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

FORM 10-K
(Mark One)

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

For the fiscal year ended March 31, 2022
or

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

For the transition period from ___ to ___

Commission File Number 001-13449

Quantum®

Quantum Corporation
(Exact name of registrant as specified in its charter)

Delaware	**94-2665054**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
224 Airport Parkway Suite 550 San Jose CA	**95110**
(Address of Principal Executive Offices)	(Zip Code)

(408) 944-4000
Registrant's telephone number, including area code

(Former name, former address, and former fiscal year, if changed since last report)

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 per share	QMCO	Nasdaq Global Market

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 (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).	▯	Yes	☐	No

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

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 ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b) by the registered public accounting firm that prepared or issued its audit report. ▯

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

As of the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of the registrant's common stock held by its non-affiliates, computed by reference to the price at which the common stock was last sold, was $134,585,491.

As of June 1, 2022, there were 101,813,778 shares of Quantum Corporation's common stock issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

The portions of the registrant's proxy statement to be filed in connection with the Annual Meeting of Stockholders to be held in 2022 have been incorporated by reference into Part III of this Annual Report on Form 10-K.

QUANTUM CORPORATION

ANNUAL REPORT ON FORM 10-K
For the Year Ended March 31, 2022

Table of Contents

As used in this Annual Report on Form 10-K (this "Annual Report"), the terms "Quantum," "we," "us," and "our" refer to Quantum Corporation and its subsidiaries taken as a whole, unless otherwise noted or unless the context indicates otherwise.

Note Regarding Forward-Looking Statements

This Annual Report contains forward-looking statements. All statements contained in this report other than statements of historical fact, including statements regarding COVID-19's anticipated impacts on our business, our future operating results and financial position, our business strategy and plans, our market growth and trends, and our objectives for future operations, are forward-looking statements. The words “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “expect,” “could,” “would,” “project,” “plan,” “potentially,” “preliminary,” “likely,” and similar expressions are intended to identify forward-looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives, and financial needs. These forward-looking statements are subject to a number of risks, uncertainties, and assumptions, including those described under Item 1A. Moreover, we operate in a competitive and changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the effect of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties, and assumptions, the future events and trends discussed in this report may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. Accordingly, you should not rely on forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, performance, or events and circumstances reflected in the forward-looking statements will be achieved or occur. We undertake no obligation to update any of these forward-looking statements for any reason after the date of this report or to conform these statements to actual results or revised expectations.

PART I

ITEM 1. BUSINESS

Overview

Quantum is a data company with a portfolio of products and services for storing, managing, protecting, archiving, and enriching digital data. We specialize in solutions for video data, images, and other large files because this “unstructured” data represents more than 80% of all data being created, according to leading industry analyst firms. This unstructured data has driven a fundamental shift in the nature of data and the role data plays in every industry. It is exponentially larger than traditional corporate data, contains immense value, and must be captured, protected, and stored for many years, decades, and longer.

We recognized this fundamental shift in the data landscape, and through a series of strategic acquisitions and internal innovation, we have transformed the company to offer end to end solutions for video and unstructured data. Quantum is a leading provider of cold storage infrastructure to the world’s largest hyperscalers. The world’s leading studios, broadcasters, sports teams, and visual effects studios rely on Quantum to create and archive content. The largest airports, hotels, and critical infrastructure rely on Quantum to capture mission-critical video surveillance data. And many of the world’s leading government agencies, research institutions, and well-known brands everywhere rely on Quantum to store, manage, and protect the data that is at the core of digital transformation.

Products and Services

Our portfolio of products and services now includes:

- **Asset Management and Workflow Orchestration Software** to index, analyze, enrich video and image data.
- **Primary Storage Systems** for high-speed data ingest and capture – optimized for video and images with the fastest streaming performance, and highly available and resilient designs.
- **Secondary Storage Systems** for large scale data storage, data and cyber protection, active and deep archives.
- **A Broad Portfolio of Services** including 24x7x365 support services, deployment and consulting services, education services, and Quantum-as-a-Service. Our services are delivered with a combination of expertise and technology, including the MyQuantum Service Delivery Platform, and Cloud-Based Analytics (CBA) AIOps software for proactive remote monitoring.

CatDV Asset Management Platform and Workflow Orchestration Software

CatDV is an agile asset management and workflow orchestration platform that provides powerful asset management, automation, and collaboration tools for any organization that manages large volumes of digital media. The software application indexes and catalogs video files, digital images, audio files, and other types of files. CatDV helps organizations browse their content and streamline their workflows. CatDV can be used with StorNext file storage, with ActiveScale object storage, as well as third party storage.

StorNext High-Performance File System Software

At the core of our high-performance shared storage product line is our StorNext software that enables high-speed ingest, editing, processing and management of digital video and image datasets. Major broadcasters and studios, post-production companies including streaming services, sports franchises, and corporations around the world use StorNext.

StorNext software is both a shared file system and data management platform. StorNext provides fast streaming performance and data access, a shared file storage environment for macOS, Microsoft Windows, and Linux workstations, and intelligent data management to protect data across its lifecycle.

StorNext is sold as software based on a subscription licensing model, runs on standard servers, and is sold with storage arrays that are used within the StorNext environment.

These storage arrays include:

- **Quantum F-Series:** A line of ultra-fast, highly available non-volatile memory express ("NVMe") storage servers for editing, rendering, and processing of video content and other large unstructured datasets.
- **Quantum H-Series:** A line of high-performance storage arrays, offered with either hard disk drives ("HDDs"), solid state drives ("SSDs"), or some combination of the two.
- **Quantum QXS-Series:** A line of high performance storage arrays, offered with either HDD, SSD, or some combination of the two. Customers are now deploying our StorNext file system with a combination of NVMe storage and more traditional SSD and HDD storage to balance cost and performance.

Our StorNext software can also manage data across different types, or pools, of storage, such as public cloud object stores and disk-based object storage systems. StorNext supports a broad range of both private and public object stores to meet customer needs. For customers that archive video and image data for years, StorNext is also integrated with our tape storage, and can assign infrequently used but important data to tape to create a large-scale active archive.

Solutions for Video Surveillance Recording and Retention

We offer a broad portfolio of products designed for the capture and analysis of video surveillance and security. These products include network video recording servers, as well as hyper-converged storage systems for video surveillance management and recording. In addition, we offer appliances designed for video surveillance analytics and to run different types of access control systems.

Quantum ActiveScale™ Object Storage

With the acquisition of the ActiveScale object storage business from Western Digital that was completed in March of 2020, we now offer leading object storage systems for massive-scale, online content repositories such as media archives, genome sequencing data repositories, and big data lakes.

ActiveScale object storage provides high levels of data durability and facilitates the management of many petabytes and billions of objects. ActiveScale object storage software is sold via a subscription licensing model, stores data in object format and uses patented erasure-encoding software to protect data across storage nodes and across multiple geographic sites.

DXi Backup Appliances

DXi backup appliances provide high-performance, scalable storage for backup and multi-site disaster recovery. Advanced deduplication technology maximizes data reduction, replication enables multi-site protection and data recovery, and a high-efficiency design enables customers to maximize backup performance while minimizing data center footprint.

Scalar® Tape Storage

Scalar tape storage systems are low-cost, long-term data storage used by large cloud providers and leading enterprises to archive and preserve digital content for decades. The product line scales from entry-level libraries for small backup environments up to massive petabyte and even exabyte scale archive libraries.

Our tape systems provide storage density, offline secure storage to protect against ransomware and malware, and an intelligent, advanced diagnostics engine designed to reduce downtime and operational expense relative to other tape systems. Our tape systems are used by thousands of enterprises around the world as well as by large cloud service providers.

In addition to our tape systems, we also sell Linear Tape Open ("LTO") tape cartridges as well as standalone LTO tape drives for small business and desktop use.

Global Support and Services, and Warranty

Our global services strategy is an integral component of our total customer solution. Service is typically a significant purchase factor for customers considering long-term storage for archiving and retention or data protection storage solutions. Consequently, our ability to provide comprehensive installation and integration services as well as maintenance services can be a noteworthy competitive advantage to attract new customers and retain existing customers. In addition, we believe that our ability to retain long-term customer relationships and secure repeat business is frequently tied directly to our comprehensive service capabilities and performance.

Our extensive use of technology and innovative product intelligence allows us to scale our global services operations to meet the needs of our customers. We are currently able to provide service to customers in more than 100 countries, supported by 24-hour, multi-language technical support centers located in North America, Europe, and Asia. We provide our customers with warranty coverage on our products. Customers with high availability requirements may also purchase additional services to obtain faster response times on our high-performance shared storage systems, tape systems, and disk backup systems. We offer this additional support coverage at a variety of response levels up to 24-hours a day, seven-days-a-week, 365-days-a-year, for customers with stringent high-availability needs. We provide support ranging from repair and replacement to 24-hour rapid exchange to on-site service support for our midrange and enterprise-class products. In addition to these traditional installation and maintenance services, we also provide project management, managed services, and other value-added services to enhance our customer’s experience and engagement. These incremental services create a deeper relationship with customers that enables them to maximize the value of our solution and better positions us to retain our customers through technology transitions.

We generally warrant our hardware products against defects for periods ranging from one to three years from the date of sale. We provide warranty and non-warranty repair services through our service team and third-party service providers. In addition, we utilize various other third-party service providers throughout the world to perform repair and warranty services for us to reach additional geographic areas and industries to provide quality services in a cost-effective manner.

Research and Development

We compete in an industry characterized by rapid technological change and evolving customer requirements. Our success depends, in part, on our ability to introduce new products and features to meet end user needs. Our research and development teams are focused on technology and services to make our storage systems and data management software easier to manage at scale; software enhancements to make our storage more searchable and accessible, software-defined hyperconverged storage technology, next generation solid-state and hard-drive storage system software, data deduplication and other data reduction technologies, and making tape even more efficient as a storage medium for long term archival storage.

Sales and Distribution Channels

Product Sales Channels

We utilize distributors, value-added resellers ("VARs") and direct market resellers ("DMRs") in our sales process. Our reseller program provides our channel partners the option of purchasing products directly or through distribution channels and provides them access to a more comprehensive product line. Additionally, we sell directly to multiple large corporate entities and government agencies.

OEM Relationships

We sell our products to several original equipment manufacturer ("OEM") customers that resell our hardware products under their own brand names and typically assume responsibility for product sales, end user service and support. We also license our software to certain OEM customers that include this software in their own brand name products. These OEM relationships enable us to reach end users not served by our branded distribution channels or our direct sales force. They also allow us to sell to select geographic or vertical markets where specific OEMs have exceptional strength.

Customers

Our customers vary across multiple industries worldwide ranging from small businesses to global enterprises. In addition, we sell to OEMs, distributors, VARs and DMRs to reach end user customers. Sales to our top five customers represented 17%, 16%, and 23% of revenue in fiscal 2022, fiscal 2021 and fiscal 2020, respectively, of which no customer represented 10% or more of our total revenue.

Competition

The markets in which we participate are highly competitive, characterized by rapid technological change and changing customer requirements. In some cases, our competitors in one market area are customers or suppliers in another. Our competitors often have greater financial, technical, manufacturing, marketing, or other resources than we do. Additionally, the competitive landscape continues to change due to merger and acquisition activity as well as new entrants into the market.

As our customers look to use more public cloud storage services, these providers offer a competitive alternative, as well as new platforms and new ways to deploy our software. We expect that the data storage infrastructures of the future will be both hybrid-cloud and multi-cloud, meaning our customers will store their data in the various large public cloud environments, and also want to use services from multiple public cloud vendors.

Our primary storage systems and object storage systems primarily face competition from the EMC business unit of Dell Inc., ("Dell"), International Business Machines Corporation, ("IBM"), NetApp, Inc., ("NetApp"), and other enterprise storage vendors in the markets we serve.

Our tape storage systems primarily compete in the midrange and enterprise reseller and end user markets with IBM and other tape library vendors. Competitors for entry-level and OEM tape systems include BDT Products, Inc. and several others that supply or manufacture similar products. In addition, disk backup products and cloud storage are an indirect competitive alternative to tape storage.

Our backup storage systems primarily compete with products sold by Dell, HPE and Veritas Technologies LLC.

Manufacturing and Supply Chain

Quantum has a global supply chain and operations organization, with contract manufacturers located in the U.S. and Mexico along with supporting third-party logistics companies in the Europe, Middle East, and Africa region, or ("EMEA"), and the Asia-Pacific region, or ("APAC"). Our supply chain and manufacturing strategy minimizes geo-political and environmental causal risks and provides flexibility to support demand fluctuations by region, further enhancing our variable cost structure.

Quantum primary storage and secondary storage systems are sold as appliances that combine Quantum software with servers that are procured from various server vendors. Quantum sources these servers from various vendors, then uses contract manufacturers for final integration and shipment to customers. Quantum tape storage systems are designed by Quantum and manufactured by a global contract manufacturer.

Tape media is manufactured in Japan and distributed globally.

The global supply chain environment is constrained, both in terms of server supply and tape drive supply. These shortages are affecting the entire data storage industry, and many industries worldwide, and have resulted in longer lead times, increased costs, and a large backlog. To address these shortages, the supply chain organization is focused on a number of actions including alternate component qualifications, more aggressive management of contract manufacturers, and model changes for better logistics performance and visibility.

Backlog

The global supply constraints have resulted in a historically large backlog, and as of the end of fiscal year 2022, these supply constraints restricted our ability to fulfill all orders. Quantum is carrying a significant backlog of orders heading into fiscal year 2023, and is taking the actions outlined above to draw down this backlog over time while continuing to book new orders.

Intellectual Property and Technology

We generally rely on patent, copyright, trademark and trade secret laws and contract rights to establish and maintain our proprietary rights in our technology and products. As of March 31, 2022, we hold over 170 U.S. patents. In general, these patents have a 20-year term from the first effective filing date for each patent. We also hold multiple foreign patents and patent applications for certain of our products and technologies. Although we believe that our patents and applications have significant value, rapidly changing technology in our industry means that our future success may also depend heavily on the technical competence and creative skills of our employees.

From time to time, third parties have asserted that the manufacture and sale of our products have infringed on their patents. We are not knowingly infringing any third-party patents. Should it ultimately be determined that licenses for third-party patents are required, we will undertake best efforts to obtain such licenses on commercially reasonable terms. See *Note 10: Commitments and Contingencies* for additional disclosures regarding lawsuits alleging patent infringement.

On occasion, we have entered into various patent licensing and cross-licensing agreements with other companies. We may enter into patent cross-licensing agreements with other third parties in the future as part of our normal business activities. These agreements, when and if entered into, would enable these third parties to use certain patents we own and enable us to use certain patents owned by these third parties. We have also sold certain patents, retaining a royalty-free license for these patents.

We are a member of the consortium that develops, patents, and licenses Linear Tape-Open, (or “LTO® tape”) technology to media manufacturing companies. We receive royalty payments for LTO media technology sold under licensing agreements. We have also entered into various licensing agreements with respect to our technology, patents and similar intellectual property which provide licensing revenues in certain cases and may expand the market for products and solutions using these technologies.

Segment Information

We operate as a single reporting unit and operating segment for business and operating purposes. Information about revenue attributable to each of our product groups is included in *Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations* and information about revenue and long-lived assets attributable to certain geographic regions is included in *Note 2: Revenue* and *Note 4: Balance Sheet Information*, respectively, to the consolidated financial statements and risks attendant to our foreign operations is set forth below in *Item 1A. Risk Factors.*

Seasonality

As is typical in our industry, we generally have the greatest demand for our products and services in the fourth quarter of each calendar year, or our fiscal third quarter. We usually experience the lowest demand for our products and services in the first and second quarters of each calendar year, or our fiscal fourth quarter and fiscal first quarter, respectively.

Information About Our Executive Officers and Management Team

Following are the names and positions of our management team as of May 18, 2022, including a brief account of the business experience of each.

Name	Position with Quantum
James J. Lerner	President, Chief Executive Officer and Chairman of the Board
J. Michael Dodson	Chief Financial Officer
Brian E. Cabrera	Chief Legal and Compliance Officer
John Hurley	Chief Revenue Officer
Lewis Moorehead	Chief Accounting Officer

James J. Lerner, 52, was appointed as President and CEO of the Company, effective July 1, 2018, and was appointed Chairman of the Board on August 7, 2018. Mr. Lerner has previously served as Vice President and Chief Operating Officer at Pivot3 Inc., a software development company, from March 2017 to June 2018, and Chief Revenue Officer from November 2016 to March 2017. Prior to Pivot3 Inc., from March 2014 to August 2015, Mr. Lerner served as President of Cloud Systems and Solutions at Seagate Technology Public Limited Company (“Seagate”), a data storage company. Prior to Seagate, Mr. Lerner served in various executive roles at Cisco Systems, Inc. (Nasdaq: CSCO), a networking hardware and software manufacturing company, including most recently as Senior Vice President and General Manager of the Cloud & Systems Management Technology Group.

Before beginning his career as a technology company executive, Mr. Lerner was a Senior Consultant at Andersen Consulting, a financial advisory and consulting firm. Since 2011, Mr. Lerner has served on the Board of Trustees of Astia, a global not-for-profit organization built on a community of men and women dedicated to the success of women-led, high-growth ventures, and is currently serving as the Chair of the Board of Trustees. Mr. Lerner earned a Bachelor of Arts in Quantitative Economics and Decision Sciences from U.C. San Diego.

J. Michael Dodson, 61, was appointed Chief Financial Officer effective May 31, 2018. He was also appointed interim Chief Executive Officer, a position in which he served until James J. Lerner joined the Company on July 1, 2018. From August 2017 to May 2018, Mr. Dodson served as the Chief Financial Officer of Greenwave Systems, a mobile network solutions company. Prior to joining Greenwave Systems, Mr. Dodson served as the Chief Operating Officer and Chief Financial Officer at Mattson Technology, Inc. (“Mattson”), a semiconductor equipment manufacturing company, from 2012 to 2017. He joined Mattson as Executive Vice President, Chief Financial Officer and Secretary in 2011. Prior to joining Mattson, Mr. Dodson served as Chief Financial Officer at four global public technology companies and Chief Accounting Officer for an S&P 500 company. Mr. Dodson started his career with Ernst & Young LLP, a global accounting firm, in San Jose, California. From 2013 through 2020, he served on the Board of Directors of Sigma Designs, Inc., a provider of system-on-chip solutions, including as Lead Independent Director starting in 2014 and Chairman of the Audit Committee starting in 2015. He has also served on Board of Directors of A10 Networks, Inc. (NYSE: ATEN), an application security company, from February 2020 until April 2021 and was named Chairman of their Audit Committee in June 2020. In addition, Mr. Dodson serves as a director of two private entities: a charitable organization and a privately held for-profit company. He holds a B.B.A. degree with dual majors in Accounting and Information Systems Analysis and Design from the University of Wisconsin-Madison.

Brian E. Cabrera, 57, most recently served as the Assistant United States Attorney from October 2018 to April 2020 and as Special Assistant United States Attorney from October 2017 to October 2018 in the Office of the United States Attorney, Northern District of California. From May 2014 to June 2017, Mr. Cabrera served as Senior Vice President & General Counsel of NVIDIA Corporation (“NVIDIA”) (Nasdaq: NVIDIA), a graphics processing units technology company. Prior to NVIDIA, Mr. Cabrera served as General Counsel and Corporate Secretary, Chief Ethics & Compliance Officer of Synopsys, Inc. (Nasdaq: SNPS), an electronic design automation company, from 2006 to 2014. From 1999 to 2006, Mr. Cabrera served as Senior Vice President, Operations, General Counsel and Corporate Secretary of Callidus Software, Inc., an enterprise software company. Prior to Callidus Software, Inc., Mr. Cabrera held various legal positions with PeopleSoft, Inc., a human resource management systems provider, Netscape Communications Corporation, an internet software developing company, Silicon Graphics, Inc., a computer hardware and software manufacturing company, and Bronson, Bronson & McKinnon LLP, a law firm.

John Hurley, 56, has served as Quantum's Chief Revenue Officer since August 2021. Prior to Quantum, Mr. Hurley was at Cisco Systems, Inc. (“Cisco”) (Nasdaq: CSCO), a networking hardware and software manufacturing company, from 2008 to 2021, and most recently served as vice president at Cisco, global commercial segment. Mr. Hurley also spent several years overseeing Cisco's service provider business. Additionally, Mr. Hurley led transformational enterprise relationships with Cisco's largest enterprise customers in aerospace and automotive. From 2005 to 2008, he served as area vice president, Midwest Global / Corporate Business Group at Dell Technologies (NYSE: DELL), a multinational technology company, where he led regional sales directors and their teams to support multiple Fortune 100 customers. Mr. Hurley held leadership roles at transformational early-stage software companies, where he helped drive the businesses to successful acquisitions by industry leaders Microsoft and HP. Mr. Hurley holds a Bachelor of Science in Economics from Pennsylvania State University.

Lewis Moorehead, 50, has served as our Chief Accounting Officer since October 2018. Prior to joining Quantum, Mr. Moorehead was the Director of Finance, Accounting and Tax at Carvana, Co. (NYSE: CVNA), a publicly traded on-line retailer, from November 2016 to October 2018. Beginning in September 2004, he has served as Managing Partner at Quassey, an investment firm. While at Quassey, he also served as Vice President of Finance and Principal Accounting Officer at Limelight Networks, a Nasdaq-listed global content delivery network and SaaS provider, from March 2010 to August 2013. He has also held finance and accounting positions at eTelecare Global Solutions, an outsourcing service company, Rivers and Moorehead PLLC, an accounting advisory firm, Intelligentias, Inc., a data intelligence company, American Express Company (NYSE: AXP), a payment card services company, and PricewaterhouseCoopers LLP, an advisory and tax services firm. He holds a Bachelor of Business Administration (B.B.A.), in Accounting from the University of Wisconsin-Whitewater.

Human Capital

Our Chief Human Resources Officer ("CHRO") leads our human capital initiatives which includes the design and execution of all people strategies. The CHRO partners directly with the Board of Directors, the Leadership and Compensation Committee, and Senior Management on the design, cost, and effectiveness of our people programs to ensure they are competitive and rewards our teams for driving company performance.

This past year we executed our global strategy in becoming the leader in video and unstructured data solutions with the acquisitions of Pivot3 and EncloudEn, strengthening our position in the video surveillance market. From these acquisitions, Quantum added 60 new employees primarily located in the U.S. and India.

Our workforce is distributed in over 16 countries, with 905 employees globally as of March 31, 2022, including 529 in the U.S. and Canada, 175 in APAC, and 201 in EMEA. We will engage with contractors, consultants, or temporary employees as needs for special projects occur.

Work Environment

Competition for talent in the technology industry continues to be aggressive and a candidates’ market. We continue to design, evaluate, and expand our total rewards programs so they remain competitive in attracting, motivating, rewarding, and retaining key talent.

For the last two years, our focus has been about keeping our employees and office locations safe during the pandemic. We offer flexible and hybrid working arrangements that allow our employees to choose where and how they work. We ensure our work environments, whether onsite or remote, are safe, professional, and inclusive so our employees can be successful.

To build high performing products and services, we start with building high performing teams that are inclusive, diverse, and respected regardless of gender, race, color, religion, age, sexual orientation, or disability. We invest in diversity hiring and training initiatives as well as performance development opportunities. We seek out candidates anywhere on the career spectrum from intern to a seasoned professional. We hire for energy first, excellence second, and experience last. This past year, we partnered with an outside firm for our annual anti-harassment and anti-discrimination training. The importance of diversity and inclusion is seen and heard from our executive team on a regular basis that includes celebrating diversity internally, promoting equality on social media, and some of our executive management serves as board members for organizations supporting women in leadership and minorities. We believe that having a work environment that is inclusive is a critical component to our culture of excellence.

Culture of Excellence, Accountability, and Innovation

Our company goals and leadership attributes set the tone for our culture of excellence and accountability. Through our Code of Conduct, Culture of Compliance survey, and monthly compliance newsletter, employees are empowered to ask questions, use their voice and report concerns without fear of retaliation.

Our company culture supports and inspires innovation. Employees are encouraged to seek out new projects or experiences even outside their own working group. The leadership team created regular “no internal meetings” days so employees can have more time to work on innovative projects, plan, take a training course, or use the uninterrupted time for personal development.

Talent Development

Our talent is our greatest asset. We are actively growing our employees from a skills and leadership perspective while also retaining our high potential and most critical talent. We offer a worldwide mentorship program that lasts six months in duration and is available to any interested employee. All of our senior leaders participate in the program and get paired with an employee on key developmental skills or behaviors. In addition, we focus our performance reviews on a semi-annual basis in order to closely monitor and discuss our talent successes, needs, and aspirations. Our managers and employees participate in semi-annual discussions that help facilitate conversations of employee contributions, goals and expectations.

Available Information

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to reports filed or furnished pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended, are available free of charge on our website at https://www.quantum.com generally when such reports are available on the SEC website. The contents of our website are not incorporated into this Annual Report on Form 10-K.

The public may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an internet site that contains reports, proxy, and information statements and other information regarding issuers that file electronically with the SEC at http://www.sec.gov.

ITEM 1A. RISK FACTORS

Before investing in any of our securities, you should carefully consider the risks and uncertainties described below, together with all other information in this Annual Report. The risks and uncertainties described below could materially and adversely affect our business, operating results, financial condition, liquidity, or competitive position, and consequently, the value of our securities. The material adverse effects include, but are not limited to, our potential inability to grow our revenue or market share at the pace that they have grown historically or at all, our revenue, market share, stock price, and market capitalization fluctuating on a quarterly and annual basis, our history of losses continuing or our failure to become profitable, our inability to achieve the revenue and net income (loss) guidance that we provide, and the risk of harm to our reputation and brand.

Risks Related to Our Supply Chain and Sales Strategy

Cost increases, supply disruptions, or raw material shortages, including single source components, could harm our business.

We have and may continue to experience cost increases or sustained supply interruptions in raw materials and components necessary for our products. We also have and may continue to experience increased freight charges and reduced capacity from our freight forwarders. Any such increases or interruptions could materially negatively impact our business, prospects, financial condition and operating results, including delays in manufacturing and shipments of our products and canceled orders. While we have implemented price increases intended to offset rising costs, we cannot provide assurance that these increases will have the desired effects on our business model in the expected timeframe.

We outsource our component supply, manufacturing, and service repair operations to third parties. Our business, financial condition, and operating results could face material adverse impacts if we cannot obtain parts, products, and services in a cost effective and timely manner that meets our customers' expectations.

Many aspects of our supply chain and operational results are dependent on the performance of third-party business partners, including contract manufacturers, service providers, and product integrators. We face a number of risks as a result of these relationships, any or all of which could have a material adverse effect on our business and harm our operating results and financial condition.

Sole source of product supply

In many cases, our business partners may be the sole source of supply for the products or parts they manufacture, or the services they provide to us, and we may not have executed long-term purchase agreements with these partners. Our reliance on a limited number of suppliers and the lack of any guaranteed sources of supply exposes us to several risks, including:

- the inability to obtain an adequate supply of key components;
- price volatility for the components of our products;
- failure of a supplier to meet our quality or production requirements;
- failure of a supplier of key components to remain in business or adjust to market conditions; and
- consolidation among suppliers, resulting in some suppliers exiting the industry, discontinuing the manufacture of components or increasing the price of components.

We cannot assure investors that we will be able to obtain a sufficient supply of these key components or that their costs will not increase. If our component supply is disrupted or delayed, or if we need to replace our existing suppliers or redesign a product to accept different components, we cannot guarantee that additional components will be available when required, on terms that are favorable to us, or at reasonable prices, which could extend our lead times and increase our component costs.

Cost and purchase commitments and processes

We may not be able to control the costs of products or services we obtain from our business partners. We provide a customer demand forecast used to procure inventory to build our products. We could be responsible for the financial impact from any forecast reduction or product mix shift relative to materials already purchased under a prior forecast, including the cost of finished goods in excess of current customer demand or for excess or obsolete inventory.

In some cases we may retain the responsibility to purchase component inventory to support third-party manufacturing activities, which presents a number of risks that could materially and adversely affect our financial condition. For instance, as part of our component planning, we may place orders with or pay certain suppliers for components in advance of receiving customer purchase orders. We may occasionally enter into large orders with vendors to ensure that we have sufficient components for our products to meet anticipated customer demand. It is possible that we could experience a design or manufacturing flaw that could delay or even prevent the production of the components for which we previously committed to pay.

