

**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, 2023**

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

(State or other jurisdiction of incorporation or organization)

94-2665054

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

**224 Airport Parkway Suite 550
San Jose CA**

(Address of Principal Executive Offices)

95110

(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	<input type="radio"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="radio"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised

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.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those errors corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

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 \$65,877,520.

As of May 30, 2023, there were 93,698,287 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 2023 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, 2023

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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, but not limited to, statements regarding our future operating results and financial position; our business strategy, focus and plans; our market growth and trends; our products, services and expected benefits thereof; 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 the competitive pressures that we face; risks associated with executing our strategy; the impact of macroeconomic and geopolitical trends and events; the need to manage third-party suppliers and the distribution of our products and the delivery of our services effectively; the protection of our intellectual property assets, including intellectual property licensed from third parties; risks associated with our international operations; the development and transition of new products and services and the enhancement of existing products and services to meet customer needs; our response to emerging technological trends; the execution and performance of contracts by us and our suppliers, customers, clients and partners; the hiring and retention of key employees; risks associated with business combination and investment transactions; [the execution, timing and results of any transformation or restructuring plans, including estimates and assumptions related to the cost and the anticipated benefits of the transformation and restructuring plans;] the outcome of any claims and disputes; and those risks described under Item 1A. Risk Factors. 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 delivers end-to-end solutions to analyze and enrich, store and manage, and protect and preserve unstructured data across its entire lifecycle. 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. It is no longer just about storing data— organizations need to extract value from their data. Locked inside video, imagery, security camera footage, scientific data sets, and other sensor-derived data is a wealth of information for informed decision-making.

As a result, organizations need end-to-end solutions that allow them to manage and preserve data for decades and to easily extract insights from the detail. Whether data lives in the workplace, at the edge, or in the cloud, we provide organizations with the technology, software, and services they need to store, manage, protect, and enrich data throughout its lifecycle.

Products and Services

Our portfolio of products includes primary storage software and systems, secondary storage software and systems, as well as devices and media.

Primary Storage Software and Systems include:

- **Myriad All-Flash File and Object Storage Software:** All-flash scale-out file and object storage for high performance enterprise unstructured data applications such as AI, machine learning, and data analytics.
- **StorNext Hybrid Flash/Disk File Storage Software:** For video editing, post-production, and streaming applications, as well as large digital file archives.
- **Unified Surveillance Platform Software:** Unified compute and storage for video surveillance recording, storage, and analytics.
- **CatDV Asset Management Software:** For indexing, cataloging, enriching video, audio, and image files, and workflow orchestration.

Secondary Storage Software and Systems include:

- **ActiveScale Object Storage Software:** Extremely scalable and durable storage for long term data preservation and protection.
- **DXi Backup Appliances:** Purpose-built backup appliances for high-speed backup and recovery and multisite data protection.
- **Scalar Tape Storage:** Low cost, secure storage for long term data archiving and offline data protection. Scalar tape storage systems are used by the world’s largest hyperscalers as well as thousands of enterprises worldwide.

Devices and Media includes the sale of standalone Linear Tape-Open (“LTO®”) tape drives for small business data protection and archiving, and LTO® media for use in tape storage systems.

We also offer a broad portfolio of services including 24x7x365 global support, 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.

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 are a solutions company that relies on technology advancements to compete in an industry characterized by rapid 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 end-to-end solution of 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 and other mediums even more efficient as a solution for 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

We provide solutions to multiple industries globally. Historically, our primary customers are in hyperscale, technology and industrial, media and entertainment, federal government, life sciences and healthcare, and financial industries. In addition, we sell to OEMs, distributors, VARs and DMRs to reach end user customers. Sales to our top five customers represented 32%, 17%, and 16% of revenue in fiscal 2023, fiscal 2022 and fiscal 2021, respectively, of which one of our hyperscale customers represented 10% or more of our total 2023 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 solutions, including 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 secondary storage solutions, primarily tape storage systems, 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, Hewlett Packard Enterprise Company 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 ("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.

Quantum primary storage and secondary disk-based 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's 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 and logistics have been severely constrained and impacted by inflationary pricing for the past couple of years. While we are cautiously optimistic and see signs of improvement over the past year with supply of both server and tape automation components, we continue to see some constraints. While some components continue to have extended lead times and often non-cancellable purchase orders are required, Quantum continues to work with suppliers to minimize lead times and associated liabilities. We continue to focus on a number of actions including alternate component qualifications, more aggressive management of contract manufacturers, and model changes for better logistics performance and visibility.

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, 2023, we hold over 160 U.S. patents. In general, these patents have a 20-year term from the first effective filing date for each patent. We may

also hold 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 11: 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

Following are the names and positions of our management team as of May 18, 2023, 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
Kenneth Gianella	Chief Financial Officer
Brian E. Cabrera	Chief Administrative Officer
John Hurley	Chief Revenue Officer
Lewis Moorehead	Chief Accounting Officer

James J. Lerner, 53, was appointed as President and Chief Executive Officer of the Company, effective July 1, 2018, and was appointed Chairman of the Company's Board of Directors (the "Board of Directors") on August 7, 2018. Mr. Lerner has previously served as Vice President and Chief Operating Officer at Pivot3 Inc., a smart infrastructure solutions company, from March 2017 to June 2018, and as 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 Holdings Public Limited Company ("Seagate") (Nasdaq: STX), 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.

Kenneth Gianella, 50, has served as our Chief Financial Officer since January 2023. Prior to joining us, he served as the Vice President of Investor Relations; Mergers, Divestitures, & Acquisitions; and Environmental, Social & Governance (ESG) Strategy at Itron, Inc. (Nasdaq: ITRI), an energy and water network technology and services company, since July 2018, and as Vice President of Finance and Treasury of Itron's Networks segment from January 2018 to July 2018. Prior to that, from December 2012 to December 2017, Mr. Gianella held various senior finance positions at Silver Springs Networks, an IoT and smart networks company (acquired by Itron in December 2017), including as interim Chief Financial Officer, Senior Vice President, Finance and Treasurer. Mr. Gianella also was the Head of Finance and Administration at Sensity Systems, Inc., a producer of smart LED lights for enabling Smart Cities, and held various senior finance roles at KLA-Tencor Corporation, a leader in process control, yield management, and computational analytics for the semiconductor industry. Mr. Gianella holds a Master of Business Administration from University of Pittsburgh and a Bachelor of Science in Business Administration from Duquesne University.

Brian E. Cabrera, 58, 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. Mr. Cabrera holds Bachelor's and Master's degrees and a Juris Doctorate from the University of Southern California.

John Hurley, 57, has served as Quantum's Chief Revenue Officer since August 2021. Prior to Quantum, Mr. Hurley was at Cisco Systems, Inc. (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 Inc. (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 Corporation and HP Inc. Mr. Hurley holds a Bachelor of Science in Economics from Pennsylvania State University.

Lewis Moorehead, 51, 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, Inc. (now Edgio, Inc.), 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, in Accounting from the University of Wisconsin-Whitewater.

Human Capital

Our Chief Administrative Officer ("CAO") leads our human capital initiatives, which include the design and execution of all people strategies. The CAO 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 reward our teams for driving company performance.

Our workforce is currently distributed across 19 countries, with approximately 850 employees globally as of March 31, 2023, including 460 in North America, 190 in APAC, and 200 in EMEA. We engage with contractors, consultants, or temporary employees as needs for special projects occur.

Work Environment

While we believe competition for talent in the technology industry in certain geographies may be beginning to soften, we continue to design, evaluate, and expand our total rewards programs so they remain competitive in attracting, motivating, rewarding, and retaining key talent.

We offer flexible and hybrid working arrangements that allow our employees to choose where and how they work. We work to ensure our office environments, whether at a primary location or remote, are safe, professional, and inclusive so our employees can be successful.

To build high performing products and services, we aim to build high performing teams that are inclusive, diverse, and respected regardless of gender, race, color, religion, age, sexual orientation, or disability. We invest in diverse hiring and training initiatives, performance and professional development opportunities, and candidates ranging from interns to experienced leaders. This past year, we partnered with an outside firm for our training on compliance and preventing harassment and discrimination. We believe that fostering an inclusive work environment is a critical component for 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. Employees are empowered to ask questions and encouraged to report concerns without fear of retaliation, including reporting anonymously if preferred.

During the fiscal year ended March 31, 2023, we redesigned our internal employee recognition program to encourage driving innovation, promoting teamwork, and leading by example. We also continued our practice of "no internal meeting days" so employees can have more time for focused work, training, or personal development.

Talent Development

Our talent is our greatest asset. We seek to actively grow our employees' skills and leadership perspective while retaining our most critical talent. Our managers and employees participate in regular performance discussions that help facilitate conversations on 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 Securities and Exchange Commission ("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 or (202) 551-5450. 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, revenue, financial condition, liquidity, market share or competitive position, and consequently, the value of our securities.

Risks Related to Our Supply Chain, Customers and Sales Strategy

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

We have and may continue to experience cost increases or supply interruptions in raw materials and components necessary for our products, as well as 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 in some cases, result in 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 are the sole source of supply for the products or parts they manufacture, or the services they provide to us, and we do 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 geopolitical unrest, including the war between Russia and Ukraine, 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;
- 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, 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 year ended March 31, 2023 we had one Hyperscale customer represent 10% or more of our total revenue versus the prior fiscal year, March 31, 2022, when we had no single customer represent 10% or more of our total revenue. If this customer or any other large customers should significantly decrease or stop purchasing our solutions we would see a significant reduction in revenue that may result in 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 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 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 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 past. 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 investors;
- changes in interest and exchange rates;
- a continued widespread decline in the U.S. or global economy as a result of the 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 competitive and we have seen 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 currency 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 tape products 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 and flash storage 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;
- 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 2023, 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.

The failure to successfully integrate future acquired businesses, products or technologies 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 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 all or any portion of 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 intense in the data storage and protection market in which we operate.

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 and financially stronger, 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 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 11: 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 May 18, 2023, we had 226 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

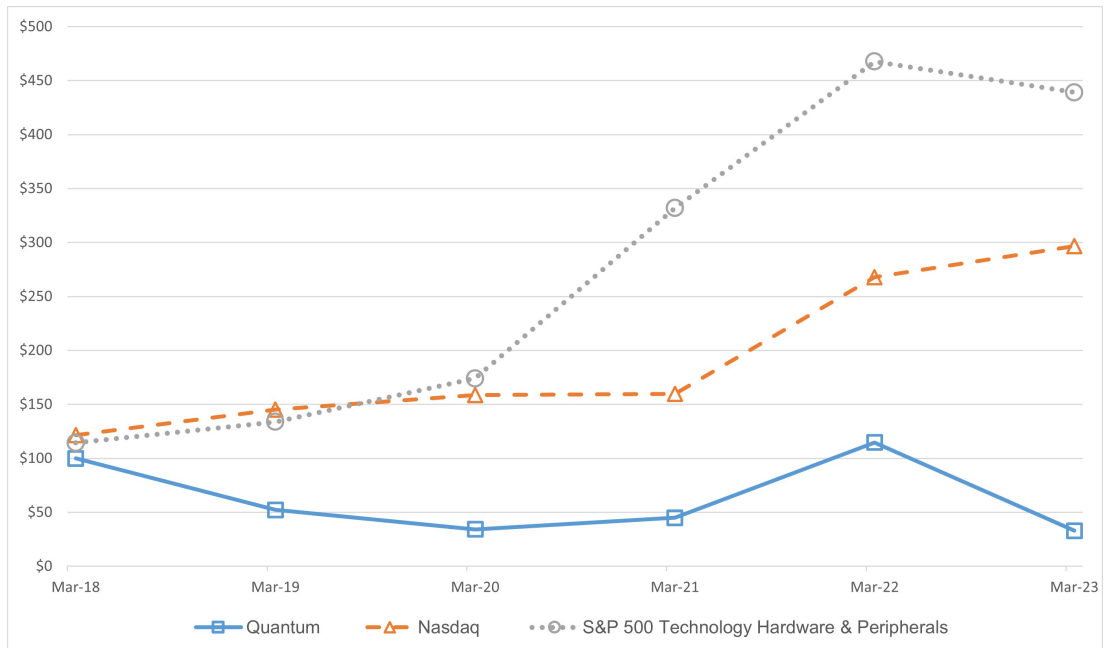
During the period covered by this Annual Report, we did not sell any equity securities that were not registered under the Securities Act of 1933.

Issuer Purchases of Equity Securities

During the quarter ended March 31, 2023, 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, 2018 through March 31, 2023.



ITEM 6. [RESERVED]

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

The following discussion and analysis compares the change in the consolidated financial statements for fiscal years 2023 and 2022 and 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. For comparisons of fiscal years 2022 and 2021, see our Management's Discussion and Analysis of Financial Condition and Results of Operations in Part II, , Item 7 of our Annual Report on Form 10-K for the fiscal year ended March 31, 2022, filed with the SEC on June 8, 2022, and incorporated herein by reference.

The following discussion contains forward-looking statements, such as statements regarding 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 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.

RESULTS OF OPERATIONS

(in thousands)	Year Ended March 31,	
	2023	2022
Total revenue	\$ 412,752	\$ 372,827
Total cost of revenue ⁽¹⁾	278,813	225,792
Gross profit	133,939	147,035
Operating expenses		
Research and development ⁽¹⁾	44,555	51,812
Sales and marketing ⁽¹⁾	66,034	62,957
General and administrative ⁽¹⁾	47,752	45,256
Restructuring charges	1,605	850
Total operating expenses	159,946	160,875
Loss from operations	(26,007)	(13,840)
Other income (expense), net	1,956	(251)
Interest expense	(10,560)	(11,888)
Loss on debt extinguishment, net	(1,392)	(4,960)
Net loss before income taxes	(36,003)	(30,939)
Income tax provision	1,940	1,341
Net loss	\$ (37,943)	\$ (32,280)

⁽¹⁾ Includes stock-based compensation as follows:

(in thousands)	Year Ended March 31,	
	2023	2022
Cost of revenue	\$ 929	\$ 1,112
Research and development	2,997	5,843
Sales and marketing	2,397	2,516
General and administrative	4,427	4,358
Total	\$ 10,750	\$ 13,829

Comparison of the Years Ended March 31, 2023 and 2022

Revenue

(in thousands)	Year Ended March 31,					
	2023	% of revenue	2022	% of revenue	\$ Change	% Change
Product revenue	\$ 266,537	65 %	\$ 223,761	60 %	\$ 42,776	19 %
Service and subscription revenue	132,510	32 %	133,689	36 %	(1,179)	(1) %
Royalty revenue	13,705	3 %	15,377	4 %	(1,672)	(11) %
Total revenue	\$ 412,752	100 %	\$ 372,827	100 %	\$ 39,925	11 %

Product Revenue

In fiscal 2023, product revenue increased \$42.8 million, or 19%, as compared to fiscal 2022. The primary driver of the increase was demand from our large hyperscale customers, as well as continued strong demand globally for data protection and archive solutions. Outside of the Tape and Hyperscale business, our remaining Secondary and Primary storage systems are also offer as a subscription. We anticipate the product revenue portion of our Primary and Secondary storage systems to decrease as we continue to transition to subscription-based offerings. The Devices and media also decreased partially driven by lower volume of LTO® media sales.

Service and Subscription Revenue

Service and subscription revenue decreased \$1.2 million, or 1%, in fiscal 2023 compared to fiscal 2022. This decrease was due in part to certain long-lived products reaching their end-of-service-life, partially offset by new support bookings and the transition towards subscription-based licensing.

Royalty Revenue

We receive royalties from third parties that license our LTO® media patents through our membership in the LTO® consortium. Royalty revenue decreased \$1.7 million, or 11%, in fiscal 2023, as compared to fiscal 2022, related to lower overall unit shipments.

Gross Profit and Margin

(in thousands)	Year Ended March 31,					
	2023	Gross margin %	2022	Gross margin %	\$ Change	Basis point change
Product gross profit	\$ 46,506	17.4 %	\$ 53,981	24.1 %	\$ (7,475)	(670)
Service and subscription gross profit	73,728	55.6 %	77,677	58.1 %	(3,949)	(250)
Royalty gross profit	13,705	100.0 %	15,377	100.0 %	(1,672)	—
Gross profit	\$ 133,939	32.5 %	\$ 147,035	39.4 %	\$ (13,096)	(690)

Product Gross Margin

Product gross margin decreased 670 basis points for fiscal 2023, as compared to fiscal 2022. This decrease was due primarily to a \$9.8 million inventory provision recorded during fiscal 2023. Due to longer purchasing lead times and other factors caused by the global supply chain disruptions occurring since the beginning of the COVID-19 pandemic, certain inventory has become obsolete due to next generation products being released and legacy products being discontinued. In addition, following our integration of several past acquisitions, certain legacy products were discontinued and replaced with updated product offerings rendering the related inventory obsolete. We do not believe that the magnitude of this inventory provision is indicative of our ongoing operations and is not expected to be repeated in the near term.

