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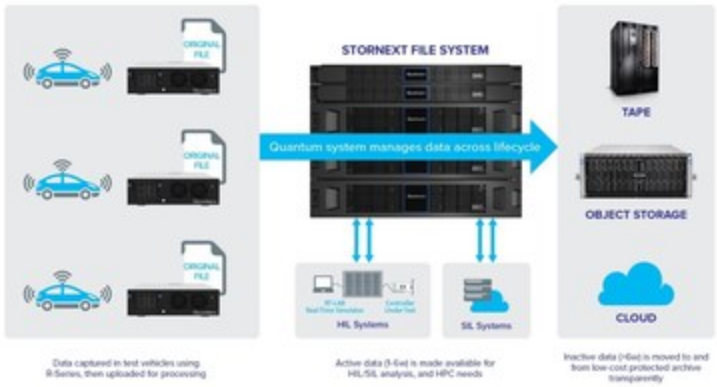
Quantum announces reference architecture for Autonomous Driving Systems and Industrial AI/ML application development

Combines ultra-fast automotive & mil-spec NVMe edge storage device with powerful StorNext software to capture, manage, and enrich vast quantities of sensor data to drive the future of autonomous vehicles

SAN JOSE, Calif., Aug. 31, 2021 /PRNewswire/ --Quantum Corporation (NASDAQ: QMCO) today announced the release of a new end-to-end reference architecture for Advanced Driver-Assistance Systems (ADAS) and Autonomous Driving (AD) systems. By enhancing the acquisition, movement, storage, and curation of the data necessary to develop autonomous vehicle software, the unique architecture is designed to address the specific needs of every stage of ADAS/AD development. It enables autonomous vehicle developers to unleash the power of their data and spearhead the next era of self-driving innovation.



"Although still relatively nascent, organizations developing autonomous vehicles are at a crossroads," said Jamie Lerner, president and CEO, Quantum. "The volume of data being captured is increasing exponentially, presenting an urgent need for speed, capacity and cost-efficiency in the data management lifecycle. As the experts in unstructured data capture, storage, management, and enrichment, we are leading the way in delivering a complete portfolio of end-to-end solutions and lab-proven technology that delivers the industry's best performance, capacity and scalability—all requirements for ADAS/AD solutions--at a fraction of the cost. This new reference architecture empowers ADAS developers to build the self-driving vehicles of tomorrow."

The vast amount of data generated during autonomous vehicle development illustrates the scale of challenges faced by AV manufacturers. The test vehicles typically capture terabytes of sensor data per hour generated by multiple video cameras, LiDARs, and Radars.

ADAS/AD development systems rely on collecting and processing these large amounts of unstructured data to build sophisticated Machine Learning (ML) models and algorithms, requiring intelligent and efficient data management. By utilizing the new end-to-end reference architecture, developers take advantage of Quantum's complete portfolio of end-to-end data management solutions that deliver the level of performance, capacity and scalability required for ADAS/AD systems.

About the Reference Architecture
The data processing in an AV development system starts with capturing data in a test vehicle. The Quantum R6000 is an ultra-fast automotive & mil-spec edge storage device explicitly developed for high-speed data capture in challenging, rugged environments including car, truck, airplane, and other moving vehicles. It provides a large data storage capacity necessary for the in-vehicle logger to store the collected sensor data for an extended period of time, all in a small form factor that makes it well suited for self-driving test vehicles. The R6000 is designed to withstand the demands of a rugged environment and is purpose-built for high availability and reliability. Once data is captured, the R6000 removable storage canister enables quick data offload and on-the-road replacement, allowing cars to stay in service and reduce vehicle downtime.

Data is then uploaded to the Quantum award-winning StorNext™ File System for processing. StorNext has demonstrated the fastest overall response times for video data using independent benchmark testing, and has the ability to process thousands of concurrent streams at high throughput. Further, StorNext software includes a policy engine with options to place and manage data on NVMe, HDD, object storage, cloud, and tape. This unique data management capability enables full and efficient use of the analytics infrastructure across multiple tiers.