In addition, in order to reduce manufacturing lead times and plan for adequate component supply, from time to time we may issue non-cancelable and non-returnable component or product orders. Our inventory management systems and related supply chain visibility tools may be inadequate to enable us to make accurate forecasts and effectively manage our component and product supply. If we ultimately determine that we have excess supply, we may have to reduce our prices and write down or write off excess or obsolete inventory. Alternatively, insufficient supply levels may lead to shortages resulting in delayed or lost revenue or reduced product margins. We could experience operating losses based on any of these conditions.

We also maintain service parts inventories to satisfy future warranty obligations and to earn service revenue by providing enhanced and extended technical support and product service during and beyond the warranty period. We estimate service parts inventory needs based on historical usage and forecasts of future warranty and service contract requirements, including estimates of failure rates, costs to repair, and out of warranty revenue. Given the significant levels of judgment inherently involved in the process, we cannot provide assurance that we will be able to maintain service parts inventories appropriate to satisfy customer needs or to avoid inventory purchases that later prove to be unnecessary. If we are unable to maintain appropriate levels of service parts inventories, our business, financial condition and results of operations may be materially and adversely impacted.

Although we have contracts for most of our third-party repair service vendors, the contract period may not be the same as the underlying customer service contract. In such cases, we face risks that the third-party service provider may increase the cost of providing services in later periods already under contract to our customers at a fixed price.

Financial condition and stability

Our third-party business partners may suffer adverse financial or operating results or be negatively impacted by economic conditions. We may face interrupted component, product, or service supply as a result of financial or other volatility affecting our supply chain. As a result, we could suffer production downtime or increased costs to procure alternate products or services.

Quality and supplier conduct

We have limited control over the quality of products and components produced and services provided by our third-party business partners and their supply chains. The quality of the products, parts or services may not be acceptable to our customers and could result in customer dissatisfaction, lost revenue, and increased warranty costs. In addition, we have limited control over the manner in which our business partners conduct their business. We may face negative consequences or publicity as a result of a third-party's failure to comply with applicable compliance, trade, environmental, or employment regulations.

As a result of our global manufacturing and sales operations, we are subject to a variety of risks related to our business outside of the U.S., any of which could, individually or in the aggregate, have a material adverse effect on our business.

A significant portion of our manufacturing, sales, and supply chain operations occur in countries other than the U.S. We utilize third-party business partners to engineer, produce, sell, and fulfill orders for our products, several of which have operations located in foreign countries including China, Hungary, India, Japan, Malaysia, Singapore, Mexico, the Philippines, Thailand, and Ukraine. Because of these operations, we are subject to a number of risks in addition to those already described, including:

- increasing import and export duties and value-added taxes, or trade regulation changes that could erode our profit margins or delay or restrict our ability to transport our products;

- war, military conflict, and geo-political unrest may affect our engineering and support teams outside the U.S. and their ability to perform as well as our sales and services delivery with sanctioned entities and countries.
- reduced or limited protection of our intellectual property;
- difficulty complying with multiple and potentially conflicting regulatory requirements and practices, including laws governing corporate conduct outside the U.S., such as the Foreign Corrupt Practices Act, United Kingdom Bribery Act, and similar regulations;
- commercial laws that favor local businesses and cultural differences that affect how we conduct business;
- differing technology standards or customer requirements;
- exposure to economic uncertainty and fluctuations including inflation, adverse movement of foreign currencies against the U.S. dollar (the currency in which we report our results), restrictions on transferring funds between countries, and continuing sovereign debt risks;
- fluctuations in freight costs, limitations on shipping and receiving capacity, and other disruptions in the transportation and shipping infrastructure at important geographic points for our products and shipments;
- inflexible employee contracts and employment laws that may make it difficult to terminate or change the compensation structure for employees in the event of business downturns;
- difficulties attracting and recruiting employees and wage inflation in highly competitive markets;
- political instability, military, social and infrastructure risks, especially in emerging or developing economies, including the war between Russia and Ukraine;
- political or nationalist sentiment impacting global trade, including the willingness of non-U.S. consumers to purchase goods or services from U.S. corporations;
- natural disasters, including earthquakes, flooding, typhoons and tsunamis; and
- pandemics and epidemics, including the impact of COVID-19, and varying and potentially inconsistent governmental restrictions on the operation of businesses, travel and other restrictions.

Any or all of these risks could have a material adverse effect on our business.

We rely on indirect sales channels to market and sell our branded products. The loss of or deterioration in our relationship with one or more of our resellers or distributors, or our inability to establish new indirect sales channels to drive growth of our branded revenue, could negatively affect our operating results.

We sell most of our branded products to distributors, value added resellers, and direct market resellers, who in turn sell our products to end users. We use different distribution channel partners in different countries and regions in the world. The success of these sales channels is hard to predict, particularly over time, and we have no purchase commitments or long-term orders from them that assure us of any baseline sales. Several of our channel partners carry competing product lines they may promote over ours. A channel partner might discontinue our products or fail to effectively market them, and each partner determines the type and amount of our products that it will purchase and the price at which it sells to end users. Establishing new indirect sales channels is an important part of our strategy to drive growth of our branded revenue. Our results of operations could be adversely affected by any number of factors related to our channel partners, including:

- A change in competitive strategy that adversely affects a partner's willingness or ability to distribute our products;
- The reduction, delay, or cancellation of orders or the return of significant products volume;
- Our inability to gain traction in developing new indirect sales channels for our branded products, or the loss of one or more existing partners; or
- Changes in requirements or programs that allow our products to be sold by third parties to government or other customers.

Because we rely heavily on channel partners to market and sell our products, if one or more of them were to experience a significant deterioration in its financial condition or its relationship with us, this could disrupt our product distribution and reduce our revenue, which could materially and adversely affect our business, financial condition, and operating results.

We heavily utilize channel partners to perform the functions necessary to market and sell our products in certain product and geographic segments. To fulfill this role, partners must maintain an acceptable level of financial stability, creditworthiness, and the ability to successfully manage business relationships with the customers they serve directly. If partners are unable to perform in an acceptable manner, we may be required to reduce sales to the partner or terminate the relationship. We may also incur financial losses for product returns from partners or for the failure or refusal of distributors to pay obligations owed to us. Either scenario could result in fewer of our products being available to the affected market segments, reduced levels of customer satisfaction and increased expenses, which could in turn have a material and adverse impact on our business, results of operations and financial condition.

A certain percentage of our sales are to a few customers, some of which are also competitors, and these customers generally have no minimum or long-term purchase commitments. The loss of, or a significant reduction in demand from, one or more key customers could materially and adversely affect our business, financial condition and results of operations.

Our product sales have been and continue to be concentrated among a small number of channel partners, direct end-users, and original equipment manufacturers. We sell to many end-user customers and channel partners on purchase orders, not under the terms of a binding long-term procurement agreement. Accordingly, they generally are not obligated to purchase any minimum product volume, and our relationships with them are terminable at will. In addition, recently we have focused our direct-sales business on the largest users of hierarchical storage architectures, the so-called “Hyper-scalers”; there are very few of these extremely large storage customers, but their order activity has a significant impact on our results from quarter to quarter.

Some of our tape and disk products are incorporated into larger storage systems or solutions that are marketed and sold to end users by third parties. Because of this, we may have limited market access to those end users, limiting our ability to influence and forecast their future purchasing decisions. In addition, revenue from OEM customers has decreased in recent years. Certain of our large OEM customers are also our competitors, and could decide to reduce or terminate purchasing our products for competitive reasons.

In addition, our sales efforts may involve long sales cycles during which we incur expenses to educate our customers about product use and benefits and support customer-driven product evaluations. These cycles may make it difficult for us to predict when, or if, future sales will occur.

During the fiscal years ended March 31, 2022 and March 31, 2021, no single customer represented 10% or more of our total revenue. However, a significant reduction in orders from, or a loss of, one or more large customers would have a material adverse effect on our operating results.

The U.S. federal government is an important customer, and our business may be materially and adversely harmed by changes in government purchasing activity.

A portion of our sales are to various agencies and departments of the U.S. federal government, and federal spending funding cuts and temporary government shutdowns have previously impacted and may continue to impact our revenue in the future. Future spending cuts by the U.S. federal government, temporary shutdowns of the U.S. federal government, or changes in its procurement processes or criteria could decrease our sales to the federal government and could materially and adversely affect our operating results. In addition, changes in government certification requirements applicable to our products could impact our ability to see to U.S. federal customers.

Risks Related to Our Operating Results, Financial Condition, or Stock Price

We continue to face risks related to inflation, economic uncertainty, and slow economic growth.

Uncertainty about economic conditions, particularly due to the ongoing COVID-19 pandemic, pose risks as businesses may further reduce or postpone spending in response to reduced budgets, tightening of credit markets, increases in inflation and interest rates, negative financial news, and declines in income or asset values which could adversely affect our business, financial condition and operating results. Recent inflationary increases have driven up the prices at which we are able to purchase necessary components, products, and services, as well as the cost of contract labor. In addition, we continue to face risks related to uncertain tariff levels between countries where our products are manufactured and sold, unstable political and economic conditions in Europe, including the war between Russia and Ukraine, and concerns about sovereign debt, which could negatively impact the U.S. and global economies and adversely affect our financial results. In addition, our ability to access capital markets may be restricted or result in unfavorable financing terms, impacting our ability to react to changing economic and business conditions and could also materially and adversely affect our ability to sustain our operations at their current levels.

Our stock price has experienced significant volatility in the recent past, and continued volatility may cause our common stock trading price to remain volatile or decline.

Our stock price has been extremely volatile in the recent past. For example, the closing price of our common stock between January 3, 2022 and June 3, 2022 ranged from $1.56 to $5.64. The trading price of our common stock may continue to fluctuate in response to a number of events and factors, many of which may be beyond our control, such as:

- quarterly variations in our operating results;
- failure to meet our financial guidance or the expectations of securities analysts and investors;
- new products, services, innovations, strategic developments, or business combinations and investments by our competitors or us;
- changes in our capital structure, including incurring new debt, issuing additional debt or equity to the public, and issuing common stock upon exercise of our outstanding warrants or subscribing to our recent rights offering;
- large or sudden purchases or sales of stock by existing or new investors;
- changes in interest and exchange rates;
- a continued widespread decline in the U.S. or global economy as a result of the continued impact of COVID-19, supply chain constraints, or other factors;
- fluctuations in the stock market in general and market prices for technology companies in particular;
- tariffs imposed by the U.S. government on sales originating in or being shipped to countries with which we have on-going trade or other political conflicts;
- investigations or enforcement actions related to a potential or actual failure to comply with applicable regulations;
- costs of new or ongoing commercial litigation; and
- significant changes in our brand or reputation.

Any of these events and factors may cause our stock price to rise or fall and may adversely affect our business and financing opportunities.

We may be unable to attract and retain key talent necessary to effectively meet our business objectives.

The market for skilled engineering, sales, and administrative talent is very competitive and recently we are seeing delays in recruiting and hiring timeframes. We believe our ability to recruit and hire new talent, and retain existing key personnel, may be negatively impacted by prior and ongoing fluctuations in our operating results, stock price, and ability to offer competitive benefits and total compensation programs. Our business results may be harmed if we are unable to attract and retain key talent in the future.

Our quarterly operating results have fluctuated significantly, and past results should not be used to predict future performance.

Our quarterly operating results have fluctuated significantly in the past and could fluctuate significantly in the future. As a result, our quarterly operating results should not be used to predict future performance. Quarterly results could be materially and adversely affected by a number of factors, including, but not limited to:

- IT spending fluctuations resulting from economic conditions or changes in U.S. federal government spending;
- supply chain constraints or other failures by our contract manufacturers to complete shipments in a timely manner;
- new product announcements by us or our competitors which may cause purchasing delays or cancellations;
- customers canceling, reducing, deferring, or rescheduling significant orders as a result of excess inventory levels, weak economic conditions, reduced demand, or other factors;
- seasonality, including customer and government fiscal year-ends and budget availability impacting demand for our products;
- reduced demand, declines in large orders, royalty, or software revenues, or other changes in product mix;
- product development and ramp cycle delays or product performance or quality issues;
- poor execution of and performance against expected sales and marketing plans and strategies;
- increased competition which may, among other things, increase pricing pressure or reduce sales;
- restructuring actions or unexpected costs; and
- foreign exchange fluctuations.

Our operating results depend on continuing and increasing market acceptance of our existing products and on new product introductions, which may be unsuccessful, in which case our business, financial condition and results of operations may be materially and adversely affected.

A limited number of products comprise a significant majority of our sales, and due to rapid technological change in our industry, our future operating results depend on our ability to improve existing products and develop and successfully introduce new products. We have devoted and expect to continue to devote considerable management and financial resources to these efforts.

When we introduce new products to the market, they may not achieve market acceptance or significant market share. In addition, the target markets for our new products may not continue or grow as we anticipate. Our new products may not be successfully or timely qualified by new customers, and if they are qualified, we may not achieve high volume production in a timely manner, if at all. In addition, we may experience technical, quality, performance-related, or other difficulties that could prevent or delay the introduction and market acceptance of new products.

If we are not successful in timely completing our new product qualifications and ramping sales to our key customers, our revenue and operating results could be adversely impacted. In addition, if the quality of our products is not acceptable to our customers, customer dissatisfaction, lost revenue, and increased warranty and repair costs could result.

We derive significant revenue from products incorporating tape technology. Our future operating results depend in part on continued market acceptance and use of tape products; in the past, decreases in the market have materially and adversely impacted our business, financial condition and operating results.

We currently derive significant revenue from products that incorporate some form of tape technology, and we expect to continue to do so in the next several years. As a result, our future operating results depend in part on continued market acceptance and use of tape products. Decreased market acceptance or use of products employing tape technology has materially and adversely impacted our business, financial condition, and operating results, and we expect that our revenues from certain types of tape products could continue to decline in the future.

Disk, solid-state, and flash storage products, as well as various software solutions and alternative technologies have eroded the demand for tape products. We expect that, over time, many of our tape customers could migrate toward these other products and solutions and their proportionate contribution to our revenue will increase in the future. While we are making targeted investments in software, disk backup systems, and other alternative technologies, these markets are characterized by rapid innovation, evolving customer demands, and strong competition, including competition with companies who are also significant customers. If we are not successful in our efforts, we may not be able to attract or retain customers, and our business, financial condition and results of operations could be materially and adversely affected.

A significant decline in our media royalty or branded software revenues could materially and adversely affect our business, financial condition and operating results.

Our media royalties and branded software revenues generate relatively greater profit margins than some of our other products and can significantly impact our overall profitability. We receive media royalty revenue based on tape media cartridges sold by various tape media manufacturers and resellers. Under our patent and technology license agreements with these companies, each of the licensees determines the pricing and number of units of tape media cartridges that it sells. Our media royalty revenue varies based on the licensees' media sales and other factors, including:

- Our customers' continued use of storage tape media, including the size of the installed base of devices and similar products that use tape media cartridges;
- The relative growth in units of newer device products, since the associated media cartridges for newer products typically sell at higher prices compared with the media cartridges associated with older products;
- The media consumption habits and rates of end users and pattern of device retirements;
- The level of channel inventories; and
- Agreement on standards for newer generations of the tape media that generates our royalty revenue.

Risks Related to Our Indebtedness

We have significant indebtedness, which imposes upon us debt service obligations, and our term loan and revolving credit facilities contain various operating and financial covenants that limit our discretion in operating our business. If we are unable to generate sufficient cash flows from operations and overall operating results to meet these debt obligations or remain in compliance with the covenants, our business, financial condition and operating results could be materially and adversely affected.

Our level of indebtedness presents significant risks to our business and investors, both in terms of the constraints that it places on our ability to operate our business and because of the possibility that we may not generate sufficient cash and operating results to remain in compliance with our covenants and pay the principal and interest on our indebtedness as it becomes due. As recently as March 2022, we were in danger of failing to meet certain financial covenants in our debt agreements, which could have resulted in a default under these agreements if we had not obtained a waiver of noncompliance from our lenders. For further description of our outstanding debt, see the section captioned "Liquidity and Capital Resources" in Part II, *Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations.*

As a result of our indebtedness:

- Our ability to invest in growing our business is constrained by the financial covenants contained in our credit facilities, which require us to maintain certain maximum total net leverage ratio levels, a minimum fixed charge coverage ratio, and liquidity levels and restrict our ability to:
  - Incur debt and liens;
  - Acquire businesses or entities or sell certain assets;
  - Make investments, including loans, guarantees, and advances;
  - Engage in transactions with affiliates;
  - Pay dividends or repurchase stock; and
  - Enter into certain restrictive agreements;
- We must dedicate a significant portion of our cash flow from operations and other capital resources to debt service, thereby reducing our ability to fund working capital, capital expenditures, research and development, mergers and acquisitions, and other cash-based activities, all of which may place us at a competitive disadvantage;
- We are subject to mandatory field audits and control of cash receipts by the lenders if we do not maintain liquidity above certain thresholds;
- We may be more vulnerable to adverse economic and industry conditions; and
- We may be unable to make payments on other indebtedness or obligations.

Our ability to make scheduled payments of the principal, to pay interest on, or refinance our debt, or to make cash payments in connection with our credit facilities, depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Further, as our debt reaches maturity, we will be required to make large cash payments or adopt one or more alternatives, such as restructuring indebtedness or obtaining additional debt or equity financing on terms that may be onerous or highly dilutive. Our ability to restructure or refinance our debt will depend on the capital markets and our financial condition at such time. We may be unable to incur additional debt or refinance our existing debt on acceptable terms, if at all.

Our credit facilities are collateralized by a pledge of all our assets. If we were to default and be unable to cure it within any applicable grace periods or obtain a waiver of such default, the lenders would have a right to foreclose on our assets to satisfy our obligations under these agreements. Any such action on the part of the lenders could have a materially adverse impact on our business, financial condition and results of operations.

In connection with entering into our prior credit facilities and certain amendments to our prior credit facilities, we were required to issue to our lenders thereunder, certain warrants to purchase our common stock. When exercised, these warrants will result in significant dilution to our stockholders. As a result, the issuance of common stock upon the exercise of our outstanding warrants may cause our stock price to decline.

Risks Related to Our Business and Industry

If we do not successfully manage the changes that we have made and may continue to make to our business model, infrastructure, and management, our business could be disrupted, and that could adversely impact our operating results and financial condition.

Managing change is an important focus for us. In recent years, we have implemented several significant initiatives involving our sales and marketing, product engineering, and operations organizations, aimed at transitioning our revenue model from discrete hardware sales to recurring software revenue, increasing our efficiency, and better aligning internal operations with our corporate strategy. In addition, we have reduced headcount to streamline and consolidate our supporting functions as appropriate following recent acquisitions and in response to market or competitive conditions, and have increased our reliance on certain third-party business relationships. If we are unable to successfully manage the changes that we implement and detect and address issues as they arise, our business could be disrupted, and our results of operations and financial condition could be materially and adversely impacted.

In addition, given that we are relatively new to offering products and services on a subscription basis, and those models in the storage industry continue to evolve, we may not be able to effectively compete, drive expected revenue and margin growth, or obtain profitability for the foreseeable future. Demand for subscription-based products could also erode one-time sales of our hardware products that might not be immediately offset by increased recurring revenue.

We have taken considerable steps towards reducing our cost structure. The steps we have taken may not reduce our cost structure to a level appropriate in relation to our future sales and therefore, these cost reductions may be insufficient to achieve profitability.

In the last several years, we have recorded significant restructuring charges and made cash payments to reduce our cost of sales and operating expenses to respond to adverse economic and industry conditions, to execute strategic management decisions, and to rationalize our operations following acquisitions. These restructuring plans may result in decreases to our revenues or adversely affect our ability to grow our business in the future. Workforce reductions may also adversely affect employee morale and our ability to retain our employees. We may take future steps to further reduce our operating costs, including additional restructurings in response to strategic decisions, increased operating and product costs due to inflation, supply chain constraints, and other external factors, adverse changes in our business or industry, or future acquisitions. We may be unable to reduce our cost of sales and operating expenses at a rate and to a level appropriate in relation to our future sales, which may materially and adversely affect our business, financial condition and results of operations.

In addition, our ability to achieve the anticipated cost savings and other benefits from these restructuring plans within the expected time frame is subject to many estimates and assumptions which may be adversely impacted by significant economic, competitive and other uncertainties, some of which are beyond our control. If these estimates and assumptions are incorrect, if we experience delays, or if other unforeseen events occur, our business, financial condition, and operating results could be adversely affected.

From time to time we have made acquisitions. The failure to successfully integrate future acquisitions could harm our business, financial condition, and operating results.

As a part of our business strategy, we have in the past and may make acquisitions in the future. We may also make significant investments in complementary companies, products or technologies. If we fail to successfully integrate such acquisitions or significant investments, it could harm our business, financial condition, and operating results. Risks that we may face in our efforts to integrate any recent or future acquisitions include, among others:

- failure to realize anticipated synergies or return on investment from the acquisition;
- difficulties assimilating and retaining employees, business culture incompatibility, or resistance to change;
- diverting management's attention from ongoing business concerns;
- coordinating geographically separate organizations and infrastructure operations in a rapid and efficient manner;
- the potential inability to maximize our financial and strategic position through the successful incorporation of acquired technology and rights into our products and services;
- failure of acquired technology or products to provide anticipated revenue or margin contribution;
- insufficient revenues to offset increased expenses associated with the acquisition;
- costs and delays in implementing or integrating common systems and procedures;
- reduction or loss of customer orders due to the potential for market confusion, hesitation and delay;
- impairment of existing customer, supplier and strategic relationships of either company;
- insufficient cash flows from operations to fund the working capital and investment requirements;

- difficulties in entering markets in which we have no or limited direct prior experience and where competitors in such markets have stronger market positions;
- dissatisfaction or performance problems with the acquired company;
- the assumption of risks, unknown liabilities, or other unanticipated adverse circumstances of the acquired company that are difficult to quantify; and
- the cost associated with the acquisition, including restructuring actions, which may require cash payments that, if large enough, could materially and adversely affect our liquidity.

A cybersecurity breach of our internal infrastructure or our products could adversely affect our ability to conduct our business, harm our reputation, expose us to significant liability, or otherwise damage our financial results.

We maintain sensitive data related to our employees, strategic partners, and customers, including personally identifiable information, intellectual property, and proprietary business information on our own systems. In addition, many of our customers and partners store sensitive data on our products.

It is critical to our business that our employees', strategic partners' and customers' sensitive information remains and is perceived as secure. While we employ sophisticated security measures in our own environment and our product features, we may face internal and external threats including unauthorized access, ransomware attacks, security breaches, and other system disruptions. A cybersecurity breach of our own IT infrastructure or products sold to our customers could result in unauthorized access to, loss of, or unauthorized disclosure of such information and expose us to litigation, indemnity obligations, government investigations, and other possible liabilities. Additionally, a cyber-attack, whether actual or perceived, could result in negative publicity which could harm our reputation and reduce our customers' confidence in the effectiveness of our solutions, which could materially and adversely affect our business and operating results. A breach could also expose us to increased costs from remediation, disruption of operations, or increased cybersecurity protection costs that may have a material adverse effect on our business. Although we maintain cybersecurity liability insurance, our insurance may not cover potential claims of these types or may not be adequate to indemnify us for inability that may be imposed. Any imposition or liability or litigation costs that are not covered by insurance could harm our business.

If our products fail to meet our or our customers' specifications for quality and reliability, we may face liability and reputational or financial harm which may adversely impact our operating results and our competitive position may suffer.

We may from time to time experience problems with the performance of our products, which could result in one or more of the following:

- Increased costs related to fulfilling our warranty obligations;
- Reduced, delayed, or cancelled orders or the return of a significant amount of products; or
- The loss of reputation in the market and customer goodwill.

These factors could cause our business, financial condition and results of operations to be materially and adversely affected.

In addition, we face potential liability for product performance problems because our end users employ our technologies to store and backup important data and to satisfy regulatory requirements. Loss of this data could cost our customers significant amounts of money, directly and indirectly as a result of lost revenues, intellectual property, proprietary business information, or other harm to their business. In some cases, the failure of our products may be caused by third-party technology that we incorporate into them. Even if failures are caused by third-party technology, we may be required to expend resources to address the failure and preserve customer relationships. We could also potentially face claims for product liability from our customers if our products cause property damage or bodily injury. Although there are limitations of liability in our commercial agreements and we maintain technology errors and omissions liability and general liability insurance, our insurance may not cover potential claims of these types or may not be adequate to indemnify us for all liability that may be imposed. Any imposition of liability or litigation costs that are not covered by insurance or could harm our business.

Competition is intensifying in the data storage and protection market as a result of competitors introducing products based on new technology standards and merger and acquisition activity, which could materially and adversely affect our business, financial condition, and operating results.

Our competitors in the data storage and protection market are aggressively trying to advance and develop new technologies and products to compete against us. Consequently, we face the risk that customers could choose competitor products over ours. As a result of competition and new technology standards, our sales or gross margins could decline, which could materially and adversely affect our business, financial condition, and operating results. Some of those competitors, are much larger, financially stronger, and have more diverse product offerings, and aggressively compete based on their reputations and greater size.

Technological developments, industry consolidation, and storage market competition over the years have resulted in decreased prices and increased commoditization for tape device and automation products and our other product offerings. Pricing pressure is more pronounced for entry-level products and less pronounced for enterprise products. Over time, the prices of our and competitor products have decreased, but such products often incorporate new or different features and technologies from what we offered in prior years. We face risks that customers could choose competitors' products over ours due to these features and technologies or pricing differences. If competition further intensifies, our product sales and gross margins could decline, which could materially and adversely affect our business, financial condition and results of operations.

Additional industry consolidation may further result in:

- competitors consolidating, having greater resources and becoming more competitive with us;
- new entrants into one or more of our primary markets increasing competition;
- customers that are also competitors becoming more competitive with us and/or reducing their purchase of our products;
- competitors acquiring our current suppliers or business partners and negatively impacting our business model; and
- market uncertainty and disruption due to the impact and timing of announced and completed transactions.

Risks Related to Intellectual Property

Some of our products contain licensed, third-party technology that provides important product functionality and features. The loss or inability to obtain any such license could have a material adverse effect on our business.

Certain of our products contain technology licensed from third parties that provides important product functionality and features. We cannot provide assurance that we will have continued access to this technology in the future. In some cases, we may seek to enforce our technology access via litigation against the licensing company itself, which may cause us to incur significant legal or other costs and may not be resolved in our favor. Other legal actions against the licensing company, such as for intellectual property infringement, could also impact our future access to the technology. We also have limited visibility or control of the technology roadmap at the licensing company and cannot ensure that the licensing company will advance the roadmap of the licensed technology in the manner best for us. We also face the risk of not being able to quickly implement a replacement technology or otherwise mitigate the risks associated with not having access to this licensed technology. Any of these actions could negatively impact our available technology portfolio, thereby reducing the functionality or features of our products, and could materially and adversely affect our business, financial condition, and operating results.

Third-party intellectual property infringement claims could result in substantial liability and significant costs, and, as a result, our business, financial condition and results of operations may be materially and adversely affected.

From time to time, third parties allege that our products infringe their patented or proprietary technology and demand that we purchase a license from them. The ultimate outcome of any license discussion or litigation, is uncertain. Adverse resolution of any third-party infringement claim could subject us to substantial liabilities and require us to refrain from manufacturing and selling certain products. In addition, the costs incurred in intellectual property litigation can be substantial, regardless of the outcome. As a result, our business, financial condition, and operating result could be materially and adversely affected.

If we fail to protect our intellectual property or if others use our proprietary technology without authorization, our competitive position may suffer.

Our future success and ability to compete depends in part on our proprietary technology. We rely on a combination of copyright, patent, trademark, and trade secrets laws and nondisclosure agreements to establish and protect our proprietary technology. However, we cannot provide assurance that patents will be issued with respect to pending or future patent applications that we have filed or plan to file, that our patents will be upheld as valid, or that our patents will prevent the development of competitive products, or that any actions we have taken will adequately protect our intellectual property rights.

Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy or otherwise obtain or use our products or technology. Enforcing our intellectual property rights can sometimes only be accomplished through litigation, which is expensive and can divert management's attention away from our business. In addition, the laws of some foreign countries do not protect our proprietary rights to the same extent as the laws of the U.S.

We license certain of our software under "open source" licenses. Because of the characteristics of opensource software licenses, it may be relatively easy for competitors, some of whom have greater resources than we have, to enter our markets and compete with us. In addition, our failure to comply with the terms of open source licenses could have a material adverse effect on our competitive position and financial results.