Excluding this non-recurring adjustment, product gross margin has declined approximately 370 basis points for fiscal 2023, as compared to fiscal 2022 primarily due to the continuation of pricing pressure on 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

Service and subscription gross margin decreased 250 basis points for fiscal 2023, as compared to fiscal 2022. This decrease was due partially to increased costs for freight and repair on replacement parts in addition to additional inventory write downs required for service parts caused by the transition of certain service logistics activities to a third party provider.

Royalty Gross Margin

Royalties do not have significant related cost of sales.

Operating expenses

(in thousands)	Year Ended March 31,					
	2023	% of revenue	2022	% of revenue	\$ Change	% Change
Research and development	\$ 44,555	11 %	\$ 51,812	14 %	\$ (7,257)	(14) %
Sales and marketing	66,034	16 %	62,957	17 %	3,077	5 %
General and administrative	47,752	12 %	45,256	12 %	2,496	6 %
Restructuring charges	1,605	— %	850	— %	755	89 %
Total operating expenses	\$ 159,946	39 %	\$ 160,875	43 %	\$ (929)	(1) %

In fiscal 2023, research and development expense decreased \$7.3 million, or 14%, as compared with fiscal 2022. This decrease was the result of one-time acquisition-related costs that occurred in the prior year, as well as the overall consolidation of those acquisitions.

In fiscal 2023, sales and marketing expenses increased \$3.1 million, or 5%, as compared with fiscal 2022. This increase was partially driven by increased investment in sales resources in key strategic markets, as well as the resumption of large trade shows and other events that are a key driver of our marketing activities.

In fiscal 2023, general and administrative expenses increased \$2.5 million, or 6%, as compared with fiscal 2022. This increase was driven primarily by transition costs as we complete large projects in our IT and facilities infrastructure.

In fiscal 2023, restructuring expenses increased \$0.8 million, or 89%, as compared with fiscal 2022. This increase is driven by corporate restructuring activities as we consolidated our physical footprint and operations in certain markets.

Other expense, net

(in thousands)	Year Ended March 31,					
	2023	% of revenue	2022	% of revenue	\$ Change	% Change
Other income (expense), net	\$ 1,956	1 %	\$ (251)	0 %	\$ (2,207)	(879) %

In fiscal 2023, other income (expense), net increased \$2.2 million or 879%, compared to fiscal 2022. The increase was primarily related to differences in foreign currency gains and losses during each period, as well as the sale of IP licenses.

Interest expense

(in thousands)	Year Ended March 31,					
	2023	% of revenue	2022	% of revenue	\$ Change	% Change
Interest expense	(10,560)	(3) %	(11,888)	(3) %	(1,328)	(11) %

In fiscal 2023, interest expense decreased \$1.3 million, or 11%, as compared to fiscal 2022. This decrease was primarily due to a lower principal balance on our Term Loan.

Loss on debt extinguishment, net

(in thousands)	Year Ended March 31,					
	2023	% of revenue	2022	% of revenue	\$ Change	% Change
Loss on debt extinguishment, net	(1,392)	— %	(4,960)	(1) %	(3,568)	(72) %

In fiscal 2023, loss on debt extinguishment, net was related to prepayment of our long-term debt.

Income tax provision

(in thousands)	Year Ended March 31,					
	2023	% of revenue	2022	% of revenue	\$ Change	% Change
Income tax provision	\$ 1,940	1 %	\$ 1,341	— %	\$ 599	45 %

Our income tax provision is primarily influenced by foreign and state income taxes. In fiscal 2023, the income tax provision increased \$0.6 million or 45%, compared to fiscal 2022, 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.

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 credit facility with PNC Bank, National Association (as amended from time to time, the "PNC Credit Facility") pursuant to the Amended Restated Revolving Credit and Security Agreement dated December 27, 2018. 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 had cash and cash equivalents of \$26.0 million as of March 31, 2023, which excludes \$0.2 million of short-term restricted cash as of March 31, 2023. Our total outstanding Term Loan debt was \$74.7 million, and we had \$20.0 million available to borrow under the PNC Credit Facility as of March 31, 2023.

We generated negative cash flows from operations of approximately \$4.9 million and \$33.7 million for the fiscal years ended March 31, 2023 and 2022, respectively, and generated net losses of approximately \$37.9 million and \$32.3 million for the fiscal years ended March 31, 2023 and 2022, respectively. We have funded operations through the sale of common stock, term debt borrowings and revolving credit facility borrowings described in *Note 5: Debt*.

On June 1, 2023, the Company entered into amendments to the Term Loan and the PNC Credit Facility. The amendments, among other things, (a) amended the total net leverage ratio financial covenant commencing with the fiscal quarter ended June 30, 2023; (b) amended the minimum liquidity financial covenant to decrease the minimum liquidity to \$15 million; and (c) amended the "EBITDA" definition to increase the add-back cap on non-recurring items including restructuring charges during the fiscal years ended March 31, 2024 and 2025. The Term Loan amendment also provided an advance of \$15 million in additional Term Loan borrowings. With the additional term debt borrowings, in addition to the amendments to the credit agreements, we forecasted that operating performance, cash, current working capital and borrowings available under the PNC Credit Facility will provide us with sufficient capital to fund operations for at least one year from the financial statement issuance date. If required, there is no assurance that we would be able to obtain sufficient additional funds when needed or that such funds, if available, would be obtainable on terms satisfactory to us. Our outstanding long-term debt amounted to \$83.1 million as of March 31, 2023, net of \$3.3 million in unamortized debt issuance costs and \$5.0 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. 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.

(in thousands)	Year Ended March 31,	
	2023	2022
Cash provided by (used in):		
Operating activities	(4,894)	(33,728)
Investing activities	(15,601)	(14,124)
Financing activities	41,165	20,157
Effect of exchange rate changes	12	51
Net change in cash, cash equivalents, and restricted cash	\$ 20,682	\$ (27,644)

Net Cash Used in Operating Activities

Net cash used in operating activities was \$4.9 million for the year ended March 31, 2023, primarily attributable to cash provided by operating activities excluding changes in assets and liabilities of \$1.5 million offset by cash used associated with working capital changes of \$6.4 million including cash used related to manufacturing and service inventories of \$5.3 million.

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 manufacturing and service inventories.

Net Cash Used in Investing Activities

Net cash used in investing activities was \$15.6 million for the year ended March 31, 2023, primarily attributable to \$12.6 million of capital expenditures and \$3.0 million of cash paid related to the deferred purchase price for a prior business acquisition.

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 Provided by Financing Activities

Net cash provided by financing activities was \$41.2 million for the year ended March 31, 2023 due primarily to \$66.2 million of net cash received from the Rights Offering of 30 million shares of our common stock offset in part by a \$20.0 million prepayment of our term debt and term debt principal amortization payments and amendment fees totaling \$3.3 million.

Net cash provided by financing activities was \$20.2 million for the year ended March 31, 2022, primarily related to borrowings under our credit facility, and proceeds from the new Term Loan offset by the repayment in full of the Senior Secured Term Loan.

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 11: 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, 2023 (in thousands):

(in thousands)	Payments Due by Period				
	Total	1 year or less	1 – 3 Years	3 – 5 Years	More than 5 years
Debt obligations ⁽¹⁾	\$ 140,407	\$ 15,109	\$ 108,548	\$ 16,750	\$ —
Future lease commitments ⁽²⁾	22,993	2,700	3,989	3,042	13,262
Purchase obligations ⁽³⁾	28,688	28,688	—	—	—
Total	\$ 192,088	\$ 46,497	\$ 112,537	\$ 19,792	\$ 13,262

⁽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, 2023, 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, 2023. Term loan debt matures on August 5, 2026.

⁽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 generally accepted accounting principles in the United States of America ("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 our 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 Accounting Standards Codification ("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

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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, 2023 and 2022 and the related consolidated statements of operations, comprehensive loss, stockholders' deficit, and cash flows for each of the years in the three-year period ended March 31, 2023, 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, 2023, 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, 2023 and 2022, 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 controls over financial reporting as of March 31, 2023, based on the criteria established in *Internal Controls - 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. 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 audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. 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.

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 judgments used when applying Accounting Standards Codification Topic 606 – Revenue from Contracts with Customers – to contracts with customers. The Company ships products to a broad network of distributors, value-added resellers (“VARs”), direct marketing resellers (“DMRs”), original equipment manufacturers (“OEMs”) and other suppliers to 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 no customer acceptance clauses existed that would preclude revenue recognition, and revenue was recognized in the appropriate fiscal year.
- 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, and validated revenue was recognized in the fiscal year ended March 31, 2023 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 write down — 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 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 ("E&O").

We identified the E&O write-down as a critical audit matter because of the judgments management makes to estimate future parts demand. This required a high degree of auditor judgment and significant effort to validate.

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 reasonableness of sales demand, tested the completeness and accuracy of prior usage data, and specific product considerations used to estimate parts demand.
- We verified that estimated parts demand was properly compared to inventories on hand to determine excess inventory, and that such excess was properly written down to net realizable value.

/s/ Armanino^{LLP}

San Ramon, California

June 6, 2023

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

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

	March 31,	
	2023	2022
Assets		
Current assets:		
Cash and cash equivalents	\$ 25,963	\$ 5,210
Restricted cash	212	283
Accounts receivable, net of allowance for doubtful accounts of \$201 and \$422, respectively	72,464	69,354
Manufacturing inventories	19,441	33,546
Service parts inventories	25,304	24,254
Prepaid expenses	4,158	7,853
Other current assets	5,513	4,697
Total current assets	153,055	145,197
Property and equipment, net	16,555	12,853
Intangible assets, net	4,941	9,584
Goodwill	12,969	12,969
Right-of-use assets, net	10,291	11,107
Other long-term assets	15,846	9,925
Total assets	\$ 213,657	\$ 201,635
Liabilities and Stockholders' Deficit		
Current liabilities:		
Accounts payable	\$ 35,716	\$ 34,220
Deferred revenue, current portion	82,504	86,517
Long-term debt, current portion	5,000	4,375
Accrued compensation	15,710	16,141
Other accrued liabilities	13,666	16,562
Total current liabilities	152,596	157,815
Deferred revenue, net of current portion	43,306	41,580
Revolving credit facility	16,750	17,735
Long-term debt, net of current portion	66,354	89,448
Operating lease liabilities	10,169	9,891
Other long-term liabilities	11,370	11,849
Total liabilities	300,545	328,318
Commitments and Contingencies (Note 11)		
Stockholders' deficit		
Preferred stock:		
Preferred stock, 20,000 shares authorized; no shares issued as of March 31, 2023 and 2022	—	—
Common stock:		
Common stock, \$0.01 par value; 225,000 shares authorized; 93,574 and 60,433 shares issued and outstanding at March 31, 2023 and 2022, respectively	936	605
Additional paid-in capital	722,603	645,038
Accumulated deficit	(808,846)	(770,903)
Accumulated other comprehensive loss	(1,581)	(1,423)
Total stockholders' deficit	(86,888)	(126,683)
Total liabilities and stockholders' deficit	\$ 213,657	\$ 201,635

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,		
	2023	2022	2021
Revenue			
Product	\$ 266,537	\$ 223,761	\$ 209,808
Service and subscription	132,510	133,689	124,904
Royalty	13,705	15,377	14,864
Total revenue	<u>412,752</u>	<u>372,827</u>	<u>349,576</u>
Cost of revenue			
Product	220,031	169,780	150,257
Service and subscription	58,782	56,012	48,566
Total cost of revenue	<u>278,813</u>	<u>225,792</u>	<u>198,823</u>
Gross profit	<u>133,939</u>	<u>147,035</u>	<u>150,753</u>
Operating expenses			
Research and development	44,555	51,812	41,703
Sales and marketing	66,034	62,957	54,945
General and administrative	47,752	45,256	42,001
Restructuring charges	1,605	850	3,701
Total operating expenses	<u>159,946</u>	<u>160,875</u>	<u>142,350</u>
Income (loss) from operations	<u>(26,007)</u>	<u>(13,840)</u>	<u>8,403</u>
Other income (expense), net	1,956	(251)	(1,312)
Interest expense	(10,560)	(11,888)	(27,522)
Loss on debt extinguishment, net	(1,392)	(4,960)	(14,789)
Net loss before income taxes	<u>(36,003)</u>	<u>(30,939)</u>	<u>(35,220)</u>
Income tax provision	1,940	1,341	239
Net loss	<u>\$ (37,943)</u>	<u>\$ (32,280)</u>	<u>\$ (35,459)</u>
Deemed dividend on warrants	(389)	—	—
Net loss attributable to common stockholders	<u>\$ (38,332)</u>	<u>\$ (32,280)</u>	<u>\$ (35,459)</u>
Net loss per share attributable to common stockholders - basic and diluted	<u>\$ (0.42)</u>	<u>\$ (0.55)</u>	<u>\$ (0.83)</u>
Weighted average shares - basic and diluted	<u>90,348</u>	<u>58,871</u>	<u>42,852</u>
Net loss	<u>\$ (37,943)</u>	<u>\$ (32,280)</u>	<u>\$ (35,459)</u>
Foreign currency translation adjustments, net	(158)	(567)	666
Total comprehensive loss	<u>\$ (38,101)</u>	<u>\$ (32,847)</u>	<u>\$ (34,793)</u>

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,		
	2023	2022	2021
Operating activities			
Net loss	\$ (37,943)	\$ (32,280)	\$ (35,459)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	10,118	9,418	5,697
Amortization of debt issuance costs	1,624	2,414	6,301
Long-term debt related costs	992	8,471	167
Provision for manufacturing and service inventories	18,052	5,740	6,334
Gain on PPP loan extinguishment	—	(10,000)	—
Stock-based compensation	10,750	13,829	9,624
Non-cash income tax benefit	—	—	(577)
Non-cash loss on debt extinguishment	—	—	10,087
Other non-cash	(2,067)	(832)	704
Changes in assets and liabilities, net of effect of acquisitions:			
Accounts receivable	(2,966)	3,651	(1,625)
Manufacturing inventories	(1,839)	(12,069)	924
Service parts inventories	(3,503)	(4,400)	(5,879)
Accounts payable	1,158	(1,939)	(1,994)
Prepaid expenses	3,695	(3,959)	(594)
Deferred revenue	(2,286)	(2,514)	418
Accrued restructuring charges	—	(580)	580
Accrued compensation	(431)	(3,073)	4,257
Other assets	(1,270)	(2,602)	2,809
Other liabilities	1,022	(3,003)	(2,541)
Net cash used in operating activities	(4,894)	(33,728)	(767)
Investing activities			
Purchases of property and equipment	(12,581)	(6,316)	(6,931)
Business acquisitions	(3,020)	(7,808)	(2,655)
Net cash used in investing activities	(15,601)	(14,124)	(9,586)
Financing activities			
Borrowings of long-term debt, net of debt issuance costs	—	94,961	19,400
Repayments of long-term debt	(24,596)	(94,301)	(92,782)
Borrowings of credit facility	497,280	309,000	309,920
Repayments of credit facility	(498,665)	(291,265)	(313,065)
Borrowings of paycheck protection program	—	—	10,000
Proceeds from secondary offering, net	—	—	96,756
Payment of taxes due upon vesting of restricted stock	—	—	(236)
Proceeds from issuance of common stock	67,146	1,762	1,335
Net cash provided by financing activities	41,165	20,157	31,328
Effect of exchange rate changes on cash and cash equivalents	12	51	(108)
Net change in cash, cash equivalents, and restricted cash	20,682	(27,644)	20,867
Cash, cash equivalents, and restricted cash at beginning of period	5,493	33,137	12,270
Cash, cash equivalents, and restricted cash at end of period	\$ 26,175	\$ 5,493	\$ 33,137
Supplemental disclosure of cash flow information			
Cash paid for interest	\$ 8,701	\$ 9,140	\$ 24,324
Cash paid for income taxes, net of refunds	\$ 1,418	\$ 944	\$ (2,283)
Non-cash transactions			
Purchases of property and equipment included in accounts payable	\$ 1,049	\$ 147	\$ 258
Transfer of manufacturing inventory to services inventory	\$ 4,045	\$ 211	\$ 918
Transfer of manufacturing inventory to property and equipment	\$ 343	\$ 818	\$ 429
Paid-in-kind interest	\$ 319	\$ —	\$ —
Deemed dividend	\$ 389	\$ —	\$ —
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	\$ 25,963	\$ 5,210	\$ 27,430
Restricted cash, current	212	283	707
Restricted cash, long-term	—	—	5,000
Total cash, cash equivalents and restricted cash at the end of period	\$ 26,175	\$ 5,493	\$ 33,137

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

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

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Deficit
	Shares	Amount				
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)
Net loss	—	—	—	(37,943)	—	(37,943)
Foreign currency translation adjustments, net of income taxes	—	—	—	—	(158)	(158)
Shares issued under employee stock purchase plan	600	6	891	—	—	897
Shares issued under employee incentive plans, net	2,180	21	(21)	—	—	—
Shares issued in connection with rights offering, net	30,000	300	65,949	—	—	66,249
Shares issued in connection with business acquisition	361	4	(4)	—	—	—
Settlement of warrant down round provision	—	—	389	—	—	389
Deemed dividend on warrants	—	—	(389)	—	—	(389)
Stock-based compensation	—	—	10,750	—	—	10,750
Balance, March 31, 2023	93,574	\$ 936	\$ 722,603	\$ (808,846)	\$ (1,581)	\$ (86,888)

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

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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-volatile 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 \$4.9 million, \$33.7 million and \$0.8 million for the fiscal years ended March 31, 2023, 2022 and 2021, respectively, and generated net losses of approximately \$37.9 million, \$32.3 million, and \$35.5 million for the fiscal years ended March 31, 2023, 2022 and 2021, respectively. The Company has funded

operations through the sale of common stock, term debt borrowings and revolving credit facility borrowings 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 or debt financing (including additional Term Debt borrowings described in *Note 13: Subsequent Events*) 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 the Company would be able to obtain sufficient additional funds when needed or that such funds, if available, would 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 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. 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.

