such as the prices charged to customers on a standalone basis, established prices lists, contractually stated prices, profit margins and other entity-specific factors, or by using information such as market conditions and other observable inputs. However, the selling prices of its software licenses and cloud-hosted SaaS arrangements are highly variable. Thus, the Company estimates SSP for software licenses and cloud-hosted SaaS arrangements using the residual approach, determined based on total transaction price less the SSP of other goods and services promised in the contract.

Determining whether licenses and services are distinct performance obligations that should be accounted for separately, or not distinct and thus accounted for together, requires significant judgment. In some arrangements, such as most of the Company's license arrangements, the Company has concluded that the licenses and associated services are distinct from each other. In others, like the Company's cloud-hosted SaaS arrangements, the license and certain services are not distinct from each other and therefore the Company has concluded that these promised goods and services are a single, combined performance obligation.

If a group of agreements are so closely related that they are, in effect, part of a single arrangement, such agreements are deemed to be one arrangement for revenue recognition purposes. The Company exercises significant judgment to evaluate the relevant facts and circumstances in determining whether the separate agreements should be accounted for separately or as, in substance, a single arrangement. The Company's judgments about whether a group of contracts comprise a single arrangement can affect the allocation of consideration to the distinct performance obligations, which could have an effect on results of operations for the periods involved.

The Company is required to estimate the total consideration expected to be received from contracts with customers. In limited circumstances, the consideration expected to be received is variable based on the specific terms of the contract or based on the Company's expectations of the term of the contract. Generally, the Company has not experienced significant returns from or refunds to customers. These estimates require significant judgment and the change in these estimates could have an effect on its results of operations during the periods involved.

Contract Balances

The timing of revenue recognition may differ from the timing of invoicing to customers and these timing differences result in receivables or contract liabilities (deferred revenue) on the Company's consolidated balance sheet. The Company records deferred revenue when revenue is recognized subsequent to invoicing.

The Company's balances for contract assets totaled \$467,000 and \$1.1 million as of December 31, 2020 and 2019, respectively. The Company's balances for contract liabilities, which are included in current and non-current deferred revenue, totaled \$16.4 million and \$11.6 million as of December 31, 2020 and 2019, respectively.

During the year ended December 31, 2020, the Company recognized \$9.8 million of revenue that was included in the deferred revenue balance at the beginning of the period. All other activity in deferred revenue is due to the timing of invoices in relation to the timing of revenue as described above.

Revenue allocated to remaining performance obligations represents the transaction price allocated to the performance obligations that are unsatisfied, or partially unsatisfied, which includes unearned revenue and amounts that will be invoiced and recognized as revenue in future periods. Contracted but unsatisfied performance obligations were approximately \$28.3 million as of December 31, 2020, of which the Company expects to recognize \$16.0 million of revenue over the next 12

months and the remainder thereafter. During the years ended December 31, 2020, 2019 and 2018, no revenue was recognized from performance obligations satisfied in previous periods.

Payment terms and conditions vary by contract type, although terms generally include a requirement of payment within 30 to 60 days. In instances where the timing of revenue recognition differs from the timing of invoicing, the Company has determined that its contracts generally do not include a significant financing component. The primary purpose of invoicing terms is to provide customers with simplified and predictable ways of purchasing the Company's products and services, and not to facilitate financing arrangements.

8) Stock-Based Compensation

The Company issues shares pursuant to the 2007 Stock Incentive Plan (the "2007 Plan"), a shareholder approved 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 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. With the exception of the awards described in the following paragraph, the stock options, restricted stock awards and restricted stock units granted during the year ended December 31, 2020 and 2019 were granted under the 2007 Plan.