One of the characteristics of open source software is that the source code is typically publicly available at no charge, and anyone who obtains copies has a license under certain of our intellectual property rights. Depending on the license, that may include access to certain of our patents, to modify and redistribute the software, and use it to compete in the marketplace. Certain open source software licenses require users to license to other any software that is based on, incorporates, or interacts with the open source software. Although we endeavor to comply fully with those requirements, third parties could claim we are required to license larger portions of our software than we intended. If such claims were successful, they could adversely impact our competitive position and financial results by providing our competitors with access to sensitive information that may help them develop competitive products without the degree of overhead and lead time required by traditional proprietary software development.

It is possible for competitors to use our open source project software to develop their own software, potentially reducing the demand for our solution and putting price pressure on our subscription offerings. We cannot guarantee that competitive pressure or the availability of new open source software will not result in price reductions, reduced operating margins and loss of market share, any one of which could harm our business, financial condition, operating results, and cash flows.

In addition, we use our own open source project software in our proprietary products. As a result, there is a risk that we may inadvertently release as open source certain code that was intended to be kept as proprietary, that reveals confidential information regarding the inner workings of our proprietary products, or that could enable competitors to more readily reverse engineer or replicate aspects of our proprietary technology that we would otherwise protect as trade secrets. We may also accept contributions from third parties to our open source projects, and it may be difficult for us to accurately determine the origin of the contributions and whether their use, including in our proprietary products, infringes, misappropriates, or violates third-party intellectual property or other rights. The availability of certain of our own software in source code form may also enable others to detect and exploit security vulnerabilities in our products. In addition, our use of open source software may harm our business and subject us to intellectual property claims, litigation, or proceedings in the future.

Risks Related to Regulatory Matters

We are subject to many laws and regulations, and violation of or changes in those requirements could materially and adversely affect our business.

We are subject to numerous U.S. and international laws and requirements regarding corporate conduct, fair competition, corruption prevention, import and export practices, and hazardous or restricted material use, storage, discharge, and disposal, including laws applicable to U.S. government contractors. We have incurred, and will continue to incur, costs and business process changes to comply with such regulations. While we maintain a rigorous corporate ethics and compliance program, we may be subject to increased regulatory scrutiny, significant monetary fines or penalties, suspension of business opportunities, loss of jurisdictional operating rights, and increased litigation and investigation costs as a result of any failure to comply with those requirements. If we identify that we have fallen out of compliance, we may proactively take corrective actions, including the filing of voluntary self-disclosure statements with applicable agencies, which could cause us to incur additional expenses and subject us to penalties and other consequences that could adversely affect our business, financial condition, and operating results. Our supply and distribution models may be reliant upon the actions of our third-party business partners and we may also be exposed to potential liability resulting from their violation of these or other compliance requirements. Further, our U.S. and international business models are based on currently applicable regulatory requirements and exceptions. Changes in those requirements or exceptions could necessitate changes to our business model. Any of these consequences could materially and adversely impact our business and results of operations.

Our actual or perceived failure to adequately protect personally identifiable information could adversely affect our business, financial condition, and operating results.

A variety of state, national, foreign, and international laws and regulations apply to the collection, use, retention, protection, disclosure, transfer, deletion, and other processing of personally identifiable information. These privacy- and data protection-related laws and regulations are evolving, with new or modified laws and regulations proposed and implemented frequently and existing laws and regulations subject to new or different interpretations. Compliance with these laws and regulations can be costly and can delay or impede the development or implementation of new products or internal systems. Failure to comply could result in enforcement actions and significant penalties against us, which could result in negative publicity, increase our operating costs, and have a material adverse effect on our business, financial condition, and operating results.

General Risk Factors

We face risks related to health epidemics, including the COVID-19 pandemic, which could have a material adverse effect on our business and results of operations.

We face various risks related to public health issues, including epidemics, pandemics, and other outbreaks, including the COVID-19 pandemic. The COVID-19 pandemic and efforts to control its spread have impacted and may continue to impact our workforce and operations, and those of our strategic partners, customers, suppliers, and logistics providers. These impacts have included and may include increased component, product, transportation, and overhead costs, increased logistics capacity and flexibility needs, decreased workforce availability, component supply, and product output, increased cybersecurity threats from remote work, and general economic downturns. We or our third-party business partners have been and may continue to be subject to government restrictions that impact our ability to continue efficient business operations. While we have taken many actions to mitigate the ongoing effects of the COVID-19 pandemic, we cannot guarantee that they will be sufficient to mitigate all related risks.

To the extent the COVID-19 pandemic adversely affects our business and financial results, it may also have the effect of heightening many of the other risks described in more detail in this “Risk Factors” section, such as those relating to adverse global or regional conditions, our highly competitive industry, supply chain disruption, customer demand conditions and our ability to forecast demand, cost saving initiatives, our indebtedness and liquidity, and cyber-attacks.

If we fail to maintain proper and effective internal controls, material misstatements in our financial statements could occur, impairing our ability to produce accurate and timely financial statements and adversely affecting investor confidence in our financial reports, which could negatively affect our business.

If we fail to maintain proper and effective internal controls, our consolidated financial statements may contain material misstatements and we could be required to restate our financial results in the future. Moreover, because of the inherent limitations of any control system, material misstatements due to error or fraud may not be prevented or detected on a timely basis, or at all. If we are unable to provide reliable and timely financial reports in the future, our business and reputation may be further harmed. Restated financial statements and failures in internal control may also cause us to fail to meet reporting obligations or debt covenants, negatively affect investor confidence in our management and the accuracy of our financial statements and disclosures, or result in adverse publicity, any of which could have a negative effect on the price of our common stock, subject us to further regulatory investigations and penalties or stockholder litigation, and materially and adversely impact our business and financial condition.

We are exposed to fluctuations in foreign currency exchange rates, and an adverse change in foreign currency exchange rates relative to our position in such currencies could have a material adverse impact on our business, financial condition and results of operations.

We do not currently use derivative financial instruments for speculative purposes. To the extent that we have assets or liabilities denominated in a foreign currency that are inadequately hedged or not hedged at all, we may be subject to foreign currency losses, which could be significant. Our international operations can act as a natural hedge when both operating expenses and sales are denominated in local currencies. In these instances, although an unfavorable change in the exchange rate of a foreign currency against the U.S. dollar would result in lower sales when translated to U.S. dollars, operating expenses would also be lower in these circumstances. The competitive price of our products relative to others could also be negatively impacted by changes in the rate at which a foreign currency is exchanged for U.S. dollars. Such fluctuations in currency exchange rates could materially and adversely affect our business, financial condition and results of operations.

If the future outcomes related to the estimates used in recording tax liabilities to various taxing authorities result in higher tax liabilities than estimated, then we would have to record tax charges, which could be material.

We have provided amounts and recorded liabilities for probable and estimable tax adjustments required by various taxing authorities in the U.S. and foreign jurisdictions. If events occur that indicate payments of these amounts will be less than estimated, then reversals of these liabilities would create tax benefits recognized in the periods when we determine the liabilities have reduced. Conversely, if events occur which indicate that payments of these amounts will be greater than estimated, then tax charges and additional liabilities would be recorded. In particular, various foreign jurisdictions could challenge the characterization or transfer pricing of certain intercompany transactions. In the event of an unfavorable outcome of such challenge, material tax charges and adverse impacts on operating results could occur in the period in which the matter is resolved or an unfavorable outcome becomes probable and estimable.

Certain changes in stock ownership could result in a limitation on the amount of net operating loss and tax credit carryovers that can be utilized each year. Should we undergo such a change in stock ownership, it would severely limit the usage of these carryover tax attributes against future income, resulting in additional tax charges, which could be material.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our headquarters are located in San Jose, California. We lease facilities in North America, Europe, and Asia Pacific. We believe that our facilities are adequate to meet our needs for the immediate future, and that, should it be needed, suitable additional space will be available to accommodate expansion of our operations.

ITEM 3. LEGAL PROCEEDINGS

See Item 8 of Part II, *"Financial Statements and Supplementary Data—Note 10: Commitments and Contingencies."*

ITEM 4. MINE SAFETY DISCLOSURE

None.

PART II

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

Market Information

Our common stock is traded on the Nasdaq Global Market under the symbol "QMCO".

Holders of Record, and Dividends

As of June 1, 2022, we had 229 holders of record of our common stock.

Dividends

We have no intention of paying cash dividends in the foreseeable future. Our ability to pay dividends is restricted by the covenants in our senior secured term loan and amended credit facility agreements. See the section captioned “Liquidity and Capital Resources” in *Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations* and *Note 5: Debt* to the consolidated financial statements.

Recent Sales of Unregistered Securities

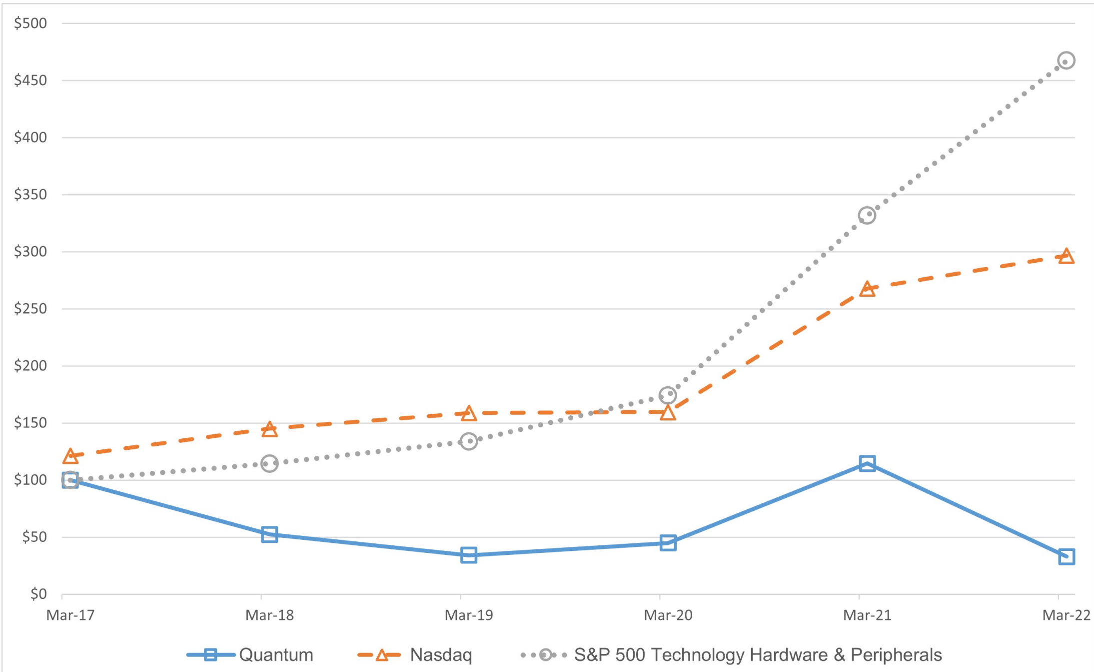
During the period covered by this annual report, we did not sell any equity securities that were not registered under the Securities Act of 1933.

Issuer Purchases of Equity Securities

During the quarter ended March 31, 2022, there were no purchases of our common stock by or on behalf of us or any of our affiliated purchasers, as such term is defined in Rule 10b-18(a)(3) under the Securities Exchange Act of 1934, as amended ("the "Exchange Act").

Stock Performance Graph

The graph below compares the cumulative total return of a $100 investment in our common stock with the cumulative total return of the same investment in the Nasdaq and the S&P 500 Index from March 31, 2017 through March 31, 2022.



ITEM 6. [RESERVED]

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 our consolidated financial statements, the accompanying notes, and other information included in this Annual Report. In particular, the risk factors contained in Item 1A may reflect trends, demands, commitments, events, or uncertainties that could materially impact our results of operations and liquidity and capital resources.

The following discussion contains forward-looking statements, such as statements regarding COVID-19's anticipated impacts on our business, our future operating results and financial position, our business strategy and plans, our market growth and trends, and our objectives for future operations. Please see "Note Regarding Forward-Looking Statements" for more information about relying on these forward-looking statements.

Overview and Fiscal Year 2022 Highlights

We are a technology company whose mission is to deliver innovative solutions to forward-thinking organizations across the world. We design, manufacture and sell technology and services that help customers capture, create and share digital content, and protect it for decades. We emphasize innovative technology in the design and manufacture of our products to help our customers unlock the value in their video and unstructured data in new ways to solve their most pressing business challenges.

We generate revenue by designing, manufacturing, and selling technology and services. Our most significant expenses are related to compensating employees; designing, manufacturing, marketing, and selling our products and services; data center costs in support of our cloud-based services; and income taxes.

Highlights from fiscal year 2022 included:

- We announced a new partnership with Supermicro and our ActiveScale 6.0 software and storage platform, as we expand our Object Storage line of business.
- We completed the Pivot3 business acquisition, which adds a portfolio of industry leading hyperconverged infrastructure (HCI) and intelligent software solutions for the security and surveillance markets.
- We completed the EnClouden assets acquisition which will enable us to expand the addressable market for our video surveillance portfolio, offering customers a solution using their server hardware of choice with a flexible subscription-based software model.
- We completed the refinancing of our term loan, significantly reducing our annual debt service and greatly increasing our financial flexibility related to covenants and restrictions.
- We brought on industry veteran John Hurley as Chief Revenue Officer. John brings extensive experience working with the largest global enterprise, commercial, and service provider customers.
- We announced a new collaboration and Remote Editing Solution for Adobe Premiere Pro Users.
- We announced a partnership with IBM on the next generation of LTO technology in which we will collaborate with IBM in its development of LTO-10 tape drives and media in order to accelerate time-to-market, capacity, and performance.
- We were awarded one Platinum and one Gold 'ASTORS' Homeland Security Award from American Security Today. The Annual 'ASTORS' Awards Program, is specifically designed to honor distinguished government and vendor solutions that deliver enhanced value, benefit, and intelligence to end-users in a variety of government, homeland security, enterprise, and public safety vertical markets.

COVID-19 IMPACT AND ASSOCIATED ACTIONS

Since the beginning of March 2020, COVID-19 has led governments and other authorities around the world, including federal, state and local authorities in the United States, to impose measures intended to reduce its spread, including restrictions on freedom of movement and business operations such as travel bans, border closings, business limitations and closures (subject to exceptions for essential operations and businesses), quarantines and shelter-in-place orders. These measures may remain in place for a significant period of time.

In light of these events, we have taken actions to protect the health and safety of our employees while continuing to serve our global customers as an essential business. We have implemented more thorough sanitation practices as outlined by health organizations and instituted mitigation practices at our locations around the world, including working from home, limiting the number of employees attending meetings, reducing the number of people in our sites at any one time, and decreasing employee travel.

We have seen a gradual stabilization in our business during the second half of fiscal 2021 and into fiscal 2022 as customers increasingly adapted to the COVID-19 environment. However, COVID-19 has caused a significant disruption to the global supply chain, which continues to have a negative impact on our business. Before the current disruptions in the global supply chain our historical backlog was very limited and typically represented less than 5% of quarterly revenues. During our fourth fiscal quarter our backlog remained above $60 million for the second consecutive quarter, up from $50 million as of September 30, 2021, and $30 million as of June 30, 2021. Approximately 80% of the ending backlog represented tape products a majority of which is for orders from our hyperscale customers. We anticipate that supply chain constraints will remain challenging, limiting our ability to ship against all customer demand and recognize a meaningful portion of the current backlog.

We will continue to actively monitor the impact of COVID-19 and may take further actions altering our business operations that we determine are in the best interests of our employees, customers, partners, suppliers, and stakeholders, or as required by federal, state, or local authorities. See “The recent COVID-19 pandemic could adversely affect our business, results of operations and financial condition” in Item 1A for more information regarding the risks we face as a result of the COVID-19 pandemic.

RESULTS OF OPERATIONS

	Year Ended March 31,		
(in thousands)	2022	2021	2020
Total revenue	$ 372,827	$ 349,576	$ 402,949
Total cost of revenue [1]	225,792	198,823	230,441
Gross profit	147,035	150,753	172,508
Operating expenses			
Research and development [1]	51,812	41,703	36,301
Sales and marketing [1]	62,957	54,945	59,524
General and administrative [1]	45,256	42,001	54,457
Restructuring charges	850	3,701	1,022
Total operating expenses	160,875	142,350	151,304
Income (loss) from operations	(13,840)	8,403	21,204
Other expense, net	(251)	(1,312)	(261)
Interest expense	(11,888)	(27,522)	(25,350)
Loss on debt extinguishment, net	(4,960)	(14,789)	—
Loss before income taxes	(30,939)	(35,220)	(4,407)
Income tax provision	1,341	239	803
Net loss	$ (32,280)	$ (35,459)	$ (5,210)

[1] Includes stock-based compensation as follows:

(in thousands)	Year Ended March 31, 2022	2021	2020
Cost of revenue	$ 1,112	$ 672	$ 452
Research and development	5,843	2,881	984
Sales and marketing	2,516	1,757	1,165
General and administrative	4,358	4,314	4,147
Total	$ 13,829	$ 9,624	$ 6,748

Comparison of the Years Ended March 31, 2022 and 2021

Revenue

(in thousands)	Year Ended March 31, 2022	% of revenue	2021	% of revenue	$ Change	% Change
Product revenue						
Secondary storage systems	$ 117,688	32 %	$ 89,000	25 %	$ 28,688	32 %
Primary storage systems	56,043	15 %	69,644	20 %	$ (13,601)	(20) %
Devices and media	50,030	13 %	51,164	15 %	(1,134)	(2) %
Total product revenue	$ 223,761	60 %	$ 209,808	60 %	$ 13,953	7 %
Service and subscription revenue	133,689	36 %	124,904	36 %	8,785	7 %
Royalty revenue	15,377	4 %	14,864	4 %	513	3 %
Total revenue	$ 372,827	100 %	$ 349,576	100 %	$ 23,251	7 %

Product Revenue

In fiscal 2022, product revenue increased $14.0 million, or 7%, as compared to fiscal 2021. Secondary storage systems increased by 32%, driven by increased demand from our large hyperscale customers, as well as continued strong demand globally for data protection and archive solutions. Primary storage systems decreased 20%, driven by large end-of-life purchases in the prior year. Devices and media decreased $1.1 million driven partially by decreased supply of LTO tape drives.

Service and Subscription Revenue

Service and subscription revenue increased $8.8 million, or 7%, in fiscal 2022 compared to fiscal 2021. This increase was due in part to acquisitions made during fiscal 2022. The increase also reflects a shift to subscription-based software licensing.

Royalty Revenue

We receive royalties from third parties that license our LTO media patents through our membership in the LTO consortium. Royalty revenue increased $0.5 million, or 3%, in fiscal 2022, as compared to fiscal 2021, related to shifts in market unit volumes towards more recent technologies such as LTO9 and LTO8.

Gross Profit and Margin

(in thousands)	Year Ended March 31, 2022	Gross margin %	2021	Gross margin %	$ Change	Basis point change
Product gross profit	$ 53,981	24.1 %	$ 59,551	28.4 %	$ (5,570)	(430)
Service and subscription gross profit	77,677	58.1 %	76,338	61.1 %	1,339	(300)
Royalty gross profit	15,377	100.0 %	14,864	100.0 %	513	—
Gross profit	$ 147,035	39.4 %	$ 150,753	43.1 %	$ (3,718)	(370)

Product Gross Margin

Product gross margin decreased 430 basis points for fiscal 2022, as compared with the same period in 2021. This decrease was due primarily to an increase in materials cost and freight, as global supply chain constraints disrupted normal procurement channels. Our product mix was also more heavily weighted to lower margin solutions.

Service and subscription gross margin decreased 300 basis points for fiscal 2022, as compared with the same period in 2021. This decrease was due primarily to increased costs for freight and repair on replacement parts.

Royalty Gross Margin

Royalties do not have significant related cost of sales.

Operating expenses

(in thousands)	Year Ended March 31, 2022	% of revenue	2021	% of revenue	$ Change	% Change
Research and development	$ 51,812	14 %	$ 41,703	12 %	$ 10,109	24 %
Sales and marketing	62,957	17 %	54,945	16 %	8,012	15 %
General and administrative	45,256	12 %	42,001	12 %	3,255	8 %
Restructuring charges	850	— %	3,701	1 %	(2,851)	(77) %
Total operating expenses	$ 160,875	43 %	$ 142,350	41 %	$ 18,525	13 %

In fiscal 2022, research and development expense increased $10.1 million, or 24%, as compared with fiscal 2021. This increase was partially attributable to acquisitions made during fiscal 2022 which broaden our portfolio in the video surveillance and media and entertainment markets. We have also invested in a partnership with IBM to develop the next generation LTO technology.

In fiscal 2022, sales and marketing expenses increased $8.0 million, or 15%, as compared with fiscal 2021. This increase was partially driven by acquisitions made during fiscal 2022, expanding us into new markets. Marketing program spend also increased as in-person events started to occur again after a halt in the previous year.

In fiscal 2022, general and administrative expenses increased $3.3 million, or 8%, as compared with fiscal 2021. This increase was driven primarily by one-time legal and financial expenses related to acquisitions.

In fiscal 2022, restructuring expenses decreased $2.9 million, or 77%, as compared with fiscal 2021. This decrease is driven by corporate restructuring activities in the prior year as we consolidated our physical footprint and operations in certain markets.

Other expense, net

(in thousands)	Year Ended March 31, 2022	% of revenue	2021	% of revenue	$ Change	% Change
Other expense, net	$ (251)	0 %	$ (1,312)	0 %	$ (1,061)	(81) %

In fiscal 2022, other expense, net decreased $1.1 million or 81%, compared to fiscal 2021. The decrease was primarily related to differences in foreign currency gains and losses during each period.

Interest expense

	Year Ended March 31,					
(in thousands)	2022	% of revenue	2021	% of revenue	$ Change	% Change
Interest expense	(11,888)	(3) %	(27,522)	(8) %	(15,634)	(57) %

In fiscal 2022, interest expense decreased $15.6 million, or 57%, as compared to fiscal 2021. This decrease was primarily due to a lower principal balance and a lower effective interest rate on our Term Loan.

Loss on debt extinguishment, net

	Year Ended March 31,					
(in thousands)	2022	% of revenue	2021	% of revenue	$ Change	% Change
Loss on debt extinguishment, net	(4,960)	(1) %	(14,789)	(4) %	(9,829)	(66) %

In fiscal 2022, loss on debt extinguishment, net was related to prepayment of our Senior Secured Term Loan that occurred during the period offset by the $10.0 million gain on the forgiveness of the Paycheck Protection Program loan. In fiscal 2021, we incurred a loss on debt extinguishment related to our Senior Secured Term Loan.

Income tax provision

	Year Ended March 31,					
(in thousands)	2022	% of revenue	2021	% of revenue	$ Change	% Change
Income tax provision	$ 1,341	— %	$ 239	— %	$ 1,102	461 %

Our income tax provision is primarily influenced by foreign and state income taxes. In fiscal 2022, the income tax provision increased $1.1 million or 461%, compared to fiscal 2021, related primarily to higher current foreign taxes as a result of an increase in foreign taxable income.

Due to our history of net losses in the U.S., the protracted period for utilizing tax attributes in certain foreign jurisdictions, and the difficulty in predicting future results, we believe that we cannot rely on projections of future taxable income to realize most of our deferred tax assets. Accordingly, we have established a full valuation allowance against our U.S. and certain foreign net deferred tax assets. Significant management judgement is required in assessing our ability to realize any future benefit from our net deferred tax assets. We intend to maintain this valuation allowance until sufficient positive evidence exists to support its reversal. Our income tax expense recorded in the future will be reduced to the extent that sufficient positive evidence materializes to support a reversal of, or decrease in, our valuation allowance.

Comparison of the Years Ended March 31, 2021 and 2020

Revenue

(in thousands)	Year Ended March 31, 2021	% of revenue	2020	% of revenue	$ Change	% Change
Product revenue						
Secondary storage systems	$ 89,000	25 %	$ 111,672	28 %	$ (22,672)	(20) %
Primary storage systems	69,644	20 %	77,152	19 %	$ (7,508)	(10) %
Devices and media	51,164	15 %	62,344	15 %	(11,180)	(18) %
Total product revenue	$ 209,808	60 %	$ 251,168	62 %	$ (41,360)	(16) %
Service and subscription revenue	124,904	36 %	131,050	33 %	(6,146)	(5) %
Royalty revenue	14,864	4 %	20,731	5 %	(5,867)	(28) %
Total revenue	$ 349,576	100 %	$ 402,949	100 %	$ (53,373)	(13) %

Product Revenue

In fiscal 2021, product revenue decreased $41.4 million, or 16%, as compared to fiscal 2020. Secondary storage systems decreased by 20%, driven by fluctuating purchase cycles with our hyperscale customers. Primary storage systems decreased 10%, driven by early disruption in the media and entertainment market as COVID-19 significantly decreased major television and film production. Devices and media decreased $11.2 million driven partially by unusually high demand in fiscal 2020 following the resolution of a legal dispute, which had caused a constraint on LTO tape supply between the two principal suppliers in the market.

Service and Subscription Revenue

Service revenue decreased $6.1 million, or 5%, in fiscal 2021 compared to fiscal 2020. This decrease was due to reduced support renewals from our legacy backup customers, partially offset by new customer support agreements and installations.

Royalty Revenue

We receive royalties from third parties that license our LTO media patents through our membership in the LTO consortium. Royalty revenue decreased $5.9 million, or 28%, in fiscal 2021, as compared to fiscal 2020, related to overall declines in market unit volumes as the primary use of tape transitions from backup to archive workflows.

Gross Profit and Margin

(in thousands)	Year Ended March 31, 2021	Gross margin %	2020	Gross margin %	$ Change	Basis point change
Product gross profit	$ 59,551	28.4 %	$ 71,408	28.4 %	$ (11,857)	—
Service and subscription gross profit	76,338	61.1 %	80,369	61.3 %	(4,031)	(20)
Royalty gross profit	14,864	100.0 %	20,731	100.0 %	(5,867)	—
Gross profit	$ 150,753	43.1 %	$ 172,508	42.8 %	$ (21,755)	30

Product Gross Margin

Product gross margin was flat comparing fiscal 2021 to fiscal 2020.

Service and Subscription Gross Margin

Service and subscription gross margin decreased 20 basis points for fiscal 2021, as compared with the same period in 2020. This decrease was due primarily to reduced service and subscription revenues from some of our legacy backup customers, partially offset by a reduction in service and subscription costs.

Royalty Gross Margin

Royalties do not have significant related cost of sales.

Operating expenses

(in thousands)	Year Ended March 31, 2021	% of revenue	2020	% of revenue	$ Change	% Change
Research and development	$ 41,703	12 %	$ 36,301	9 %	$ 5,402	15 %
Sales and marketing	54,945	16 %	59,524	15 %	(4,579)	(8) %
General and administrative	42,001	12 %	54,457	14 %	(12,456)	(23) %
Restructuring charges	3,701	1 %	1,022	— %	2,679	262 %
Total operating expenses	$ 142,350	41 %	$ 151,304	38 %	$ (8,954)	(6) %

In fiscal 2021, research and development expense increased $5.4 million, or 15%, as compared with fiscal 2020. This increase was partially attributable to an increase in research and development headcount and professional services cost related to new product development. Most notably this includes headcount related to business acquisitions and integration of the associated development teams.

In fiscal 2021, sales and marketing expenses decreased $4.6 million, or 8%, as compared with fiscal 2020. This decrease was driven by a decrease in compensation as the result of lower sales performance and a decrease in marketing programs and professional services costs. Travel expenses were also significantly reduced during the fiscal year due to restrictions from the COVID-19 pandemic.

In fiscal 2021, general and administrative expenses decreased $12.5 million, or 23%, as compared with fiscal 2020. This decrease was driven primarily by lower costs related to our prior financial restatement and related activities, which we primarily incurred during fiscal 2019 and fiscal 2020 and decreased facilities expenses as we consolidate our physical footprint. These decreases were partially offset by increases to software expense as we modernize our existing IT infrastructure.

In fiscal 2021, restructuring expenses increased $2.7 million, or 262%, as compared with fiscal 2020. This increase was primarily due to footprint and associated headcount reductions that occurred in fiscal 2021, as well as changes in key leadership positions.

Other expense, net

(in thousands)	Year Ended March 31, 2021	% of revenue	2020	% of revenue	$ Change	% Change
Other expense	$ (1,312)	0 %	$ (261)	0 %	$ 1,051	403 %
Interest expense	(27,522)	(8) %	(25,350)	(6) %	2,172	9 %
Loss on debt extinguishment, net	(14,789)	(4) %	—	— %	14,789	100 %

In fiscal 2021, other expense, net increased $1.1 million or 403%, compared to fiscal 2020. The increase was primarily related to differences in foreign currency gains and losses during each period.