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.

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 is 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.

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.

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 \$5.6 million, \$3.1 million and \$3.1 million for fiscal 2023, 2022 and 2021, respectively. Related amortization expense for software implementation costs was \$0.1 million, \$0.1 million and \$0 during fiscal 2023, 2022 and 2021, respectively.

Advertising Expense

Advertising expense is recorded as incurred and was \$ 3.2 million, \$3.5 million, and \$1.5 million in fiscal 2023, 2022 and 2021, respectively.

Shipping and Handling Fees

Shipping and handling fees are included in cost of revenue and were \$ 12.1 million, \$11.5 million, and \$9.4 million in fiscal 2023, 2022 and 2021, 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 warrants 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 reassesses 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 year ended March 31, 2023, one customer represented more than 10% of the Company's total revenue. In fiscal 2022 and 2021, no customers represented 10% or more of the Company's total revenue. One customer comprised approximately 22% of accounts receivable as of March 31, 2023. One customer comprised approximately 21% of accounts receivable as of March 31, 2022.

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

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 a one reportable segment and 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,	
	2023	2022
United States	\$ 16,289	\$ 12,506
International	266	347
Total	\$ 16,555	\$ 12,853

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, 2023, 2022 and 2021, the Company incurred \$1.7 million, \$1.7 million, and \$1.2 million in matching contributions, respectively.

Recently Adopted Accounting Pronouncements

There are no recently issued accounting pronouncements that are expected to have a material impact on our consolidated financial statements and accompanying disclosures.

NOTE 2: REVENUE

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

	Year Ended March 31,					
	2023		2022		2021	
		%		%		%
Americas¹						
Product revenue	172,332		124,952		118,653	
Service and subscription	77,863		81,608		76,039	
Total revenue	250,195	61 %	206,560	55 %	194,692	56 %
EMEA						
Product revenue	67,485		70,730		67,509	
Service and subscription	44,675		44,187		41,261	
Total revenue	112,160	27 %	114,917	31 %	108,770	31 %
APAC						
Product revenue	26,720		28,079		23,646	
Service and subscription	9,972		7,894		7,604	
Total revenue	36,692	9 %	35,973	10 %	31,250	9 %
Consolidated						
Product revenue	266,537		223,761		209,808	
Service and subscription	132,510		133,689		124,904	
Royalty ²	13,705	3 %	15,377	4 %	14,864	4 %
Total revenue	412,752	100 %	372,827	100 %	349,576	100 %

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

² Royalty revenue is not allocable to geographic regions.

Revenue by Solution

	Year Ended March 31,					
	2023		2022		2021	
		%		%		%
Primary storage systems	57,578	14 %	60,697	16 %	70,286	20 %
Secondary storage systems	175,508	43 %	118,310	32 %	89,000	25 %
Device and media	42,371	10 %	50,030	13 %	51,164	15 %
Service	123,590	30 %	128,413	35 %	124,262	36 %
Royalty	13,705	3 %	15,377	4 %	14,864	4 %
Total revenue ¹	412,752	100 %	372,827	100 %	349,576	100 %

¹ Subscription revenue of \$8.9 million, \$5.3 million and \$0.6 million allocated to Primary and Secondary storage systems for the fiscal years ended 2023, 2022 and 2021, respectively.

Contract Balances

The following table presents the Company's contract liabilities and certain information related to this balance as of March 31, 2023 (in thousands):

	March 31, 2023	
Deferred revenue	\$	125,810
Revenue recognized in the period from amounts included in contract liabilities at the beginning of the period	\$	82,609

Remaining Performance Obligations

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

	Current	Non-Current	Total
As of March 31, 2023	\$ 95,584	\$ 44,579	\$ 140,163

The table below reflects our deferred revenue as of March 31, 2023 (in thousands):

(in thousands)	Deferred revenue by period			
	Total	1 year or less	1 – 3 Years	3 year or greater
Service revenue	\$ 111,041	\$ 75,211	\$ 33,750	\$ 2,080
Subscription revenue	14,769	7,293	6,648	828
Total	\$ 125,810	\$ 82,504	\$ 40,398	\$ 2,908

The Company expects to recognize approximately 68.2% 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

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. 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	<u>\$ 7,818</u>	

Pivot3 has also agreed to license to the Company certain intellectual property rights related to the business. The historical results of operations for Pivot3 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 estimated 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):

<i>Manufacturing inventories</i>	March 31,	
	2023	2022
Manufactured finished goods	\$ 6,958	\$ 14,607
Work in progress	1,304	2,546
Raw materials	11,179	16,393
Total manufacturing inventories	<u>\$ 19,441</u>	<u>\$ 33,546</u>

<i>Service inventories</i>	March 31,	
	2023	2022
Finished goods	\$ 19,834	\$ 19,234
Component parts	5,470	5,020
Total service inventories	<u>\$ 25,304</u>	<u>\$ 24,254</u>

<i>Property and equipment, net</i>	March 31,	
	2023	2022
Machinery and equipment, and software	\$ 46,170	\$ 46,831
Leasehold improvements	14,405	6,029
Furniture and fixtures	848	838
	61,423	53,698
Less: accumulated depreciation	(44,868)	(40,845)
Total property, plant and equipment, net	<u>\$ 16,555</u>	<u>\$ 12,853</u>

Depreciation and amortization expense for property and equipment amounted to \$ 10.1 million, \$9.4 million, and \$5.7 million for the years ended March 31, 2023, 2022, and 2021, respectively.

<i>Intangibles, net</i>	March 31, 2023			March 31, 2022		
	Gross	Accumulated Amortization	Net	Gross	Accumulated Amortization	Net
Developed technology	\$ 9,013	\$ (6,269)	\$ 2,744	\$ 9,208	\$ (3,121)	\$ 6,087
Customer lists	4,398	(2,201)	2,197	4,600	(1,103)	3,497
Intangible assets, net	<u>\$ 13,411</u>	<u>\$ (8,470)</u>	<u>\$ 4,941</u>	<u>\$ 13,808</u>	<u>\$ (4,224)</u>	<u>\$ 9,584</u>

Intangible assets amortization expense was \$4.6 million, \$3.7 million, and \$0.1 million for the years ended March 31, 2023, 2022, and 2021, respectively. As of March 31, 2023, the remaining weighted-average amortization period for definite-lived intangible assets was approximately 1.6 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, 2023, the future expected amortization expense for intangible assets is as follows (in thousands):

Fiscal year ending	Estimated future amortization expense	
2024	\$	3,488
2025		1,453
Thereafter		—
Total	\$	<u>4,941</u>

Goodwill	Amount	
Balance at March 31, 2022	\$	12,969
Goodwill acquired		—
Balance at March 31, 2023	\$	<u>12,969</u>

Other accrued liabilities	March 31,	
	2023	2022
Accrued expenses	\$ 1,988	\$ 4,984
Asset retirement obligation	2,513	4,590
Accrued income taxes	1,509	943
Accrued warranty	2,094	1,899
Accrued interest	494	278
Lease liability	1,364	1,727
Other	3,704	2,141
Total other accrued liabilities	\$ 13,666	\$ 16,562

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

	Year Ended March 31,		
	2023	2022	2021
Balance as of April 1	\$ 1,899	\$ 2,383	2,668
Current period accruals	3,477	3,717	4,699
Adjustments to prior estimates	(18)	(156)	(472)
Charges incurred	(3,264)	(4,045)	(4,512)
Balance as of March 31	\$ 2,094	\$ 1,899	\$ 2,383

NOTE 5: DEBT

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

	Year Ended March 31,	
	2023	2022
Term Loan	74,667	98,723
PNC Credit Facility	16,750	17,735
Less: current portion	(5,000)	(4,375)
Less unamortized debt issuance costs ⁽¹⁾	(3,313)	(4,899)
Long-term debt, net	\$ 83,104	\$ 107,184

⁽¹⁾ The unamortized debt issuance costs related to the 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") and amended its Revolving Credit and Security Agreement with PNC Bank, National Association (the "PNC Credit Facility"). On February 11, 2021, the Company prepaid \$92.3 million of its outstanding Senior Secured Term Loan.

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.

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 amendment to the Term Loan was accounted for as a modification. The Company incurred \$0.4 million in costs related to the modification which are reflected as a reduction to the carrying amount of the Term Loan and amortized to interest expense over the remaining loan term.

Loans under the Term Loan designated as ABR 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 SOFR 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 SOFR Rate Loans bear interest at a rate per annum equal to the SOFR Rate plus an applicable margin of 6.00%. The SOFR Rate is subject to a floor of 0.75%. The Company can designate a loan as an ABR Rate Loan or SOFR Rate Loan in its discretion.

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 SOFR. The amendment to the PNC Credit Facility was accounted for as a modification. The Company incurred \$0.4 million in costs which were recorded to other assets and amortized to interest expense over the remaining term of the agreement.

Loans designated as PNC SOFR Loans bear interest at a rate per annum equal to the SOFR Rate plus 2.75% until December 31, 2023 and thereafter between 2.25% and 2.75% determined based on the Company's Total Net Leverage Ratio, (as defined in the PNC Bank Credit Facility Agreement) for the most recently completed fiscal quarter (the "PNC SOFR 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 SOFR Rate plus 1.0%, plus 1.75% until December 31, 2023 and thereafter between 1.25% and 1.75% determined based on the Company's Total Net Leverage Ratio (the "PNC Domestic Loan Interest Rate").

With respect to any PNC SOFR 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) 6.50%, minus (y) the PNC SOFR Loan Interest Rate, plus (z) if the SOFR Rate applicable to such interest payment is less than 0.75%, (i) 0.75% minus (ii) such SOFR Rate. With respect to any Domestic Rate Loan or Swing Loan, the Company has agreed to pay an affiliate of certain Term Loan lenders a fee equal to a percentage per annum equal to the sum of (x) 5.50%, 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.

During the quarter ended December 31, 2022, the Company recorded a loss on debt extinguishment of \$ 1.4 million related to a \$20.0 million prepayment of the Term Loan which was comprised of a \$0.4 million prepayment penalty and the write-off of unamortized debt issuance costs of \$ 1.0 million.

As of March 31, 2023, the interest rate on the Term Loan was 10.8% and the interest rate on the PNC Credit Facility for Domestic Rate Loans and Swing Loans was 9.75% and the PNC SOFR Rate Loan was 7.5%. As of March 31, 2023, the PNC Credit Facility had an available borrowing base of \$36.8 million, of which \$20.0 million was available to borrow at that date. Subsequent to year end these terms were renegotiated, please See *Note 13: Subsequent Event* for more information.

NOTE 6: LEASES

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

Operating leases	March 31, 2023		March 31, 2022	
Operating lease right-of-use assets	\$	10,291	\$	11,107
Other current liabilities	\$	1,364	\$	1,727
Operating lease liability		10,169		9,891
Total operating lease liabilities	\$	11,533	\$	11,618

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

Lease expense	Year Ended March 31,			
	2023		2022	
Operating lease expense	\$	4,276	\$	3,727
Variable lease expense		753		643
Short-term lease expense		—		15
Total lease expense	\$	5,029	\$	4,385

Maturity of Lease Liabilities	Operating Leases	
2023	\$	2,700
2024		2,208
2025		1,781
2026		1,606
2027		1,436
Thereafter		13,262
Total lease payments	\$	22,993
Less: Imputed interest		(11,460)
Present value of lease liabilities	\$	11,533

Lease Term and Discount Rate	March 31,	
	2023	2022
Weighted average remaining operating lease term (years)	10.85	10.88
Weighted average discount rate for operating leases	12.66 %	12.9 %

Operating cash outflows related to operating leases totaled \$ 3.5 million and \$ 3.7 million for the fiscal years ended March 31, 2023 and March 31, 2022, respectively.

NOTE 7: RESTRUCTURING CHARGES

During fiscal years 2023, 2022 and 2021, the Company approved certain restructuring plans to improve operational efficiencies and rationalize its cost structure.

The following tables show the activity and the estimated timing of future payouts for accrued restructuring (in thousands):

	Severance and benefits	Facilities	Total
Balance as of March 31, 2020	\$ —	\$ —	\$ —
Restructuring costs	3,701	—	3,701
Cash payments	(3,121)	—	(3,121)
Balance as of March 31, 2021	580	—	580
Adjustments of prior estimates	—	—	—
Cash payments	850	—	850
Other non-cash	(1,430)	—	(1,430)
Balance as of March 31, 2022	—	—	—
Restructuring costs	1,605	—	1,605
Cash payments	(1,605)	—	(1,605)
Balance as of March 31, 2023	\$ —	\$ —	\$ —

NOTE 8: COMMON STOCK

In the quarter ended September 30, 2022, the Company's shareholders approved an increase in its authorized shares of common stock from 125 million to 225 million.

Common Stock Rights Offering

On April 22, 2022, the Company completed a rights offering of 30 million shares of its common stock for \$2.25 per share (the "Rights Offering"). The proceeds net of offering expenses was \$66.2 million. A portion of the proceeds from the Rights Offering was used to prepay \$20.0 million of the Company's Term Loan.

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 has 7.0 million shares authorized for issuance of new shares, with 5.6 million performance shares and restricted shares outstanding, and 1.4 million shares available for future issuance under the Plan as of March 31, 2023.

The majority of performance share units, restricted stock units and stock options granted to employees typically vest between one and 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 three years.

On December 30, 2022 the Leadership and Compensation Committee of the Board of Directors approved an amendment to the 2021 Inducement Plan to increase the number of shares of common stock of the Company authorized for issuance thereunder from 770,000 to 1.5 million. There were 0.6 million shares available for future issuance as of March 31, 2023.

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,	
	2023	2022
Shares available for issuance at beginning of period	688	1,077
Shares issued during the period	(600)	(389)
Total shares available for future issuance at end of period	88	688

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 does 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,		
	2023	2022	2021
Expected life	0.5 years	0.5 years	0.5 years
Volatility	96%	51% - 57%	55% - 133%
Risk-free interest rate	3.10%	0.06% - 0.23%	0.05% - 0.11%
Dividend yield	—%	—%	—%
Fair value of common stock	\$1.85	\$4.60 - \$6.40	\$4.99 - \$8.05

Performance Stock Units

The Company granted 0.4 million, 0.6 million, and 0.9 million of performance share units with market conditions (“Market PSUs”) in fiscal 2023, 2022, and 2021, 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	2023	2022	2021
Discount period (years)	3.00	2.98	2.54
Risk-free interest rate	2.84%	0.93%	0.31%
Stock price volatility	80.00%	75.00%	82.00%
Grant date fair value	\$1.17	\$5.40	\$3.77

The Company granted 0.9 million, 0.0 million and 0.5 million of performance share units with financial performance conditions (“Performance PSUs”) in the fiscal years ended March 31, 2023, 2022 and 2021, respectively. Performance PSUs become eligible for vesting based on the Company achieving certain financial performance targets, 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, 2023 (shares in thousands):

	Shares	Weighted-Average Grant Date Fair Value per Share
Outstanding as of March 31, 2022	1,579	\$ 4.58
Granted	1,357	\$ 1.33
Vested	(555)	\$ 5.07
Forfeited or cancelled	(768)	\$ 2.41
Outstanding as of March 31, 2023	<u>1,613</u>	<u>\$ 2.72</u>

As of March 31, 2023, there was \$ 1.6 million and \$ 0.0 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, 2023, 2022, and 2021 was \$ 1.9 million, \$ 3.9 million, and \$ 2.9 million, respectively.

Restricted Stock Units

The Company granted 2.9 million, 2.8 million, and 2.4 million of service-based restricted stock units ("RSUs") in the fiscal years ended March 31, 2023, 2022 and 2021, 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, 2023 (shares in thousands):

	Shares	Weighted-Average Grant Date Fair Value per Share
Outstanding as of March 31, 2022	3,856	\$ 5.46
Granted	2,920	\$ 1.43
Vested	(1,625)	\$ 5.32
Forfeited or cancelled	(657)	\$ 4.13
Outstanding as of March 31, 2023	<u>4,494</u>	<u>\$ 3.09</u>

As of March 31, 2023, there was \$ 9.2 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, 2023, 2022, and 2021 was \$ 5.2 million, \$ 5.0 million, and \$ 2.1 million, respectively.