In addition to awards granted under the 2007 Plan, the Company granted a non-qualified option to purchase 457,692 shares of its common stock to a newly hired chief executive officer on July 22, 2020, which was the first date of an open window period following the first day of employment. The option was granted outside of any shareholder-approved plan as an inducement to accept employment with the Company. The option has an exercise price equal to the closing price of the Company's common stock as reported by the Nasdaq Stock Market on the grant date, vest in three equal installments on each of the first three anniversaries of the date of grant and has a term of seven years. In other respects, the option was structured to mirror the terms of the options granted under the 2007 Plan and are subject to a stock option agreement between the Company and the employee.

During the year ended December 31, 2020, the Company's shareholders approved an amendment to the 2007 Plan to increase the number of shares authorized under the plan by 500,000 to a total of 3,730,320 shares, of which 640,205 were available for future grant.

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

	Year Ended December 31,		
	2020	2019	2018
Stock-based compensation cost charged against loss, before income tax benefit			
Stock options	\$ 424	\$ 331	\$ 326
Restricted stock and restricted stock units	754	521	566
Performance stock units	—	5	190
Total stock-based compensation costs	<u>\$ 1,178</u>	<u>\$ 857</u>	<u>\$ 1,082</u>
Stock-based compensation cost included in:			
Cost of revenues	\$ 36	\$ 26	\$ 34
Operating expenses	1,142	831	1,048
Total stock-based compensation costs	<u>\$ 1,178</u>	<u>\$ 857</u>	<u>\$ 1,082</u>

As of December 31, 2020, compensation expense of \$1.9 million related to non-vested option awards was not yet recognized and is expected to be recognized over a weighted-average period of 2.8 years. As of December 31, 2020, compensation expense of \$1.9 million related to non-vested shares and restricted share unit awards was not yet recognized and is expected to be recognized over a weighted-average period 2.9 years.

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,		
	2020	2019	2018
Expected life of options in years	4.50 - 4.75	4.70 - 4.75	4.54 - 4.75
Risk-free interest rate	0.2% - 0.4%	1.8% - 2.5%	2.6% - 2.9%
Expected volatility	75.3% - 76.3%	69.7% - 73.6%	69.6% - 70.5%
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. The Company has concluded that its stock option exercise history does not provide a reasonable basis upon which to estimate expected term, and therefore it uses the simplified method for determining the expected life of stock options granted to employees in 2020, 2019 and 2018, 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 ⁽¹⁾
Options outstanding at December 31, 2017	1,288	\$ 6.18		
Granted	758	2.24		
Exercised	—	—		
Canceled	(604)	7.60		
Options outstanding at December 31, 2018	1,442	3.51		
Granted	39	3.11		
Exercised	(40)	2.55		
Canceled	(381)	5.20		
Options outstanding at December 31, 2019	1,060	2.93		
Granted	658	4.90		
Exercised	(295)	2.63		
Canceled	(158)	4.31		
Options outstanding at December 31, 2020	1,265	3.85	2.9	\$ 5,317
Total vested and expected to vest as of December 31, 2020	1,265	3.85	2.9	\$ 5,317
Options exercisable as of:				
December 31, 2018	572	\$ 5.29		
December 31, 2019	540	3.51		
December 31, 2020	394	2.96	3.5	\$ 2,069

⁽¹⁾ 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,		
	2020	2019	2018
Fair value of options granted	\$ 1,891	\$ 71	\$ 982
Per share weighted average fair value of options granted	\$ 2.87	\$ 1.83	\$ 1.30
Total intrinsic value of stock options exercised	\$ 707	\$ 55	\$ —

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, 2017	218	\$ 3.87
Granted	279	2.17
Vested	(186)	3.66
Canceled	(3)	14.78
Nonvested at December 31, 2018	308	2.38
Granted	230	3.16
Vested	(198)	2.53
Canceled	(31)	2.25
Nonvested at December 31, 2019	309	2.87
Granted	577	4.50
Vested	(244)	2.23
Canceled	(114)	3.22
Nonvested at December 31, 2020	528	\$ 4.52

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

	Year Ended December 31,		
	2020	2019	2018
Per share weighted average grant-date fair value of restricted stock and restricted stock units granted	\$ 4.50	\$ 3.16	\$ 2.17
Total fair value of restricted stock and restricted stock units vested	\$ 903	\$ 749	\$ 377

Performance Stock Units

The Company granted performance stock units during 2018 ("2018 Performance Stock Units") and 2017 ("2017 Performance Stock Units"). 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 each award. The percentage achievement for the performance stock units may not exceed 100%.