Interest expense

(in thousands)	Year Ended March 31, 2021	% of revenue	2020	% of revenue	$ Change	% Change
Interest expense	(27,522)	(8) %	(25,350)	(6) %	2,172	9 %

In fiscal 2021, interest expense increased $2.2 million, or 9%, as compared to fiscal 2020. This increase was primarily due to a higher average principal balance of our outstanding debt.

Loss on debt extinguishment, net

(in thousands)	Year Ended March 31,					
	2021	% of revenue	2020	% of revenue	$ Change	% Change
Loss on debt extinguishment, net	(14,789)	(4) %	—	— %	14,789	100 %

In fiscal 2021, we incurred a loss on debt extinguishment related to our Senior Secured Term Loan.

Income tax provision

(in thousands)	Year Ended March 31,					
	2021	% of revenue	2020	% of revenue	$ Change	% Change
Income tax provision	$ 239	— %	$ 803	— %	$ (564)	(70) %

Our income tax provision is primarily influenced by foreign and state income taxes. In fiscal 2021, the income tax provision decreased $0.6 million or 70%, compared to fiscal 2020, related primarily to a valuation allowance recorded in fiscal 2020 for certain foreign deferred tax assets.

Due to our history of net losses in the U.S., the protracted period for utilizing tax attributes in certain foreign jurisdictions, and the difficulty in predicting future results, we believe that we cannot rely on projections of future taxable income to realize most of our deferred tax assets. Accordingly, we have established a full valuation allowance against our U.S. and certain foreign net deferred tax assets. Significant management judgement is required in assessing our ability to realize any future benefit from our net deferred tax assets. We intend to maintain this valuation allowance until sufficient positive evidence exists to support its reversal. Our income tax expense recorded in the future will be reduced to the extent that sufficient positive evidence materializes to support a reversal of, or decrease in, our valuation allowance.

Liquidity and Capital Resources

We consider liquidity in terms of the sufficiency of internal and external cash resources to fund our operating, investing and financing activities. Our principal sources of liquidity include cash from operating activities, cash and cash equivalents on our balance sheet and amounts available under our Amended PNC Credit Facility (as defined below). We require significant cash resources to meet obligations to pay principal and interest on our outstanding debt, provide for our research and development activities, fund our working capital needs, and make capital expenditures. Our future liquidity requirements will depend on multiple factors, including our research and development plans and capital asset needs. We are subject to the risks arising from COVID-19 which have caused substantial financial market volatility and have adversely affected both the U.S. and the global economy. We believe that these social and economic impacts have had a negative effect on sales due to the decline in certain of our customers' ability or willingness to purchase our products and services. We have also experienced negative impacts on sales due to global supply chain constraints which has resulted in a significant increase in our sales backlog compared to our historical levels. The extent of the impacts will depend, in part, on how long the negative trends in customer demand and supply chain levels will continue. We expect the impact of COVID-19 to continue to have a significant impact on our liquidity and capital resources.

We had cash and cash equivalents of $5.2 million as of March 31, 2022, compared to $27.4 million as of March 31, 2021. These amounts exclude $0.0 and $5.0 million in long-term restricted cash that we were required to maintain under our PNC Credit Facility, and $0.3 million and $0.7 million of short-term restricted cash as of March 31, 2022 and March 31, 2021, respectively. As of March 31, 2022 we had $5.0 million available to borrow under the PNC Credit Agreement.

We generated negative cash flows from operations of approximately $33.7 million, $0.8 million and $1.2 million for the fiscal years ended March 31, 2022, 2021 and 2020, respectively, and generated net losses of approximately

$32.3 million, $35.5 million, and $5.2 million for the fiscal years ended March 31, 2022, 2021 and 2020, respectively. We have funded operations through the sale of common stock, term debt borrowings, revolving credit facility borrowings and proceeds from the Paycheck Protection Program Loan described in *Note 5: Debt*. Management believes that it has the ability to obtain additional debt or equity financing, if required, and has historically been able to do so. Management also believes that current working capital, borrowings available under the revolving credit facility and future equity financing (including the April 22, 2022 sale of 30 million shares of our common stock for gross proceeds of $67.5 million) or debt financing will provide the Company with sufficient capital to fund operations for at least one year from the financial statement issuance date. There is no assurance that we would be able to obtain sufficient additional funds when needed or that such funds, if available, will be obtainable on terms satisfactory to us.

Our outstanding long-term debt amounted to $107.2 million as of March 31, 2022, net of $4.9 million in unamortized debt issuance costs and $4.4 million in current portion of long-term debt, and $90.9 million as of March 31, 2021 net of $9.7 million in unamortized debt issuance costs and $1.9 million in current portion of long-term debt.

We are subject to various debt covenants under our debt agreements. Our failure to comply with our debt covenants could materially and adversely affect our financial condition and ability to service our obligations. On March 15, 2022, we received waivers of our financial covenants under our term debt and PNC Credit Facility. We believe we were in compliance with all covenants under our debt agreements as of the date of filing of this Annual Report on Form 10-K. See "Risks Related to our Indebtedness" section of *Item 1A. Risk Factors.*

Cash Flows

The following table summarizes our consolidated cash flows for the periods indicated.

	Year Ended March 31,		
(in thousands)	**2022**	**2021**	**2020**
Cash provided by (used in):			
Operating activities	(33,728)	(767)	$ (1,181)
Investing activities	(14,124)	(9,586)	(4,599)
Financing activities	20,157	31,328	1,211
Effect of exchange rate changes	(108)	(108)	(16)
Net change in cash, cash equivalents, and restricted cash	$ (27,803)	$ 20,867	$ (4,585)

Net Cash Used in Operating Activities

Net cash used in operating activities was $33.7 million for the year ended March 31, 2022, primarily attributable to $30.5 million of changes in assets and liabilities due primarily to working capital requirements due to higher inventories and prepaid expenses.

Net cash used in operating activities was $0.8 million for the year ended March 31, 2021, primarily attributable to cash provided by operating activities excluding changes in assets and liabilities of $3.6 million offset by working capital changes.

Net cash used in operating activities was $1.2 million for the year ended March 31, 2020, primarily attributable $20.9 million of changes in assets and liabilities due primarily to lower deferred revenue and an increase in manufacturing inventories offset by cash provided by operating activities excluding changes in assets and liabilities.

Net Cash Used in Investing Activities

Net cash used in investing activities was $14.1 million for the year ended March 31, 2022, primarily attributable to $7.8 million of business acquisitions and $6.3 million of capital expenditures.

Net cash used in investing activities was $9.6 million for the year ended March 31, 2021, primarily attributable to $6.9 million of capital expenditures and $2.7 million for a business acquisition.

Net cash used in investing activities was $4.6 million for the year ended March 31, 2020, primarily attributable to $2.6 million of capital expenditures and $2.0 million for a business acquisition.

Net Cash Provided by Financing Activities

Net cash provided by financing activities was $20.2 million for the year ended March 31, 2022 due primarily to $17.7 million of borrowings under PNC Credit Facility.

Net cash provided by financing activities was $31.3 million for the year ended March 31, 2021 due primarily to a secondary equity offering which generated net proceeds of $96.8 million, term loan borrowings of $19.4 million (net of lender fees of $0.6 million), $10.0 million in borrowings under the Paycheck Protection Program, offset in part by the prepayment of $92.3 million of our term debt.

Net cash provided by financing activities was $1.2 million for the year ended March 31, 2020 related primarily to net borrowings under the Amended PNC Credit Facility offset by principal repayments on our term debt.

Commitments and Contingencies

Our contingent liabilities consist primarily of certain financial guarantees, both express and implied, related to product liability and potential infringement of intellectual property. We have little history of costs associated with such indemnification requirements and contingent liabilities associated with product liability may be mitigated by our insurance coverage. In the normal course of business to facilitate transactions of our services and products, we indemnify certain parties with respect to certain matters, such as intellectual property infringement or other claims. We also have indemnification agreements with our current and former officers and directors. It is not possible to determine the maximum potential amount under these indemnification agreements due to the limited history of our indemnification claims, and the unique facts and circumstances involved in each particular agreement. Historically, payments made by us under these agreements have not had a material impact on our operating results, financial position or cash flows.

We are also subject to ordinary course of business litigation, See *Note 10: Commitments and Contingencies*, to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Contractual Obligations

Contractual obligations are cash amounts that we are obligated to pay as part of certain contracts that we have entered into during the normal course of business. Below is a table that shows our contractual obligations as of March 31, 2022 (in thousands):

	Payments Due by Period				
(in thousands)	Total	1 year or less	1 – 3 Years	3 –5 Years	More than 5 years
Debt obligations [1]	$ 149,186	$ 12,355	$ 24,972	$ 111,859	$ —
Future lease commitments [2]	24,137	2,638	4,141	2,902	14,456
Purchase obligations [3]	64,601	64,601	—	—	—
Total	$ 237,924	$ 79,594	$ 29,113	$ 114,761	$ 14,456

(1) Consists of (i) principal and interest payments on our term loan based on the amount outstanding and interest rates in effect at March 31, 2022, and (ii) principal, interest, and unused commitment fees on our PNC Credit Facility based on the amount outstanding and rates in effect at March 31, 2022.

(2) Represents aggregate future minimum lease payments under non-cancelable operating leases.

(3) Includes primarily non-cancelable inventory purchase commitments.

Off-Balance Sheet Arrangements

We do not currently have any other off-balance sheet arrangements and do not have any holdings in variable interest entities.

CRITICAL ACCOUNTING ESTIMATES AND POLICIES

The preparation of our consolidated financial statements in accordance with U.S. GAAP requires management to make judgments, estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes included elsewhere in this Annual Report on Form 10-K. On an ongoing basis, we evaluate estimates, which are based on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. We consider the following accounting policies to be critical to understanding our financial statements because the application of these policies requires significant judgment on the part of management, which could have a material impact on our financial statements if actual performance should differ from historical experience or if our assumptions were to change. The following accounting policies include estimates that require management's subjective or complex judgments about the effects of matters that are inherently uncertain. For information on our significant accounting policies, including the policies discussed below, see *Note 1: Description of Business and Significant Accounting Policies* , to our consolidated financial statements.

Revenue Recognition

Our revenue is derived from three main sources: (a) products, (b) service and subscription, and (c) royalties. Our performance obligations are satisfied at a point in time or over time as stand ready obligations. Product revenue is recognized at the point in time when the customer takes control of the product, which typically occurs at the point of shipment. Service and subscription revenue consists of customer support agreements, software subscriptions, installation, and consulting & training. Our software subscriptions include term licenses which are recognized as revenue when the license has been delivered to the customer and related customer support which is recognized ratably over the service period. Revenue from customer support agreements is recognized ratably over the contractual term of the agreement. Installation services are typically completed within a short period of time and revenue from these services are recognized at the point when installation is complete. A majority of the Company's consulting and training revenue does not take significant time to complete therefore these obligations are satisfied upon completion of such services at a point in time. We license certain products under royalty arrangements, pursuant to which our licensees periodically provide us with reports containing units sold to end users subject to the royalties. The reports substantiate that our performance obligation has been satisfied and we recognize royalty revenue based on the reports or when amounts can be reasonably estimated.

There are significant judgements used when applying ASC Topic 606 to contracts with customers. Most of our contracts contain multiple goods and services designed to meet each customers' unique storage needs. For contracts with multiple performance obligations, we allocate the transaction price to each performance obligation based on the relative standalone selling price of the good or service underlying each performance obligation. Where standalone selling price may not be directly observable (e.g., the performance obligation is not sold separately), we maximize the use of observable inputs by using information including reviewing discounting practices, performance obligations with similar customers and product groupings. We determined that invoice price is the best representation of what we expect to receive from the delivery of each performance obligation. This judgment is based on the fact that each storage solution is customizable to meet an individual customer's needs and every product's transaction price can vary depending on the mix of other products included in the same purchase order and there are no identifiable trends that provide a good representation of expected margin for each product.
Product revenue may be impacted by a variety of price adjustments or other factors, including rebates, returns and stock rotation. We use the expected value method to estimate the net consideration expected to be returned by the customer. We use historical data and current trends to drive our estimates. We record a reduction to revenue to account for these items that may result in variable consideration. We initially measure a returned asset at the carrying amount of the inventory, less any expected costs to recover the goods including potential decreases in value of the returned goods.

Income Taxes

Deferred tax assets and liabilities are recognized based on temporary differences between the financial reporting and tax bases of assets and liabilities, measured at the enacted tax rates expected to apply to taxable income in the years in which those tax assets or liabilities are expected to be realized or settled. Based on the evaluation of available evidence, both positive and negative, we recognize future tax benefits, such as net operating loss carryforwards and tax credit carryforwards, to the extent that realizing these benefits is considered to be more likely than not.

A valuation allowance is provided if we believe it is more likely than not that all or some portion of the deferred tax asset will not be realized. An increase or decrease in the valuation allowance, if any, that results from a change in circumstances, and which causes a change in our judgment about the realizability of the related deferred tax asset, is included in the tax provision.

We recognize the financial statement effects of an uncertain income tax position when it is more likely than not, based on technical merits, that the position will be sustained upon examination. We reevaluate these uncertain tax positions on a quarterly basis. This evaluation is based on factors including, but not limited to, changes in facts or circumstances and changes in tax law. We recognize penalties and tax-related interest expense as a component of income tax expense in our consolidated statements of operations. See *Note 9: Income Taxes*, to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Inventories

Manufacturing Inventories

Our manufacturing inventory is recorded at the lower of cost or net realizable value, with cost being determined on a first-in, first-out (“FIFO”) basis. Costs include material, direct labor, and an allocation of overhead. Adjustments to reduce the cost of manufacturing inventory to its net realizable value, if required, are made for estimated excess, obsolete or impaired balances. Factors influencing these adjustments include declines in demand, rapid technological changes, product life cycle and development plans, component cost trends, product pricing, physical deterioration and quality issues. Revisions to these adjustments would be required if these factors differ from our estimates.

Service Parts Inventories

Our service parts inventories are recorded at the lower of cost or net realizable value, with cost being determined on a FIFO basis. Service parts inventories consist of both component parts, which are primarily used to repair defective units, and finished units, which are provided for customer use permanently or on a temporary basis while the defective unit is being repaired. We record adjustments to reduce the carrying value of service parts inventory to its net realizable value and dispose of parts with no use and a net realizable value of zero. Factors influencing these adjustments include product life cycles, end of service life plans and the volume of enhanced or extended warranty service contracts. Estimates of net realizable value involve significant estimates and judgments about the future, and revisions would be required if these factors differ from our estimates.

Business Acquisitions, Goodwill and Acquisition-Related Intangible Assets

We allocate the purchase price to the intangible and tangible assets acquired and liabilities assumed in a business combination at their estimated fair values on the date of acquisition, with the excess recorded to goodwill. We use our best estimates and assumptions to assign fair value to the assets acquired and liabilities assumed as well as the useful lives of the acquired intangible assets. Examples of critical estimates in valuing certain intangible assets we have acquired include, but are not limited to, future expected cash flows, expected technology life cycle, attrition rates of customers, and discount rates. We estimate the useful lives of each intangible asset based on the expected period over which we anticipate generating economic benefit from the asset. The amounts and useful lives assigned to acquired intangible assets impact the amount and timing of future amortization expense.

While we use our best estimates and assumptions as part of the purchase price allocation process to value assets acquired and liabilities assumed, these estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, we may record adjustments to the estimated fair value of the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon the conclusion of the measurement period, any subsequent adjustments are recorded to the consolidated statements of operations.

Recently Issued and Adopted Accounting Pronouncements

For recently issued and adopted accounting pronouncements, see *Note 1: Description of Business and Significant Accounting Policies* , to our consolidated financial statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily a result of exposure due to potential changes in inflation or interest rates. We do not hold financial instruments for trading purposes.

Interest Rate Risk

We are subject to interest rate risk on borrowings under our variable interest rate term debt and PNC Credit Facility. See *Note 5: Debt* to our consolidated financial statements for a description of our long term debt. Changes in the market interest rate will increase or decrease our interest expense. Assuming no change in the outstanding borrowings under the term debt and the PNC Credit Facility during fiscal 2023, a hypothetical 100-basis point increase or decrease in market interest rates sustained throughout the year would not result in a material change to our annual interest expense. Our other long-term debt related to lease obligations have fixed interest rates and terms, and as such, we consider the associated risk to our results of operations from changes in market rates of interest applied to our lease obligations to be minimal.

Foreign Exchange Risk

We conduct business in certain international markets. Because we operate in international markets, we have exposure to different economic climates, political arenas, tax systems and regulations that could affect foreign exchange rates. Our primary exposure to foreign currency risk relates to transacting in foreign currency and recording the activity in U.S. dollars. Changes in exchange rates between the U.S. dollar and these other currencies will result in transaction gains or losses, which we recognize in our consolidated statements of operations.

To the extent practicable, we minimize our foreign currency exposures by maintaining natural hedges between our assets and liabilities and revenues and expenses denominated in foreign currencies. We may enter into foreign exchange derivative contracts or other economic hedges in the future. Our goal in managing our foreign exchange risk is to reduce to the extent practicable our potential exposure to the changes that exchange rates might have on our earnings.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders
Quantum Corporation
San Jose, California

Opinions on the Consolidated Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Quantum Corporation and its subsidiaries (the Company) as of March 31, 2022 and 2021 and the related consolidated statements of operations and comprehensive loss, stockholders' deficit, and cash flows for each of the years in the three year period ended March 31, 2022, and the related notes (collectively referred to as the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of March 31, 2022, based on criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of March 31, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the three-year period ended March 31, 2022 in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of March 31, 2022, based on the criteria established in *Internal Control - Integrated Framework (2013)* issued by COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express an opinion on the Company's consolidated financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

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 generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with 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 (3) 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 consolidated 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.

Critical Audit Matters

The critical audit matters communicated below are matters 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 critical audit matters 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 matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Revenue Recognition — Refer to Note 1 to the Consolidated Financial Statements

Critical Audit Matter Description

The Company recognizes revenue from sales of products as control is transferred to customers, which generally occurs at the point of shipment or upon delivery, unless customer acceptance is uncertain. Revenue from distributors is recognized when the customer obtains control of the product, which generally occurs at the point of shipment or upon delivery, unless customer acceptance is uncertain. Net sales for the fiscal year ended March 31, 2022 was $372.8 million, which principally consist of product sales.

We identified the timing of revenue recognition for product sales (i.e., whether the Company recorded product sales in the appropriate fiscal year) as a critical audit matter because of the significant judgment used when applying Accounting Standards Codification Topic 606 – Revenue from Contracts with Customers – to contracts with customers. The Company utilizes a broad network of distributors, value-added resellers ("VARs"), direct marketing resellers ("DMRs"), original equipment manufacturers ("OEMs") and other suppliers ship products and fulfill performance obligations. This made auditing the timing of revenue recognition for product sales challenging and required significant audit effort to validate the timing of revenue recognition.

How the Critical Audit Matter Was Addressed in the Audit

Our principal audit procedures related to the timing of revenue recognition for product sales included the following, among others:

- We tested the effectiveness of internal controls over the timing of revenue recognition.
- We selected a sample of product sales obtained the invoice, purchase order, customer contract or agreement, packing list, bill of lading, proof of delivery, and evidence of cash collection, to validate revenue was recognized in the appropriate fiscal year.
- We selected a sample of product sales for the year and examined the related contract to validate no customer acceptance clauses existed that would preclude revenue recognition.
- We selected a sample of credit memos from the period immediately subsequent to the Company's fiscal year end and the related invoice, return merchandise authorization form, and shipping documents, to and validated revenue was recognized in the fiscal year ended March 31, 2022 only when control was transferred to the customer and if applicable, customer acceptance had occurred.
- We obtained and evaluated internal certifications provided by the Company's sales employees to validate no side agreements existed that could impact the timing of revenue recognition.

Inventories – Excess and Obsolescence Reserve — Refer to Note 1 to the Consolidated Financial Statements

Critical Audit Matter Description

The Company's manufacturing and service parts inventories are recorded on a first-in, first-out ("FIFO") basis, subject to the lower of cost or net realizable value, and as necessary, the Company writes down the valuation of inventories for excess and obsolescence. Provision for manufacturing and service inventories for the fiscal year ended March 31, 2022 was $20.8 million.

We identified the excess and obsolescence write-down as a critical audit matter because of the judgment's management makes to estimate the excess and obsolescence write-downs. This required a high degree of auditor judgment and significant effort to validate the methodology and the reasonableness of the excess and obsolescence write-downs.

How the Critical Audit Matter Was Addressed in the Audit

Our principal audit procedures related to the Company’s excess and obsolescence write-down included the following procedures, among others:

- We tested the effectiveness of internal controls over inventory valuation.
- We gained an understanding and evaluated the Company’s methodology for determining inventory that is excess or obsolete and the key assumptions and judgments made as part of the process.
- We evaluated the assumptions used by the Company to define what is considered aged inventory by assessing historical trends in the Company’s product life cycle as well as evaluating the underlying calculations applied to the aged inventory.
- We evaluated the inventory valuation utilizing the methodology above to assess the inventory write-down rate applied to different products.

/s/ Armanino LLP

San Ramon, California

June 8, 2022

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

QUANTUM CORPORATION
CONSOLIDATED BALANCE SHEETS
(in thousands, except per share amounts)

	March 31, 2022	March 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 5,210	$ 27,430
Restricted cash	283	707
Accounts receivable, net of allowance for doubtful accounts of $422 and $406, respectively	69,354	73,102
Manufacturing inventories	33,546	24,467
Service parts inventories	24,254	23,421
Prepaid expenses	7,853	3,893
Other current assets	4,697	3,046
Total current assets	145,197	156,066
Property and equipment, net	12,853	10,051
Intangible assets, net	9,584	5,037
Goodwill	12,969	3,466
Restricted cash	—	5,000
Right-of-use assets, net	11,107	9,383
Other long-term assets	9,925	5,921
Total assets	$ 201,635	$ 194,924
Liabilities and Stockholders’ Deficit		
Current liabilities:		
Accounts payable	$ 34,220	$ 35,245
Deferred revenue	86,517	84,027
Long-term debt, current portion	4,375	1,850
Accrued compensation	16,141	19,214
Other accrued liabilities	16,562	18,754
Total current liabilities	157,815	159,090
Deferred revenue	41,580	36,126
Revolving credit facility	17,735	—
Long-term debt, net of current portion	89,448	90,890
Operating lease liabilities	9,891	8,005
Other long-term liabilities	11,849	13,058
Total liabilities	328,318	307,169
Commitments and Contingencies (Note 10)		
Stockholders’ deficit		
Preferred stock:		
Preferred stock, 20,000 shares authorized; no shares issued as of March 31, 2022 and 2021	—	—
Common stock:		
Common stock, $0.01 par value; 125,000 shares authorized; 60,433 and 56,915 shares issued and outstanding at March 31, 2022 and 2021, respectively	605	570
Additional paid-in capital	645,038	626,664
Accumulated deficit	(770,903)	(738,623)
Accumulated other comprehensive loss	(1,423)	(856)
Total stockholders' deficit	(126,683)	(112,245)
Total liabilities and stockholders' deficit	$ 201,635	$ 194,924

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

QUANTUM CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(in thousands, except per share amounts)

	Year Ended March 31,		
	2022	**2021**	**2020**
Revenue			
Product	$ 223,761	$ 209,808	$ 251,168
Service and subscription	133,689	124,904	131,050
Royalty	15,377	14,864	20,731
Total revenue	372,827	349,576	402,949
Cost of revenue			
Product	169,780	150,257	179,760
Service and subscription	56,012	48,566	50,681
Total cost of revenue	225,792	198,823	230,441
Gross profit	147,035	150,753	172,508
Operating expenses			
Research and development	51,812	41,703	36,301
Sales and marketing	62,957	54,945	59,524
General and administrative	45,256	42,001	54,457
Restructuring charges	850	3,701	1,022
Total operating expenses	160,875	142,350	151,304
Income (loss) from operations	(13,840)	8,403	21,204
Other expense, net	(251)	(1,312)	(261)
Interest expense	(11,888)	(27,522)	(25,350)
Loss on debt extinguishment, net	(4,960)	(14,789)	—
Net loss before income taxes	(30,939)	(35,220)	(4,407)
Income tax provision	1,341	239	803
Net loss	$ (32,280)	$ (35,459)	$ (5,210)
Net loss per share - basic and diluted	$ (0.55)	$ (0.83)	$ (0.14)
Weighted average shares - basic and diluted	58,871	42,852	37,593
Net loss	$ (32,280)	$ (35,459)	$ (5,210)
Foreign currency translation adjustments, net	(567)	666	(112)
Total comprehensive loss	$ (32,847)	$ (34,793)	$ (5,322)

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

QUANTUM CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended March 31, 2022	2021	2020
Operating activities			
Net loss	$ (32,280)	$ (35,459)	$ (5,210)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	9,418	5,697	4,287
Amortization of debt issuance costs	2,414	6,301	4,017
Long-term debt related costs	8,471	167	—
Paid-in-kind interest	—	—	1,858
Provision for manufacturing and service inventories	5,740	6,334	6,255
Gain on PPP loan extinguishment	(10,000)	—	—
Stock-based compensation	13,829	9,624	6,748
Non-cash income tax benefit	—	(577)	—
Non-cash loss on debt extinguishment	—	10,087	—
Other non-cash	(832)	704	1,807
Changes in assets and liabilities, net of effect of acquisitions:			
Accounts receivable	3,651	(1,625)	15,237
Manufacturing inventories	(12,069)	924	(11,092)
Service parts inventories	(4,400)	(5,879)	(3,817)
Accounts payable	(1,939)	(1,994)	(768)
Deferred revenue	(2,514)	418	(11,334)
Accrued restructuring charges	(580)	580	(2,876)
Accrued compensation	(3,073)	4,257	(2,161)
Prepaid expenses and other assets	(6,561)	2,215	979
Other liabilities	(3,003)	(2,541)	(5,111)
Net cash used in operating activities	(33,728)	(767)	(1,181)
Investing activities			
Purchases of property and equipment	(6,316)	(6,931)	(2,633)
Business acquisitions	(7,808)	(2,655)	(1,966)
Net cash provided by (used in) investing activities	(14,124)	(9,586)	(4,599)
Financing activities			
Borrowings of long-term debt	94,961	19,400	—
Repayments of long-term debt	(94,301)	(92,782)	(1,238)
Borrowings of credit facility	309,000	309,920	331,632
Repayments of credit facility	(291,265)	(313,065)	(329,012)
Borrowings of paycheck protection program	—	10,000	—
Proceeds from secondary offering, net	—	96,756	—
Payment of taxes due upon vesting of restricted stock	—	(236)	(171)
Proceeds from issuance of common stock	1,762	1,335	—
Net cash provided by financing activities	20,157	31,328	1,211
Effect of exchange rate changes on cash and cash equivalents	51	(108)	(16)
Net change in cash, cash equivalents, and restricted cash	(27,644)	20,867	(4,585)
Cash, cash equivalents, and restricted cash at beginning of period	33,137	12,270	16,855
Cash, cash equivalents, and restricted cash at end of period	$ 5,493	$ 33,137	$ 12,270
Supplemental disclosure of cash flow information			
Cash paid for interest	$ 9,140	$ 24,324	$ 16,488
Cash paid for income taxes, net of refunds	$ 944	$ (2,283)	$ (490)
Non-cash transactions			
Purchases of property and equipment included in accounts payable	$ 147	$ 258	$ 368
Purchases of property and equipment included in accrued liabilities	$ —	$ 1,212	$ —
Transfer of property and equipment to manufacturing inventory	$ 818	$ 429	$ 400
Payment of litigation settlements with insurance proceeds	$ —	$ —	$ 8,950
The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the consolidated balance sheets that sum to the total of the same such amounts shown in the statement of cash flows:			
Cash and cash equivalents	$ 5,210	$ 27,430	$ 6,440
Restricted cash, current	283	707	830
Restricted cash, long-term	—	5,000	5,000
Total cash, cash equivalents and restricted cash at the end of period	$ 5,493	$ 33,137	$ 12,270

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

QUANTUM CORPORATION
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT
(in thousands)

	Common Stock					
	Shares	**Amount**	**Additional Paid-in Capital**	**Accumulated Deficit**	**Accumulated Other Comprehensive Loss**	**Total Stockholders' Deficit**
Balance, March 31, 2019	36,040	$ 360	$ 499,224	$ (697,954)	$ (1,410)	$ (199,780)
Net loss	—	—	—	(5,210)	—	(5,210)
Foreign currency translation adjustments, net	—	—	—	—	(112)	(112)
Shares issued under employee incentive plans, net	1,082	11	(182)	—	—	(171)
Shares issued from warrants exercised, net	2,783	28	(28)	—	—	—
Stock-based compensation	—	—	6,748	—	—	6,748
Balance, March 31, 2020	39,905	$ 399	$ 505,762	$ (703,164)	$ (1,522)	$ (198,525)
Net loss	—	—	—	(35,459)	—	(35,459)
Foreign currency translation adjustments, net of income taxes	—	—	—	—	666	666
Shares issued under employee stock purchase plan	320	4	1,331	—	—	1,335
Shares issued under employee incentive plans, net	1,264	13	(13)	—	—	—
Shares surrendered for employees' tax liability upon settlement of restricted stock units	(44)	—	(236)	—	—	(236)
Shares issued in connection with business acquisition	361	3	2,077	—	—	2,080
Shares issued in connection with secondary equity offering, net	15,109	151	96,604	—	—	96,755
Warrants issued related to long-term debt	—	—	11,515	—	—	11,515
Stock-based compensation	—	—	9,624	—	—	9,624
Balance, March 31, 2021	56,915	$ 570	$ 626,664	$ (738,623)	$ (856)	$ (112,245)
Net loss	—	—	—	(32,280)	—	(32,280)
Foreign currency translation adjustments, net of income taxes	—	—	—	—	(567)	(567)
Shares issued under employee stock purchase plan	389	4	1,758	—	—	1,762
Shares issued under employee incentive plans, net	2,308	23	(23)	—	—	—
Shares issued in connection with business acquisition	821	8	2,810	—	—	2,818
Stock-based compensation	—	—	13,829	—	—	13,829
Balance, March 31, 2022	60,433	$ 605	$ 645,038	$ (770,903)	$ (1,423)	$ (126,683)

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

INDEX TO NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1: DESCRIPTION OF BUSINESS AND SIGNIFICANT ACCOUNTING POLICIES

Description of Business

Quantum Corporation, together with its consolidated subsidiaries ("Quantum" or the "Company"), is a leader in storing and managing digital video and other forms of unstructured data, delivering top streaming performance for video and rich media applications, along with low-cost, long-term storage systems for data protection and archiving. The Company helps customers around the world capture, create and share digital data and preserve and protect it for decades. The Company's software-defined, hyperconverged storage solutions span from non-violate memory express ("NVMe"), to solid state drives, ("SSD"), hard disk drives, ("HDD"), tape and the cloud and are tied together leveraging a single namespace view of the entire data environment. The Company works closely with a broad network of distributors, value-added resellers ("VARs"), direct marketing resellers ("DMRs"), original equipment manufacturers ("OEMs") and other suppliers to meet customers' evolving needs.