Compensation Expense

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

	Year Ended March 31,		
	2023	2022	2021
Cost of revenue	\$ 929	\$ 1,112	\$ 672
Research and development	2,997	5,843	2,881
Sales and marketing	2,397	2,516	1,757
General and administrative	4,427	4,358	4,314
Total stock-based compensation	<u>\$ 10,750</u>	<u>\$ 13,829</u>	<u>\$ 9,624</u>

	Year Ended March 31,		
	2023	2022	2021
Restricted stock units	\$ 9,299	\$ 9,331	\$ 4,041
Performance share units	878	3,811	4,904
Employee stock purchase plan	573	687	679
Total stock-based compensation	<u>\$ 10,750</u>	<u>\$ 13,829</u>	<u>\$ 9,624</u>

Warrants

As of March 31, 2023 and 2022, 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 (the "\$1.33 Warrants"). As of March 31, 2022 and the date of the Rights Offering, the Company had outstanding warrants to purchase 3,400,000 shares of the Company's common stock exercisable until June 16, 2030 at an exercise price of \$ 3.00 per share (the "\$3.00 Warrants"). The exercise price and the number of shares underlying the \$ 1.33 Warrants and the \$ 3.00 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 (the "Down Round Feature"). The Rights Offering triggered the Down Round Feature on April 22, 2022, the for the \$3.00 Warrants due to the price per share received in the Rights Offering being lower than the exercise price. The exercise price for the \$3.00 Warrants was adjusted to \$2.79 per share and an additional 256,113 warrants were subsequently issued with an exercise price of \$2.79. The Company calculated the difference between the \$ 3.00 Warrants' fair value before and after the Down Round Feature was triggered using the original exercise price and the new exercise price in addition to the value of the newly issued warrants. The difference in fair value of the effect of the Down Round Feature of \$0.4 million was reflected as a deemed dividend and a reduction to income available to common stockholders in the basic and diluted earnings per share calculations. The Company used the Black-Scholes-Merton option-pricing model to determine the fair value of the deemed dividend. The assumptions used in the model are as follows: dividend rate of 0%; expected term of 8 years; volatility of 56%; and a risk-free rate 2.85%.

As of March 31, 2023 and 2022, the Company had outstanding warrants to purchase 50,000 shares of the Company's common stock exercisable until June 16, 2030 at an exercise price of \$3.00 per share.

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 \$1.33 Warrants and \$3.00 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 9: 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,		
	2023	2022	2021
Stock awards	543	1,996	1,818
Warrants	3,538	6,886	6,573
ESPP	8	11	223
Total	4,089	8,893	8,614

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, 2023 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 0.4 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, 2023.

NOTE 10: INCOME TAXES

Pre-tax loss reflected in the consolidated statements of operations for the years ended March 31, 2023, 2022 and 2021 is as follows (in thousands):

	Year Ended March 31,		
	2023	2022	2021
U.S.	\$ (38,004)	\$ (31,489)	\$ (36,648)
Foreign	2,001	550	1,428
Total	\$ (36,003)	\$ (30,939)	\$ (35,220)

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

	Year Ended March 31,		
	2023	2022	2021
Current tax expense			
Federal	\$ —	\$ —	\$ (76)
State	70	477	339
Foreign	2,045	1,381	747
Total current tax expense	2,115	1,858	1,010
Deferred tax expense			
Federal	23	9	(577)
State	108	22	9
Foreign	(306)	(548)	(203)
Total deferred tax expense (benefit)	(175)	(517)	(771)
Income tax provision	\$ 1,940	\$ 1,341	\$ 239

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,		
	2023	2022	2021
Expense (benefit) at the federal statutory rate	\$ (7,560)	\$ (6,493)	\$ (7,396)
Equity compensation	1,945	195	345
Permanent items	1,498	1,941	1,295
Foreign taxes	586	1,761	(129)
State income taxes	(373)	(402)	(969)
Valuation allowance	5,096	(4,899)	5,444
Uncertain tax positions	(3,791)	(6,349)	(6,695)
Tax reform	—	—	—
Credit monetization	—	(2,100)	—
Expiration of attributes	5,734	18,345	9,862
Research and development credits	(1,582)	(2,094)	(1,829)
Other	387	1,436	311
Income tax provision	\$ 1,940	\$ 1,341	\$ 239

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

	As of March 31,	
	2023	2022
Deferred tax assets		
Loss carryforwards	\$ 56,675	\$ 59,636
Deferred revenue	28,389	29,485
Capitalized research and development	23,949	16,289
Tax credits	15,894	16,085
Disallowed interest	13,162	12,296
Other accruals and reserves not currently deductible for tax purposes	4,494	4,450
Lease obligations	2,384	2,514
Inventory	2,715	1,701
Accrued warranty expense	495	447
Acquired intangibles	961	853
Gross deferred tax assets	149,118	143,756
Valuation allowance	(143,704)	(138,365)
Total deferred tax assets, net of valuation allowance	\$ 5,414	\$ 5,391
Deferred tax liabilities		
Depreciation	\$ (2,009)	\$ (1,921)
Lease assets	(2,128)	(2,439)
Other	(548)	(1,048)
Total deferred tax liabilities	\$ (4,685)	\$ (5,408)
Net deferred tax assets (liabilities)	\$ 729	\$ (17)

The valuation allowance increased by \$5.3 million during the year ended March 31, 2023, increased by \$4.9 million during the year ended March 31, 2022, and decreased by \$5.4 million during the year ended March 31, 2021, respectively.

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

	For the year ended March 31,		
	2023	2022	2021
Beginning Balance	\$ 99,603	\$ 101,119	\$ 107,282
Increase in balances related to tax positions in current period	2,778	2,785	2,560
Increase in balances related to tax positions in prior period	—	4,881	—
Increase in balances related to acquisitions	—	—	511
Decrease in balances related to tax positions in prior period	(817)	(1,020)	(522)
Decrease in balances due to lapse in statute of limitations	(5,221)	(8,162)	(8,712)
Ending balance	<u>\$ 96,343</u>	<u>\$ 99,603</u>	<u>\$ 101,119</u>

During fiscal 2023, excluding interest and penalties, there was a \$ 3.3 million change in the Company's unrecognized tax benefits. Including interest and penalties, the total unrecognized tax benefit at March 31, 2023 was \$97.0 million, of which \$78.3 million, if recognized, would favorably affect the effective tax rate. At March 31, 2023, 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, 2023, \$90.3 million of unrecognized tax benefits were recorded as a contra deferred tax asset in other long-term assets in the consolidated balance sheets and \$7.2 million (including interest and penalties) were included in other long-term liabilities in the consolidated balances 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 \$3.5 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. Upon recognition of the tax benefit related to the expiring statutes of limitation \$2.9 million will be offset by the establishment of a related valuation allowance. The net tax benefit recognized in the income statement is estimated to be \$0.6 million.

As of March 31, 2023, the Company had federal net operating loss and tax credit carryforwards of approximately \$ 246.5 million and \$48.2 million, respectively. The net operating loss and tax credit carryforwards expire in varying amounts in fiscal year 2024 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 \$ 4.4 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 11: 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, 2023, the Company had issued non-cancelable commitments for \$28.7 million to purchase inventory from its contract manufacturers and suppliers.

Leases

At the end of fiscal 2023, 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 was thereafter 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. On July 31, 2017, the Court in the Northern District of California stayed proceedings in this litigation pending the outcome of Inter Partes Review proceedings before the Patent Trial and Appeal Board relating to the asserted 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.” In opinions dated May 4, 2021 and August 23, 2021, the Court in the Delaware Action reaffirmed its earlier ruling and granted defendants’ motions to dismiss under Section 101. Realtime Data has appealed those decisions to the Federal Circuit. The Federal Circuit argument occurred on February 10, 2023 and a decision is expected sometime in the latter half of the year. The case pending against Quantum in the Northern District of California remains stayed pending the final outcome of the 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 alleging that between 2012 and 2014, Starboard purchased shares of Quantum’s common stock, obtained three seats on the Board of Directors and then, in July 2014, entered into an agreement with Quantum whereby Starboard would not seek control of the Board of Directors 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 lawsuit further alleges that Quantum hid its failure to meet those performance objectives by improperly recognizing revenue in fiscal 2015.

Also as previously reported, the California action was stayed and then dismissed. 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.

As of January 12, 2023, all parties signed a settlement agreement amicably resolving both actions. The litigation will have no material effect on the Company’s financial statements or business operations.

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, 2023 and 2022, 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 contain 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 12: 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, 2023, 2022 and 2021. 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, 2023 and March 31, 2022, respectively. The fair value has been classified as Level 2 within the fair value hierarchy.

	March 31,			
	2023		2022	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Term Loan	74,667	66,684	98,723	98,723
PNC Credit Facility	16,750	15,918	17,735	17,735

NOTE 13: SUBSEQUENT EVENTS

Debt Amendments

On June 1, 2023, the Company entered into amendments to the Term Loan and the PNC Credit Facility. The amendments, among other things, (a) amended the total net leverage ratio financial covenant commencing with the fiscal quarter ended June 30, 2023; (b) amended the minimum liquidity financial covenant to decrease the minimum liquidity to \$15 million; and (c) amended the "EBITDA" definition to increase the add-back cap on non-recurring items including restructuring charges during the fiscal years ended March 31, 2024 and 2025. The Term Loan amendment (the "June 2023 Term Loan Amendment") also provided an advance of \$15 million in additional Term Loan borrowings.

In connection with the amendments, the Company issued to the lender a warrant to purchase an aggregate of 1.25 million shares of the Company's common stock, par value \$0.01 per share, at an exercise price of \$ 1.00 per share. The exercise price and the number of shares underlying the warrant are subject to adjustment in the event of specified events, including dilutive issuances at a price lower than the exercise price of the warrant, a subdivision or combination of the Common Stock, a reclassification of the Common Stock or specified dividend payments.

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, 2023, 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) and 15d-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, 2023, 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,” “Board of Directors and Committees—Board Committees and Leadership Structure,” “Corporate Governance,” and “Compensation Discussion and Analysis—Anti-Hedging and Anti-Pledging Policies” in our definitive Proxy Statement for our 2023 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.”

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 2023 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 2023 Compensation Tables,” “Report of the Leadership and Compensation Committee of the Board of Directors” and “Corporate Governance—Non-Employee Director Compensation—Compensation Committee Interlocks and Insider Participation” in our definitive Proxy Statement for our 2023 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 2023 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—Board Meetings and Independence,” and “Related Party Transactions” in our definitive Proxy Statement for our 2023 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 2023 annual stockholders’ meeting.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) Documents filed as part of this report

1. Financial Statements

Reference is made to the Index to Financial Statements of Quantum Corporation included in Item 8 of Part II of this report.

2. Financial Statement Schedules

All schedules have been omitted because they are not required, not applicable, or the required information is included in the financial statements or notes thereto.

3. Exhibits

See Item 15(b) below. Each management contract or compensatory plan or arrangement required to be filed has been identified.

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed or Furnished Herewith
		Form	Filing Date	Exhibit	
2.1	Asset Purchase Agreement dated July 18, 2021 by and between PV3 (an ABC) LLC, as assignee for the benefit of Pivot3, Inc., and the Company.*	8-K	7/22/21	2.1	
3.1	Amended and Restated Certificate of Incorporation of the Company, as amended through August 19, 2022				X
3.2	Amended and Restated Bylaws of the Company, as amended through February 8, 2016				X
4.1	Description of Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934				X
4.2	Certificate of Designation of Rights, Preferences and Privileges of Series B Junior Participating Preferred Stock	S-3	10/9/03	4.7	
4.3	Warrant to Purchase Common Stock dated December 27, 2018 issued to OC II FIE V LP	8-K	12/28/18	4.1	
4.4	Warrant to Purchase Common Stock dated December 27, 2018 issued to BTC Holdings Fund I, LLC	8-K	12/28/18	4.2	
4.5	Warrant Agreement dated June 16, 2020 by and between the Company and Armory Securities, LLC.	8-K	6/17/20	4.4	
4.6	Warrant to Purchase Common Stock dated June 16, 2020, Warrant No. B-1 issued to OC II FIE V LP	8-K	6/17/20	4.1	
4.7	Warrant to Purchase Common Stock dated June 16, 2020, Warrant No. B-2 issued to Blue Torch Credit Opportunities Fund I LP	8-K	6/17/20	4.2	
4.8	Warrant to Purchase Common Stock dated June 16, 2020, Warrant No. B-3, issued to BTC Holdings SC Fund LLC	8-K	6/17/20	4.3	
4.9	Amended and Restated Registration Rights Agreement dated June 16, 2020 by and among 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	Registration Rights Agreement dated December 12, 2020 by and between the Company and the securityholders of Square Box Systems Limited	8-K	12/14/20	4.1	
10.1	Lease Agreement dated February 6, 2006 by and 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 by and 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 by and between the Company and the Named Executive Officers and Directors	8-K	9/28/22	10.3	
10.4#	Form of Amended and Restated Director Change of Control Agreement by and between the Company and the Directors (other than the CEO)	8-K	5/10/11	10.2	
10.5#	Form of Amended and Restated Change of Control Agreement by and between the Company and each of the Company's Executive Officers	10-Q	11/6/15	10.2	
10.6#	Offer Letter dated May 1, 2017 by and between the Company and Marc Rothman	8-K	5/4/17	10.1	
10.7#	Quantum Corporation Executive Officer Incentive Plan, restated as of August 23, 2017	8-K	8/24/17	10.2	

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10.8#	Offer Letter dated June 22, 2018 by and between the Company and James J. Lerner	8-K	6/27/18	10.1
10.9#	Change of Control Agreement dated June 22, 2018 by and between the Company and James J. Lerner	8-K	6/27/18	10.2
10.10	Amended and Restated Revolving Credit and Security Agreement dated December 27, 2018 by and among the Company, Quantum LTO, the lenders party thereto, and PNC Bank, National Association	8-K	12/28/18	10.2
10.11	First Amendment dated April 3, 2020 to Amended and Restated Revolving Credit and Security Agreement dated December 27, 2018 by and among the Company, Quantum LTO Holdings, LLC, the lenders from time to time party thereto, and PNC Bank, National Association	8-K	4/6/20	10.2
10.12	Second Amendment dated April 11, 2020 to the Amended and Restated Revolving Credit and Security Agreement dated December 27, 2018 by and among the Company, Quantum LTO Holdings, LLC, the lenders from time to time party thereto, and PNC Bank, National Association	8-K	4/16/20	10.3
10.13	Third Amendment dated June 16, 2020 to Amended and Restated Revolving Credit and Security Agreement dated December 27, 2018 by and among the Company, Quantum LTO Holdings, LLC, the lenders party thereto, and PNC Bank, National Association	8-K	6/17/20	10.2
10.14	Fourth Amendment dated December 10, 2020 to Amended and Restated Revolving Credit and Security Agreement dated December 27, 2018 by and among the Company, Quantum LTO Holdings, LLC, the lenders party thereto, and PNC Bank, National Association	8-K	12/14/20	10.2
10.15	Fifth Amendment dated February 5, 2021 to Amended and Restated Revolving Credit and Security Agreement dated December 27, 2018 by and among the Company, Quantum LTO Holdings, LLC, the lenders party thereto, and PNC Bank, National Association	10-K	6/8/22	10.3
10.16	Sixth Amendment dated August 5, 2021 to Amended and Restated Revolving Credit and Security Agreement dated December 27, 2018, by and among the Company, Quantum LTO Holdings, LLC, Square Box Systems Limited, the borrowers and guarantors party thereto, the lenders party thereto, and PNC Bank, National Association	10-K	6/8/22	10.31
10.17	Seventh Amendment dated September 30, 2021 to Amended and Restated Revolving Credit and Security Agreement dated December 27, 2018 by and among the Company, Quantum LTO Holdings, LLC, Square Box Systems Limited, the borrowers and guarantors party thereto, the lenders party thereto, and PNC Bank, National Association	8-K	10/06/21	10.1
10.18	Eighth Amendment dated March 15, 2022 to Amended and Restated Revolving Credit and Security Agreement dated December 27, 2018 by and among the Company, Quantum LTO Holdings, LLC, Square Box Systems Limited, the borrowers and guarantors party thereto, the lenders party thereto, and PNC Bank, National Association	8-K	3/17/22	10.3
10.19	Ninth Amendment dated April 25, 2022 to Amended and Restated Revolving Credit and Security Agreement dated December 27, 2018 by and among the Company, Quantum LTO Holdings, LLC, Square Box Systems Limited, the lenders party thereto, and PNC Bank, National Association	8-K	4/27/22	10.1
10.20	Stipulation and Agreement of Settlement entered into on April 11, 2019	8-K	5/31/19	99.2
10.21#	Offer Letter dated October 3, 2018 by and between the Company and Lewis W. Moorehead	10-K	8/6/19	10.75
10.22#	Quantum Corporation 2012 Long-Term Incentive Plan Agreement, as amended and restated on November 13, 2019	8-K	11/18/19	10.1
10.23#	Form of Restricted Stock Unit Agreement (US Employees) under the Quantum Corporation 2012 Long-Term Incentive Plan	10-K	6/24/20	10.2
10.24#	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
10.25#	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
10.26#	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
10.27#	Form of Restricted Stock Unit Agreement (Directors) under the Quantum Corporation 2012 Long-Term Incentive Plan	10-K	6/24/20	10.6
10.28#	Quantum Corporation Employee Stock Purchase Plan Agreement, as amended and restated on November 13, 2019	8-K	11/18/19	10.2
10.29#	2021 Inducement Plan	S-8	2/1/21	10.1
10.30#	Amendment No. 1 to 2021 Inducement Plan			X
10.31#	Offer Letter dated December 16, 2019 by and between the Company and Rebecca Jacoby	10-Q	1/29/2020	10.1

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10.32	Term Loan Credit and Security Agreement dated August 5, 2021 by and among the Company, Quantum LTO, Square Box Systems Limited, the lenders party thereto, and Blue Torch Finance LLC	8-K	8/05/21	10.1	
10.33	First Amendment dated September 30, 2021 to Term Loan Credit and Security Agreement dated August 5, 2021 by and among the Company, Quantum LTO Holdings, LLC, the borrowers and guarantors party thereto, the lenders party thereto, and Blue Torch Finance LLC	8-K	10/06/21	10.2	
10.34	Second Amendment dated March 15, 2022 to Term Loan Credit and Security Agreement dated August 5, 2021 by and among the Company, Quantum LTO Holdings, LLC, the borrowers and guarantors party thereto, the lenders party thereto, and Blue Torch Finance LLC	8-K	3/17/22	10.2	
10.35	Third Amendment dated April 25, 2022 to Term Loan Credit and Security Agreement dated August 5, 2021 by and among the Company, Quantum LTO Holdings, LLC, Square Box Systems Limited, the lenders party thereto, and Blue Torch Finance LLC	8-K	4/27/22	10.2	
10.36	Investment Commitment Agreement dated 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	
10.37#	Director Offer Letter dated September 16, 2022 by and between the Company and Don Jaworski	8-K	9/28/22	10.1	
10.38#	Director Offer Letter dated September 16, 2022 by and between the Company and Hugues Meyrath	8-K	9/28/22	10.2	
10.39#	Offer Letter dated December 15, 2022 by and between the Company and Kenneth P. Gianella	8-K	1/11/23	10.1	
10.40#	Transition Agreement dated January 29, 2023 by and between the Company and J. Michael Dodson	8-K	1/11/23	10.3	
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 on the signature page hereof)				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 (formatted as inline XBRL and contained in Exhibit 101)				X

* Schedules and attachments 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 6, 2023
(Date)

/s/ Kenneth P. Gianella
Kenneth P. Gianella
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 Kenneth Gianella, 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 6, 2023.