A summary of performance stock units activity is presented in the table below (in thousands):

	Number of Units		
	2018 Performance Stock Units	2017 Performance Stock Units	Total Performance Stock Units
Nonvested at December 31, 2017	—	140	140
Granted	169	—	169
Vested	—	(116)	(116)
Canceled	(21)	(24)	(45)
Nonvested at December 31, 2018	148	—	148
Granted	—	—	—
Vested	(98)	—	(98)
Canceled	(9)	—	(9)
Nonvested at December 31, 2019	41	—	41
Granted	—	—	—
Vested	—	—	—
Canceled	(41)	—	(41)
Nonvested at December 31, 2020	—	—	—

In settlement of vested performance stock units granted in 2018, during the year ended December 31, 2019 the Company issued 8,492 shares of restricted stock, which was equal to the number of vested 2018 performance stock units multiplied by the performance goals achievement of 100%. At December 31, 2019, there were 40,599 shares of common stock underlying the outstanding 2018 performance stock units that were subject to vesting upon the achievement of performance goals for the performance period of January 1, 2019 to December 31, 2019. The outstanding unvested 2018 performance stock units were canceled on February 10, 2020 upon determination by the Compensation Committee of the Company's Board of Directors that

the performance metric for the 2019 performance period was not achieved. Accordingly, as of December 31, 2020, there were no performance stock units outstanding.

The 2017 Performance Stock Units consisted of 140,493 units outstanding as of December 31, 2017, of which 116,168 vested during 2018. In settlement of the vested 2017 Performance Stock Units, during 2018 the Company issued 25,726 shares upon vesting, which was equal to the number of 2017 Performance Stock Units vested multiplied by the weighted percentage achievement of the performance goals for the 2017 Incentive Plan of approximately 22.1%. With the vesting and settlement of the 2017 Performance Stock Units in shares, the 2017 Performance Stock Units terminated.

9) 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 100% of pretax compensation subject to Internal Revenue Code limitations. The Company matches a percentage of employees' contributions. Matching contributions totaled \$303,000, \$296,000 and \$281,000 for the years ended December 31, 2020, 2019 and 2018, respectively.

10) Sale of Investment in Software Company

During 2018, Canon Inc. ("Canon") acquired all of the outstanding shares of BriefCam, Ltd. ("BriefCam"), a privately-held Israeli company, and the Company received \$9.7 million from the closing proceeds for its convertible preferred shares of BriefCam, as well as received \$100,000 following the satisfaction of a contingency, resulting in a gain on sale of \$6.6 million during the year ended December 31, 2018. Additionally, during the year ended December 31, 2019, the Company recognized a gain of \$1,000 related to the release of cash from escrow in connection with the sale.

11) Income Taxes

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

	Year Ended December 31,		
	2020	2019	2018
Loss before income taxes:			
Domestic	\$ (7,435)	\$ (5,466)	\$ (1,631)
Foreign	(2,071)	(1,171)	(1,688)
Total loss before income taxes	\$ (9,506)	\$ (6,637)	\$ (3,319)

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

	Year Ended December 31,		
	2020	2019	2018
Current:			
U.S. Federal	\$ —	\$ —	\$ (8)
State	61	17	591
Foreign	(368)	(246)	(314)
Total current	(307)	(229)	269
Deferred:			
U.S. Federal	—	—	—
State	(8)	8	11
Foreign	9	27	18
Total deferred	1	35	29
Total provision for income tax expense (benefit)	\$ (306)	\$ (194)	\$ 298