Basis of Presentation

The consolidated financial statements and accompanying notes have been prepared in accordance with generally accepted accounting principles in the United States of America ("GAAP"). All intercompany balances and transactions have been eliminated. The Company reviews subsidiaries and affiliates, as well as other entities, to determine if they should be considered variable interest entities ("VIE"), and whether it should change the consolidation determinations based on changes in their characteristics. The Company considers an entity a VIE if its equity investors own an interest therein that lacks the characteristics of a controlling financial interest or if such investors do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support or if the entity is structured with non-substantive voting interests. To determine whether or not the entity is consolidated with the Company's results, the Company also evaluates which interests are variable interests in the VIE and which party is the primary beneficiary of the VIE.

Liquidity

The accompanying consolidated financial statements of the Company have been prepared in conformity with GAAP, which contemplate continuation of the Company as a going concern. The Company generated negative cash flows from operations of approximately $33.7 million, $0.8 million and $1.2 million for the fiscal years ended March 31, 2022, 2021 and 2020, respectively, and generated net losses of approximately $32.3 million, $35.5 million, and $5.2 million for the fiscal years ended March 31, 2022, 2021 and 2020, respectively. The Company has funded operations through the sale of common stock, term debt borrowings, revolving credit facility borrowings and proceeds from the Paycheck Protection Program Loan described in *Note 5: Debt*. Management believes that it has the ability to obtain additional debt or equity financing, if required, and has historically been able to do so. Management also believes that current working capital, borrowings available under the revolving credit facility and future equity financing (including the April 22, 2022 sale of 30 million shares of our common stock for gross proceeds of $67.5 million) or debt financing will provide the Company with sufficient capital to fund operations for at least one year from the consolidated financial statement issuance date. There is no assurance that we would be able to obtain sufficient additional funds when needed or that such funds, if available, will be obtainable on terms satisfactory to the Company.

Principles of Consolidation

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

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported and disclosed in the financial statements and accompanying notes. Actual results could differ from these estimates and assumptions due to risks and uncertainties, including uncertainty in the current economic environment from the ongoing COVID-19 pandemic. Such estimates include, but are not limited to, the determination of standalone selling price for revenue arrangements with multiple performance obligations, useful lives of intangible assets and property and equipment, stock-based compensation and provision for income taxes including related reserves. Management bases its estimates on historical experience and on various other assumptions which management believes to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities.

Cash and Cash Equivalents

The Company has cash deposits and cash equivalents deposited in or managed by major financial institutions. Cash equivalents include all highly liquid investment instruments with an original maturity of three months or less and consist primarily of money market accounts. At times the related amounts are in excess of amounts insured by the Federal Deposit Insurance Corporation. The Company has not experienced any losses with these financial institutions and does not believe such balances are exposed to significant credit risk.

Restricted Cash

Restricted cash is comprised of required minimum balances that serve as cash collateral in connection with various items including insurance requirements, value added taxes, ongoing tax audits and leases in certain countries.

Allowance for Doubtful Accounts

The Company maintains an allowance for doubtful accounts for estimated losses based on historical experience and expected collectability of outstanding accounts receivable. The Company performs ongoing credit evaluations of its customers' financial condition, and for the majority of its customers require no collateral. For customers that do not meet the Company's credit standards, the Company may require a form of collateral, such as cash deposits or letters of credit, prior to the completion of a transaction. These credit evaluations require significant judgment and are based on multiple sources of information. The Company analyzes such factors as its historical bad debt experience, industry and geographic concentrations of credit risk, current economic trends and changes in customer payment terms. The Company will write-off customer balances in full to the reserve when it has determined that the balance is not recoverable. Changes in the allowance for doubtful accounts are recorded in general and administrative expenses.

Fair Value of Financial Instruments

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. To increase the comparability of fair value measures, the following hierarchy prioritizes the inputs to valuation methodologies used to measure fair value:

Level 1: Unadjusted quoted prices in active markets for identical assets or liabilities.

Level 2: Other than quoted prices that are observable in the market for the asset or liability, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or model-derived valuations or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3: Inputs are unobservable and reflect management's estimates of assumptions that market participants would use in pricing the asset or liability.

The categorization of a financial instrument within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The Company's financial instruments consist of Level 3 liabilities.

Manufacturing Inventories

Manufacturing inventory is recorded at the lower of cost or net realizable value, with cost being determined on a first-in, first-out ("FIFO") basis. Costs include material, direct labor, and an allocation of overhead in the case of work in process. Adjustments to reduce the cost of manufacturing inventory to its net realizable value, if required, are made for estimated excess, obsolete or impaired balances. Factors influencing these adjustments include declines in demand, rapid technological changes, product life cycle and development plans, component cost trends, product pricing, physical deterioration and quality issues. Revisions to these adjustments would be required if these factors differ from the Company's estimates.

Service Parts Inventories

Service parts inventories are recorded at the lower of cost or net realizable value, with cost being determined on a FIFO basis. The Company carries service parts because it generally provides product warranty for one to three years and earns revenue by providing enhanced and extended warranty and repair services during and beyond this warranty period. Service parts inventories consist of both component parts, which are primarily used to repair defective units, and finished units, which are provided for customer use permanently or on a temporary basis while the defective unit is being repaired. The Company records adjustments to reduce the carrying value of service parts inventory to its net realizable value and disposes of parts with no use and a net realizable value of zero. Factors influencing these adjustments include product life cycles, end of service life plans and volume of enhanced or extended warranty service contracts. Estimates of net realizable value involve significant estimates and judgments about the future, and revisions would be required if these factors differ from the Company's estimates.

Property and Equipment

Property and equipment are carried at cost, less accumulated depreciation and amortization, computed on a straight-line basis over the estimated useful lives of the assets as follows:

Machinery and equipment	3 to 5 years
Computer equipment	3 to 5 years
Other software	3 years
Furniture and fixtures	5 years
Other office equipment	5 years
Leasehold improvements	Shorter of useful life or life of lease

When assets are retired or otherwise disposed of, the related costs and accumulated depreciation are removed from the balance sheet and any resulting gain or loss is reflected in the consolidated statements of operations and comprehensive income (loss) in the period realized.

The Company evaluates the recoverability of the carrying amount of its property and equipment whenever events or changes in circumstances indicate that the carrying amount of an asset group may not be fully recoverable. A potential impairment charge is evaluated when the undiscounted expected cash flows derived from an asset group are less than its carrying amount. Impairment losses, if applicable, are measured as the amount by which the carrying value of an asset group exceeds its fair value and are recognized in operating results. Judgment is used when applying these impairment rules to determine the timing of impairment testing, the undiscounted cash flows used to assess impairments and the fair value of the asset group.

Business Combinations

The Company allocates the purchase price to the assets acquired and liabilities assumed based on their estimated fair values. The excess of the purchase price over the fair values of the assets acquired and liabilities assumed is recorded as goodwill. During the measurement period, which may be up to one year from the acquisition date, the Company may record adjustments to the estimated fair value of the assets acquired and liabilities assumed, with the corresponding offset to goodwill. The results of operations of an acquired business is included in its consolidated financial statements from the date of acquisition. Acquisition-related expenses are expensed as incurred.

Goodwill

Goodwill represents the excess of the purchase price consideration over the estimated fair value of the tangible and intangible assets acquired and liabilities assumed in a business combination. Goodwill is evaluated for impairment annually in the third quarter of the Company's fiscal year as a single reporting unit, and whenever events or changes in circumstances indicate the carrying value of goodwill may not be recoverable. The Company may elect to qualitatively assess whether it is more likely than not that the fair value of its reporting unit is less than its carrying value. If the Company opts not to qualitatively assess, a quantitative goodwill impairment test is performed. The quantitative test compares its reporting unit's carrying amount, including goodwill, to its fair value calculated based on its enterprise value. If the carrying amount exceeds its fair value, an impairment loss is recognized for the excess. The Company did not recognize any impairment of goodwill in any of the periods presented in the consolidated financial statements.

Purchased Intangible Assets

Purchased intangible assets with finite lives are stated at cost, net of accumulated amortization. The Company amortizes its intangible assets on a straight-line basis over an estimated useful life of two to four years.

Impairment of Long-Lived Assets

The Company reviews its long-lived assets, including property and equipment and finite-lived intangible assets, for impairment whenever events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. The Company measures the recoverability of these assets by comparing the carrying amounts to the future undiscounted cash flows the assets are expected to generate. If the total of the future undiscounted cash flows is less than the carrying amount of an asset, the Company records an impairment charge for the amount by which the carrying amount of the asset exceeds its fair market value.

Operating Leases

The Company determines if an arrangement contains a lease at inception. Lease liabilities are recognized at the present value of the future lease payments at commencement date. The interest rate implicit in the Company's operating leases is not readily determinable, and therefore an incremental borrowing rate is estimated to determine the present value of future payments. The estimated incremental borrowing rate factors in a hypothetical interest rate on a collateralized basis with similar terms, payments, and economic environments. The operating lease right-of-use ("ROU") asset is determined based on the lease liability initially established and reduced for any prepaid lease payments and any lease incentives. The Company accounts for the lease and non-lease components of operating lease contract consideration as a single lease component.

Certain of the operating lease agreements contain rent concession, rent escalation, and option to renew provisions. Rent concession and rent escalation provisions are considered in determining the lease cost. Lease cost is recognized on a straight-line basis over the lease term commencing on the date the Company has the right to use the leased property. The Company generally uses the base, non-cancelable, lease term when recognizing the lease assets and liabilities, unless it is reasonably certain that an extension or termination option will be exercised.

In addition, certain operating lease agreements contain tenant improvement allowances from the Company's landlords. These allowances are accounted for as lease incentives and reduce its ROU asset and lease cost over the lease term.

For short-term leases which have a lease term less than twelve months and do not include an option to purchase the underlying asset that is reasonably certain to be exercised, the Company recognizes rent expense in the consolidated statements of operations and comprehensive loss on a straight-line basis over the lease term and record variable lease payments as incurred.

Deferred Revenue

Deferred revenue primarily consists of amounts that have been invoiced but have not yet been recognized as revenue and performance obligations pertaining to subscription services. The current portion of deferred revenue represents the amounts that are expected to be recognized as revenue within one year of the consolidated balance sheet dates.

Revenue Recognition

The Company generates revenue from three main sources: (1) product, (2) professional services, and (3) royalties. Sales tax collected on sales is netted against government remittances and thus, recorded on a net basis. The Company's performance obligations are satisfied at a point in time or over time as stand ready obligations. The majority of revenue is recognized at a point in time when products are accepted, installed or delivered.

Product Revenue

The Company's product revenue is comprised of multiple storage solution hardware and software offerings targeted towards consumer and enterprise customers. Revenue from product sales is recognized at the point in time when the customer takes control of the product. If there are significant post-delivery obligations, the related revenue is deferred until such obligations are fulfilled. Revenue from contracts with customer acceptance criteria are recognized upon end user acceptance.

Service and Subscription Revenue

Service and subscription revenue consists of four components: (a) post-contract customer support agreements,
(b) software subscriptions, (c) installation, and (d) consulting & training.

Customers have the option to choose between different levels of hardware and software support. The Company's support plans include various stand-ready obligations such as technical assistance hot-lines, replacement parts maintenance, and remote monitoring that are delivered whenever called upon by its customers. Support plans provide additional services and assurance outside the scope of the Company's primary product warranties. Revenue from support plans are recognized ratably over the contractual term of the service contract.

The Company also sells software subscriptions that include term licenses which are recognized as revenue when the license is delivered to the customer and related customer support which is recognized ratably over the service period.

The Company offers installation services on all its products. Customers can opt to either have Quantum or a Quantum-approved third-party service provider install its products. Installation services are typically completed within a short period of time and revenue from these services are recognized at the point when installation is complete.

A majority of the Company's consulting and training revenue does not take significant time to complete therefore these obligations are satisfied upon completion of such services at a point in time.

Royalty Revenue

The Company licenses certain intellectual property to third party manufacturers which gives the manufacturers rights to intellectual property including the right to either manufacture or include the intellectual property in their products for resale. Licensees pay the Company a per-unit royalty for sales of their products that incorporate its intellectual property. On a periodic and timely basis, the licensees provide the Company with reports containing units sold to end users subject to the royalties. The reports substantiate that the performance obligation has been satisfied therefore revenue is recognized based on the reports or when amounts can be reasonably estimated.

Significant Judgements

The Company generally enters into contracts with customers to provide storage solutions to meet their individual needs. Most of the Company’s contracts contain multiple goods and services designed to meet each customers’ unique storage needs. Contracts with multiple goods and services have multiple distinct performance obligations as the promise to transfer hardware, installation services, and support services are capable of being distinct and provide economic benefit to customers on their own.

Stand-alone selling price

For contracts with multiple performance obligations, the Company allocates the transaction price to each performance obligation based on the relative standalone selling price (“SSP”) of the good or service underlying each performance obligation. The SSP represents the amount for which the Company would sell the good or service to a customer on a standalone basis (i.e., not sold as a bundle with any other products or services). Where SSP may not be directly observable (e.g., the performance obligation is not sold separately), the Company maximized the use of observable inputs by using information including reviewing discounting practices, performance obligations with similar customers and product groupings. The Company evaluated all methods included in ASC 606 to determine SSP and concluded that invoice price is the best representation of what the Company expects to receive from the delivery of each performance obligation.

Variable consideration

Product revenue includes multiple types of variable consideration, such as rebates, returns, or stock rotations. All contracts with variable consideration require payment upon satisfaction of the performance obligation typically with net 45-day payment terms. The Company does not include significant financing components in its contracts. The Company constrains estimates of variable consideration to amounts that are not expected to result in a significant revenue reversal in the future, primarily based on the most likely level of consideration to be returned to the customer under the specific terms of the underlying programs.

The expected value method is used to estimate the consideration expected to be returned to the customer. The Company uses historical data and current trends to drive the estimates. The Company records a reduction to revenue to account for these programs. The Company initially measures this asset at the carrying amount of the inventory, less any expected costs to recover the goods including potential decreases in the value of the returned goods.

Cost of Service and Subscription Revenue

The Company classifies expenses as service cost of revenue by estimating the portion of its total cost of revenue that relates to providing field support to its customers under contract. These estimates are based upon a variety of factors, including the nature of the support activity and the level of infrastructure required to support the activities from which it earns service and subscription revenue. In the event its service business changes, its estimates of cost of service and subscription revenue may be impacted.

Research and Development Costs

Expenditures relating to the development of new products and processes are expensed as incurred. These costs include expenditures for employee compensation, materials used in the development effort, other internal costs, as well as expenditures for third party professional services. The Company has determined that technological feasibility for its software products is reached shortly before the products are released to manufacturing. Costs incurred after technological feasibility is established have not been material. The Company expenses software-related research and development costs as incurred.

Internal-use Software Costs

The Company capitalizes costs incurred to implement software solely for its internal use, including (i) hosted applications used to deliver the Company's support services, and (ii) certain implementation costs incurred in a hosting arrangement that is a service contract when the preliminary project stage is complete, management with the relevant authority authorizes and commits to the funding of the software project, and it is probable the project will be completed and used to perform the intended function.

Software implementation costs are capitalized to either other current assets or other long-term assets on the Company's consolidated balance sheet and amortized over 10 years. Software implementation costs capitalized were $3.1 million and $3.1 million for fiscal 2022 and 2021. Related amortization expense for software implementation costs was $ 0.1 million and $0 during fiscal 2022 and 2021, respectively.

Advertising Expense

Advertising expense is recorded as incurred and was $ 3.5 million, $1.5 million, and $3.4 million in fiscal 2022, 2021 and 2020, respectively.

Shipping and Handling Fees

Shipping and handling fees are included in cost of revenue and were $ 7.3 million, $9.4 million, and $9.4 million in fiscal 2022, 2021 and 2020, respectively.

Restructuring Reserves

Restructuring reserves include charges related to the realignment and restructuring of the Company's business operations. These charges represent judgments and estimates of the Company's costs of severance, closure and consolidation of facilities and settlement of contractual obligations under its operating leases, including sublease rental rates, asset write-offs and other related costs. The Company reassesses the reserve requirements to complete each individual plan under the restructuring programs at the end of each reporting period. If these estimates change in the future or actual results differ from the Company's estimates, additional charges may be required.

Foreign Currency Translation

The Company's international operations generally use their local currency as their functional currency. Assets and liabilities are translated at exchange rates in effect at the balance sheet date. Income and expense accounts are translated at the average monthly exchange rates during the year. Resulting translation adjustments are reported as a component of other comprehensive loss and recorded in accumulated other comprehensive loss in the accompanying consolidated balance sheets.

Income Taxes

The Company accounts for income taxes in accordance with ASC Topic 740, *Income Taxes,* in which deferred tax asset and liabilities are recognized based on differences between the financial reporting carrying values of assets and liabilities and the tax basis of those assets and liabilities, measured at the enacted tax rates expected to apply to taxable income in the years in which those tax assets or liabilities are expected to be realized or settled.

A valuation allowance is provided if the Company believes it is more likely than not that all or some portion of the deferred tax asset will not be realized. An increase or decrease in the valuation allowance, if any, that results from a change in circumstances, and which causes a change in the Company's judgment about the realizability of the related deferred tax asset, is included in the tax provision.

The Company assesses whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the consolidated financial statements. The Company may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, including resolution of any related appeals or litigation processes, based on the technical merits of the position. The tax benefit to be recognized in the consolidated financial statements from such a position is measured as the largest amount of benefit that has a greater than fifty percent likelihood of being realized upon ultimate settlement. The Company reevaluates these uncertain tax positions on a quarterly basis. This evaluation is based on factors including, but not limited to, changes in facts or circumstances and changes in tax law. The Company recognizes penalties and tax-related interest expense as a component of income tax expense in the consolidated statements of operations.

Asset Retirement Obligations

The Company records an asset retirement obligation for the fair value of legal obligations associated with the retirement of tangible long-lived assets and a corresponding increase in the carrying amount of the related asset in the period in which the obligation is incurred. In periods subsequent to initial measurement, the Company recognizes changes in the liability resulting from the passage of time and revisions to either the timing or the amount of the original estimate. Over time, the liability is accreted to its present value and the capitalized cost is depreciated over the estimated useful life of the asset. The Company's obligations relate primarily to certain legal obligations to remediate leased property on which certain assets are located.

Warranty Expense

The Company warranties its products against certain defects and the terms range from one to three years. The Company provides for the estimated costs of fulfilling its obligations under hardware warranties at the time the related revenue is recognized. The Company estimates the provision based on historical and projected product failure rates, historical and projected repair costs, and knowledge of specific product failures (if any). The Company regularly reassess its estimates to determine the adequacy of the recorded warranty liability and adjusts the provision, as necessary.

Debt Issuance Costs

Debt issuance costs for revolving credit agreements are capitalized and amortized over the term of the underlying agreements on a straight-line basis. Amortization of these debt issuance costs is included in interest expense while the unamortized debt issuance cost balance is included in other current assets or other assets. Debt issuance costs for the Company's term loans are recorded as a reduction to the carrying amount and are amortized over their terms using the effective interest method. Amortization of these debt issuance costs is included in interest expense.

Stock-Based Compensation

The Company classifies stock-based awards granted in exchange for services as either equity awards or liability awards. The classification of an award as either an equity award or a liability award is generally based upon cash settlement options. Equity awards are measured based on the fair value of the award at the grant date. Liability awards are re-measured to fair value each reporting period. Each reporting period, the Company recognizes the change in fair value of awards issued to non-employees as expense. The Company recognizes stock-based compensation on a straight-line basis over the award's requisite service period, which is generally the vesting period of the award, less actual forfeitures. No compensation expense is recognized for awards for which participants do not render the requisite services. For equity and liability awards earned based on performance or upon occurrence of a contingent event, when and if the awards will be earned is estimated. If an award is not considered probable of being earned, no amount of stock-based compensation is recognized. If the award is deemed probable of being earned, related compensation expense is recorded over the estimated service period. To the extent the estimate of awards considered probable of being earned changes, the amount of stock-based compensation recognized will also change.

Concentration of Credit Risk

The Company sells products to customers in a wide variety of industries on a worldwide basis. In countries or industries where the Company is exposed to material credit risk, the Company may require collateral, including cash deposits and letters of credit, prior to the completion of a transaction. The Company does not believe it has significant credit risk beyond that provided for in the consolidated financial statements in the ordinary course of business. During the fiscal years ended March 31, 2022, 2021 and 2020 no customers represented 10% or more of the Company's total revenue. One customer comprised approximately 21% of accounts receivable as of March 31, 2022. Two customers comprised approximately 22% of accounts receivable as of March 31, 2021.

If the Company is unable to obtain adequate quantities of the inventory needed to sell its products, the Company could face costs increases or delays or discontinuations in product shipments, which could have a material adverse effect on the Company's results of operations. In many cases, the Company's chosen vendor may be the sole source of supply for the products or parts they manufacture, or services they provide, for the Company. Some of the products the Company purchases from these sources are proprietary or complex in nature, and therefore cannot be readily or easily replaced by alternative sources.

Segment Reporting

Business segments are defined as components of an enterprise about which discrete financial information is available and is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing operating performance. Based on the way the Company manages its business, the Company has determined that it currently operates with one reportable segment. The chief operating decision maker focuses on consolidated results in assessing operating performance and allocating resources. Furthermore, the Company offers similar products and services and uses similar processes to sell those products and services to similar classes of customers.

The Company's chief operating decision-maker is its Chief Executive Officer who makes resource allocation decisions and assesses performance based on financial information presented on a consolidated basis. There are no segment managers who are held accountable by the chief operating decision-maker, or anyone else, for operations, operating results, and planning for levels or components below the consolidated unit level. Accordingly, the Company has determined that it has a single reportable segment and operating segment structure.
Based on how the Company manages its business, the Company has determined that it currently operates in one reportable segment. The Company operates in three geographic regions: (a) Americas; (b) Europe, Middle East, and Africa ("EMEA"); and (c) Asia Pacific ("APAC").

The following table summarizes property and equipment, net by geographic region (in thousands):

	For the year ended March 31,	
	2022	2021
United States	$ 12,506	$ 9,787
International	347	264
Total	$ 12,853	$ 10,051

Defined Contribution Plan

The Company sponsors a qualified 401(k) retirement plan for its U.S. employees. The plan covers substantially all employees who have attained the age of 18. Participants may voluntarily contribute to the plan up to the maximum limits established by Internal Revenue Service regulations. For the years ended March 31, 2022 and 2021, the Company incurred $1.7 million and $1.2 million in matching contributions, respectively. No matching contributions were made in the fiscal year ended March 31, 2020.

Recently Adopted Accounting Pronouncements

In October 2021, the Financial Accounting Standards Board issued ASU 2021-08— *Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*, which amends ASC 805 to "require acquiring entities to apply Topic 606 to recognize and measure contract assets and contract liabilities in a business combination." Under current GAAP, an acquirer generally recognizes such items at fair value on the acquisition date. As a result of the amendments made by ASU 2021-08, it is expected that an acquirer will generally recognize and measure acquired contract assets and contract liabilities in a manner consistent with how the acquiree recognized and measured them in its pre-acquisition financial statements. The Company elected to early adopt this standard in the fourth quarter of fiscal 2022 using a retrospective approach that applies the new standard to all business acquisitions that occurred within the current fiscal year. The impact of adoption was in increase of $2.7 million to deferred revenue and goodwill associated with the Pivot 3 acquisition described in *Note 3: Business Acquisitions*.

Table of Contents

NOTE 2: REVENUE

In the following table, revenue is disaggregated by major product offering and geographies (in thousands):

	Year Ended March 31,		
	2022	2021	2020
Americas[1]			
Primary storage systems	$ 36,575	$ 52,295	$ 54,211
Secondary storage systems	63,528	41,948	57,192
Device and media	24,849	24,410	31,228
Service and subscription	81,608	76,039	82,607
Total revenue	206,560	194,692	225,238
EMEA			
Primary storage systems	13,620	12,940	16,078
Secondary storage systems	37,643	33,688	40,008
Device and media	19,467	20,881	25,484
Service and subscription	44,187	41,261	39,467
Total revenue	114,917	108,770	121,037
APAC			
Primary storage systems	5,848	4,409	6,863
Secondary storage systems	16,517	13,364	14,472
Device and media	5,714	5,873	5,632
Service and subscription	7,894	7,604	8,976
Total revenue	35,973	31,250	35,943
Consolidated			
Primary storage systems	56,043	69,644	77,152
Secondary storage systems	117,688	89,000	111,672
Device and media	50,030	51,164	62,344
Service and subscription	133,689	124,904	131,050
Royalty[2]	15,377	14,864	20,731
Total revenue	$ 372,827	$ 349,576	$ 402,949

[1] Revenue for Americas geographic region outside of the United States is not significant.

[2] Royalty revenue is not allocable to geographic regions.

Contract Balances

The following table presents the Company's contract liabilities and certain information related to this balance as of March 31, 2022 (in thousands):

	March 31, 2022
Deferred revenue	$ 128,097
Revenue recognized in the period from amounts included in contract liabilities at the beginning of the period	$ 83,311

Remaining Performance Obligations

Remaining performance obligations consisted of the following (in thousands):

	Current	Non-Current	Total
As of March 31, 2022	$ 110,029	$ 43,638	$ 153,667

The Company expects to recognize approximately 71.6% of the remaining performance obligations within the next 12 months. The majority of the Company's noncurrent remaining performance obligations is expected to be recognized in the next 13 to 60 months.

NOTE 3: BUSINESS ACQUISITIONS

Square Box

On December 12, 2020, the Company entered into a Stock Purchase Agreement to acquire all of the issued and outstanding shares of Square Box Systems Limited ("SBS").

The purchase price of approximately $7.7 million was comprised of (a) $2.6 million cash (net of cash acquired); (b) approximately 0.4 million shares of the Company's common stock, with a fair value of $2.1 million; (c) $2.0 million cash payable at the first anniversary of the closing date; and (d) $ 1.0 million cash payable at the second anniversary of the closing date.