<u>Signature</u>	<u>Title</u>
<u>/s/ James J. Lerner</u> James J. Lerner	President, Chief Executive Officer and Chairman of the Board (Principal Executive Officer)
<u>/s/ Kenneth P. Gianella</u> Kenneth P. Gianella	Chief Financial Officer (Principal Financial Officer)
<u>/s/ Lewis Moorehead</u> Lewis Moorehead	Chief Accounting Officer (Principal Accounting Officer)
<u>/s/ Rebecca J. Jacoby</u> Rebecca J. Jacoby	Director
<u>/s/ Donald Jaworski</u> Donald Jaworski	Director
<u>/s/ Hugues Meyrath</u> Hugues Meyrath	Director
<u>/s/ Christopher D. Neumeyer</u> Christopher D. Neumeyer	Director
<u>/s/ Marc E. Rothman</u> Marc E. Rothman	Director
<u>/s/ Yue Zhou White</u> Yue Zhou White	Director

**AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF QUANTUM CORPORATION,
a Delaware Corporation**

Quantum Corporation, a corporation organized and existing under the laws of the State of Delaware, certifies that:

- a. This Amended and Restated Certificate of Incorporation is to become effective August 13, 2007.
- b. The original Certificate of Incorporation of the Corporation was filed with the Secretary of State of the State of Delaware on January 28, 1987. The initial Amended and Restated Certificate of Incorporation of the Corporation was filed with the Secretary of State of the State of Delaware on August 3, 1999 (the "**Restated Certificate**"). A Certificate of Correction to the Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on July 25, 2003.
- c. The amendment and restatement herein set forth has been duly approved by the Board of Directors of the corporation pursuant to Sections 141 and 228 of the General Corporation Law of the State of Delaware ("**Delaware Law**").
- d. The restatement herein set forth has been duly adopted pursuant to Section 245 of the Delaware Law.
- e. Pursuant to Section 103(f) of the Delaware Law, this Amended and Restated Certificate of Incorporation corrects a typographical error in Article IX, and updates the Corporation's registered office set forth in Article II, of the Corporation's Restated Certificate. No other amendments have been made with this Amended and Restated Certificate of Incorporation.
- f. The text of the Restated Certificate of Incorporation is hereby amended and restated to read in its entirety as follows:

"ARTICLE I

The name of this Corporation is Quantum Corporation (the "Corporation").

ARTICLE II

The address of the registered office of the Corporation in the State of Delaware is 1209 Orange Street, Wilmington, DE, 19801, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE III

The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under Delaware Law.

ARTICLE IV

This Corporation is authorized to issue two classes of shares to be designated, respectively, Common Stock and Preferred Stock. Each share of Common Stock shall have a par value of \$0.01 and each share of Preferred Stock shall have a par value of \$0.01. The total number of shares of Common Stock this Corporation shall have authority to issue is 1,000,000,000 and the total number of shares of Preferred Stock this Corporation shall have authority to issue is 20,000,000. The Board of Directors of the corporation, subject to any restrictions contained in Delaware Law, the Bylaws, any preferences and relative, participating, optional or other special rights of any outstanding class or series of preferred stock of the Corporation and any qualifications or restrictions on the Common Stock created thereby, may declare and pay dividends upon the shares of its capital stock. The directors of the Corporation may set apart out of any of the funds of the corporation available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve.

The Preferred Stock may be issued in one or more series, of which one such series shall be designated Series B Junior Participating Preferred Stock. The Series B Junior Participating Preferred Stock shall consist of 1,000,000 shares. Any Preferred Stock not previously designated as to series may be issued from time to time in one or more series pursuant to a resolution or resolutions providing for such issue duly adopted by the Board of Directors (authority to do so being hereby expressly vested in the Board), and such resolution or resolutions shall also set forth the voting powers, full or limited or none, of each such series of Preferred Stock and shall fix the designations, preferences and relative, participating, optional or other special rights of each such series of Preferred Stock and the qualifications, limitations or restrictions of such powers, designations, preferences or rights. The Board of Directors is also authorized to fix the number of shares of each such series of Preferred Stock. The Board of Directors is authorized to alter the powers, designation, preferences, rights, qualifications, limitations and restrictions granted to or imposed upon any wholly unissued series of Preferred Stock and, within the limits and restrictions stated in any resolution or resolutions of the Board of Directors originally fixing the number of shares constituting any series of Preferred Stock, to increase or decrease (but not below the number of shares of any such series then outstanding) the number of shares of any such series subsequent to the issue of shares of that series.

Each share of Preferred Stock issued by the Corporation, if reacquired by the Corporation (whether by redemption, repurchase, conversion to Common Stock or other means), shall upon such reacquisition resume the status of authorized and unissued shares of Preferred Stock, undesignated as to series and available for designation and issuance by the Corporation in accordance with the immediately preceding paragraph.

The Corporation shall from time to time in accordance with Delaware Law increase the authorized amount of its Common Stock if at any time the number of shares of Common Stock remaining unissued and available for issuance shall not be sufficient to permit conversion, if applicable, of the Preferred Stock.

ARTICLE V

Except as otherwise provided in this Amended and Restated Certificate of Incorporation, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

ARTICLE VI

The management of the business and the conduct of the affairs of the Corporation shall be vested in its Board of Directors. The number of directors constituting the whole Board of Directors shall be designated in the Bylaws of the Corporation.

ARTICLE VII

Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

ARTICLE VIII

Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

ARTICLE IX

To the fullest extent permitted by Delaware Law as the same exists or as may hereafter be amended, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. Neither any amendment nor repeal of this Article IX shall, nor the adoption of any provision of this Certificate of Incorporation inconsistent with this Article IX, shall eliminate or reduce the effect of this Article IX in respect of any matter occurring, or any cause of action, suit or claim that, but for this Article IX, would accrue or arise prior to such amendment, repeal or adoption of an inconsistent provision.

ARTICLE X

Subject to Article XI hereof, at all elections of directors of the Corporation, each holder of stock or of any class or classes or of a series or series thereof shall be entitled to as many votes as shall equal the number of votes which (except for this provision as to cumulative voting) he would be entitled to cast for the election of directors with respect to his shares of stock multiplied by the number of directors to be elected, and he may cast all of such votes for a single director or may distribute them among the number of directors to be voted for, or for any two or more of them as he may see fit.

ARTICLE XI

Advance notice of new business and stockholder nominations for the election of directors shall be given in the manner and to the extent provided in the Bylaws of the Corporation.

ARTICLE XII

Any action required or permitted to be taken by the stockholders of the Corporation must be effected at duly called annual or special meeting of such holders and may not be effected by any consent in writing by such holders.

Unless otherwise required by law, special meetings of the stockholders of the Corporation, for any purpose or purposes, may be called only by either (i) the Board of Directors of the Corporation, (ii) the Chairman of the Board of Directors of the Corporation, if there be one, or (iii) the President of the Corporation.

ARTICLE XIII

The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Amended and Restated Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

ARTICLE XIV

The Corporation shall have perpetual existence."

* * *

IN WITNESS WHEREOF, the undersigned has executed this certificate on August 8, 2007.

Quantum Corporation

By: /s/ Shawn D. Hall

Shawn D. Hall,

Vice President, General Counsel and Secretary

CERTIFICATE OF AMENDMENT TO THE AMENDED AND RESTATED CERTIFICATE OF INCORPORATION OF QUANTUM CORPORATION

Quantum Corporation, a corporation organized and existing under the General Corporation Law of the State of Delaware (the "**Corporation**"), hereby certifies as follows:

1. The original Certificate of Incorporation of the Corporation was filed with the Secretary of State of Delaware on January 28, 1987. The most recent Amended and Restated Certificate of Incorporation of the Corporation was filed with the Secretary of State of Delaware on August 8, 2007, as amended by the Certificate of Amendment to the Amended and Restated Certificate of Incorporation filed with the Secretary of State of Delaware on April 17, 2017 and the Certificate of Amendment to the Amended and Restated Certificate of Incorporation filed with the Secretary of State of Delaware on November 6, 2017.

2. This amendment to the Amended and Restated Certificate of Incorporation of the Corporation as set forth below has been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware by the stockholders and directors of the Corporation.

3. The first paragraph of ARTICLE IV of the Amended and Restated Certificate of Incorporation of the Corporation as presently in effect is amended and restated to read in its entirety as follows:

"This Corporation is authorized to issue two classes of shares to be designated, respectively, Common Stock and Preferred Stock. The total number of shares of Common Stock that this Corporation is authorized to issue is 225,000,000, with a par value of \$0.01 per share,

and the total number of shares of Preferred Stock that this Corporation is authorized to issue is 20,000,000, with a par value of \$0.01 per share.

The Board of Directors of the Corporation, subject to any restrictions contained in Delaware law, the Bylaws, any preferences and relative, participating, optional or other special rights of any outstanding class or series of Preferred Stock of the Corporation and any qualification or restrictions on the Common Stock created thereby, may declare and pay dividends upon the shares of its capital stock. The directors of the Corporation may set apart out of any of the funds of the Corporation available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve.”

4. All other provisions of the Amended and Restated Certificate of Incorporation of the Corporation remain in full force and effect.

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment to be signed by its duly authorized Chief Legal Officer this 19th day of August, 2022.

QUANTUM CORPORATION

By: /s/ Brian E. Cabrera

Brian E. Cabrera

Senior Vice President, Chief Legal Officer, and Secretary

AMENDED AND RESTATED BYLAWS OF QUANTUM CORPORATION
(as amended on November 18, 2008)

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**AMENDED AND RESTATED
BYLAWS
OF
QUANTUM CORPORATION**

A. CORPORATE OFFICES

- a. REGISTERED OFFICE
-

The registered office of Quantum Corporation shall be fixed in the corporation's certificate of incorporation, as the same may be amended from time to time.

a. OTHER OFFICES

The corporation's board of directors may at any time establish other offices at any place or places where the corporation is qualified to do business.

A. MEETINGS STOCKHOLDERS

a. PLACE OF MEETINGS

Meetings of stockholders shall be held at any place, within or outside the State of Delaware, designated by the board of directors. The board of directors may, in its sole discretion, determine that a meeting of stockholders shall not be held at any place, but may instead be held solely by means of remote communication as authorized by Section 211(a)(2) of the Delaware General Corporation Law (the "DGCL"). In the absence of any such designation or determination, stockholders' meetings shall be held at the corporation's principal executive office.

a. ANNUAL MEETING

The annual meeting of stockholders shall be held each year. The board of directors shall designate the date and time of the annual meeting. At the annual meeting, directors shall be elected and any other proper business may be transacted.

a. SPECIAL MEETING

(i) A special meeting of the stockholders, other than those required by statute, may be called only by either (i) the board of directors, (ii) the chairman of the board of directors of the corporation, if there be one, or (iii) the president of the corporation. The board of directors may cancel, postpone or reschedule any previously scheduled special meeting at any time, before or after the notice for such meeting has been sent to the stockholders.

(ii) The notice of a special meeting shall include the purpose for which the meeting is called. Only such business shall be conducted at a special meeting of stockholders as shall have been brought before the meeting by or at the direction of the board of directors, chairperson of the board of directors, or president. Nothing contained in this Section 2.3(ii) shall be construed as limiting, fixing or affecting the time when a meeting of stockholders called by action of the board of directors may be held.

a. ADVANCE NOTICE PROCEDURES

(i) *Advance Notice of Stockholder Business (Other than Director Nominations)*. At an annual meeting of the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. To be properly brought before an annual meeting, business must be brought: (A) pursuant to the corporation's proxy materials with respect to such meeting, (B) by or at the direction of the board of directors, or (C) by a stockholder of the corporation who (1) is a stockholder of record at the time of the giving of the notice required by this Section 2.4(i) and on the record date for the determination of stockholders entitled to vote at the annual meeting and (2) has timely complied in proper written form with the notice procedures set forth in this Section 2.4(i). In addition, for business to be properly brought before an annual meeting by a stockholder, such business must be a proper matter for stockholder action pursuant to these bylaws and applicable law. For the avoidance of doubt, clause (C) above shall be the exclusive means for a stockholder to bring business (other than relating to director nominations) before an annual meeting of stockholders.

(a) To comply with clause (C) of Section 2.4(i) above, a stockholder's notice must set forth all information required under this Section 2.4(i) and must be timely received by the secretary of the corporation. To be timely, a

stockholder's notice must be received by the secretary at the principal executive offices of the corporation not later than the 45th day nor earlier than the 75th day before the one-year anniversary of the date on which the corporation first mailed its proxy materials or a notice of availability of proxy materials (whichever is earlier) for the preceding year's annual meeting; *provided, however*, that in the event that no annual meeting was held in the previous year or if the date of the annual meeting is advanced by more than 30 days prior to or delayed by more than 60 days after the one-year anniversary of the date of the previous year's annual meeting, then, for notice by the stockholder to be timely, it must be so received by the secretary not earlier than the close of business on the 120th day prior to such annual meeting and not later than the close of business on the later of (i) the 90th day prior to such annual meeting, or (ii) the tenth day following the day on which Public Announcement (as defined below) of the date of such annual meeting is first made. In no event shall any adjournment or postponement of an annual meeting or the announcement thereof commence a new time period for the giving of a stockholder's notice as described in this Section 2.4(i)(a). "**Public Announcement**" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or a comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or any successor thereto (the "**1934 Act**").

(b) To be in proper written form, a stockholder's notice to the secretary must set forth as to each matter of business the stockholder intends to bring before the annual meeting: (1) a brief description of the business intended to be brought before the annual meeting and the reasons for conducting such business at the annual meeting, (2) the name and address, as they appear on the corporation's books, of the stockholder proposing such business and any Stockholder Associated Person (as defined below), (3) the class and number of shares of the corporation that are held of record or are beneficially owned by the stockholder or any Stockholder Associated Person and any derivative positions held or beneficially held by the stockholder or any Stockholder Associated Person, (4) whether and the extent to which any hedging or other transaction or series of transactions has been entered into by or on behalf of such stockholder or any Stockholder Associated Person with respect to any securities of the corporation, and a description of any other agreement, arrangement or understanding (including any short position or any borrowing or lending of shares), the effect or intent of which is to mitigate loss to, or to manage the risk or benefit from share price changes for, or to increase or decrease the voting power of, such stockholder or any Stockholder Associated Person with respect to any securities of the corporation, (5) any material interest of the stockholder or a Stockholder Associated Person in such business, and (6) a statement whether either such stockholder or any Stockholder Associated Person will deliver a proxy statement and form of proxy to holders of at least the percentage of the corporation's voting shares required under applicable law to carry the proposal (such information provided and statements made as required by clauses (1) through (6), a "**Business Solicitation Statement**"). In addition, to be in proper written form, a stockholder's notice to the secretary must be supplemented not later than ten days following the record date to disclose the information contained in clauses (3) and (4) above as of the record date. For purposes of this Section 2.4, a "**Stockholder Associated Person**" of any stockholder shall mean (i) any person controlling, directly or indirectly, or acting in concert with, such stockholder, (ii) any beneficial owner of shares of stock of the corporation owned of record or beneficially by such stockholder and on whose behalf the proposal or nomination, as the case may be, is being made, or (iii) any person controlling, controlled by or under common control with such person referred to in the preceding clauses (i) and (ii).