With Quantum, once the ML model training and verification is complete and new models developed and deployed, the massive data sets required for future ML development can be retained on low-cost storage providing the right balance between the highest performance and best economics. Quantum singularly delivers a powerful portfolio of end-to-end solutions that can tier the data to the location that is the most efficient and cost-effective, are built specifically for ADAS/AD rugged environments and have the necessary performance, capacity and scalability to effectively manage the data across the entire lifecycle.

"Autonomous vehicle manufacturers are capturing massive amounts of roadway data, and then using that data to design, develop, and validate algorithms that can power self-driving cars. The challenge they're grappling with is how to effectively extract insights, integrate with other pieces of their architecture, and retain that data for longer periods of time," said Graham Cousens, ADAS/Autonomous Vehicle Solutions practice lead, Quantum. "These are challenges that Quantum has been solving for over 40 years in other sectors. Based on solutions that have been proven to outperform the competition in lab testing – driven by the powerful StorNext File System and our ultra-fast automotive & mil-spec R6000 in-vehicle data storage device – this new reference architecture is set to streamline and power the future of autonomous vehicles development."

To discover more about Quantum's solutions for connected and autonomous vehicles, meet our technical director, Plamen Minev, at the Autonomous Vehicles 2021 Exhibition and Conference at The Waterfront Beach Resort, Huntington Beach, California. He'll be sharing how to overcome key data collection and management challenges on Thursday September

2, from 9:40-10:10 a.m. PT.

Additional Resources
To learn more about Quantum's ADAS and mobility solutions, visit our autonomous vehicles page.
To learn more about the Quantum R-Series Edge Storage range, visit the R-Series product page.

About Quantum
Quantum technology, software, and services provide the solutions that today's organizations need to make video and other unstructured data smarter – so their data works for them and not the other way around. With over 40 years of innovation, Quantum's end-to-end platform is uniquely equipped to orchestrate, protect, and enrich data across its lifecycle, providing enhanced intelligence and actionable insights. Leading organizations in cloud services, entertainment, government, research, education, transportation, and enterprise IT trust Quantum to bring their data to life, because data makes life better, safer, and smarter. Quantum is listed on Nasdaq (QMCO) and the Russell 2000® Index. For more information visit www.quantum.com.

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Forward-Looking Statements
The information provided in this press release may include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 ("Exchange Act"). These forward-looking statements are largely based on our current expectations and projections about future events and financial trends affecting our business. Such forward-looking statements include, in particular, statements about the anticipated benefits and features of the new R6000 and associated reference architecture, and our business prospects, changes and trends in our business and the markets in which we operate.

These forward-looking statements may be identified by the use of terms and phrases such as "anticipates", "believes", "can", "could", "estimates", "expects", "forecasts", "intends", "may", "plans", "projects", "targets", "will", and similar expressions or variations of these terms and similar phrases. Additionally, statements concerning future matters and other statements regarding matters that are not historical are forward-looking statements. Investors are cautioned that these forward-looking statements relate to future events or our future performance and are subject to business, economic, and other risks and uncertainties, both known and unknown, that may cause actual results, levels of activity, performance or achievements to be materially different from those expressed or implied by any forward-looking statements.

These forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those projected, including without limitation, the following: the need to address the many challenges facing our business; the potential impact of the COVID-19 pandemic on our business, including potential disruptions to our supply chain, employees, operations, sales and overall market conditions; the competitive pressures we face; risks associated with executing our strategy; the distribution of our products and the

delivery of our services effectively; the development and transition of new products and services and the enhancement of existing products and services to meet customer needs and respond to emerging technological trends; whether the market for ADAS and AD systems develops as anticipated and whether our products meet the developing needs of this market; and other risks that are described herein, including but not limited to the items discussed in "Risk Factors" in our filings with the Securities and Exchange Commission, including our Form 10-K filed with the Securities and Exchange Commission on May 26, 2021 and our Form 10-Q filed on August 9, 2021. We do not intend to update or alter our forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law or regulation.
TBD

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