Total income tax expense (benefit) differs from the expected income tax expense (benefit), computed by applying the federal statutory rate of 21% in 2020, 2019 and 2018, to earnings before income taxes as follows (in thousands):

	Year Ended December 31,		
	2020	2019	2018
Expected income tax benefit	\$ (1,997)	\$ (1,393)	\$ (697)
Federal R&D credit	(67)	(54)	(32)
Refundable AMT credit	—	—	(12)
Effect of deferred rate change	—	—	8
Foreign tax	76	27	38
Non-deductible equity expense	258	15	13
Non-deductible stock issuance costs	(82)	3	85
Foreign unremitted earnings	—	—	130
Change in valuation allowance	1,655	1,379	408
State income taxes, net of federal tax effect	(168)	(219)	455
Other, net	19	48	(98)
Total provision for income tax expense (benefit)	<u>\$ (306)</u>	<u>\$ (194)</u>	<u>\$ 298</u>

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

	December 31,	
	2020	2019
Deferred tax assets:		
Inventory provisions and uniform capitalization	\$ 1	\$ —
Accounts receivable allowances	8	8
Non-qualified stock option and restricted stock expense	245	220
Deferred revenue	302	218
Lease liabilities	199	290
Loss and credit carryforwards of U.S. subsidiary	25,844	24,717
Loss carryforward of foreign subsidiaries	91	145
Excess interest expense	420	496
Other accruals and reserves	326	101
Total deferred tax assets before valuation allowance	<u>27,436</u>	<u>26,195</u>
Less valuation allowance	(26,999)	(25,406)
Total deferred tax assets	<u>\$ 437</u>	<u>\$ 789</u>
Deferred tax liabilities:		
Acquired intangibles	\$ (347)	\$ (465)
Right of use assets	(78)	(207)
Fixed assets	7	(26)
Other	—	(70)
Total deferred tax liabilities	<u>\$ (418)</u>	<u>\$ (768)</u>
Total net deferred tax assets	<u>\$ 19</u>	<u>\$ 21</u>

As of December 31, 2020, the Company had \$94.0 million of net operating loss carryforwards for U.S. federal tax purposes and \$66.3 million of net operating loss carryforwards for various states. The loss carryforwards for state tax purposes will expire between 2021 and 2038 if not utilized. At December 31, 2020, \$85.8 million of federal net operating loss carryforwards (losses originating in tax years beginning prior to January 1, 2018), expire in years 2022 through 2037, and federal net operating loss of \$8.2 million generated since 2018 can be carryforward indefinitely and utilization is limited to 80% of taxable income. The net operating loss expiration related to the state income tax returns that the Company files varies by state.

As of December 31, 2020, the Company had federal and state research and development credit carryforwards of \$3.5 million, net of Section 383 limitations, which will begin to expire in 2023 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, 2020 and 2019, based on the consideration of all available positive and negative evidence, using the “more likely than not” standard required by ASC 740, *Income Taxes*. During 2019 the U.K. shifted from a net deferred tax liability to net deferred tax asset position. As such, the Company no longer believes that it is more likely than not that the future results of the operations in the U.K. will generate sufficient taxable income to utilize the deferred tax assets. As of December 31, 2020 and 2019, a full valuation allowance has been applied against its U.K. deferred tax assets. As of December 31, 2020, the Company had a cumulative foreign tax loss carryforward of \$2.1 million in the U.K. This amount can be carried forward indefinitely. The valuation allowance will be reviewed quarterly and will be maintained until sufficient positive evidence exists to support the reversal of the valuation allowance.

On December 22, 2017, the Tax Cuts and Jobs Act (the Tax Act) was enacted, significantly altering U.S. corporate income tax law. Many of the new elements of the Tax Act became effective during 2018, including limitations on the deductibility of interest expense, limitations on executive compensation, as well as international provisions. The Company has considered and incorporated the new provisions into its tax calculations. Such provisions included in the Tax Act did not significantly impact the Company in 2020 and 2019, due to the full valuation allowance on deferred tax assets.