(c) Without exception, no business shall be conducted at any annual meeting except in accordance with the provisions set forth in this Section 2.4(i) and, if applicable, Section 2.4(ii). In addition, business proposed to be brought by a stockholder may not be brought before the annual meeting if such stockholder or a Stockholder Associated Person, as applicable, takes action contrary to the representations made in the Business Solicitation Statement applicable to such business or if the Business Solicitation Statement applicable to such business contains an untrue statement of a material fact or omits to state a material fact necessary to make the statements therein not misleading. The chairperson of the annual meeting shall, if the facts warrant, determine and declare at the annual meeting that business was not properly brought before the annual meeting and in accordance with the provisions of this Section 2.4(i), and, if the chairperson should so determine, he or she shall so declare at the annual meeting that any such business not properly brought before the annual meeting shall not be conducted.

(ii) *Advance Notice of Director Nominations at Annual Meetings.* Notwithstanding anything in these bylaws to the contrary, only persons who are nominated in accordance with the procedures set forth in this Section 2.4(ii) shall be eligible for election or re-election as directors at an annual meeting of stockholders. Nominations of persons for

election to the board of directors of the corporation shall be made at an annual meeting of stockholders only (A) by or at the direction of the board of directors or (B) by a stockholder of the corporation who (1) was a stockholder of record at the time of the giving of the notice required by this Section 2.4(ii) and on the record date for the determination of stockholders entitled to vote at the annual meeting and (2) has complied with the notice procedures set forth in this Section 2.4(ii). In addition to any other applicable requirements, for a nomination to be made by a stockholder, the stockholder must have given timely notice thereof in proper written form to the secretary of the corporation.

(a) To comply with clause (B) of Section 2.4(ii) above, a nomination to be made by a stockholder must set forth all information required under this Section 2.4(ii) and must be received by the secretary of the corporation at the principal executive offices of the corporation at the time set forth in, and in accordance with, the final three sentences of Section 2.4(i)(a) above.

(b) To be in proper written form, such stockholder's notice to the secretary must set forth:

(1) as to each person (a "nominee") whom the stockholder proposes to nominate for election or re-election as a director: (A) the name, age, business address and residence address of the nominee, (B) the principal occupation or employment of the nominee, (C) the class and number of shares of the corporation that are held of record or are beneficially owned by the nominee and any derivative positions held or beneficially held by the nominee, (D) whether and the extent to which any hedging or other transaction or series of transactions has been entered into by or on behalf of the nominee with respect to any securities of the corporation, and a description of any other agreement, arrangement or understanding (including any short position or any borrowing or lending of shares), the effect or intent of which is to mitigate loss to, or to manage the risk or benefit of share price changes for, or to increase or decrease the voting power of the nominee, (E) a description of all arrangements or understandings between the stockholder and each nominee and any other person or persons (naming such person or persons) pursuant to which the nominations are to be made by the stockholder, (F) a written statement executed by the nominee acknowledging that as a director of the corporation, the nominee will owe a fiduciary duty under Delaware law with respect to the corporation and its stockholders, and (G) any other information relating to the nominee that would be required to be disclosed about such nominee if proxies were being solicited for the election of the nominee as a director, or that is otherwise required, in each case pursuant to Regulation 14A under the 1934 Act (including without limitation the nominee's written consent to being named in the proxy statement, if any, as a nominee and to serving as a director if elected); and

(2) as to such stockholder giving notice, (A) the information required to be provided pursuant to clauses (2) through (5) of Section 2.4(i)(b) above, and the supplement referenced in the second sentence of Section 2.4(i)(b) above (except that the references to "business" in such clauses shall instead refer to nominations of directors for purposes of this paragraph), and (B) a statement whether either such stockholder or Stockholder Associated Person will deliver a proxy statement and form of proxy to holders of a number of the corporation's voting shares reasonably believed by such stockholder or Stockholder Associated Person to be necessary to elect such nominee(s) (such information provided and statements made as required by clauses (A) and (B) above, a "**Nominee Solicitation Statement**").

(c) At the request of the board of directors, any person nominated by a stockholder for election as a director must furnish to the secretary of the corporation (1) that information required to be set forth in the stockholder's notice of nomination of such person as a director as of a date subsequent to the date on which the notice of such person's nomination was given and (2) such other information as may reasonably be required by the corporation to determine the eligibility of such proposed nominee to serve as an independent director of the corporation or that could be material to a reasonable stockholder's understanding of the independence, or lack thereof, of such nominee; in the absence of the furnishing of such information if requested, such stockholder's nomination shall not be considered in proper form pursuant to this Section 2.4(ii).

(d) Without exception, no person shall be eligible for election or re-election as a director of the corporation at an annual meeting of stockholders unless nominated in accordance with the provisions set forth in this Section 2.4(ii). In addition, a nominee shall not be eligible for election or re-election if a stockholder or Stockholder Associated Person, as applicable, takes action contrary to the representations made in the Nominee Solicitation Statement applicable to such nominee or if the Nominee Solicitation Statement applicable to such nominee contains an untrue statement of a material fact or omits to state a material fact necessary to make the statements therein not misleading.

The chairperson of the annual meeting shall, if the facts warrant, determine and declare at the annual meeting that a nomination was not made in accordance with the provisions prescribed by these bylaws, and if the chairperson should so determine, he or she shall so declare at the annual meeting, and the defective nomination shall be disregarded.

(iii) *Advance Notice of Director Nominations for Special Meetings.*

(a) For a special meeting of stockholders at which directors are to be elected pursuant to Section 2.3, nominations of persons for election to the board of directors shall be made only (1) by or at the direction of the board of directors or (2) by any stockholder of the corporation who (A) is a stockholder of record at the time of the giving of the notice required by this Section 2.4(iii) and on the record date for the determination of stockholders entitled to vote at the special meeting and (B) delivers a timely written notice of the nomination to the secretary of the corporation that includes the information set forth in Sections 2.4(ii)(b) and (ii)(c) above. To be timely, such notice must be received by the secretary at the principal executive offices of the corporation not later than the close of business on the later of the 90th day prior to such special meeting or the tenth day following the day on which Public Announcement is first made of the date of the special meeting and of the nominees proposed by the board of directors to be elected at such meeting. A person shall not be eligible for election or re-election as a director at a special meeting unless the person is nominated (i) by or at the direction of the board of directors or (ii) by a stockholder in accordance with the notice procedures set forth in this Section 2.4(iii). In addition, a nominee shall not be eligible for election or re-election if a stockholder or Stockholder Associated Person, as applicable, takes action contrary to the representations made in the Nominee Solicitation Statement applicable to such nominee or if the Nominee Solicitation Statement applicable to such nominee contains an untrue statement of a material fact or omits to state a material fact necessary to make the statements therein not misleading.

(b) The chairperson of the special meeting shall, if the facts warrant, determine and declare at the meeting that a nomination or business was not made in accordance with the procedures prescribed by these bylaws, and if the chairperson should so determine, he or she shall so declare at the meeting, and the defective nomination or business shall be disregarded.

(iv) *Other Requirements and Rights.* In addition to the foregoing provisions of this Section 2.4, a stockholder must also comply with all applicable requirements of state law and of the 1934 Act and the rules and regulations thereunder with respect to the matters set forth in this Section 2.4, including, with respect to business such stockholder intends to bring before the annual meeting that involves a proposal that such stockholder requests to be included in the corporation's proxy statement, the requirements of Rule 14a-8 (or any successor provision) under the 1934 Act. Nothing in this Section 2.4 shall be deemed to affect any right of the corporation to omit a proposal from the corporation's proxy statement pursuant to Rule 14a-8 (or any successor provision) under the 1934 Act.

a. NOTICE OF STOCKHOLDERS' MEETINGS

Whenever stockholders are required or permitted to take any action at a meeting, a written notice of the meeting shall be given which shall state the place, if any, date and hour of the meeting, the means of remote communication, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Except as otherwise provided in the DGCL, the certificate of incorporation or these bylaws, the written notice of any meeting of stockholders shall be given not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting.

a. QUORUM

The holders of a majority of the stock issued and outstanding and entitled to vote, present in person or represented by proxy, shall constitute a quorum for the transaction of business at all meetings of the stockholders. Where a separate vote by a class or series or classes or series is required, a majority of the outstanding shares of such class or series or classes or series, present in person or represented by proxy, shall constitute a quorum entitled to take action with respect to that vote on that matter, except as otherwise provided by law, the certificate of incorporation or these bylaws.

If, however, such quorum is not present or represented at any meeting of the stockholders, then either (i) the chairperson of the meeting, or (ii) the stockholders entitled to vote at the meeting, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present or represented. At such adjourned meeting at which a quorum is present or represented, any business may be transacted that might have been transacted at the meeting as originally noticed.

a. ADJOURNED MEETING; NOTICE

When a meeting is adjourned to another time or place, unless these bylaws otherwise require, notice need not be given of the adjourned meeting if the time, place if any thereof, and the means of remote communications if any by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than 30 days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

a. CONDUCT OF BUSINESS

The chairperson of any meeting of stockholders shall determine the order of business and the procedure at the meeting, including such regulation of the manner of voting and the conduct of business.

a. VOTING

The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of Section 2.11 of these bylaws, subject to Section 217 (relating to voting rights of fiduciaries, pledgors and joint owners of stock) and Section 218 (relating to voting trusts and other voting agreements) of the DGCL.

Except as may be otherwise provided in the certificate of incorporation or these bylaws, each stockholder shall be entitled to one vote for each share of capital stock held by such stockholder.

Except as otherwise required by law, the certificate of incorporation or these bylaws, in all matters other than the election of directors, the affirmative vote of a majority of the voting power of the shares present in person or represented by proxy at the meeting and entitled to vote on the subject matter shall be the act of the stockholders. Except as otherwise required by law, the certificate of incorporation or these bylaws, directors shall be elected by a plurality of the voting power of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors. Where a separate vote by a class or series or classes or series is required, in all matters other than the election of directors, the affirmative vote of the majority of shares of such class or series or classes or series present in person or represented by proxy at the meeting shall be the act of such class or series or classes or series, except as otherwise provided by law, the certificate of incorporation or these bylaws.

a. STOCKHOLDER ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Subject to the rights of the holders of the shares of any series of Preferred Stock or any other class of stock or series thereof having a preference over the Common Stock as dividend or upon liquidation, any action required or permitted to be taken by the stockholders of the corporation must be effected at a duly called annual or special meeting of stockholders of the corporation and may not be effected by any consent in writing by such stockholders.

a. RECORD DATE FOR STOCKHOLDER NOTICE; VOTING; GIVING CONSENTS

In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock

or for the purpose of any other lawful action, the board of directors may fix, in advance, a record date, which record date shall not precede the date on which the resolution fixing the record date is adopted and which shall not be more than 60 nor less than 10 days before the date of such meeting, nor more than 60 days prior to any other such action.

If the board of directors does not so fix a record date:

(i) The record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held.

(ii) The record date for determining stockholders for any other purpose shall be at the close of business on the day on which the board of directors adopts the resolution relating thereto.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided, however*, that the board of directors may fix a new record date for the adjourned meeting.

a. PROXIES

Each stockholder entitled to vote at a meeting of stockholders may authorize another person or persons to act for such stockholder by proxy authorized by an instrument in writing or by a transmission permitted by law filed in accordance with the procedure established for the meeting, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212 of the DGCL.

a. LIST OF STOCKHOLDERS ENTITLED TO VOTE

The officer who has charge of the stock ledger of the corporation shall prepare and make, at least 10 days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. The corporation shall not be required to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting for a period of at least 10 days prior to the meeting: (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (ii) during ordinary business hours, at the corporation's principal place of business. In the event that the corporation determines to make the list available on an electronic network, the corporation may take reasonable steps to ensure that such information is available only to stockholders of the corporation. If the meeting is to be held at a place, then the list shall be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting. Such list shall presumptively determine the identity of the stockholders entitled to vote at the meeting and the number of shares held by each of them.

a. INSPECTORS OF ELECTION

A written proxy may be in the form of a telegram, cablegram, or other means of electronic transmission which sets forth or is submitted with information from which it can be determined that the telegram, cablegram, or other means of electronic transmission was authorized by the person.

Before any meeting of stockholders, the board of directors shall appoint an inspector or inspectors of election to act at the meeting or its adjournment. The number of inspectors shall be either one (1) or three (3). If any person appointed as inspector fails to appear or fails or refuses to act, then the chairperson of the meeting may, and upon the request of any stockholder or a stockholder's proxy shall, appoint a person to fill that vacancy.

Such inspectors shall:

1. determine the number of shares outstanding and the voting power of each, the number of shares represented at the meeting, the existence of a quorum, and the authenticity, validity, and effect of proxies;
2. receive votes, ballots or consents;
3. hear and determine all challenges and questions in any way arising in connection with the right to vote;
4. count and tabulate all votes or consents;
5. determine when the polls shall close;
6. determine the result; and
7. do any other acts that may be proper to conduct the election or vote with fairness to all stockholders.

The inspectors of election shall perform their duties impartially, in good faith, to the best of their ability and as expeditiously as is practical. If there are three (3) inspectors of election, the decision, act or certificate of a majority is effective in all respects as the decision, act or certificate of all. Any report or certificate made by the inspectors of election is *prima facie* evidence of the facts stated therein.

A. DIRECTORS

a. POWERS

The business and affairs of the corporation shall be managed by or under the direction of the board of directors, except as may be otherwise provided in the DGCL or the certificate of incorporation.

a. NUMBER OF DIRECTORS

The board of directors shall consist of one or more members, each of whom shall be a natural person. Unless the certificate of incorporation fixes the number of directors, the number of directors shall be determined from time to time by resolution of the board of directors. No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

a. ELECTION, QUALIFICATION AND TERM OF OFFICE OF DIRECTORS

Except as provided in Section 3.4 of these bylaws, each director, including a director elected to fill a vacancy, shall hold office until the expiration of the term for which elected and until such director's successor is elected and qualified or until such director's earlier death, resignation or removal. Directors need not be stockholders unless so required by the certificate of incorporation or these bylaws. The certificate of incorporation or these bylaws may prescribe other qualifications for directors.

a. RESIGNATION AND VACANCIES

Any director may resign at any time upon notice given in writing or by electronic transmission to the corporation. A resignation is effective when the resignation is delivered unless the resignation specifies a later effective date or an effective date determined upon the happening of an event or events. A resignation which is conditioned upon the director failing to receive a specified vote for reelection as a director may provide that it is irrevocable. Unless otherwise provided in the certificate of incorporation or these bylaws, when one or more directors resign from the board of directors, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective.

Unless otherwise provided in the certificate of incorporation or these bylaws, vacancies and newly created directorships resulting from any increase in the authorized number of directors elected by all of the stockholders having the right to vote as a single class may be filled by a majority of the directors then in office, although less than a quorum, or by a sole remaining director. If the directors are divided into classes, a person so elected by the directors then in office to fill a vacancy or newly created directorship shall hold office until the next election of the class for which such director shall have been chosen and until his or her successor shall have been duly elected and qualified.

If at any time, by reason of death or resignation or other cause, the corporation should have no directors in office, then any officer or any stockholder or an executor, administrator, trustee or guardian of a stockholder, or other fiduciary entrusted with like responsibility for the person or estate of a stockholder, may call a special meeting of stockholders in accordance with the provisions of the certificate of incorporation or these bylaws, or may apply to the Court of Chancery for a decree summarily ordering an election as provided in Section 211 of the DGCL.

If, at the time of filling any vacancy or any newly created directorship, the directors then in office constitute less than a majority of the whole board of directors (as constituted immediately prior to any such increase), the Court of Chancery may, upon application of any stockholder or stockholders holding at least 10% of the voting stock at the time outstanding having the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office as aforesaid, which election shall be governed by the provisions of Section 211 of the DGCL as far as applicable.

a. PLACE OF MEETINGS; MEETINGS BY TELEPHONE

The board of directors may hold meetings, both regular and special, either within or outside the State of Delaware.

Unless otherwise restricted by the certificate of incorporation or these bylaws, members of the board of directors, or any committee designated by the board of directors, may participate in a meeting of the board of directors, or any committee, by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

a. REGULAR MEETINGS

Regular meetings of the board of directors may be held without notice at such time and at such place as shall from time to time be determined by the board of directors.

a. SPECIAL MEETINGS; NOTICE

Special meetings of the board of directors for any purpose or purposes may be called at any time by the chairperson of the board of directors, the chief executive officer, the president, the secretary or a majority of the authorized number of directors.