Contingently issuable restricted stock units in the amount of $5.3 million, which are subject to continuous employment, are being recognized as stock-based compensation over the related two years vesting period.

The purchase price was allocated to tangible assets of approximately $ 0.8 million, intangible assets of approximately $ 5.6 million based on their fair values on the acquisition date, liabilities of approximately $1.0 million, and a net deferred tax liability of $ 1.1 million. The excess of the purchase price over the amounts allocated to assets acquired and liabilities assumed was approximately $3.4 million, which has been recorded as goodwill.

The historical results of operations for SBS were not significant to the Company's consolidated results of operations for the periods presented.

Pivot3

In July 2021, the Company purchased specified assets related to the video surveillance business of PV3 (an ABC) LLC, a Delaware limited liability company as assignee for the benefit of Pivot3, Inc., a Delaware corporation ("Pivot 3"). The transaction costs associated with the acquisition were not material and were expensed as incurred. Goodwill generated from this acquisition is primarily attributable to the expected post-acquisition synergies from integrating Pivot3's video surveillance portfolio and assets with its platform to expand the video surveillance portfolio with hardware and software offerings that will be offered under the Quantum VS-Series portfolio. Goodwill obtained in an asset acquisition is deductible for tax purposes.

The total purchase consideration for the acquisition of Pivot3 was $ 7.8 million, which consisted of the following (in thousands):

Cash	$ 5,000
Fair value of stock consideration	2,818
Total	$ 7,818

The following table summarizes the preliminary fair values of assets acquired and liabilities assumed as of the date of the acquisition (in thousands):

	Amount	Estimated Useful Life
Goodwill	$ 9,503	
Identified intangible assets:		
Developed technology	1,700	2 years
Customer lists	3,700	4 years
Property, plant and equipment	4,300	3 years
Net liabilities assumed	(11,385)	
Total	$ 7,818	

Pivot 3 has also agreed to license to the Company certain intellectual property rights related to the business. The historical results of operations for Pivot 3 were not significant to the Company's consolidated results of operations for the periods presented.

EnCloudEn

In October 2021, the Company acquired all intellectual property rights and certain other assets of EnCloudEn, an early stage hyperconverged infrastructure software company. The transaction costs associated with the acquisition were not material and were expensed as incurred. The total purchase consideration for the acquisition was $2.8 million with $2.6 million paid at closing and an additional $ 0.2 million paid in three equal quarterly installments after closing. The fair value of the assets acquired was allocated to developed technology with an estimate useful life of three years.

NOTE 4: BALANCE SHEET INFORMATION

Certain significant amounts included in the Company's consolidated balance sheets consist of the following (in thousands):

Manufacturing inventories	March 31, 2022	March 31, 2021
Finished goods		
Manufactured finished goods	$ 14,395	$ 12,452
Distributor inventory	212	238
Total finished goods	14,607	12,690
Work in progress	2,546	2,074
Raw materials	16,393	9,703
Total manufacturing inventories	$ 33,546	$ 24,467

Service inventories	March 31, 2022	March 31, 2021
Finished goods	$ 19,234	$ 18,773
Component parts	5,020	4,648
Total service inventories	$ 24,254	$ 23,421

Property and equipment, net	March 31, 2022	March 31, 2021
Machinery and equipment, and software	$ 46,831	$ 38,327
Leasehold improvements	6,029	7,080
Furniture and fixtures	838	847
	53,698	46,254
Less: accumulated depreciation	(40,845)	(36,203)
Total property, plant and equipment, net	$ 12,853	$ 10,051

Depreciation and amortization expense for property and equipment amounted to $ 9.4 million, $5.7 million, and $4.3 million for the years ended March 31, 2022, 2021, and 2020, respectively.

Intangibles, net	March 31, 2022			March 31, 2021		
	Gross	Accumulated Amortization	Net	Gross	Accumulated Amortization	Net
Developed technology	$ 9,208	$ (3,121)	$ 6,087	$ 4,700	$ (473)	$ 4,227
Customer lists	4,600	(1,103)	3,497	900	(90)	810
Intangible assets, net	$ 13,808	$ (4,224)	$ 9,584	$ 5,600	$ (563)	$ 5,037

Intangible assets amortization expense was $ 3.7 million, $0.1 million for the years ended March 31, 2022 and 2021, respectively. There was no amortization expense for the year ended March 31, 2020. As of March 31, 2022, the remaining weighted-average amortization period for definite-lived intangible assets was approximately 2.4 years. The Company recorded amortization of developed technology in cost of product revenue, and customer lists in sales and marketing expenses in the consolidated statements of operations.

As of March 31, 2022, the future expected amortization expense for intangible assets is as follows (in thousands):

Fiscal year ending	Estimated future amortization expense	
2023	$	4,568
2024		3,417
2025		1,599
Thereafter		—
Total	$	9,584

Goodwill	Amount	
Balance at March 31, 2021	$	3,466
Goodwill acquired		9,503
Balance at March 31, 2022	$	12,969

Other accrued liabilities	March 31,			
	2022		2021	
Accrued expenses	$	4,984	$	6,799
Asset retirement obligation		4,590		2,906
Accrued warranty		1,899		2,383
Accrued interest		278		57
Accrued restructuring		—		580
Other		4,811		6,029
Total other accrued liabilities	$	16,562	$	18,754

The following table details the change in the accrued warranty balance (in thousands):

	Year Ended March 31,					
	2022		2021		2020	
Balance as of April 1	$	2,383	$	2,668		3,456
Current period accruals		3,717		4,699		3,516
Adjustments to prior estimates		(156)		(472)		(114)
Charges incurred		(4,045)		(4,512)		(4,190)
Balance as of March 31	$	1,899	$	2,383	$	2,668

NOTE 5: DEBT

The following table summarizes the Company's borrowing as of the dates presented (in thousands):

	Year Ended March 31,	
	2022	2021
Senior Secured Term Loan	$ —	$ 92,426
Term Loan	98,723	—
Amended PNC Credit Facility	17,735	—
Paycheck Protection Program	—	10,000
Less: current portion	(4,375)	(1,850)
Less unamortized debt issuance costs[(1)]	(4,899)	(9,686)
Long-term debt, net	$ 107,184	$ 90,890

(1) The unamortized debt issuance costs related to the Term Loan and the Senior Secured Term Loan are presented as a reduction of the carrying amount of the corresponding debt balance on the accompanying consolidated balance sheets. Unamortized debt issuance costs related to the PNC Credit Facility are presented within other assets on the accompanying consolidated balance sheets.

Term Loan

On December 27, 2018, the Company entered into a senior secured term loan (the "Senior Secured Term Loan") amended its existing PNC Bank Credit Facility Agreement (the "PNC Credit Facility"). On February 11, 2021, the Company prepaid $92.3 million of its outstanding Senior Secured Term Loan utilizing the proceeds of the secondary public offering discussed in *Note 7: Common Stock*. The Company recognized a loss on debt extinguishment of $ 14.8 million which included the write-off of debt issuance costs of $10.1 million, a prepayment penalty of $ 4.6 million and other costs of $ 0.1 million.

On August 5, 2021, the Company entered into a new senior secured term loan to borrow an aggregate of $ 100.0 million (the "Term Loan"). A portion of the proceeds were used to repay in full all outstanding borrowings under the Senior Secured Term Loan. Borrowings under the Term Loan mature on August 5, 2026. Principal is payable at a rate per annum equal to (a) 2.5% of the original principal balance thereof during the first year following the closing date of the Term Loan and (b) 5% of the original principal balance thereof thereafter. Principal and interest payments are payable on a quarterly basis. The Company incurred $5.1 million in costs related to the Term Loan. These debt issuance costs are reflected as a reduction of the carrying amount of the Term Loan and are being recognized as interest expense over the term of the Term Loan. The Company recorded a loss on debt extinguishment of $15.0 million related to the repayment of the Senior Secured Term Loan which was comprised of $6.4 million in prepayment penalties, $ 0.1 million in legal fees, and the write-off of unamortized debt issuance costs of $8.4 million.

On March 15, 2022, the Company entered into an amendment to the Term Loan, which, among other things (a) waived compliance with the total leverage ratio financial covenant for the four fiscal quarter period ended March 31, 2022; (b) waived compliance with the minimum liquidity financial covenant as of March 31, 2022; and (c) permitted the Company to retain a portion of the cash proceeds of a public offering of the Company's common stock.

Loans under the Term Loan designated as Prime Rate Loans bear interest at a rate per annum equal to the greatest of (i) 1.75%, (ii) the Federal funds rate plus 0.50%; (iii) the LIBOR Rate based upon an interest period of one month plus 1.0%; and (iv) the "Prime Rate" last quoted by the Wall Street Journal, plus an applicable margin of 5.00%. Loans designated as LIBOR Rate Loans bear interest at a rate per annum equal to the LIBOR Rate plus an applicable margin of 6.00%. The LIBOR Rate is subject to a floor of 0.75%. The Company can designate a loan as a Prime Rate Loan or LIBOR Rate Loan in its discretion.

The Term Loan and the PNC Credit Agreement contain certain covenants, including requirements to prepay the Term Loan in an amount equal to (i) 100% of the net cash proceeds from certain asset dispositions, extraordinary receipts, debt issuances and equity issuances, subject to certain reinvestment rights and other exceptions and (ii) 75% of certain excess cash flow of the Company and its subsidiaries beginning in the fiscal year ended March 31, 2023, subject to certain exceptions, including reductions to the percentage of such excess cash flow that is required to prepay the loans to 50% and 0%, based on the Company's applicable total net leverage ratio. Amounts outstanding under the Term Loan may become due and payable upon the occurrence of specified events, which among other things include (subject to certain exceptions and cure periods): (i) failure to pay principal, interest, or any fees when due; (ii) breach of any representation or warranty, covenant, or other agreement in the Term Loan and other related loan documents; (iii) the occurrence of a bankruptcy or insolvency proceeding with respect to the Company or certain of its subsidiaries; (iv) any "Event of Default" with respect to other indebtedness involving an aggregate amount of $3,000,000 or more; (v) any lien created by the Term Loan or any related security documents ceasing to be valid and perfected; (vi) the Term Loan Credit Agreement or any related security documents or guarantees ceasing to be legal, valid, and binding upon the parties thereto; or (vii) a change of control shall occur. Additionally, the Term Loan contains financial covenants relating to minimum liquidity and total net leverage.

Revolving Credit Facility

On September 30, 2021, the Company amended the PNC Credit Facility. The amendment, among other things (a) extended the maturity date to August 5, 2026; (b) reduced the principal amount of the revolving commitments to a maximum amount equal to the lesser of: (i) $30.0 million or (ii) the amount of the borrowing base, as defined in the PNC Credit agreement; (c) replaced existing debt covenants with net leverage ratio, minimum liquidity and fixed charges coverage ratio covenants, and (d) removed the requirement to maintain a $5.0 million restricted cash reserve with PNC.

On March 15, 2022, the Company entered into an amendment to the PNC Credit Facility, which, among other things (a) waived compliance with the total leverage ratio financial covenant for the four fiscal quarter period ended March 31, 2022; (b) waived compliance with the fixed charge coverage ratio; and (c) waived compliance with the minimum liquidity financial covenant as of March 31, 2022.

Loans designated as PNC LIBOR Rate Loans bear interest at a rate per annum equal to the LIBOR Rate plus 2.25% until December 31, 2021 and thereafter between 1.75% and 2.25% based on the percentage of Average Undrawn Availability (as defined in the PNC Credit Agreement) for the most recently completed fiscal quarter (the "PNC LIBOR Loan Interest Rate"). Loans under the PNC Credit Facility designated as PNC Domestic Rate Loans and Swing Loans bear interest at a rate per annum equal to the greatest of (i) the base commercial lending rate of PNC Bank; (ii) the Overnight Bank Funding Rate plus 0.5%; and (iii) the daily LIBOR Rate plus 1.0%, plus 1.25% until December 31, 2021 and thereafter between 0.75% and 1.25% based on the percentage of Average Undrawn Availability (as defined in the PNC Credit Agreement) for the most recently completed fiscal quarter (the "PNC Domestic Loan Interest Rate"). If on the last day of any calendar quarter, the average "Usage Amount" during such calendar quarter does not equal the "Maximum Revolving Advance Amount" (as such terms are defined in the PNC Credit Facility), then the Company will pay an undrawn commitment fee of between 0.25% and 0.375% (based on the percentage usage of the Maximum Revolving Advance Amount during that calendar quarter) on the amount by which the Maximum Revolving Advance Amount exceeds such average Usage Amount.

With respect to any PNC LIBOR Rate Loan, the Company has agreed to pay affiliates of certain Term Loan lenders a fee equal to a percentage per annum equal to the sum of (x) 6.00%, minus (y) the PNC LIBOR Loan Interest Rate, plus (z) if the LIBOR Rate applicable to such interest payment is less than 0.75%, (i) 0.75% minus (ii) such LIBOR Rate. With respect to any Domestic Rate Loan or Swing Loan, the Company has agreed to pay an affiliate of Blue Torch a fee equal to a percentage per annum equal to the sum of (x) 5.00%, minus (y) the PNC Domestic Loan Interest Rate, plus (z) if the Alternative Base Rate applicable to such interest payment is less than 1.00%, (i) 1.00% minus (ii) such Alternative Base Rate. If on the last day of any calendar quarter, the average "Usage Amount" during such calendar quarter does not equal the "Maximum Revolving Advance Amount" (as such terms are defined in the PNC Credit Facility), then the Company has agreed to pay affiliates of certain Term Loan lenders a fee at a rate per annum equal to 1.00% minus a fee percentage between 0.25% to 0.375% on the amount by which the Maximum Revolving Advance Amount exceeds such average Usage Amount.

As of March 31, 2022, the interest rate on the Term Loan was 6.75% and the interest rate on the PNC Credit Facility for Domestic Rate Loans and Swing Loans was 4.75% and for LIBOR Loans was 2.61%. As of March 31, 2022, the

PNC Credit Facility had a borrowing base of $ 24.1 million, of which $5.0 million was available at that date. The Company was required to maintain a $ 5.0 million restricted cash reserve as part of the PNC Credit Facility, which was presented as long-term restricted cash within the accompanying consolidated balance sheet as of March 31, 2021. The September 30, 2021 amendment to the PNC Credit Facility removed the restricted cash reserve requirement.

Paycheck Protection Program Loan

On April 13, 2020, the Company entered into a Paycheck Protection Program (“PPP”) Term Loan (“PPP Loan”) effective April 11, 2020 with PNC in an aggregate principal amount of $10.0 million pursuant to the Paycheck Protection Program under the Coronavirus Aid, Relief, and Economic Security (“CARES”) Act. In July 2021, the Company received notice from PNC that the PPP Loan and related accrued interest was approved for forgiveness in full by the U.S. Small Business Administration (the “SBA”). The Company recorded the amount forgiven as gain on debt extinguishment of $10.0 million in fiscal year ended March 31, 2022.

NOTE 6: LEASES

Supplemental balance sheet information related to leases is as follows (in thousands):

Operating leases	March 31, 2022	March 31, 2021
Operating lease right-of-use assets	$ 11,107	$ 9,383
Other current liabilities	$ 1,727	$ 2,581
Operating lease liability	9,891	8,005
Total operating lease liabilities	$ 11,618	$ 10,586

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

	Year Ended March 31,	
Lease expense	2022	2021
Operating lease expense	$ 6,871	$ 4,718
Variable lease expense	1,179	820
Short-term lease expense	26	132
Total lease expense	$ 8,076	$ 5,670

Maturity of Lease Liabilities	Operating Leases
2023	$ 2,638
2024	2,204
2025	1,937
2026	1,502
2027	1,400
Thereafter	14,456
Total lease payments	$ 24,137
Less: Imputed interest	(12,519)
Present value of lease liabilities	$ 11,618

Lease Term and Discount Rate	March 31,	
	2022	2021
Weighted average remaining operating lease term (years)	10.88	4.53
Weighted average discount rate for operating leases	12.9 %	13.96 %

Operating cash outflows related to operating leases totaled $ 3.9 million and $4.9 million for the fiscal years ended March 31, 2022 and March 31, 2021, respectively.

NOTE 7: COMMON STOCK

Secondary Public Offering

On February 8, 2021, the Company closed a secondary public offering of 15,109,489 shares of its common stock for gross proceeds of $ 103.5 million. The Company received net proceeds of $96.8 million after deducting underwriters' discounts and other offering related expenses.

Amended and Restated 2012 Long-Term Incentive Plan

The Company has a stockholder-approved 2012 Long-Term Incentive Plan (the "Plan") that was amended and restated in fiscal year 2022 which added an additional 5.9 million shares. The Plan has 9.0 million shares authorized for issuance of new shares, with 4.8 million performance shares and restricted shares outstanding, and 4.2 million shares available for future issuance under the Plan as of March 31, 2022.

Stock options under the Plan are granted at prices determined by the Board of Directors, but at not less than the fair market value of the Company's common stock on the date of grant. The majority of performance share units, restricted stock units and stock options granted to employees vest over three years. Stock options, performance shares and restricted stock grants to non-employee directors typically vest over one year. The term of each stock option under the Plan will not exceed seven years. Stock options, performance share units and restricted stock units granted under the Plan are subject to forfeiture if employment terminates.

2021 Inducement Plan

The Company's 2021 Inducement Plan became effective on February 1, 2021 and provides for issuance of inducement equity awards to individuals who were not previously an employee or non-employee director of the Company as an inducement material to such individual's entering into employment with the Company. The term of each stock option and restricted stock unit under the plan will not exceed seven years, and each award generally vests between two and four years. There were no shares available for future issuance as of March 31, 2022.

The Company accounts for all forfeitures of stock-based awards when they occur.

Employee Stock Purchase Plan

The Company's has an Employee Stock Purchase Plan (the "ESPP") which enables eligible employees to purchase shares of its common stock at a discount. Purchases will be accomplished through participation in discrete offering periods. On each purchase date, eligible employees will purchase the Company's common stock at a price per share equal to 85% of the lesser of (i) the fair market value of the Company's common stock on the first trading day of the offering period, and (ii) the fair market value of the Company's common stock on the purchase date.

The Company has reserved shares of common stock for future issuance under its ESPP as follows (in thousands):

	March 31,	
	2022	2021
Shares available for issuance at beginning of period	1,077	1,397
Additional shares authorized during the period	—	—
Shares issued during the period	(389)	(320)
Total shares available for future issuance at end of period	688	1,077

The Company uses the Black-Scholes-Merton option-pricing model (“Black-Scholes”) to determine the fair value for stock options, shares forecasted to be issued pursuant to its ESPP, and warrants. This requires the use of assumptions about expected life, stock price, volatility, risk-free interest rates and expected dividends.

Expected Life—The expected term was based on historical experience with similar awards, giving consideration to the contractual terms, exercise patterns and post-vesting forfeitures.

Volatility—The expected stock price volatility for the Company's common stock was based on the historical volatility of its common stock over the most recent period corresponding with the estimated expected life of the award.

Risk-Free Rate—The risk-free interest rate is based on the yields of U.S. Treasury securities with maturities similar to the expected term of the options for each option group.

Dividend Yield—The Company has never declared or paid any cash dividends and do not currently plan to pay cash dividends in the foreseeable future. Consequently, an expected dividend yield of zero was used.

The weighted-average grant date fair value and the assumptions used in calculating fair values of shares forecasted to be issued pursuant to the Company's ESPP are as follows:

	Year Ended March 31,		
	2022	**2021**	**2020**
Expected life	0.5 years	0.5 years	0.5 years
Volatility	51% - 57%	55% - 133%	49.81%
Risk-free interest rate	0.06% - 0.23%	0.05% - 0.11%	0.41%
Dividend yield	—%	—%	—%
Fair value of common stock	$4.60 - $6.40	$4.99 - $8.05	$4.78

Performance Stock Units

The Company granted 0.6 million, 0.9 million, and 1.5 million of performance share units with market conditions (“Market PSUs”) in fiscal 2022, 2021, and 2020, respectively. Market PSUs vest one to three years from the issuance date and become eligible for vesting based on the Company achieving certain stock price targets and are contingent upon continued service of the holder of the award during the vesting period. The estimated fair value of these Market PSUs is determined at the issuance date using a Monte Carlo simulation model.

Assumptions used in the Monte Carlo model to calculate fair values of market PSU’s during each fiscal period are as follows:

Weighted-Average	**2022**	**2021**	**2020**
Discount period (years)	2.98	2.54	3.00
Risk-free interest rate	0.93%	0.31%	1.45%
Stock price volatility	75.00%	82.00%	72.00%
Grant date fair value	$5.40	$3.77	$5.92

The Company granted 0.0 million, 0.5 million and 0.3 million of performance share units with financial performance conditions (“Performance PSUs”) in the fiscal years ended March 31, 2022, 2021 and 2020, respectively. Performance PSUs become eligible for vesting based on the Company achieving certain financial performance targets through the end of the fiscal year when the performance PSUs were granted, and are contingent upon continued service of the holder of the award during the vesting period. Performance PSUs are valued at the market closing share price on the date of grant and compensation expense for Performance PSUs is recognized when it is probable that the performance conditions will be achieved. Compensation expense recognized related to Performance PSUs is reversed if the Company determines that it is no longer probable that the performance conditions will be achieved.

The following table summarizes activity for Market PSUs and Performance PSUs for the year ended March 31, 2022 (shares in thousands):

	Shares	Weighted-Average Grant Date Fair Value per Share
Outstanding as of March 31, 2021	2,355	$ 4.20
Granted	567	$ 4.30
Vested	(1,074)	$ 3.64
Forfeited or cancelled	(269)	$ 4.38
Outstanding as of March 31, 2022	1,579	$ 4.58

As of March 31, 2022, there was $2.7 million and $0.6 million of unrecognized stock-based compensation related to Market PSUs and Performance PSUs, respectively, which is expected to be recognized over a weighted-average period of one year. The total grant date fair value of shares vested during fiscal years ended March 31, 2022, 2021, and 2020 was $3.9 million, $2.9 million, and $0.6 million, respectively.

Restricted Stock Units

The Company granted 2.8 million, 2.4 million, and 0.6 million of service-based restricted stock units ("RSUs") in the fiscal years ended March 31, 2022, 2021 and 2020, respectively, which generally vest ratably over a three-year service period. RSUs are valued at the market closing share price on the date of grant and compensation expense for RSUs is recognized ratably over the applicable vesting period.

The following table summarizes activity for restricted stock units for the year ended March 31, 2022 (shares in thousands):

	Shares	Weighted-Average Grant Date Fair Value per Share
Outstanding as of March 31, 2021	2,710	$ 4.17
Granted	2,770	$ 5.99
Vested	(1,234)	$ 4.05
Forfeited or cancelled	(390)	$ 4.69
Outstanding as of March 31, 2022	3,856	$ 5.46

As of March 31, 2022, there was $17.1 million of total unrecognized stock-based compensation related to RSUs, which is expected to be recognized over a weighted-average period of two years. The total grant date fair value of RSUs vested during fiscal years ended March 31, 2022, 2021, and 2020 was $5.0 million, $2.1 million, and $4.0 million, respectively.

Compensation Expense

The following table details the Company's stock-based compensation expense, net of forfeitures (in thousands):

	Year Ended March 31,		
	2022	2021	2020
Cost of revenue	$ 1,112	$ 672	$ 452
Research and development	5,843	2,881	984
Sales and marketing	2,516	1,757	1,165
General and administrative	4,358	4,314	4,147
Total share-based compensation	$ 13,829	$ 9,624	$ 6,748

	Year Ended March 31,		
	2022	2021	2020
Restricted stock units	$ 9,331	$ 4,041	$ 3,610
Performance share units	3,811	4,904	3,103
Employee stock purchase plan	687	679	35
Total stock-based compensation	$ 13,829	$ 9,624	$ 6,748

Warrants

As of March 31, 2022 and 2021, the Company had outstanding warrants to purchase 7,110,616 shares of the Company's common stock exercisable until December 27, 2028 at an exercise price of $1.33 per share and outstanding warrants to purchase 3,450,000 shares of the Company's common stock exercisable until June 16, 2030 at an exercise price of $3.00 per share (collectively, the "Warrants"). The exercise price and the number of shares underlying the Warrants are subject to adjustment in the event of specified events, including dilutive issuances of common stock linked equity instruments at a price lower than the exercise price of the warrants, a subdivision or combination of the Company's common stock, a reclassification of the Company's common stock or specified dividend payments. Upon exercise, the aggregate exercise price may be paid, at each warrant holder's election, in cash or on a net issuance basis, based upon the fair market value of the Company's common stock at the time of exercise.

The Warrants grant the holders certain registration rights for the shares of common stock issuable upon the exercise of the applicable warrants, including (a) the ability of a holder to request that the Company file a Form S-1 registration statement with respect to at least 40% of the registrable securities held by such holder as of the issuance date of the applicable warrants; (b) the ability of a holder to request that the Company file a Form S-3 registration statement with respect to outstanding registrable securities if at any time the Company is eligible to use a Form S-3 registration statement; and (c) certain piggyback registration rights related to potential future equity offerings of the Company, subject to certain limitations.

NOTE 8: NET LOSS PER SHARE

Equity Instruments Outstanding

The Company has stock options, performance share units, restricted stock units and options to purchase shares under its ESPP, granted under various stock incentive plans that, upon exercise and vesting, would increase shares outstanding. The Company has also issued warrants to purchase shares of the Company's stock.

The following outstanding shares of common stock equivalents were excluded from the computation of the diluted net loss per share attributable to common stock for the periods presented because their effect would have been anti-dilutive (in thousands):

	Year Ended March 31,		
	2022	2021	2020
Stock awards	1,996	1,818	931
Warrants	6,886	6,573	6,312
ESPP	11	11	223
Total	8,893	8,402	7,466

The dilutive impact related to common shares from stock incentive plans and outstanding warrants is determined by applying the treasury stock method to the assumed vesting of outstanding performance share units and restricted stock units and the exercise of outstanding options and warrants. The dilutive impact related to common shares from contingently issuable performance share units is determined by applying a two-step approach using both the contingently issuable share guidance and the treasury stock method.

The Company had outstanding market based restricted stock units as of March 31, 2022 that were eligible to vest into shares of common stock subject to the achievement of certain stock price targets in addition to a time-based vesting period. These contingently issuable shares are excluded from the computation of diluted earnings per share if, based on current period results, the shares would not be issuable if the end of the reporting period were the end of the contingency period. There were 0.1 million shares of contingently issuable market-based restricted stock units that were excluded from the table above as the market conditions were not satisfied as of March 31, 2022.

NOTE 9: INCOME TAXES

Pre-tax loss reflected in the consolidated statements of operations for the years ended March 31, 2022, 2021 and 2020 is as follows (in thousands):

	Year Ended March 31,		
	2022	2021	2020
U.S.	$ (31,489)	$ (36,648)	$ (6,318)
Foreign	550	1,428	1,911
Total	$ (30,939)	$ (35,220)	$ (4,407)

Income tax provision consists of the following (in thousands):

	Year Ended March 31,		
	2022	2021	2020
Current tax expense			
Federal	$ —	$ (76)	$ (115)
State	477	339	106
Foreign	1,381	747	1,271
Total current tax expense	1,858	1,010	1,262
Deferred tax expense			
Federal	9	(577)	—
State	22	9	33
Foreign	(548)	(203)	(492)
Total deferred tax expense (benefit)	(517)	(771)	(459)
Income tax provision	$ 1,341	$ 239	$ 803

The income tax provision differs from the amount computed by applying the federal statutory rate of 21% to loss before income taxes as follows (in thousands):

	For the year ended March 31,		
	2022	2021	2020
Expense at the federal statutory rate	$ (6,493)	$ (7,396)	$ (925)
Expiration of attributes	18,345	9,862	11,679
Valuation allowance	(4,899)	5,444	(2,639)
Permanent items	1,941	1,295	914
Equity compensation	195	345	280
Debt forgiveness	(2,100)	—	—
Foreign taxes	1,761	(129)	1,612
State income taxes	(402)	(969)	(20)
Research and development credits	(2,094)	(1,829)	(1,566)
Uncertain tax positions	(6,349)	(6,695)	(8,654)
Other	1,436	311	122
Income tax provision	$ 1,341	$ 239	$ 803

Significant components of deferred tax assets and liabilities are as follows (in thousands):

	As of March 31,	
	2022	2021
Deferred tax assets		
Loss carryforwards	$ 59,636	$ 76,153
Deferred revenue	29,485	21,839
Tax credits	16,085	16,574
Disallowed interest	12,296	12,132
Other accruals and reserves not currently deductible for tax purposes	4,450	8,192
Capitalized research and development	16,289	7,811
Lease obligations	2,514	1,747
Inventory	1,701	1,374
Accrued warranty expense	447	569
Acquired intangibles	853	454
Gross deferred tax assets	143,756	146,845
Valuation allowance	(138,365)	(143,263)
Total deferred tax assets, net of valuation allowance	$ 5,391	$ 3,582
Deferred tax liabilities		
Depreciation	$ (1,921)	$ (1,440)
Lease assets	(2,439)	(1,670)
Other	(1,048)	(1,013)
Total deferred tax liabilities	$ (5,408)	$ (4,123)
Net deferred tax assets (liabilities)	$ (17)	$ (541)

The valuation allowance decreased by $ 4.9 million during the year ended March 31, 2022, increased by $ 5.4 million during the year ended March 31, 2021, and decreased by $2.5 million during the year ended March 31, 2020.