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 on cash given that the future tax consequences of repatriation are expected to be insignificant as a result of the Tax Cuts and Jobs Act of 2017.

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,	
	2020	2019
Gross unrecognized tax benefits at beginning of year	\$ 1,780	\$ 1,724
Increases related to:		
Prior year income tax positions	—	7
Current year income tax positions	57	49
Decreases related to:		
Prior year income tax positions - closure of statute of limitations	(1)	—
Gross unrecognized tax benefits at end of year	\$ 1,836	\$ 1,780

Included in the balance of unrecognized tax benefits at December 31, 2020 are potential benefits of \$08,000 that, if recognized, would affect the effective tax rate. The change in the liability for gross unrecognized tax benefits reflects an increase in reserves established for federal and state uncertain tax positions. The Company does not anticipate that the total amount of unrecognized tax benefits as of December 31, 2020 will change significantly by December 31, 2021.

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 \$50,000 and \$28,000 on a gross basis at December 31, 2020 and 2019, 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 \$22,300 and \$22,000 in 2020 and 2019, respectively.

The Company files income tax returns in the U.S. federal jurisdiction and various state and foreign jurisdictions. As of December 31, 2020, the Company was no longer subject to income tax examinations for taxable years before 2018 in the case of U.S. federal taxing authorities, and taxable years generally before 2016 in the case of major state and local taxing jurisdictions.

12) Computation of Net Loss Per Share of Common Stock

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

	Year Ended December 31,		
	2020	2019	2018
Net loss per share – basic			
Net loss	\$ (9,200)	\$ (6,443)	\$ (3,617)
Weighted average shares outstanding – basic	13,612	10,395	9,499
Net loss per share – basic	<u>\$ (0.68)</u>	<u>\$ (0.62)</u>	<u>\$ (0.38)</u>
Net loss per share – diluted			
Loss attributable to common shareholders:			
Net loss	\$ (9,200)	\$ (6,443)	\$ (3,617)
Numerator effect of dilutive securities			
Warrants	(294)	(105)	(161)
Loss attributable to common shareholders	<u>\$ (9,494)</u>	<u>\$ (6,548)</u>	<u>\$ (3,778)</u>
Weighted averages shares outstanding – diluted:			
Weighted average shares outstanding – basic	13,612	10,395	9,499
Denominator effect of dilutive securities			
Warrants	15	19	107
Weighted average shares outstanding – diluted	<u>13,627</u>	<u>10,414</u>	<u>9,606</u>
Net loss per share – diluted	<u>\$ (0.70)</u>	<u>\$ (0.63)</u>	<u>\$ (0.39)</u>

Stock options, warrants 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,		
	2020	2019	2018
Stock options	1,150	1,299	1,273
Warrants	414	1,025	348
Restricted stock units	284	124	150
Total anti-dilutive	<u>1,848</u>	<u>2,448</u>	<u>1,771</u>

13) Significant Customers and Geographic Data

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

Revenues	Year Ended December 31,		
	2020	2019	2018
Customer A	\$ 6,442	*	*

* No customer exceeded 10% of total revenue

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

Accounts Receivable	December 31,	
	2020	2019
Customer B	\$ 918	*
Customer C	\$ 535	\$ 677
Customer D	*	\$ 550
Customer E	*	\$ 471

* Accounts receivable balance did not exceed 10%

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

	December 31,	
	2020	2019
United States	\$ 180	\$ 442
United Kingdom	34	96
India	35	58
Total	\$ 249	\$ 596

14) Termination of Merger Agreement with Synacor, Inc.