Notice of the time and place of special meetings shall be:

- (i) delivered personally by hand, by courier or by telephone;
- (ii) sent by United States first-class mail, postage prepaid;
- (iii) sent by facsimile; or
- (iv) sent by electronic mail,

directed to each director at that director's address, telephone number, facsimile number or electronic mail address, as the case may be, as shown on the corporation's records.

If the notice is (i) delivered personally by hand, by courier or by telephone, (ii) sent by facsimile or (iii) sent by electronic mail, it shall be delivered or sent at least 24 hours before the time of the holding of the meeting. If the notice is sent by United States mail, it shall be deposited in the United States mail at least four days before the time of the holding of the meeting. Any oral notice may be communicated to the director. The notice need not specify the place of the meeting (if the meeting is to be held at the corporation's principal executive office) nor the purpose of the meeting.

a. QUORUM; VOTING

At all meetings of the board of directors, a majority of the total authorized number of directors shall constitute a quorum for the transaction of business. If a quorum is not present at any meeting of the board of directors, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present. A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the required quorum for that meeting.

The vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the board of directors, except as may be otherwise specifically provided by statute, the certificate of incorporation or these bylaws.

If the certificate of incorporation provides that one or more directors shall have more or less than one vote per director on any matter, every reference in these bylaws to a majority or other proportion of the directors shall refer to a majority or other proportion of the votes of the directors.

a. BOARD ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Unless otherwise restricted by the certificate of incorporation or these bylaws, any action required or permitted to be taken at any meeting of the board of directors, or of any committee thereof, may be taken without a meeting if all members of the board of directors or committee, as the case may be, consent thereto in writing or by electronic transmission and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the board of directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

a. FEES AND COMPENSATION OF DIRECTORS

Unless otherwise restricted by the certificate of incorporation or these bylaws, the board of directors shall have the authority to fix the compensation of directors.

a. REMOVAL OF DIRECTORS

Any director may be removed from office by the stockholders of the corporation only for cause.

No reduction of the authorized number of directors shall have the effect of removing any director prior to the expiration of such director's term of office.

A. COMMITTEES

a. COMMITTEES OF DIRECTORS

The board of directors may, by resolution passed by a majority of the authorized number of directors, designate one or more committees, each committee to consist of one or more of the directors of the corporation. The board of directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the board of directors

to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the board of directors or in these bylaws, shall have and may exercise all the powers and authority of the board of directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority to (i) approve or adopt, or recommend to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval, or (ii) adopt, amend or repeal any bylaw of the corporation.

a. COMMITTEE MINUTES

Each committee shall keep regular minutes of its meetings and report the same to the board of directors when required.

a. MEETINGS AND ACTION OF COMMITTEES

Meetings and actions of committees shall be governed by, and held and taken in accordance with, the provisions of:

- (i) Section 3.5 (place of meetings and meetings by telephone);
- (ii) Section 3.6 (regular meetings);
- (iii) Section 3.7 (special meetings and notice);
- (iv) Section 3.8 (quorum; voting);
- (v) Section 7.5 (waiver of notice); and
- (vi) Section 3.9 (action without a meeting)

with such changes in the context of those bylaws as are necessary to substitute the committee and its members for the board of directors and its members *However:*

- (i) the time of regular meetings of committees may be determined either by resolution of the board of directors or by resolution of the committee;
- (ii) special meetings of committees may also be called by resolution of the board of directors; and

(iii) notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The board of directors may adopt rules for the government of any committee not inconsistent with the provisions of these bylaws.

Any provision in the certificate of incorporation providing that one or more directors shall have more or less than one vote per director on any matter shall apply to voting in any committee or subcommittee, unless otherwise provided in the certificate of incorporation or these bylaws.

a. SUBCOMMITTEES

Unless otherwise provided in the certificate of incorporation, these bylaws or the resolutions of the board of directors designating the committee, a committee may create one or more subcommittees, each subcommittee to consist of one or more members of the committee, and delegate to a subcommittee any or all of the powers and authority of the committee.

A. OFFICERS

a. OFFICERS

The officers of the corporation shall be a president and a secretary. The corporation may also have, at the discretion of the board of directors, a chairperson of the board of directors, a vice chairperson of the board of directors, a chief

executive officer, a chief financial officer or treasurer, one or more assistant treasurers, one or more assistant secretaries, and any such other officers as may be appointed in accordance with the provisions of these bylaws. Any number of offices may be held by the same person.

a. APPOINTMENT OF OFFICERS

The board of directors shall appoint the officers of the corporation, except such officers as may be appointed in accordance with the provisions of Section 5.3 of these bylaws, subject to the rights, if any, of an officer under any contract of employment.

a. SUBORDINATE OFFICERS

The board of directors may appoint, or empower the chief executive officer or, in the absence of a chief executive officer, the president, or any other officer specified in Section 5.1 to appoint, such other officers and agents as the business of the corporation may require. Each of such officers and agents shall hold office for such period, have such authority, and perform such duties as are provided in these bylaws or as the board of directors (or, as applicable, the chief executive officer, president or other officer specified in Section 5.1 of these bylaws to whom such officer reports) may from time to time determine.

a. REMOVAL AND RESIGNATION OF OFFICERS

Subject to the rights, if any, of an officer under any contract of employment, any officer may be removed, either with or without cause, by an affirmative vote of the majority of the board of directors at any regular or special meeting of the board of directors or, except in the case of an officer chosen by the board of directors, by any officer upon whom such power of removal may be conferred by the board of directors.

Any officer may resign at any time by giving written notice to the corporation. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice. Unless otherwise specified in the notice of resignation, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the corporation under any contract to which the officer is a party.

a. VACANCIES IN OFFICES

Any vacancy occurring in any office of the corporation shall be filled by the board of directors or as provided in Section 5.3.

a. REPRESENTATION OF SHARES OF OTHER CORPORATIONS

The chairperson of the board of directors, the president, any vice president, the treasurer, the secretary or assistant secretary of this corporation, or any other person authorized by the board of directors or the president or a vice president, is authorized to vote, represent, and exercise on behalf of this corporation all rights incident to any and all shares of any other corporation or corporations standing in the name of this corporation. The authority granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

a. AUTHORITY AND DUTIES OF OFFICERS

All officers of the corporation shall have such authority and perform such duties in the management of the business of the corporation as may be designated from time to time by the board of directors or the stockholders (or, as applicable, the chief executive officer, president or other officer specified in Section 5.1 of these bylaws to whom such officer reports) and, to the extent not so provided, as generally pertain to their respective offices, subject to the control of the board of directors.

A. STOCK

a. STOCK CERTIFICATES; PARTLY PAID SHARES

The shares of the corporation shall be represented by certificates, provided that the board of directors may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the corporation. Every holder of stock represented by certificates shall be entitled to have a certificate signed by, or in the name of the corporation by the chairperson of the board of directors or vice-chairperson of the board of directors, or the president or a vice-president, and by the treasurer or an assistant treasurer, or the secretary or an assistant secretary of the corporation representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue. The corporation shall not have power to issue a certificate in bearer form.

The corporation may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly-paid shares, or upon the books and records of the corporation in the case of uncertificated partly-paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully-paid shares, the corporation shall declare a dividend upon partly-paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

a. SPECIAL DESIGNATION ON CERTIFICATES

If the corporation is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the corporation shall issue to represent such class or series of stock; *provided, however*, that, except as otherwise provided in Section 202 of the DGCL, in lieu of the foregoing requirements there may be set forth on the face or back of the certificate that the corporation shall issue to represent such class or series of stock, a statement that the corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Within a reasonable time after the issuance or transfer of uncertificated stock, the corporation shall send to the registered owner thereof a written notice containing the information required to be set forth or stated on certificates pursuant to this section 6.2 or Sections 156, 202(a) or 218(a) of the DGCL or with respect to this section 6.2 a statement that the corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

Except as otherwise expressly provided by law, the rights and obligations of the holders of uncertificated stock and the rights and obligations of the holders of certificates representing stock of the same class and series shall be identical.

a. LOST CERTIFICATES

Except as provided in this Section 6.3, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the corporation and cancelled at the same time. The corporation may issue a new certificate of stock or uncertificated shares in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the corporation may require the owner of the lost, stolen or destroyed certificate, or such owner's legal representative, to give the corporation a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

a. DIVIDENDS

The board of directors, subject to any restrictions contained in the certificate of incorporation or applicable law, may declare and pay dividends upon the shares of the corporation's capital stock. Dividends may be paid in cash, in property, or in shares of the corporation's capital stock, subject to the provisions of the certificate of incorporation.

The board of directors may set apart out of any of the funds of the corporation available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve. Such purposes shall include but not be limited to equalizing dividends, repairing or maintaining any property of the corporation, and meeting contingencies.

a. TRANSFER OF STOCK

Transfers of record of shares of stock of the corporation shall be made only upon its books by the holders thereof, in person or by an attorney duly authorized, and, if such stock is certificated, upon the surrender of a certificate or certificates for a like number of shares, properly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer.

a. STOCK TRANSFER AGREEMENTS

The corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the corporation to restrict the transfer of shares of stock of the corporation of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

a. REGISTERED STOCKHOLDERS

The corporation:

(i) shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends and to vote as such owner;

(ii) shall be entitled to hold liable for calls and assessments the person registered on its books as the owner of shares; and

(iii) shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of another person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

A. MANNER OF GIVING NOTICE AND WAIVER

a. NOTICE OF STOCKHOLDERS' MEETINGS

Notice of any meeting of stockholders, if mailed, is given when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the corporation's records. An affidavit of the secretary or an assistant secretary of the corporation or of the transfer agent or other agent of the corporation that the notice has been given shall, in the absence of fraud, be *prima facie* evidence of the facts stated therein.

a. NOTICE BY ELECTRONIC TRANSMISSION

Without limiting the manner by which notice otherwise may be given effectively to stockholders pursuant to the DGCL, the certificate of incorporation or these bylaws, any notice to stockholders given by the corporation under any provision of the DGCL, the certificate of incorporation or these bylaws shall be effective if given by a form of electronic transmission consented to by the stockholder to whom the notice is given. Any such consent shall be revocable by the stockholder by written notice to the corporation. Any such consent shall be deemed revoked if:

- (i) the corporation is unable to deliver by electronic transmission two consecutive notices given by the corporation in accordance with such consent; and
- (ii) such inability becomes known to the secretary or an assistant secretary of the corporation or to the transfer agent, or other person responsible for the giving of notice.

However, the inadvertent failure to treat such inability as a revocation shall not invalidate any meeting or other action.

Any notice given pursuant to the preceding paragraph shall be deemed given:

- (i) if by facsimile telecommunication, when directed to a number at which the stockholder has consented to receive notice;
- (ii) if by electronic mail, when directed to an electronic mail address at which the stockholder has consented to receive notice;
- (iii) if by a posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of (A) such posting and (B) the giving of such separate notice; and
- (iv) if by any other form of electronic transmission, when directed to the stockholder.

An affidavit of the secretary or an assistant secretary or of the transfer agent or other agent of the corporation that the notice has been given by a form of electronic transmission shall, in the absence of fraud, be *prima facie* evidence of the facts stated therein.

An “**electronic transmission**” means any form of communication, not directly involving the physical transmission of paper, that creates a record that may be retained, retrieved, and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient through an automated process.

Notice by a form of electronic transmission shall not apply to Sections 164, 296, 311, 312 or 324 of the DGCL.

a. NOTICE TO STOCKHOLDERS SHARING AN ADDRESS

Except as otherwise prohibited under the DGCL, without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the corporation under the provisions of the DGCL, the certificate of incorporation or these bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Any such consent shall be revocable by the stockholder by written notice to the corporation. Any stockholder who fails to object in writing to the corporation, within 60 days of having been given written notice by the corporation of its intention to send the single notice, shall be deemed to have consented to receiving such single written notice.

a. NOTICE TO PERSON WITH WHOM COMMUNICATION IS UNLAWFUL

Whenever notice is required to be given, under the DGCL, the certificate of incorporation or these bylaws, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting which shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the corporation is such as to require the filing of a certificate under the DGCL, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

a. WAIVER OF NOTICE

Whenever notice is required to be given under any provision of the DGCL, the certificate of incorporation or these bylaws, a written waiver, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time of the event for which notice is to be given, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice or any waiver by electronic transmission unless so required by the certificate of incorporation or these bylaws.

A. INDEMNIFICATION

a. THIRD PARTY ACTIONS

Subject to Section 8.4 of these bylaws, the corporation shall, to the fullest extent permitted by the General Corporation Law of the State of Delaware, indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending, or completed action, suit or proceeding, whether civil, criminal, administrative, or investigative (other than an action by or in the right of the corporation) by reason of the fact that he is or was a director or officer of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful. The termination of any action, suit, or proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that his conduct was unlawful.

a. ACTIONS BY OR IN THE RIGHT OF THE CORPORATION

Subject to Section 8.4 of these bylaws, the corporation shall, to the fullest extent permitted by the General Corporation Law of the State of Delaware, indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that he is or was a director or officer of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by him in connection with the defense or settlement of such action or suit if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue, or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Delaware Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

a. SUCCESSFUL DEFENSE

To the extent that a present or former director or officer of the corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding referred to in Sections 8.1 or 8.2 of this Article VIII, or in defense of any claim, issue or matter therein, he shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him in connection therewith.

a. DETERMINATION OF CONDUCT

Subject to any rights under any contract between this corporation and any person seeking indemnification pursuant to this Article VIII, any indemnification under this Article VIII (unless ordered by a court) shall be made by the corporation only as authorized in the specific case upon a determination that indemnification of such person is proper in the circumstances because he has met the applicable standard of conduct set forth in Sections 8.1 or 8.2 of this Article VIII. Such determination shall be made (1) by the Board of Directors (or by an executive committee thereof) by a majority vote of a quorum consisting of directors who were not parties to such action, suit or proceeding, or (2) if such a quorum is not obtainable, or, even if obtainable, if a quorum of disinterested directors so directs, by independent legal counsel in a written opinion, or (3) by the stockholders (but only if a majority of the directors who are not parties to such action, suit or proceeding, if they constitute a quorum of the board of directors, presents the issue of entitlement to indemnification to the stockholders for their determination). Notwithstanding the foregoing, an Agent of the corporation shall be able to contest any determination that the director or officer has not met the applicable standard of conduct, set forth in Section 8.1 or 8.2 of this Article VIII, by petitioning a court of appropriate jurisdiction.

a. GOOD FAITH DEFINED

For purposes of any determination under Section 8.4 of this Article VIII, to the fullest extent permitted the General Corporation Law of the State of Delaware, a person shall be deemed to have acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation, or, with respect to any criminal action or proceeding, to have had no reasonable cause to believe such person's conduct was unlawful, if such person's action is based on the records or books of account of the corporation or any other corporation, partnership, joint venture, trust or other enterprise, or on information supplied to such person by the officers of the corporation or any other corporation, partnership, joint venture, trust or other enterprise in the course of their duties, or on the advice of legal counsel for the corporation or any other corporation, partnership, joint venture, trust or other enterprise or on information or records given or reports made to the corporation or any other corporation or any other corporation, partnership, joint venture, trust or other enterprise by an independent certified public accountant or by an appraiser or other expert selected with reasonable care by the corporation or such other corporation, partnership, joint venture, trust or other enterprise. The provisions of this Section 8.5 shall not be deemed to be exclusive or to limit in any way the circumstances in which a person may be deemed to have met the applicable standard of conduct set forth in Section 8.1 or 8.2 of this Article VIII, as the case may be.

a. PAYMENT OF EXPENSES IN ADVANCE

To the fullest extent permitted by the Delaware General Corporation Law, expenses incurred by a person who is or was a director or officer of the corporation in defending or settling any civil or criminal action, suit or proceeding shall be paid by the corporation in advance of the final disposition of such action, suit or proceeding as authorized by the Board of Directors upon receipt of an undertaking by or on behalf of the director or officer to repay such amount if it shall ultimately be determined that he is not entitled to be indemnified by the corporation as authorized in this Article VIII.

a. INDEMNITY NOT EXCLUSIVE

The indemnification and advancement of expenses provided by, or granted pursuant to, the other subparagraphs of this Article VIII shall not be deemed exclusive of, and shall be subject to, any other rights to which those seeking indemnification or advancement of expenses may be entitled under any Bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding such office.

a. INSURANCE INDEMNIFICATION

The corporation shall have the power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, whether or not the corporation would have the power to indemnify him against such liability under the provisions of this Article VIII.

a. CERTAIN DEFINITIONS

For purposes of this Article VIII, references to

(a) "the corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger, so that any person who is or was a director or officer of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Article VIII (including, without limitation, the provisions of Section 8.4 of these bylaws) with respect to the resulting or surviving corporation as he would have with respect to such constituent corporation if its separate existence had continued;

(b) "other enterprises" shall include employee benefit plans;

(c) "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and

(d) "serving at the request of the corporation" shall include any service as a director, officer, employee or agent of the corporation which imposes duties on, or involves services by, such director, officer, employee or agent with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner he reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the corporation" as referred to in this Article VIII.

a. INDEMNITY FUND

Upon resolution passed by the Board of Directors, the corporation may establish a trust or other designated account, grant a security interest or use other means (including, without limitation, a letter of credit), to ensure the payment of any or all of its obligations arising under this Article VIII and/or agreements which may be entered into between the corporation and its officers and directors from time to time.

a. INDEMNIFICATION OF OTHER PERSONS

The provisions of this Article VIII shall not be deemed to preclude the indemnification of any person who is not a current or former director or officer of the corporation but whom the corporation has the power or obligation to indemnify under the provisions of the General Corporation Law of the State of Delaware or otherwise. The corporation may, in its sole discretion, indemnify an employee, trustee or other agent as permitted by the General Corporation Law of the State of Delaware. The corporation shall indemnify an employee, trustee or other agent where required by law.

a. SAVINGS CLAUSE

If this Article VIII or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then, subject to the provisions of Section 8.4, the corporation shall nevertheless indemnify each person seeking indemnification hereunder against expense (including attorneys' fees), judgments, fines and amounts paid in settlement with respect to any action, suit, proceeding or investigation, whether civil, criminal or administrative, and whether internal or external, including a grand jury proceeding and an action or suit brought by or in the right of the

corporation, to the full extent permitted by any applicable portion of this Article VIII that shall not have been invalidated or by any other applicable law.

a. CONTINUATION OF INDEMNIFICATION AND ADVANCEMENT OF EXPENSES

The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VIII shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

a. EFFECT OF AMENDMENT OR REPEAL

Neither any amendment or repeal of any section of this Article VIII, nor the adoption of any provision of the Certificate of Incorporation or these bylaws inconsistent with this Article VIII, shall adversely affect any right or protection of any director, officer, employee or other agent established pursuant to this Article VIII existing at the time of such amendment, repeal or adoption of an inconsistent provision, including, without limitation, by eliminating or reducing the effect of this Article VIII, for or in respect of any act, omission or other matter occurring, or any action or proceeding accruing or arising (or that, but for this Article VIII, would accrue or arise), prior to such amendment, repeal or adoption of an inconsistent provision.