A reconciliation of the gross unrecognized tax benefits is as follows (in thousands):

	For the year ended March 31,		
	2022	2021	2020
Beginning Balance	$ 101,119	$ 107,282	$ 116,032
Increase in balances related to tax positions in current period	2,785	2,560	2,275
Increase in balances related to tax positions in prior period	4,881	—	144
Increase in balances related to acquisitions	—	511	—
Decrease in balances related to tax positions in prior period	(1,020)	(522)	(4)
Decrease in balances due to lapse in statute of limitations	(8,162)	(8,712)	(11,165)
Ending balance	$ 99,603	$ 101,119	$ 107,282

During fiscal 2022, excluding interest and penalties, there was a $ 1.5 million change in the Company's unrecognized tax benefits. Including interest and penalties, the total unrecognized tax benefit at March 31, 2022 was $100.8 million, of which $92.2 million, if recognized, would favorably affect the effective tax rate. At March 31, 2022, accrued interest and penalties totaled $1.2 million. The Company's practice is to recognize interest and penalties related to income tax matters in the income tax provision in the consolidated statements of operations. As of March 31, 2022, $93.5 million of unrecognized tax benefits were recorded as a contra deferred tax asset in other long-term assets in the consolidated balance sheets and $7.3 million (including interest and penalties) were included in other long-term liabilities in the consolidated balance sheets.

The Company files its tax returns as prescribed by the laws of the jurisdictions in which it operates. The Company's U.S. tax returns have been audited for years through 2002 by the Internal Revenue Service. In other major jurisdictions, the Company is generally open to examination for the most recent three to five fiscal years. During the next 12 months, it is reasonably possible that approximately $11.0 million of tax benefits, inclusive of interest and penalties, that are currently unrecognized could be recognized as a result of the expiration of applicable statutes of limitations.

As of March 31, 2022, the Company had federal net operating loss and tax credit carryforwards of approximately $ 258.1 million and $52.5 million, respectively. The net operating loss and tax credit carryforwards expire in varying amounts beginning in fiscal year 2022 if not previously utilized, and $12.8 million are indefinite-lived net operating loss carryforwards. These carryforwards include $11.1 million of acquired net operating losses and $ 8.0 million of acquired credits, the utilization of which is subject to various limitations due to prior changes in ownership.

Certain changes in stock ownership could result in a limitation on the amount of both acquired and self-generated net operating loss and tax credit carryovers that can be utilized each year. If the Company has previously undergone, or should it experience in the future, such a change in stock ownership, it could severely limit the usage of these carryover tax attributes against future income, resulting in additional tax charges.

Due to its history of net losses and the difficulty in predicting future results, Quantum believes that it cannot rely on projections of future taxable income to realize the deferred tax assets. Accordingly, it has established a full valuation allowance against its U.S. and certain foreign net deferred tax assets. Significant management judgement is required in determining the Company's deferred tax assets and liabilities and valuation allowances for purposes of assessing its ability to realize any future benefit from its net deferred tax assets. The Company intends to maintain this valuation allowance until sufficient positive evidence exists to support the reversal of the valuation allowance. The Company's income tax expense recorded in the future will be reduced to the extent that sufficient positive evidence materializes to support a reversal of, or decrease in, its valuation allowance.

NOTE 10: COMMITMENTS AND CONTINGENCIES

Commitments to Purchase Inventory

The Company uses contract manufacturers for its manufacturing operations. Under these arrangements, the contract manufacturer procures inventory to manufacture products based upon its forecast of customer demand. The Company has similar arrangements with certain other suppliers. The Company is responsible for the financial impact on the supplier or contract manufacturer of any reduction or product mix shift in the forecast relative to materials that the third party had already purchased under a prior forecast. Such a variance in forecasted demand could require a cash payment for inventory in excess of current customer demand or for costs of excess or obsolete inventory. As of March 31, 2022, the Company had issued non-cancelable commitments for $64.6 million to purchase inventory from its contract manufacturers and suppliers.

Leases

At the end of fiscal year 2022, the Company had various non-cancelable operating for office facilities. Refer to *Note 6: Leases* for additional information regarding lease commitments.

Legal Proceedings

Realtime Data Matter

On July 22, 2016, Realtime Data LLC d/b/a IXO (“Realtime Data”) filed a patent infringement lawsuit against the Company in the U.S. District Court for the Eastern District of Texas, alleging infringement of U.S. Patents Nos. 7,161,506, 7,378,992, 7,415,530, 8,643,513, 9,054,728, and 9,116,908. The lawsuit has been transferred to the U.S. District Court for the Northern District of California for further proceedings. Realtime Data asserts that the Company has incorporated Realtime Data’s patented technology into its compression products and services. Realtime Data seeks unspecified monetary damages and other relief that the Court deems appropriate. On July 31, 2017, the District Court stayed proceedings in this litigation pending the outcome of Inter Partes Review proceedings before the Patent Trial and Appeal Board relating to the Realtime patents. In those proceedings the asserted claims of the ’506 patent, the ’992 patent, and the ’513 patent were found unpatentable. In addition, on July 19, 2019, the United States District Court for the District of Delaware issued a decision finding that all claims of the ’728 patent, the ’530 patent, and the ’908 patent are not eligible for patent protection under 35 U.S.C. § 101 (the “Delaware Action”). On appeal, the Federal Circuit vacated the decision in the Delaware Action and remanded for the Court to “elaborate on its ruling.” The case pending against Quantum in the Northern District of California remains stayed pending the final outcome in the Delaware Action. On May 4, 2021, the Court in the Delaware Action reaffirmed its earlier ruling and granted defendants’ motions to dismiss under Section 101. The Court also granted Realtime Data fourteen days to file amended complaints in the Delaware Action where they sought leave to do so. On May 19, 2021, Realtime Data filed amended complaints including revised bases for claims of infringement of the same patents. On June 29, 2021, defendants in the Delaware Action filed a renewed motion to dismiss under Section 101. Realtime Data filed its opposition to the motion to dismiss on July 13, 2021. On August 23, 2021, the Court again reaffirmed its earlier ruling and granted defendants’ motions to dismiss under Section 101. Realtime Data has appealed that decision to the Federal Circuit. On September 7, 2021, the case against Quantum in the Northern District of California was stayed pending the outcome of Realtime Data’s appeal in the Delaware Action. Quantum believes the probability that this lawsuit will have a material adverse effect on its business, operating results or financial condition is remote.

Starboard Matter

On July 14, 2020, Starboard Value LP, Starboard Value and Opportunity Master Fund Ltd., Starboard Value and Opportunity S LLC, and Starboard Value and Opportunity C LP (collectively, “Starboard”) filed a lawsuit against Quantum Corporation, Quantum’s former CEO and board member Jon Gacek, and former Quantum board member Paul Auvil in the California Superior Court in Santa Clara County. The complaint alleges that between 2012 and 2014, Starboard purchased a large number of shares of Quantum’s common stock, obtained three seats on Quantum’s board of directors and then, in July 2014, entered into an agreement with Quantum whereby Starboard would not seek control of Quantum’s board but would instead support Quantum’s slate of board nominees so long as Quantum met certain performance objectives by the end of fiscal 2015. The complaint further alleges that Quantum hid its failure to meet those performance objectives by improperly recognizing revenue in fiscal 2015. Mr. Gacek resigned from the board effective May 1, 2017, and as CEO effective November 7, 2017; Mr. Auvil resigned from the board effective November 8, 2017. The complaint’s accounting allegations largely repeat allegations made in now-concluded shareholder class actions, shareholder derivative actions and an SEC investigation, the settlement of which Quantum previously reported in the Company’s Form 10-Q filed with the SEC on January 29, 2020 and Form 10-K filed with the SEC on August 6, 2019 (among other SEC filings). On September 14, 2020, defendants filed a motion to dismiss the California action on grounds of forum non conveniens and the mandatory Delaware forum selection clauses set forth in the contracts between Starboard and Quantum. On November 19, 2020, Starboard filed a first amended complaint in which Quantum was not named as a defendant, in effect dismissing Quantum from the California action. On January 8, 2021, Messrs. Gacek and Auvil moved to dismiss the amended complaint in California on grounds of forum non conveniens and the mandatory Delaware forum selection clauses set forth in the contracts between Starboard and Quantum. On March 11, 2021, the California Superior Court stayed the California action.

On April 14, 2021, Starboard filed a new action in the Delaware Court of Chancery, naming as defendants Messrs. Gacek and Auvil and Quantum. The new action largely repeats the allegations of the California action, alleging claims for fraud against all defendants, fraudulent concealment against all defendants, negligent misrepresentation against all defendants, breach of contract against Quantum, breach of the implied covenant of good faith and fair dealing against Quantum, and breach of fiduciary duty against Messrs. Gacek and Auvil. The complaint prays for unspecified damages in an amount to be determined at trial, costs and attorneys’ fees, and any other relief deemed just or appropriate by the court. On May 10, 2021, Quantum filed a motion to dismiss this Delaware action, as did Messrs. Gacek and Auvil. Briefing on the motions ended July 26, 2021. The Court held oral argument on the motions on November 1, 2021. On January 28, 2022, via a bench ruling, the Court granted the motions to dismiss the breach of fiduciary duty claims against Messrs. Gacek and Auvil and denied the motions to dismiss the remaining claims; the bench ruling was confirmed in a written order filed February 24, 2022. On March 28, 2022, Quantum filed an answer and affirmative defenses to the complaint, as did Messrs. Gacek and Auvil. Discovery is underway. On May 3, 2022, the Court filed a stipulated order governing case schedule, setting trial for June 6-9, 2023, and also setting a number of pretrial deadlines. At this time, Quantum is unable to estimate the range of possible outcomes with respect to this matter.

On March 4, 2022, Starboard filed a request for dismissal without prejudice of the California action because the matter is proceeding in Delaware. On March 10, 2022, the California Superior Court entered a minute order dismissing the action without prejudice.

Indemnifications

The Company has certain financial guarantees, both express and implied, related to product liability and potential infringement of intellectual property. Other than certain product warranty liabilities recorded as of March 31, 2022 and 2021, the Company did not record a liability associated with these guarantees, as the Company has little, or no history of costs associated with such indemnification requirements. Contingent liabilities associated with product liability may be mitigated by insurance coverage that the Company maintains.

In the normal course of business to facilitate transactions of the Company's services and products, the Company indemnifies certain parties with respect to certain matters. The Company has agreed to hold certain parties harmless against losses arising from a breach of representations or covenants, or out of intellectual property infringement or other claims made against certain parties. These agreements may limit the time within which an indemnification claim can be made and the amount of the claim. In addition, the Company has entered into indemnification agreements with its officers and directors, and the Company's bylaws contains similar indemnification obligations to its agents. It is not possible to determine the maximum potential amount under these indemnification agreements due to the limited history of the Company's indemnification claims, and the unique facts and circumstances involved in each particular agreement. Historically, payments made by the Company under these agreements have not had a material impact on its operating results, financial position, or cash flows.

NOTE 11: FAIR VALUE OF FINANCIAL INSTRUMENTS

The Company has certain non-financial assets that are measured at fair value on a non-recurring basis when there is an indicator of impairment, and they are recorded at fair value only when an impairment is recognized. These assets include property and equipment and amortizable intangible assets. The Company did not record impairments to any non-financial assets in the fiscal years ended March 31, 2022, 2021 and 2020. The Company does not have any non-financial liabilities measured and recorded at fair value on a non-recurring basis. The carrying amounts reported in the accompanying consolidated financial statements for cash and cash equivalents, restricted cash, accounts receivable, accounts payable, accrued expenses and other current liabilities approximate their respective fair values because of the short-term nature of these accounts.

The table below represents the carrying value and total estimated fair value of long-term debt as of March 31, 2022 and March 31, 2021, respectively. The fair value has been classified as Level 2 within the fair value hierarchy.

	March 31,			
	2022		2021	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Senior Secured Term Loan	$ —	$ —	$ 92,426	$ 97,047
Term Loan	98,723	98,723	—	—
PNC Credit Facility	17,735	17,735	—	—

NOTE 12: SUBSEQUENT EVENTS

Rights Offering

On April 22, 2022, the Company completed a rights offering of 30 million shares of its common stock for gross proceeds of $ 67.5 million. The Company repaid $20.0 million of its outstanding Term Loan with the offering proceeds.

Debt Restructuring

On April 25, 2022, the Company entered into amendments to the Term Loan and the PNC Credit Facility. The Term Loan amendment, among other things, (a) amended the total net leverage ratio financial covenant and the minimum liquidity financial covenant commencing with the fiscal quarter ended June 30, 2022; and; (b) replaced the benchmark rate for LIBOR Rate Loans with a rate based on the Secured Overnight Financing Rate ("SOFR"). The PNC Credit Facility amendment, among other things, (a) increased the principal amount of revolving commitments from $30.0 million to $40.0 million; (b) waived compliance with the fixed charge coverage ratio financial covenant until the fiscal quarter ended March 31, 2025; (c) amended the total net leverage ratio financial covenant and the minimum liquidity financial covenant commencing with the fiscal quarter ended June 30, 2022; and (d) replaced the benchmark rate for PNC LIBOR Rate Loans with a rate based on the SOFR.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating our disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under Exchange Act as of the end of the period covered by this Annual Report on Form 10-K.

Based on this evaluation, our chief executive officer and chief financial officer concluded that, as of March 31, 2022, our disclosure controls and procedures were effective at the reasonable assurance level.

Management’s Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) under the Exchange Act. Our management, with the participation of our principal executive and principal financial officers, evaluated the effectiveness of our internal control over financial reporting using the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control—Integrated Framework (2013)*. Based on this assessment, management concluded that Quantum Corporation maintained effective internal control over financial reporting as of the end of the period covered by this Annual Report. Armanino LLP, our independent registered public accounting firm, has issued an attestation report on our internal control over financial reporting, and this attestation report appears in Item 8.

Changes in Internal Controls over Financial Reporting

There were no changes in our internal controls over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) identified in connection with the evaluation of our internal control performed during the fiscal quarter ended March 31, 2022, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by Item 10 is incorporated by reference from the sections entitled “Board of Directors and Committees” and “Corporate Governance” in our definitive Proxy Statement for our 2022 annual stockholders’ meeting.

Certain other information relating to our executive officers appears in Part I of this Annual Report on Form 10-K under the heading “Information About Our Executive Officers and Management Team.”

Item 405 of Regulation S-K calls for disclosure of any known late filing or failure by an insider to file a report required by Section 16(a) of the Exchange Act. To the extent disclosure for delinquent reports is being made, it can be found under the caption “Delinquent Section 16(a) Reports” in the Proxy Statement for our 2022 annual stockholders’ meeting and is incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information required by Item 11 is incorporated by reference from the sections entitled “Corporate Governance—Non-Employee Director Compensation”, “Compensation Discussion and Analysis”, “Fiscal 2022 Compensation Tables”, “Report of the Leadership and Compensation Committee of the Board of Directors” and “Compensation Committee Interlocks and Insider Participation” in our definitive Proxy Statement for our 2022 annual stockholders’ meeting.

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

The information required by Item 12 is incorporated by reference from the section entitled “Security Ownership of Certain Beneficial Owners and Management” and “Equity Compensation Plan Information” in our definitive Proxy Statement for our 2022 annual stockholders’ meeting.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by Item 13 is incorporated by reference from the section entitled “Board of Directors and Committees” , “Corporate Governance” and “Related Party Transactions” in our definitive Proxy Statement for our 2022 annual stockholders’ meeting.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by Item 14 is incorporated by reference from the section entitled “Audit and Audit-Related Fees” in our definitive Proxy Statement for our 2022 annual stockholders’ meeting.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

The financial statements and financial statement schedules required to be filed as part of this Annual Report are included under Item 8. The exhibits required to be filed as part of this Annual Report are listed below. Notwithstanding any language to the contrary, Exhibits 32.1, 32.2, 101, and 104 shall not be deemed to be filed as part of this Annual Report for purposes of Section 18 of the Securities Exchange Act of 1934.

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed or Furnished Herewith
		Form	Filing Date	Exhibit	
2.1	Stock Purchase Agreement between Quantum Corporation and the securityholders of Square Box Systems Limited, a company incorporated in England and Wales, dated December 12, 2020.	8-K	12/14/20	2.1	
2.2	Asset Purchase Agreement dated July 18, 2021 by and between PV3 (an ABC) LLC, a Delaware limited liability company as assignee for the benefit of Pivot3, Inc., a Delaware corporation, and Quantum Corporation.*	8-K	7/22/21	2.1	
3.1	Amended and Restated Certificate Of Incorporation Of Quantum	8-K	8/16/07	3.1	
3.2	Amended and Restated By-Laws Of Quantum, As Amended	8-K	12/5/08	3.1	
3.3	Certification Of Amendment To The Bylaws Of Quantum Corporation, As Adopted On January 20, 2010	8-K	1/26/10	3.1	
3.4	Certification Of Amendment To The Bylaws Of Quantum Corporation, As Adopted On February 3, 2016	8-K	2/8/16	3.5	
3.5	Certificate Of Amendment To The Amended Articles Of Incorporation Of Quantum Corporation	10-Q	11/9/17	3.1	
4.1	Certificate Of Designation Of Rights, Preferences and Privileges Of Series B Junior Participating Preferred Stock.	S-3	10/9/03	4.7	
4.2	Warrant to Purchase Common Stock dated December 27, 2018 issued to OC II FIE V LP	8-K	12/28/18	4.1	
4.3	Warrant to Purchase Common Stock dated December 27, 2018 issued to BTC Holdings Fund I, LLC	8-K	12/28/18	4.2	
4.4	Registration Rights Agreement, dated December 27, 2018 between the Company, OC II FIE V LP and BTC Holdings Fund I, LLC	8-K	12/28/18	4.3	
4.5	Warrant to Purchase Common Stock, dated June 16, 2020, Warrant No. B-1	8-K	6/17/20	4.1	
4.6	Warrant to Purchase Common Stock, dated June 16, 2020, Warrant No. B-2	8-K	6/17/20	4.2	
4.7	Warrant to Purchase Common Stock, dated June 16, 2020, Warrant No. B-3	8-K	6/17/20	4.3	
4.8	Warrant Agreement, dated June 16, 2020	8-K	6/17/20	4.4	
4.9	Amended and Restated Registration Rights Agreement, dated June 16, 2020, between the Company, OC II FIE V LP, Blue Torch Credit Opportunities Fund I LP and BTC Holdings SC Fund LLC	8-K	6/17/20	4.5	
4.10	Description of Common Stock	10-K	6/24/20	4.1	
4.11	Registration Rights Agreement between the Company and the securityholders of Square Box Systems Limited, a company incorporated in England and Wales, dated December 12, 2020.	8-K	12/14/20	4.1	
10.1	Lease Agreement, Dated February 6, 2006, between the Company and CS/Federal Drive AB LLC (For Building A)	8-K	2/10/06	10.2	
10.2	Lease Agreement, Dated February 6, 2006, between the Company and Cs/Federal Drive AB LLC (For Building B)	8-K	2/10/06	10.3	
10.3#	Form Of Indemnification Agreement between the Company and The Named Executive Officers and Directors	8-K	4/4/07	10.4	
10.4#	Form Of Amended and Restated Director Change Of Control Agreement between the Company and the Directors (other than the CEO)	8-K	5/10/11	10.3	
10.5#	Form Of Agreement To Advance Legal Fees between the Company and Certain Of Its Executive Officers	10-K	6/12/15	10.25	
10.6#	Form Of Amended and Restated Change Of Control Agreement between the Company and Each Of Registrant's Executive Officers	10-Q	11/6/15	10.2	
10.7#	Revolving Credit and Security Agreement, Dated October 21, 2016, among Quantum Corporation, PNC Bank, National Association, As Agent, and The Lender Party Thereto	8-K	10/21/16	10.2	
10.8#	Offer Letter, Dated May 1, 2017, between the Company and Marc Rothman	8-K	5/4/17	10.1	
10.9#	Quantum Corporation Executive Officer Incentive Plan, Restated As Of August 23, 2017	8-K	8/24/17	10.2	
10.10#	Offer Letter with Raghu Rau, Dated August 31, 2017	8-K	9/5/17	10.1	

10.11	Second Amendment To Revolving Loan Credit and Security Agreement, Dated November 6, 2017, by and among the Company, PNC Bank, National Association, As Agent, and The Lender Parties Thereto	8-K	11/9/17	10.2	
10.12	Third Amendment To Revolving Credit and Security Agreement, Dated As Of February 14, 2018, between the Company and PNC Bank, National Association, As Agent	8-K	2/20/18	10.1	
10.13#	Offer Letter between the Company and J. Michael Dodson, Dated May 29, 2018	8-K	5/30/18	10.1	
10.14#	Change Of Control Agreement between the Company and J. Michael Dodson, Dated May 29, 2018	8-K	5/30/18	10.2	
10.15#	Offer Letter between the Company and James J. Lerner, Dated June 22, 2018	8-K	6/27/18	10.1	
10.16#	Change Of Control Agreement between the Company and James J. Lerner, Dated June 22, 2018	8-K	6/27/18	10.2	
10.17	Amended and Restated Revolving Credit and Security Agreement, dated December 27, 2018, between the Company, Quantum LTO, the lenders party thereto, and PNC Bank, National Association	8-K	12/28/18	10.2	
10.18	Stipulation and Agreement Of Settlement Entered Into April 11, 2019	8-K	5/31/19	99.2	
10.19	Joinder and Fourth Amendment To Revolving Credit and Security Agreement Dated August 23, 2018	10-K	8/6/19	10.68	
10.20#	Offer Letter between the Company and Lewis W. Moorehead, Dated October 3, 2018	10-K	8/6/19	10.75	
10.21#	Offer Letter between the Company and John Fichthorn, Dated April 4, 2019	10-K	8/6/19	10.76	
10.22#	Amended and Restated Long-term Incentive Plan Agreement (As amended and restated through November 13, 2019)	8-K	11/13/2019	10.1	
10.23#	Amended and Restated Employee Stock Purchase Plan Agreement (As amended and restated through November 13, 2019)	8-K	11/13/2019	10.2	
10.24#	Offer letter between the Company and Rebecca Jacoby, dated December 16, 2019	10-Q	1/29/2020	10.1	
10.25	First Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of December 27, 2018, as amended on April 3, 2020 among the Company, Quantum LTO Holdings, LLC, the lenders from time to time party thereto, and PNC Bank, National Association, as administrative agent for such lenders	8-K	4/6/20	10.2	
10.26	Payment Protection Program Term Note, effective as of April 11, 2020, in favor of PNC Bank, National Association	8-K	4/16/20	10.1	
10.27	Second Amendment to the Amended and Restated Revolving Credit and Security Agreement, dated as of December 27, 2018, amended as of April 11, 2020 among the Company, Quantum LTO Holdings, LLC, the lenders from time to time party thereto, and PNC Bank, National Association, as administrative agent for such lenders	8-K	4/16/20	10.3	
10.28	Third Amendment to Amended and Restated Revolving Credit and Security Agreement, Dated June 16, 2020, between the Company, Quantum LTO Holdings, LLC, the lenders party thereto, and PNC Bank, National Association, as administrative agent	8-K	6/17/20	10.2	
10.29	Fourth Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of December 10, 2020, among the Company, Quantum LTO Holdings, LLC, the lenders party thereto, and PNC Bank, National Association, as administrative agent for such lenders.	8-K	12/14/20	10.2	
10.30	Fifth Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of February 5, 2021, among the Company, Quantum LTO Holdings, LLC, the lenders party thereto, and PNC Bank, National Association, as administrative agent for such lenders.				X
10.31	Sixth Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of August 5, 2021, among the Company, Quantum LTO Holdings, LLC, Square Box Systems Limited, the lenders party thereto, and PNC Bank, National Association, as administrative agent for such lenders.				X
10.32	Seventh Amendment to Amended and Restated Revolving Credit and Security Agreement, dated September 30, 2021, between the Company, Quantum LTO Holdings, LLC, the borrowers and guarantors party thereto, the lenders party thereto, and PNC Bank, National Association, as administrative agent.	8-K	10/06/21	10.1	
10.33	Eighth Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of March 15, 2022, by and among the Company, Quantum LTO Holdings, LLC, the borrowers and guarantors party thereto, the lenders party thereto, and PNC Bank, National Association, as administrative agent.	8-K	3/17/22	10.3	
10.34	Ninth Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of April 25, 2022, among the Company, Quantum LTO Holdings, LLC, Square Box Systems Limited, the lenders party thereto, and PNC Bank, National Association, as administrative agent.	8-K	4/27/22	10.1	
10.35#	Offer letter between the Company and Elizabeth King, dated January 14, 2019	10-K	6/24/20	10.1	
10.36#	Form of Restricted Stock Unit Agreement (US Employees) under the Quantum Corporation 2012 Long Term Incentive Plan	10-K	6/24/20	10.2	

10.37#	Form of Market-Based Restricted Stock Unit Agreement (US Employees) under the Quantum Corporation 2012 Long Term Incentive Plan	10-K	6/24/20	10.3	
10.38#	Form of Restricted Stock Unit Agreement (Non-US Employees) under the Quantum Corporation 2012 Long Term Incentive Plan	10-K	6/24/20	10.4	
10.39#	Form of Restricted Stock (PSU) Unit Agreement (Non-US Employees) under the Quantum Corporation 2012 Long Term Incentive Plan	10-K	6/24/20	10.5	
10.40#	Form of Restricted Stock Unit Agreement (Directors) under the Quantum Corporation 2012 Long Term Incentive Plan	10-K	6/24/20	10.6	
10.41	Term Loan Credit and Security Agreement, dated August 5, 2021, between the Company, Quantum LTO, Square Box, the lenders party thereto, and Blue Torch Finance LLC, as disbursing and collateral agent.	8-K	8/05/21	10.1	
10.42	First Amendment to Term Loan Credit and Security Agreement, dated September 30, 2021, among the Company, Quantum LTO Holdings, LLC, the borrowers and guarantors party thereto, the lenders party thereto, and Blue Torch Finance LLC, as disbursing agent and collateral agent.	8-K	10/06/21	10.2	
10.43	Second Amendment to Term Loan Credit and Security Agreement, dated as of March 15, 2022, by and among the Company, Quantum LTO Holdings, LLC, the borrowers and guarantors party thereto, the lenders party thereto, and Blue Torch Finance LLC, as disbursing agent and collateral agent.	8-K	3/17/22	10.2	
10.44	Third Amendment to Term Loan Credit and Security Agreement, dated as of April 25, 2022, among the Company, Quantum LTO Holdings, LLC, Square Box Systems Limited, the lenders party thereto, and Blue Torch Finance LLC, as disbursing agent and collateral agent.	8-K	4/27/22	10.2	
10.45	Investment Commitment Agreement, dated as of March 16, 2022, by and among the Company, Neuberger Berman Investment Advisers LLC, OC II FIE V LP, OC III LVS XI LP, BRF Investments, LLC, B. Riley Securities, Inc., and BRC Partners Opportunity Fund, LP.	8-K	3/17/22	10.1	
21.1	List of Subsidiaries	10-K	6/24/20	21.1	
23.1	Consent of Armanino, LLP				X
24.1	Power of Attorney (contained in "Signatures")				X
31.1	Certification of the Principal Executive Officer pursuant to Section 302(a) of the Sarbanes-Oxley Act of 2002				X
31.2	Certification of the Principal Financial Officer pursuant to Section 302(a) of the Sarbanes-Oxley Act of 2002				X
32.1	Certification of Principal Executive Officer pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley act of 2002				X
32.2	Certification of Principal Financial Officer pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley act of 2002				X
101.INS	XBRL Instance Document				X
101.SCH	XBRL Taxonomy Extension Schema Document				X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document				X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document				X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document				X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document				X
104	Cover page interactive data file, submitted using XBRL (contained in Exhibit 101)				X

* Schedules and attachments to the Purchase Agreement have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The registrant hereby undertakes to furnish supplemental copies of any of the omitted schedules and attachments upon request by the Securities and Exchange Commission.