As previously disclosed, on February 11, 2020, Qumu Corporation entered into an Agreement and Plan of Merger and Reorganization (the “Merger Agreement”) with Synacor, Inc. (“Synacor”) and Quantum Merger Sub I, Inc., a direct, wholly owned subsidiary of Synacor (“Merger Sub”).

On June 29, 2020, Qumu, Synacor and Merger Sub entered into an agreement to terminate the Merger Agreement (the “Mutual Termination Agreement”). Pursuant to the Mutual Termination Agreement, the Merger Agreement was terminated and the parties provided a mutual release of claims relating to the Merger Agreement and related agreements.

Pursuant to the terms of the Mutual Termination Agreement, Qumu paid Synacor \$250,000 on June 29, 2020 and is obligated to pay an additional \$1.45 million if (a) within 15 months following June 29, 2020, an Acquisition Transaction in respect of Qumu is consummated with a Person other than Synacor or (b) (i) within 15 months following June 29, 2020, Qumu enters into a binding definitive agreement for an Acquisition Transaction with a Person other than Synacor and (ii) such Acquisition Transaction is ultimately consummated (whether or not during the foregoing 15 months period). For the purposes of the Mutual Termination Agreement, all references to 15% or 85% in the definition of “Acquisition Transaction” of the Merger Agreement shall be replaced by 50%.

During the year ended December 31, 2020, the Company recognized transaction-related expenses related to the Company's Merger Agreement with Synacor totaling \$.6 million, which is included within general and administrative expenses in the Company's consolidated statement of operations.

15) Subsequent Events

Hale Warrant Exercise

On January 12, 2021, HCP-FVD, LLC, the holder of the outstanding Hale warrant to purchase 314,286 shares of common stock, exercised a portion of the warrant in a cashless exercise. The exercise resulted in the issuance by the Company of 50,000 shares of common stock and an overall reduction of 75,703 warrant shares. Immediately following the exercise, HCP-FVD, LLC retains the right under the warrant to purchase 238,583 shares of the Company's common stock at an exercise price of \$.80 per share through October 21, 2026. The estimated fair value of the exercised warrants of \$561,000 will be reflected as a reclassification from warrant liability to stockholders' equity in the Company's consolidated balance sheet.

Wells Fargo Credit Facility

On January 15, 2021, the Company entered into and closed on the Loan and Security Agreement (the “Loan Agreement”) with Wells Fargo Bank, National Association providing for a revolving line of credit.

Concurrently with the closing of the Loan Agreement, the Company received an advance of approximately \$1,840,000 from the line of credit and used \$1,832,888 to repay the face amount of that certain secured promissory note dated May 1, 2020 to ESW Holdings, Inc., which represented the deferred purchase price of the Company's purchase and termination of the warrant to ESW Holdings, Inc. dated January 12, 2018 for 925,000 shares of the Company's common stock. In connection with the repayment of the ESW Note, the related security agreement May 1, 2020 between the Company and ESW Holdings, Inc. was terminated. As provided in the ESW Note, the Company will be obligated to pay ESW Holdings, Inc. an additional \$150,000 if a “Fundamental Transaction,” as defined in the ESW Note, occurs prior to April 1, 2021.

Under the Loan Agreement, the revolving line has a maximum availability for borrowing of the lesser of \$10 million or a defined borrowing base, less any outstanding letters of credit and the outstanding principal balance of any advances. The borrowing base is six times the prior quarter's monthly average recurring revenue from eligible customer accounts. The revolving line has a January 15, 2023 maturity date and amounts borrowed bear interest at a floating per annum rate equal to 1.25% above Wells Fargo's prime rate, currently 3.25%. The Company will also be obligated to pay Wells Fargo an unused

revolving line facility fee quarterly in arrears of 0.25% per annum of the average unused portion of the revolving line of credit during such quarterly period.