A. GENERAL MATTERS

a. EXECUTION OF CORPORATE CONTRACTS AND INSTRUMENTS

Except as otherwise provided by law, the certificate of incorporation or these bylaws, the board of directors may authorize any officer or officers, or agent or agents, to enter into any contract or execute any document or instrument in the name of and on behalf of the corporation; such authority may be general or confined to specific instances. Unless so authorized or ratified by the board of directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

a. FISCAL YEAR

The fiscal year of the corporation shall be fixed by resolution of the board of directors and may be changed by the board of directors.

a. SEAL

The corporation may adopt a corporate seal, which shall be adopted and which may be altered by the board of directors. The corporation may use the corporate seal by causing it or a facsimile thereof to be impressed or affixed or in any other manner reproduced.

a. CONSTRUCTION; DEFINITIONS

Unless the context requires otherwise, the general provisions, rules of construction, and definitions in the DGCL shall govern the construction of these bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term “**person**” includes both a corporation and a natural person.

A. AMENDMENTS

These bylaws may be adopted, amended or repealed by the stockholders entitled to vote. However, the corporation may, in its certificate of incorporation, confer the power to adopt, amend or repeal bylaws upon the directors. The

fact that such power has been so conferred upon the directors shall not divest the stockholders of the power, nor limit their power to adopt, amend or repeal bylaws.

A bylaw amendment adopted by stockholders which specifies the votes that shall be necessary for the election of directors shall not be further amended or repealed by the board of directors.

QUANTUM CORPORATION
CERTIFICATE OF AMENDMENT OF BYLAWS

The undersigned hereby certifies that he or she is the duly elected, qualified, and acting Secretary or Assistant Secretary of Quantum Corporation, a Delaware corporation and that the foregoing bylaws, comprising 23 pages, were amended and restated on November 18, 2008 by the corporation's board of directors.

IN WITNESS WHEREOF, the undersigned has hereunto set his or her hand this 18th day of November, 2008.

/s/ Shawn D. Hall Shawn D. Hall, Secretary

**CERTIFICATE OF AMENDMENT
TO THE BYLAWS OF
QUANTUM CORPORATION**

The undersigned, Shawn D. Hall, hereby certifies that he is the duly appointed, qualified, and acting Secretary of Quantum Corporation, a Delaware corporation (the "**Company**"), and that on January 20, 2010, the Board of Directors of the Company (the "**Board**") amended such Bylaws as set forth below:

Implementation of Majority Voting Policy

WHEREAS: The Board deems it advisable and in the best interests of the Company and its stockholders to implement a majority voting policy with respect to uncontested elections of directors to the Board; and

WHEREAS: The Board may adopt, amend or repeal any provision of the Bylaws.

NOW, THEREFORE, BE IT RESOLVED: That Article II, Section 2.9 of the Bylaws are hereby amended and restated in their entirety to read as follows:

"2.9 VOTING

The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of Section 2.11 of these bylaws, subject to Section 217 (relating to voting rights of fiduciaries, pledgors and joint owners of stock) and Section 218 (relating to voting trusts and other voting agreements) of the DGCL.

Except as may be otherwise provided in the certificate of incorporation or these bylaws, each stockholder shall be entitled to one vote for each share of capital stock held by such stockholder.

Except as otherwise required by law, the certificate of incorporation or these bylaws, in all matters other than the election of directors, the affirmative vote of a majority of the voting power of the shares present in person or represented by proxy at the meeting and entitled to vote on the subject matter shall be the act of the stockholders. Except as otherwise required by law, the certificate of incorporation or these bylaws, directors shall be elected in accordance with Section 3.3 of these bylaws. Where a separate vote by a class or series or classes or series is required, in all matters other than the election of directors, the affirmative vote of the majority of shares of such class or series or classes or series present in person or represented by proxy at the meeting shall be the act of such class or series or classes or series, except as otherwise provided by law, the certificate of incorporation or these bylaws.

Except as provided in Section 3.4 of these bylaws, each director, including a director elected to fill a vacancy, shall hold office until the expiration of the term for which elected and until such director's successor is elected and qualified or until such director's earlier death, resignation or removal. Directors need not be stockholders unless so required by the certificate of incorporation or these bylaws. The certificate of incorporation or these bylaws may prescribe other qualifications for directors."

RESOLVED FURTHER: That Article III, Section 3.3 of the Bylaws are hereby amended and restated in their entirety to read as follows:

"3.3 ELECTION, QUALIFICATION AND TERM OF OFFICE OF DIRECTORS

Except as provided in Section 3.4 of these bylaws, directors shall be elected at each annual meeting of stockholders to hold office until the next annual meeting. A nominee for director shall be elected to the board of directors if the votes cast for such nominee's election exceed the votes cast against such nominee's election; provided, however, that directors shall be elected by a plurality of the votes cast at any meeting of stockholders for which (i) the secretary of the corporation receives notice that a stockholder has nominated a person for election to the board of directors in compliance with the advance notice requirements for stockholder nominees for director set forth in Section 2.4 of these bylaws and (ii) such nomination has not been withdrawn by such stockholder on or prior to the date that is ten (10) calendar days in advance of the date the corporation files its definitive proxy statement (regardless of whether thereafter revised or supplemented) for such meeting with the Securities and Exchange Commission. "Votes cast" shall include votes to withhold authority in each case but shall exclude abstentions with respect to that director's election. If directors are to be elected by a plurality of the votes cast, stockholders shall not be permitted to vote against a nominee. Each director, including a director elected or appointed to fill a vacancy (including vacancies from newly created directorships), shall hold office until the expiration of the term for which elected and until a successor has been elected and qualified. Directors need not be stockholders unless so required by the certificate of incorporation or these bylaws. The certificate of incorporation or these bylaws may prescribe other qualifications for directors."

IN WITNESS WHEREOF, the undersigned has hereunto set his hand this 21st day of January, 2010.

By: /s/ Shawn D. Hall Signature

Shawn D. Hall,

Secretary, General Counsel, and Senior Vice President

**CERTIFICATE OF AMENDMENT
TO THE BYLAWS OF
QUANTUM CORPORATION**

The undersigned, Shawn D. Hall, hereby certifies that he is the duly appointed, qualified, and acting Secretary of Quantum Corporation, a Delaware corporation (the "Company"), and that on February 3, 2016, the Board of Directors of the Company (the "Board") amended such Bylaws as set forth below:

Removal of Directors

WHEREAS: Following the ruling on December 21, 2015 of the Delaware Chancery Court in the *In re: Vaalco Energy Inc.* matter, the Board believes it to be in the best interest of the Company and its shareholders to amend its bylaws as set forth below; and

WHEREAS: The Board may adopt, amend or repeal any provision of the Bylaws.

NOW, THEREFORE, BE IT RESOLVED: That Article III, Section 3.11 of the Bylaws are hereby amended and restated in their entirety to read as follows:

"3.11 REMOVAL OF DIRECTORS

Any director may be removed from office by the stockholders of the corporation in accordance with the provisions of the DGCL.

No reduction of the authorized number of directors shall have the effect of removing any director prior to the expiration of such director's term of office."

IN WITNESS WHEREOF, the undersigned has hereunto set his hand this 8th day of February, 2016.

By: _____ /s/ Shawn D. Hall
Signature

Shawn D. Hall,
Secretary, General Counsel, and Senior Vice President

**DESCRIPTION OF REGISTRANT'S SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF THE
SECURITIES EXCHANGE ACT OF 1934**

Quantum Corporation (the "Company") has one class of securities registered pursuant to Section 12 of the Securities Exchange Act of 1934: common stock, par value \$0.01 per share ("Common Stock"). The following description summarizes the most important terms of the Company's Common Stock. For a complete description of the matters set forth in this exhibit, please refer to the Company's amended and restated certificate of incorporation (as amended, the "Certificate of Incorporation"), the Company's amended and restated bylaws (as amended, the "Bylaws"), each of which is filed as an exhibit to the Annual Report on Form 10-K of which this exhibit is a part, and to the applicable provisions of the Delaware General Corporation Law ("Delaware Law").

Common Stock

Common Stock Outstanding. Under the Certificate of Incorporation, the Company is authorized to issue 225,000,000 shares of Common Stock. The outstanding shares of Common Stock are duly authorized, validly issued, fully paid and nonassessable.

Voting Rights. Each holder of Common Stock is entitled to one vote per share, except in the case of election of directors of the Company. At an election of directors of the Company, each holder of stock or any class or classes or of a series thereof shall be entitled to as many votes as shall equal the number of votes which such holder would be entitled to cast for the election of directors with respect to such holder's shares of stock multiplied by the number of directors to be elected, and such holder may cast all of such votes for a single director or may distribute them among the number of directors to be voted for, or for any two or more of them as such holder sees fit.

Dividend Rights. The Company's Board of Directors (the "Board"), subject to any restrictions contained in the Delaware Law, the Company's Bylaws, any preferences and relative, participating, optional or other special rights of any outstanding class or series of preferred stock of the Company and any qualifications or restrictions on the Common Stock created thereby, may declare and pay dividends upon the shares of its capital stock. The Board may set apart out of any of the funds of the Company available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve.

Rights upon Liquidation. In the event of a liquidation, dissolution or winding up of the Company, holders of Common Stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of the Company's debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then outstanding shares of preferred stock.

Other Rights. Holders of Common Stock have no preemptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to Common Stock. The rights, preferences and privileges of the holders of Common Stock are subject to and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that the Company may designate and issue in the future.

Anti-Takeover Effects of Delaware Law, the Certificate of Incorporation and the Bylaws

Certain provisions of Delaware Law, the Certificate of Incorporation and the Bylaws may have the effect of delaying, deferring or discouraging another person from acquiring control of the Company. These provisions, which are summarized below, may have the effect of discouraging takeover bids, coercive or otherwise. They are also

designed, in part, to encourage persons seeking to acquire control of the Company to negotiate first with the Company's board of directors.

Delaware Law. The Company is a Delaware corporation and subject to Section 203 of the Delaware Law, an anti-takeover law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" transaction with an "interested stockholder" for a period of three years after the person became an interested stockholder, unless the business combination or the transaction in which the person became an interested stockholder is approved in the manner described below.

Section 203 restrictions do not apply if: (i) the business combination or transaction is approved by the Company's board of directors before the date the interested stockholder obtained the status as "interested"; (ii) upon consummation of the transaction that resulted in the stockholder obtaining the status, the stockholder owned at least 85% of the shares of stock entitled to vote in the election of directors ("Voting Stock"). The 85% calculation does not include those shares owned by directors who are also officers of the Company, and held by employee stock plans that do not permit employees to decide confidentially whether to accept a tender or exchange offer; or (iii) on or after the date the interested stockholder obtained its status, the business combination is approved by the Company's board of directors and at a stockholder meeting by the affirmative vote of at least 66 2/3% of the outstanding Voting Stock that is not owned by the interested stockholder. Generally, an "interested stockholder" is a person who, together with its affiliates and associates, owns, or within three years prior to the determination of interested stockholder status, did own, 15% or more of a corporation's Voting Stock. Section 203 may prohibit or delay mergers or other takeover or change in control attempts with respect to the Company. As a result, Section 203 may discourage attempts to acquire the Company even though such transaction may offer our stockholders the opportunity to sell their stock at a price above the prevailing market price.

Board of Directors Vacancies. The Bylaws authorize the Board to fill vacant directorships, including newly created seats. In addition, the number of directors on the Board is permitted to be set from time to time by resolution of the Board. These provisions would prevent a stockholder from increasing the size of the Board and then gaining control of the Board by filling the resulting vacancies with its own nominees. This makes it more difficult to change the composition of the Board but promotes continuity of management.

Limits on Ability of Stockholders to Act by Written Consent or Call a Special Meeting The Certificate of Incorporation and Bylaws provide that stockholders may not take action by written consent. This limit on the ability of stockholders to act by written consent may lengthen the amount of time required to take stockholder actions. As a result, the holders of a majority of the Company's capital stock would not be able to amend the Bylaws or remove directors without holding a meeting of stockholders called in accordance with the Bylaws. The Certificate of Incorporation and Bylaws further provide that special meetings of stockholders may be called only by the Board, the Chairperson of the Board, if there be one, or the president of the Company, thus prohibiting a stockholder from calling a special meeting. These provisions might delay the ability of stockholders to force consideration of a proposal or for stockholders controlling a majority of the Company's capital stock to take any action, including the removal of directors.

Requirements for Advance Notification of Stockholder Nominations and Proposals. The Bylaws provide advance notice procedures for stockholders seeking to bring business before an annual meeting of stockholders or to nominate candidates for election as directors at an annual meeting of stockholders. The Bylaws also specify certain requirements regarding the form and content of a stockholder's notice. These provisions might preclude stockholders from bringing matters before an annual meeting of stockholders or from making nominations for directors at an annual meeting of stockholders if the proper procedures are not followed. These provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of the Company.

**AMENDMENT NO. 1
TO
QUANTUM CORPORATION
2021 INDUCEMENT PLAN**

RECITALS

A. On February 1, 2021 the board of directors (the Board) of Quantum Corporation, a Delaware corporation (the Company) adopted the Quantum Corporation 2021 Inducement Plan (the Plan).

B. On December 30, 2022 (the Effective Date), the Leadership and Compensation Committee of the Board (the Committee) approved an amendment to the Plan to increase the number of shares of Common Stock of the Company authorized for issuance thereunder to 1,500,000 shares, pursuant to its authority under the Leadership and Compensation Committee Charter and Section 18(a) of the Plan.

AMENDMENT

1. Section 3(a) of the Plan is hereby amended and restated as follows:

“Stock Subject to the Plan. Subject to the provisions of Section 13 of the Plan, the maximum aggregate number of Shares that may be issued under the Plan shall equal 1,500,000 Shares. The Shares may be authorized, but unissued, or reacquired Common Stock.”

2. Except as set forth in this amendment, the Plan shall be unaffected hereby and shall remain in full force and effect.

IN WITNESS WHEREOF, the Company has executed this Amendment No. 1 to the Quantum Corporation 2021 Inducement Plan on December 30, 2022.

QUANTUM CORPORATION

By: /s/ Brian E. Cabrera
Brian E. Cabrera
Senior Vice President, Chief Administrative Officer, and Corporate Secretary

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, 333-259902 and 333-269445) and Registration Statements on Form S-3 (Nos. 333-250976, 333-252609, 333-258922, 333-261733 and 333-269061) of Quantum Corporation of our report dated June 6, 2023, 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, 2023.

/s/ Armanino^{LLP}
San Ramon, California

June 6, 2023

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 6, 2023

/s/ James J. Lerner

James J. Lerner

President, Chief Executive Officer and Chairman of the Board

(Principal Executive Officer)

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

I, Kenneth P. Gianella, 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 6, 2023

/s/ Kenneth P. Gianella

Kenneth P. Gianella

Chief Financial Officer

(Principal Financial Officer)

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 of Quantum Corporation, on Form 10-K for the fiscal year ended March 31, 2023, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, 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 6, 2023

/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. Kenneth P. Gianella, 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 of Quantum Corporation, on Form 10-K for the fiscal year ended March 31, 2023, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, 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 6, 2023

/s/ Kenneth P. Gianella

Kenneth P. Gianella

Chief Financial Officer

(Principal Financial Officer)