Quantum

R-SERIES

EDGE STORAGE

DATASHEET

FEATURES & BENEFITS

Reliable, High-Speed Data Capture

Magazine and chassis are designed to withstand the rigors of in-vehicle conditions with a ruggedized hardware design and built-in data protection software.

Highly Available and Reliable Architecture

Both software and hardware are purpose-built for high availability and reliability in rugged mobile environments.

Quickly Upload Data with Removable Drive Canister

The removable magazine makes it easy for a technician to upload 10s of TBs of raw data to a Quantum shared storage system at the end of the day.

Easily Integrated

The R-Series is easily integrated with a full suite of data loggers which collect data from LiDAR, radar, camera, GPS, and other sensors, and can work alongside a wide array of in-vehicle data annotation tools.

Capture huge amounts of sensor data inside a moving vehicle under demanding conditions, then quickly and easily ingest data for processing.

QUICKLY CAPTURE SENSOR DATA IN ANY EDGE ENVIRONMENT

Data captured in an autonomous vehicle can generate up to 20 TB per hour, per vehicle, and petabytes a week, quickly reaching multi-petabyte scale. Vast amounts of unstructured data—high-resolution images, LiDAR sensor data, and machine data—are being generated in an environment that requires small form factor, large storage capacity, durability, and performance based on NVMe flash. The Quantum R-Series is purpose built to meet all these requirements.

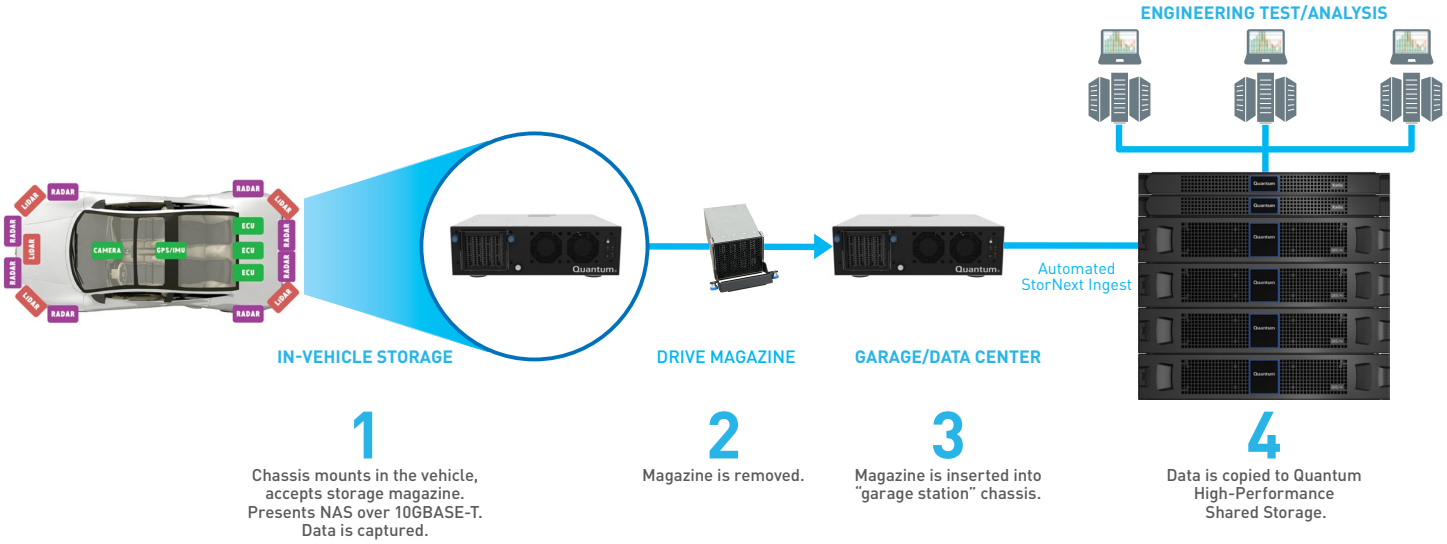
EDGE STORAGE WITH RELIABLE, DURABLE DATA CAPTURE

Quantum's R-Series was specifically designed for edge data capture use cases, such as ADAS and autonomous vehicle research, surveillance monitoring, M&E production, and Internet of Things (IoT) technologies. The R-Series addresses the demanding requirements of data capture in any challenging environment—from military vehicles on rough terrain in the desert to research vehicles navigating potholes and road obstacles at high speeds.

The R-Series supports SSD and NVMe form factors with adjustable capacity based on requirements. The drives are situated in a removable canister, making it easy to swap full canisters and put in empty canisters—ready to capture more data. The removed canister can then be inserted into a chassis in the data center for further analysis.

The R6000 is designed and built to meet MIL-STD-810F, MIL-STD-810G, and MIL-STD-461F specs. The design is built with the latest technology on the market today, including PCIe GEN4, MIL-spec grade locked down internal components, and tamperproof features. Beyond the ruggedized hardware elements, the R6000 contains substantial encryption. The disk security features include Sanitize Instant Erase (SIE), Self-Encrypting Drive (SED), and Self-Encrypting Drive (SED) with FIPS 140-2 validation or compliance. Secure erase is built into the software and includes support for encryption, secure erase, and instant erase.

TECHNICAL SPECIFICATIONS



Specification	R3000	R6000
Canister Storage	6-Bay SSD	4-Bay NVMe
Raw capacity	23 or 46 TB (6) 2.5" SSD drives in removable canister	15.36 TB, 30.72 TB, 61.44 TB (4) Hot Swap 2.5" NVMe non-SED or SED drives
Data protection	RAID 0/1/5/6/10	RAID 0/1/5/6/10
Connectivity	(2) 10 GbE RJ45	(2) x 10GbE Ethernet 10BaseT (1) x 2-Port 100GbE PCIe Card, Mellanox ConnectX-5 Adapter Card* *-QSFP28 transceivers and cables not included
Performance	Up to 1.6 GB/sec	Up to 10 GB/sec
Dimensions (W x H x D)	9" x 5.25" x 21"	11.8" x 3.43" x 10.2"
Weight	12 lbs	12 lbs
Environmental	Operating: 0 to 50 °C Non-Op: -20 to 80 °C	Operating: 0 to 55 °C Non-Op: -20 to 70 °C
Cooling	(2) 60 x 25 mm fans (2) CPU heatsinks	(3) 60 x 25 mm fans
Power	225 W, 12 V DC 120 – 240 VAC for garage station	In-Vehicle: 100 W, 12 V DC Data Center: 12 V or 24 V DC Optional adapter allows 110 – 240 VAC, 160 W
Supported OS	Ubuntu with NAS stack pre-loaded	Debian GNU/Linux

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Quantum

Quantum technology and services help customers capture, create, and share digital content—and preserve and protect it for decades at the lowest cost. Quantum's platforms provide the fastest performance for high-resolution video, images, and industrial IoT, with solutions built for every stage of the data lifecycle, from high-performance ingest to real-time collaboration and analysis and low-cost archiving. Every day the world's leading entertainment companies, sports franchises, research scientists, government agencies, enterprises, and cloud providers are making the world happier, safer, and smarter on Quantum.

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