The Loan Agreement contains customary affirmative and negative covenants and requirements relating to the Company and its operations. The affirmative covenants also require the Company to maintain at all times minimum quarterly recurring revenue and minimum liquidity. As of the last day of each fiscal quarter, commencing with the fiscal quarter ending March 31, 2021, the Company's recurring revenue may not be less than the amounts reflected in a financial covenant side letter agreement entered into between the Company and Wells Fargo on January 15, 2021 (the "Letter Agreement"). The Letter Agreement specifies minimum quarterly recurring revenue for the first, second, third and fourth quarters of 2021 of \$5 million, \$5 million, \$6 million and \$8 million, respectively. The Letter Agreement also specifies minimum quarterly recurring revenue of \$8 million for all quarters of 2022. The Loan Agreement provides that the Company liquidity, tested as of the last day of each fiscal quarter, of not less than \$ million, with liquidity generally defined as including the aggregate amount of unrestricted and unencumbered cash and cash equivalents held at such time by the Company in accounts maintained with Wells Fargo or its affiliates in the United States, and the availability under the line of credit.

Pursuant to the Loan Agreement, the Company granted a security interest in substantially all of its properties, rights and assets (including certain equity interests of the Company's subsidiaries).

Public Offering

On January 29, 2021, the Company closed on the sale of its common stock in a follow-on public offering of the Company's common stock, par value \$0.01 per share, with Craig-Hallum Capital Group LLC, as underwriter. In the follow-on offering, the Company issued and sold 3,225,000 base shares plus an additional 483,750 over-allotment shares to the underwriter at a price of \$6.31125 per share. The price to the public in the offering was \$6.75 per share. The net proceeds to the Company for the issuance of the total 3,708,750 shares, after deducting underwriting discounts and commissions and other offering expenses, was approximately \$23.1 million.

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, TJ Kennedy, and our Chief Financial Officer, David G. Ristow, have evaluated the Company's disclosure controls and procedures as of December 31, 2020. Our Chief Executive Officer and our Chief Financial Officer used the definition of "disclosure controls and procedures" as such term is defined in Rule 13a-15(e) and 15d-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, 2020.

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, 2020.

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, 2020 that have materially affected, or are reasonable likely to materially affect, the Company's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

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 2021 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 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) Financial Statements. See Part II, Item 8 of this report
- (b) Exhibit Index

Exhibit No.	Description
3.1	1992 Restated Articles of Incorporation of Rimage Corporation (Incorporated by reference to Exhibit 3.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 2017).
3.2	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)).
3.3	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).
3.4	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).
3.5	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).
4.1	Description of the Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934 (Incorporated by reference to Exhibit 4.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 2019).
10.1	Second Amended and Restated 2007 Stock Incentive Plan * (Incorporated by reference to Appendix A to the Company's Proxy Statement for the 2018 Annual Meeting of Shareholders held on May 10, 2018).
10.2	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 for the year ended December 31, 2009).
10.3	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).
10.4	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).
10.5	Amendment No. 3 dated January 18, 2019 to 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 Quarterly Report on Form 10-Q for the quarter ended March 31, 2019).
10.6	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).
10.7	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).
10.8	Letter Agreement effective March 3, 2020 by and between Qumu Corporation and David G. Ristow * (Incorporated by reference to Exhibit 10.11 to the Company's Annual Report on Form 10-K for the year ended December 31, 2019).
10.9	Secured Promissory Note dated May 1, 2020 by and between Qumu Corporation and ESW Holdings, Inc. (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated May 7, 2020).
10.10	Security Agreement dated May 1, 2020 by and between Qumu Corporation and ESW Holdings, Inc. (Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K dated May 7, 2020).
10.11	Mutual Termination Agreement dated June 29, 2020 by and among Qumu Corporation, Synacor, Inc. and Quantum Merger Sub I, Inc. (Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated June 29, 2020).
10.12	Stock Option Agreement dated July 22, 2020 by and between Qumu Corporation and TJ Kennedy * (Incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on 10-Q for the quarter ended September 30, 2020).
21.1	Subsidiaries of Qumu Corporation.
23.1	Consent of RSM US LLP, Independent Registered Public Accounting Firm.
23.2	Consent of KPMG LLP, Independent Registered Public Accounting Firm.
31.1	Certificate of Chief Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) of the Exchange Act.
31.2	Certificate of Chief Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) of the Exchange Act.
32	Certification pursuant to 18 U.S.C. §1350.
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.