# Indicates management contract or compensatory plan or arrangement.

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURE

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.

Quantum Corporation
(Registrant)

June 8, 2022	/s/ J. Michael Dodson
(Date)	J. Michael Dodson Chief Financial Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints James Lerner and Michael Dodson, jointly and severally, his attorneys-in-fact, each with the power of substitution, for him in any and all capacities, to sign any amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons in the capacities on June 8, 2022.

Signature	Title
/s/ James J. Lerner James J. Lerner	President, Chief Executive Officer and Chairman of the Board (Principal Executive Officer)
/s/ J. Michael Dodson J. Michael Dodson	Chief Financial Officer (Principal Financial Officer)
/s/ Lewis Moorehead Lewis Moorehead	Chief Accounting Officer (Principal Accounting Officer)
/s/ Raghavendra Rau Raghavendra Rau	Director
/s/ Marc E. Rothman Marc E. Rothman	Director
/s/ Yue Zhou White Yue Zhou White	Director
/s/ Rebecca J. Jacoby Rebecca J. Jacoby	Director

FIFTH AMENDMENT TO
AMENDED AND RESTATED REVOLVING CREDIT AND SECURITY AGREEMENT

THIS FIFTH AMENDMENT TO AMENDED AND RESTATED REVOLVING CREDIT AND SECURITY AGREEMENT (this " Amendment"), dated as of February 5, 2021, is entered into by and among QUANTUM CORPORATION, a Delaware corporation ("Quantum"), QUANTUM LTO HOLDINGS, LLC, a Delaware limited liability company ("Quantum LTO"; and together with Quantum and each other Person joined to the Credit Agreement as a borrower from time to time, collectively, the "Borrowers" and each a "Borrower"), the financial institutions which are now or which hereafter become a party to the Credit Agreement as lenders (collectively, the "Lenders" and each a "Lender"), and PNC BANK, NATIONAL ASSOCIATION ("PNC"), in its capacity as agent for the Lenders (in such capacity, together with its successors and assigns, " Agent").

RECITALS

A. Agent, the Lenders and the Borrowers are parties to that certain Amended and Restated Revolving Credit and Security Agreement, dated as of December 27, 2018 as amended by the First Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of April 3, 2020, the Second Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of April 11, 2020, the Third Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of June 16, 2020, and the Fourth Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of December 10, 2020 (as amended hereby and as the same may be further amended, modified, supplemented, renewed, restated or replaced from time to time, the "Credit Agreement"), pursuant to which the Lenders have made and may hereafter make certain loans and have provided and may hereafter provide certain financial accommodations to the Borrowers.

B. The Borrowers have requested that Agent and the Lenders make certain amendments to the Credit Agreement as set forth herein, and Agent and the Required Lenders have agreed to make such amendments, subject to the terms and conditions set forth herein.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

1. Definitions.

(a) Interpretation. Capitalized terms used herein and not defined shall have the meanings given to such terms in the Credit Agreement.

(b) New Definitions. The following defined terms are hereby added to Section 1.2 of the Credit Agreement in their proper alphabetical order:

"Fifth Amendment" shall mean the Fifth Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of the Fifth Amendment Effective Date, by and among Agent, Lenders and the Borrowers.

"Fifth Amendment Effective Date" shall mean February 5, 2021.

2. Mandatory Prepayments. Section 2.20 of the Credit Agreement is hereby amended by deleting such Section in its entirety and replacing it with the following:

"(e) Reserved."

3. Conditions Precedent. The effectiveness of this Amendment is expressly conditioned upon the satisfaction of each of the following conditions precedent:

(a) Agent shall have received this Amendment, duly authorized, executed and delivered by each Loan Party;

(b) Agent shall have received Amendment No. 6 to the Term Loan Agreement, duly authorized, executed and delivered by the Loan Parties and the Term Loan Lenders;

(c) Agent shall have received payment from Borrowers of all fees, charges and disbursements of Agent and its counsel required to be paid pursuant to the Credit Agreement in connection with the preparation, execution and delivery of this Amendment and the Other Documents executed and delivered in connection herewith or related hereto;

(d) all proceedings taken in connection with the transactions contemplated by this Amendment and all documents, instruments and other legal matters incident thereto shall be reasonably satisfactory to Agent and its counsel; and

(e) on the date of this Amendment and after giving effect to the provisions of this Amendment and the transactions contemplated hereby, no Default or Event of Default shall exist or have occurred and be continuing.

Agent shall notify the Borrowers in writing of the effectiveness of this Amendment, which notice shall be conclusive and binding on all parties to the Credit Agreement.

4. Representations and Warranties. In addition to the continuing representations and warranties heretofore or hereafter made by the Loan Parties to Agent and Lenders pursuant to the Credit Agreement and the Other Documents, each Loan Party hereby represents and warrants to Agent and each Lender as follows:

(a) each Loan Party has full power, authority and legal right to enter into this Amendment and to perform all its respective Obligations hereunder;

(b) this Amendment has been duly executed and delivered by each Loan Party;

(c) this Amendment constitutes the legal, valid and binding obligation of each Loan Party enforceable in accordance with its terms, except as such enforceability may be limited by any applicable bankruptcy, insolvency, moratorium or similar Laws affecting creditors' rights generally;

(d) the execution, delivery and performance of this Amendment (i) are within each Loan Party's corporate or limited liability company powers, as applicable, (ii) have been duly authorized by all necessary corporate or limited liability company action, as applicable, (iii) are not in contravention of law or the terms of such Loan Party's Organizational Documents or to the conduct of such Loan Party's business or any Material Contract or undertaking to which such Loan Party is a party or by which such Loan Party is bound, including without limitation the Term Loan Documents, (iv) will not conflict with or violate any material provisions of any law or regulation, or any judgment, order or decree of any Governmental Body, (v) will not require the Consent of any Governmental Body, any party to a Material Contract or any other Person, except (x) any Consents of any party to a Material Contract or any other Person (other than a Governmental Body) with respect to which the failure to obtain could not reasonably be expected, individually or in the aggregate to have a Material Adverse Effect, (y) any immaterial Consents of any Governmental Body, or (z) those Consents set forth on Schedule 5.1 to the Credit Agreement, all of which will have been duly obtained, made or complied with prior to the Fifth Amendment Effective Date and which are in full force and effect on the Fifth Amendment Effective Date, and (vi) will not conflict with, nor result in any breach in any of the provisions of or constitute a default under or result in the creation of any Lien except Permitted Encumbrances upon any asset of such Loan Party under the provisions of any material agreement, instrument, or other document to which such Loan Party is a party or by which it or its property is a party or by which it may be bound, including without limitation any of the Term Loan Documents;

(e) each Loan Party is duly formed or incorporated, as applicable, and in good standing under the laws of the state of its incorporation or formation, as applicable, and is good standing in such state and is qualified to do business in any state where the failure to be so qualified could reasonably be expected to result in a Material Adverse Effect;

(f) each of the representations and warranties made by any Loan Party in the Credit Agreement and the Other Documents, each as amended hereby, are true and correct in all material respects (except that such materiality qualifier shall not be applicable to any representations and warranties that are qualified or modified by materiality in the text thereof) as if made on the date of this Amendment and after giving effect to this Amendment and the transactions contemplated hereby, except to the extent that any such representation or warranty is made as of an earlier and/or specified date, in which case such representation or warranty shall have been true and correct in all material respects (except that such materiality qualifier shall not be applicable to any representations and warranties that are qualified or modified by materiality in the text thereof) as of such earlier or specified date; and

(g) after giving effect to the transactions contemplated by this Amendment, on the date of this Amendment, no Default or Event of Default exists or has occurred and is continuing.

5. Reaffirmation. Each Loan Party hereby ratifies and reaffirms (a) all of its payment and performance obligations, contingent or otherwise, under the Credit Agreement and each of the Other Documents to which it is a party, and (b) its grant to Agent of a security interest in the Collateral under the Credit Agreement and each of the Other Documents to which it is a party.

6. Acknowledgments. To induce Agent and Lenders to enter into this Amendment, Borrowers and each other Loan Party acknowledge that:

(a) as of the Fifth Amendment Effective Date, (i) Agent and Lenders have performed without default all obligations required of Agent and Lenders under the Credit Agreement and each of the Other Documents; and (ii) there are no disputes with or claims against Agent or Lenders, or any knowledge of any facts giving rise to any disputes or claims, related to the Credit Agreement or any of the Other Documents, including, without limitation, any disputes or claims or knowledge of facts giving rise thereto, that involve a breach or violation on the part of Agent or any Lender of the terms and conditions of the Credit Agreement or any of the Other Documents; and

(b) no Loan Party has any valid defense to the enforcement of their respective obligations set forth in the Credit Agreement, the Other Documents or this Amendment, as applicable, by reason of any circumstance, action, cause or thing whatsoever which arises at any time on or prior to the day and date of this Amendment.

7. Governing Law. This Amendment and all matters relating hereto or arising herefrom (whether arising under contract law, tort law or otherwise) shall, in accordance with Section 5-1401 of the

General Obligations Law of the State of New York, be governed by and construed in accordance with the Laws of the State of New York.

8. Effect of this Agreement. Except as expressly amended pursuant hereto, no other changes or modifications to the Credit Agreement or any of the Other Documents are intended or implied, and in all other respects, the Credit Agreement and each of the Other Documents is hereby specifically ratified, restated and confirmed by all parties hereto as of the date of this Amendment. To the extent that any provision of the Credit Agreement or any of the Other Documents are inconsistent with the provisions of this Amendment, the provisions of this Amendment shall control.

9. Binding Effect. This Amendment shall bind and inure to the benefit of the respective successors and permitted assigns of each of the parties hereto.

10. Further Assurances. The Loan Parties shall execute and deliver such further documents and take such further action as may be reasonably requested by Agent to effectuate the provisions and purposes of this Amendment.

11. Counterparts; Electronic Signature. This Amendment may be executed in any number of and by different parties hereto on separate counterparts, all of which, when so executed, shall be deemed an original, but all such counterparts shall constitute one and the same agreement. Any signature delivered by a party by facsimile or electronic transmission (including email transmission of a .pdf image) shall be deemed to be an original signature hereto.

12. Release. In consideration of the agreements of Agent and Lenders contained herein and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, each Loan Party, on behalf of itself and its respective successors, assigns, and other legal representatives, hereby absolutely, unconditionally and irrevocably releases, remises and forever discharges Agent and Lenders, their respective successors and assigns, and their respective present and former shareholders, affiliates, subsidiaries, divisions, predecessors, directors, officers, attorneys, employees, agents and other representatives (Agent, each Lender and all such other Persons being hereinafter referred to collectively as the "Releasees" and individually as a "Releasee"), of and from all demands, actions, causes of action, suits, covenants, contracts, controversies, agreements, promises, sums of money, accounts, bills, reckonings, damages and any and all other claims, counterclaims, defenses, rights of set-off, demands and liabilities whatsoever (individually, a "Claim" and collectively, "Claims") of every name and nature, known or unknown, suspected or unsuspected, as of the date of this Amendment, both at law and in equity, which such Loan Party, or any of its respective successors, assigns, or other legal representatives may now or hereafter own, hold, have or claim to have against the Releasees or any of them for, upon, or by reason of any circumstance, action, cause or thing whatsoever which arises at any time on or prior to the day and date of this Amendment, in each case for or on account of, or in relation to, or in any way in connection with any of the Credit Agreement, any of the Other Documents or transactions thereunder or related thereto; provided that nothing contained herein shall release any Releasee from any Claims resulting from the gross negligence, willful misconduct or material breach of the Credit Agreement or any of the Other Documents by any Releasee as determined by a court of competent jurisdiction in a final non-appealable judgment or order or for any Claim arising with respect to obligations arising under this Amendment or the documents entered into as of the Fifth Amendment Effective Date.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties have entered into this Amendment as of the date fast above written.

BORROWERS:

QUANTUM CORPORATION

By: /s/ J. Michael Dodson
Name: J. Michael Dodson
Title: Chief Financial Officer

QUANTUM LTO HOLDINGS, LLC

By: /s/ J. Michael Dodson
Name: J. Michael Dodson
Title: Chief Financial Officer

AGENT AND LENDERS:

PNC BANK, NATIONAL ASSOCIATION,
as Agent and Lender

By: /s/ Daniela Piemonte_________
Name: Daniela Piemonte
Title: Senior Vice President

SIXTH AMENDMENT TO
AMENDED AND RESTATED REVOLVING CREDIT AND SECURITY AGREEMENT

THIS SIXTH AMENDMENT TO AMENDED AND RESTATED REVOLVING CREDIT AND SECURITY AGREEMENT (this "Amendment"), dated as of August 5, 2021, is entered into by and among QUANTUM CORPORATION, a Delaware corporation (" Quantum"), QUANTUM LTO HOLDINGS, LLC, a Delaware limited liability company ("Quantum LTO", and together with Quantum, and each other Person joined to the Credit Agreement as a borrower from time to time, collectively, the "Borrowers" and each a "Borrower"), SQUARE BOX SYSTEMS LIMITED, a company incorporated in England and Wales (registered number 03819556) ("Square Box" and together with each other Person joined to the Credit Agreement as a guarantor from time to time, collectively, the "Guarantors" and each a "Guarantor" and together with the Borrowers, collectively, the "Loan Parties" and each a "Loan Party"), the financial institutions which are now or which hereafter become a party to the Credit Agreement as lenders (collectively, the "Lenders" and each a "Lender"), and PNC BANK, NATIONAL ASSOCIATION (" PNC"), in its capacity as agent for the Lenders (in such capacity, together with its successors and assigns, "Agent").

RECITALS

A. Agent, the Lenders and certain of the Loan Parties are parties to that certain Amended and Restated Revolving Credit and Security Agreement, dated as of December 27, 2018, as amended by the First Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of April 3, 2020, the Second Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of April 11, 2020, the Third Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of June 16, 2020, the Fourth Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of December 10, 2020, and the Fifth Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of February 5, 2021 (as amended hereby and as the same may be further amended, modified, supplemented, renewed, restated or replaced from time to time, the "Credit Agreement"), pursuant to which the Lenders have made and may hereafter make certain loans and have provided and may hereafter provide certain financial accommodations to the Borrowers.

B. The Borrowers have requested that Agent and the Lenders make certain amendments to the Credit Agreement as set forth herein, and Agent and the Required Lenders have agreed to make such amendments, subject to the terms and conditions set forth herein.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

1. Definitions.

(a) Interpretation. Capitalized terms used herein and not defined shall have the meanings given to such terms in the Credit Agreement.

(b) New Definitions. The following defined terms are hereby added to Section 1.2 of the Credit Agreement in their proper alphabetical order:

"Existing PIMCO Term Loan Agent" shall mean U.S. Bank National Association, in its capacity as disbursing agent and collateral agent under the Existing PIMCO Term Loan Documents.

"Existing PIMCO Term Loan Documents" shall mean, collectively, the following (as the same have heretofore been amended, modified or supplemented): (a) the Term Loan Credit and Security Agreement, dated as of December 27, 2018, as amended, modified and/or supplemented, by and among Existing PIMCO Term Loan Agent, the financial institutions parties thereto as lenders, and the Loan Parties, and (b) all of the other agreements, documents and instruments executed and delivered in connection therewith or related thereto.

"Sixth Amendment" shall mean the Sixth Amendment to Amended and Restated Revolving Credit and Security Agreement, dated as of the Sixth Amendment Effective Date, by and among Agent, Lenders and the Loan Parties.

"Sixth Amendment Effective Date" shall mean August 5, 2021.

(c) Amendments to Definitions.

(i) Intercreditor Agreement. The definition of "Intercreditor Agreement" in Section 1.2 of the Credit Agreement is hereby amended by deleting such definition in its entirety and replacing it with the following:

"Intercreditor Agreement" shall mean that certain Intercreditor Agreement, dated as of the Sixth Amendment Effective Date, between Agent and Term Loan Agent, as acknowledged and agreed to by the Loan Parties, as the same may be further amended, modified, supplemented, renewed, restated or replaced from time to time in accordance with the terms thereof.

(ii) Term Loan. The definition of "Term Loan" set forth in Section 1.2 of the Credit Agreement is hereby amended by deleting such definition in its entirety and replacing it with the following:

"Term Loan" shall mean, collectively, the term loans made by Term Loan Lenders to the Borrowers on the Sixth Amendment Effective pursuant to the Term Loan Agreement in the aggregate original principal amount of $100,000,000.

(iii) Term Loan Agent. The definition of "Term Loan Agent" set forth in Section 1.2 of the Credit Agreement is hereby amended by deleting such definition in its entirety and replacing it with the following:

"Term Loan Agent" shall mean Blue Torch Finance LLC, in its capacity as disbursing agent and collateral agent under the Term Loan Documents, and its successors and permitted assigns.

(iv) Term Loan Agreement. The definition of "Term Loan Agreement" set forth in Section 1.2 of the Credit Agreement is hereby amended by deleting such definition in its entirety and replacing it with the following:

"Term Loan Agreement" shall mean the Term Loan Credit and Security Agreement, dated as of the Sixth Amendment Effective Date, by and among Term Loan Agent, Term Loan Lenders and the Loan Parties.

2. Notices. Section 16.6 of the Credit Agreement is hereby amended by deleting the notice information for the Agent, PNC, Borrowing Agent and the other Loan Parties and replacing it with the following:

"(A) If to Agent or PNC at:

PNC Bank, National Association
One North Franklin Street, 25th Floor
Chicago, IL 60606
Attention: Relationship Manager - Quantum
Facsimile:

with a copy to:

Blank Rome LLP
1271 Avenue of the Americas
New York, NY 10020
Attention: Michael J. Loesberg, Esq.
Facsimile: (212) 885-5001

(B) If to Borrowing Agent or any Loan Party:

Quantum Corporation
224 Airport Parkway, Suite 550
San Jose, CA 95110
Attention: Brian Cabrera, Lewis Moorehead
Email:

with a copy to:

Latham & Watkins LLP
140 Scott Drive
Menlo Park, California 94025
Attention: Tad J. Freese, Esq.
Facsimile: (650) 463-2600"

3. Conditions Precedent. The effectiveness of this Amendment is expressly conditioned upon the satisfaction of each of the following conditions precedent:

(a) Agent shall have received this Amendment, duly authorized, executed and delivered by each Loan Party;

(b) Agent shall have received, in form and substance satisfactory to Agent, true, correct and complete copies of the Term Loan Agreement and all of the other material Term Loan Documents, in each case duly authorized, executed and delivered by the parties thereto and in effect on the Sixth Amendment Effective Date, and the transactions contemplated by the Term Loan Documents shall be consummated on the Sixth Amendment Effective Date, including, without limitation, the receipt by the Borrowers of the gross proceeds of the Term Loan in the sum of $100,000,000;

(c) Agent shall have received, in form and substance satisfactory to Agent, the Intercreditor Agreement, duly authorized, executed and delivered by Term Loan Agent and acknowledged and agreed to by the Loan Parties;

(d) Agent shall have received, in form and substance reasonably satisfactory to Agent, (i) a payoff letter from Existing PIMCO Term Loan Agent providing that, among other things, all of the Indebtedness of the Loan Parties under the Existing PIMCO Term Loan Documents has been paid and satisfied in full and all of the Liens securing such Indebtedness have been terminated and released and (ii) all related Lien termination agreements, documents and instruments executed and delivered by Existing PIMCO Term Loan Agent;

(e) Agent shall have received payment from Borrowers of all fees, charges and disbursements of Agent and its counsel required to be paid pursuant to the Credit Agreement in connection with the preparation, execution and delivery of this Amendment and the Other Documents executed and delivered in connection herewith or related hereto;

(f) all proceedings taken in connection with the transactions contemplated by this Amendment and all documents, instruments and other legal matters incident thereto shall be reasonably satisfactory to Agent and its counsel; and

(g) on the date of this Amendment and after giving effect to the provisions of this Amendment and the transactions contemplated hereby, no Default or Event of Default shall exist or have occurred and be continuing.

Agent shall notify the Borrowers in writing of the effectiveness of this Amendment, which notice shall be conclusive and binding on all parties to the Credit Agreement.

4. Representations and Warranties. In addition to the continuing representations and warranties heretofore or hereafter made by the Loan Parties to Agent and Lenders pursuant to the Credit Agreement and the Other Documents, each Loan Party hereby represents and warrants to Agent and each Lender as follows:

(a) each Loan Party has full power, authority and legal right to enter into this Amendment and to perform all its respective Obligations hereunder;

(b) this Amendment has been duly executed and delivered by each Loan Party;

(c) this Amendment constitutes the legal, valid and binding obligation of each Loan Party enforceable in accordance with its terms, except as such enforceability may be limited by any applicable bankruptcy, insolvency, moratorium or similar Laws affecting creditors' rights generally;

(d) the execution, delivery and performance of this Amendment (i) are within each Loan Party's corporate or limited liability company powers, as applicable, (ii) have been duly authorized by all necessary corporate or limited liability company action, as applicable, (iii) are not in contravention of law or the terms of such Loan Party's Organizational Documents or to the conduct of such Loan Party's business or any Material Contract or undertaking to which such Loan Party is a party or by which such Loan Party is bound, including without limitation the Term Loan Documents, (iv) will not conflict with or violate any material provisions of any law or regulation, or any judgment, order or decree of any Governmental Body, (v) will not require the Consent of any Governmental Body, any party to a Material Contract or any other Person, except (x) any Consents of any party to a Material Contract or any other Person (other than a Governmental Body) with respect to which the failure to obtain could not reasonably be expected, individually or in the aggregate to have a Material Adverse Effect, (y) any immaterial Consents of any Governmental Body, or (z) those Consents set forth on Schedule 5.1 to the Credit Agreement, all of which will have been duly obtained, made or complied with prior to the Sixth Amendment Effective Date and which are in full force and effect on the Sixth Amendment Effective Date, and (vi) will not conflict with, nor result in any breach in any of the provisions of or constitute a default under or result in the creation of any Lien except Permitted Encumbrances upon any asset of such Loan Party under the provisions of any material agreement, instrument, or other document to which such Loan Party is a party or by which it or its property is a party or by which it may be bound, including without limitation any of the Term Loan Documents;

(e) each Loan Party is duly formed or incorporated, as applicable, and in good standing under the laws of the state of its incorporation or formation, as applicable, and is good standing in such state and is qualified to do business in any state where the failure to be so qualified could reasonably be expected to result in a Material Adverse Effect;

(f) each of the representations and warranties made by any Loan Party in the Credit Agreement and the Other Documents, each as amended hereby, are true and correct in all material respects (except that such materiality qualifier shall not be applicable to any representations and warranties that are qualified or modified by materiality in the text thereof) as if made on the date of this Amendment and after giving effect to this Amendment and the transactions contemplated hereby, except to the extent that any such representation or warranty is made as of an earlier and/or specified date, in which case such representation or warranty shall have been true and correct in all material respects (except that such materiality qualifier shall not be applicable to any representations and warranties that are qualified or modified by materiality in the text thereof) as of such earlier or specified date; and

(g) on the date of this Amendment, after giving effect to the transactions contemplated by this Amendment and the Term Loan Documents, no Default or Event of Default exists or has occurred and is continuing.

5. Reaffirmation. Each Loan Party hereby ratifies and reaffirms (a) all of its payment and performance obligations, contingent or otherwise, under the Credit Agreement and each of the Other Documents to which it is a party, and (b) its grant to Agent of a security interest in the Collateral under the Credit Agreement and each of the Other Documents to which it is a party.

6. Acknowledgments. To induce Agent and Lenders to enter into this Amendment, each Loan Party acknowledges that:

(a) as of the Sixth Amendment Effective Date, (i) Agent and Lenders have performed without default all obligations required of Agent and Lenders under the Credit Agreement and each of the Other Documents; and (ii) there are no disputes with or claims against Agent or Lenders, or any knowledge of any facts giving rise to any disputes or claims, related to the Credit Agreement or any of the Other Documents, including, without limitation, any disputes or claims or knowledge of facts giving rise thereto, that involve a breach or violation on the part of Agent or any Lender of the terms and conditions of the Credit Agreement or any of the Other Documents; and

(b) no Loan Party has any valid defense to the enforcement of their respective obligations set forth in the Credit Agreement, the Other Documents or this Amendment, as applicable, by reason of any circumstance, action, cause or thing whatsoever which arises at any time on or prior to the day and date of this Amendment.

7. Governing Law. This Amendment and all matters relating hereto or arising herefrom (whether arising under contract law, tort law or otherwise) shall, in accordance with Section 5-1401 of the General Obligations Law of the State of New York, be governed by and construed in accordance with the Laws of the State of New York.

8. Effect of this Agreement. Except as expressly amended pursuant hereto, no other changes or modifications to the Credit Agreement or any of the Other Documents are intended or implied, and in all other respects, the Credit Agreement and each of the Other Documents is hereby specifically ratified, restated and confirmed by all parties hereto as of the date of this Amendment. To the extent that any provision of the Credit Agreement or any of the Other Documents are inconsistent with the provisions of this Amendment, the provisions of this Amendment shall control.

9. Binding Effect. This Amendment shall bind and inure to the benefit of the respective successors and permitted assigns of each of the parties hereto.

10. Further Assurances. The Loan Parties shall execute and deliver such further documents and take such further action as may be reasonably requested by Agent to effectuate the provisions and purposes of this Amendment.

11. Counterparts; Electronic Signature. This Amendment may be executed in any number of and by different parties hereto on separate counterparts, all of which, when so executed, shall be deemed an original, but all such counterparts shall constitute one and the same agreement. Any signature delivered by a party by facsimile or electronic transmission (including email transmission of a .pdf image) shall be deemed to be an original signature hereto.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties have entered into this Amendment as of the date first above written.

BORROWERS:

QUANTUM CORPORATION

By: /s/ J.Michael Dodson
Name: J. Michael Dodson
Title: Chief Financial Officer

QUANTUM LTO HOLDINGS, LLC

By: /s/ J.Michael Dodson
Name: J. Michael Dodson
Title: Chief Financial Officer

GUARANTORS:

SQUARE BOX SYSTEMS LIMITED

By: /s/ Lewis Moorehead
Name: Lewis Moorehead
Title: Company Secretary

AGENT AND LENDERS:

PNC BANK, NATIONAL ASSOCIATION,
as Agent and Lender

By: /s/ Daniela Piemonte
Name: Daniela Piemonte
Title: Vice President

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-184854, 333-200052, 333-218576, 333-221476, 333-234046, 333-236270, 333-252601 and 333-259902) and Registration Statements on Form S-3 (Nos. 333-250976, 333-252609, 333-258922 and 333-261733) of Quantum Corporation of our report dated June 8, 2022, relating to the consolidated financial statements and the effectiveness of internal control over financial reporting, which appear in this Form 10-K for the year ended March 31, 2022.

/s/ Armanino LLP
San Ramon, California

June 8, 2022

Exhibit 31.1

CERTIFICATION PURSUANT TO SECTION 302(a)
OF THE SARBANES-OXLEY ACT OF 2002

I, James J. Lerner, certify that:

1) I have reviewed this Annual Report on Form 10-K of Quantum 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; and

   d) disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5) The registrant’s other certifying officer(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.

Date June 8, 2022

/s/ James J. Lerner
James J. Lerner
President, Chief Executive Officer and Chairman of the Board
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO SECTION 302(a)
OF THE SARBANES-OXLEY ACT OF 2002

I, J. Michael Dodson, certify that:

1) I have reviewed this Annual Report on Form 10-K of Quantum 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; and

   d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5) The registrant's other certifying officer(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.

Date June 8, 2022

/s/ J. Michael Dodson

J. Michael Dodson
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350

I, James J. Lerner, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report on Form 10-K of Quantum Corporation for the fiscal year ended March 31, 2022, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Annual Report on Form 10-K fairly presents, in all material respects, the financial condition and results of operations of Quantum Corporation.

Date June 8, 2022

/s/ James J. Lerner

James J. Lerner
President, Chief Executive Officer and Chairman of the Board
(Principal Executive Officer)

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350

I, J. Michael Dodson, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report on Form 10-K of Quantum Corporation for the fiscal year ended March 31, 2022, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Annual Report on Form 10-K fairly presents, in all material respects, the financial condition and results of operations of Quantum Corporation.

Date June 8, 2022

/s/ J. Michael Dodson

J. Michael Dodson
Chief Financial Officer
(Principal Financial Officer)