ITEM 16. FORM 10-K SUMMARY

Not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Dated: March 9, 2021

QUMU CORPORATION

By: /s/ TJ Kennedy

TJ Kennedy
Chief Executive Officer

By: /s/ David G. Ristow

David G. Ristow
Chief Financial Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated. Each person whose signature appears below constitutes and appoints TJ Kennedy and David G. Ristow as his or her true and lawful attorneys-in-fact and agents, each acting alone, with full power of substitution and re-substitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K and to file the same, with all exhibits thereto, and other documents in connection therewith, with the U.S. Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, each acting alone, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all said attorneys-in-fact and agents, each acting alone, or his substitute or substitutes, may lawfully do or cause to be done by virtue thereof.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ TJ Kennedy</u> TJ Kennedy	Chief Executive Officer (Principal Executive Officer), Director	March 9, 2021
<u>/s/ David G. Ristow</u> David G. Ristow	Chief Financial Officer (Principal Financial and Accounting Officer)	March 9, 2021
<u>/s/ Mary E. Chowning</u> Mary E. Chowning	Director	March 9, 2021
<u>/s/ Neil E. Cox</u> Neil E. Cox	Director	March 9, 2021
<u>/s/ Daniel R. Fishback</u> Daniel R. Fishback	Director	March 9, 2021
<u>/s/ Edward Horowitz</u> Edward Horowitz	Director	March 9, 2021
<u>/s/ Kenan Lucas</u> Kenan Lucas	Director	March 9, 2021
<u>/s/ Robert F. Olson</u> Robert F. Olson	Director	March 9, 2021

SUBSIDIARIES OF QUMU CORPORATION AS OF DECEMBER 31, 2020

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% ⁽¹⁾
Qumu Middle East FZ-LLC	Dubai	100.0% ⁽¹⁾
Qumu Ltd.	United Kingdom	100.0% ⁽¹⁾
Qumu Japan Co., Ltd.	Japan	100.0%
Qumu (Singapore) Pte. Ltd	Singapore	100.0%

⁽¹⁾100% owned by Qumu UK Holdings, Ltd.

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statements (Nos. 333-215549, 333-206270, 333-197520, 333-161262, 333-147344, 333-34788, 333-53875, 333-69550, 333-106901, 333-127244, 333-176145, 333-177836, 333-187616, 333-226694 and 333-249832) on Form S-8 and Registration Statements (Nos. 333-215551, 333-213070, 333-224200, 333-233470 and 333-252388) on Form S-3 of Qumu Corporation and its subsidiaries of our report dated March 9, 2021, relating to the consolidated financial statements of Qumu Corporation and its subsidiaries, appearing in this Annual Report on Form 10-K of Qumu Corporation for the year ended December 31, 2020.

/s/ RSM US LLP

Minneapolis, Minnesota
March 9, 2021

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Qumu Corporation

We consent to the use of our report dated March 15, 2019 with respect to the consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for the year ended December 31, 2018, and the related notes, incorporated herein by reference, in the annual report on Form 10-K to be filed on March 9, 2021.

Our report refers to a change in the method of accounting for revenue.

/s/ KPMG LLP

Minneapolis, Minnesota
March 9, 2021

CERTIFICATION

I, TJ Kennedy, 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 9, 2021

/s/ TJ Kennedy
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 9, 2021

/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, 2020, 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 9, 2021

/s/ TJ Kennedy
Chief Executive Officer

/s/ David G. Ristow
Chief Financial Officer