

Quantum®

QXS-3 Hybrid Storage



> DATASHEET

Entry-level, value-priced, seamlessly upgradable storage

The QXS™-3 hybrid storage series features next-generation host connection speeds, Q-Tools, Q-Turbo, and high-capacity drives. These models support the following host connection types: 8 Gb Fibre Channel, 16 Gb Fibre Channel, 12 Gb SAS, 1 Gb iSCSI, or 10 Gb iSCSI.

QXS-3 hybrid storage arrays with data protection are ideal for IT applications such as email, file sharing, and video editing. With the fast host connections, Quantum systems readily support server backup for small virtualized environments and small workgroup video editing.

Manageability is a cornerstone of the QXS-3 Series. Q-Tools include:

- Thin Provisioning
- Automatic Pooling
- Quick—Provides an accelerated rebuild operation as only the sectors that contain actual data are rebuilt—resulting in up to five times faster restoration
- Q-Turbo—Simultaneously writes to both controllers, increasing performance by 50%

Other optional management tools are:

- Q-Snap—Redirects on write snapshots (pointers)
- Q-Replication—Provides asynchronous replication
- Q-Copy—Copies snapshots

The QXS-3 Series arrays are easy to manage with the Storage Management Console. You can manage all array functions without the need for host-based software, including the advanced Management Console that saves time with configuration and installation wizards, schedulers, and the administration of Q-Tools data protection software.

MODEL QXS-312 (FIBRE CHANNEL, iSCSI, SAS)

With 12 3.5-Inch Drives

Drives per array	Up to 12 (SSD, SAS, 15K, 7K, encrypted)
Maximum capacity per chassis	96 TB
Expanded capacity	384 TB

Performance

Read	3.3 GB/s
Write	2.4 GB/s

Physical

Depth (excluding cable)	20.57 in/52.25 cm
Height	3.43 in/8.71 cm
Width	18.99 in/48.24 cm
Chassis weight	58.2 lb/26.9 kg
Chassis weight with drives	78.2 lb/35.5 kg

Part Numbers

FC/iSCSI	GQ312-AR12-CL1A
SAS	GQ312-AR12-SL1A

MODEL QXS-324 (FIBRE CHANNEL, iSCSI, SAS)

With 24 2.5-Inch Drives

Drives per array	Up to 24 (SSD, SAS, 15K, 7K, encrypted)
Maximum capacity per chassis	48 TB
Expanded capacity	192 TB

Performance

Read	3.3 GB/s
Write	2.4 GB/s

Physical

Depth (excluding cable)	20.46 in/51.9 cm
Height	3.5 in/8.9 cm
Width	17.6 in/44.7 cm
Chassis weight	36.4 lb/16.5 kg
Chassis weight with drives	51.8 lb/23.5 kg

Part Numbers

FC/iSCSI	GQ324-AR24-CS1A
SAS	GQ324-AR24-SS1A

> LEARN MORE:
www.quantum.com/hybridstorage

TECHNICAL SPECIFICATIONS

HOSTS

External Ports	Two per controller/Four maximum
Fibre Channel	
Host Speed	16 Gb, 8 Gb Fibre Channel
Interface Type	SFP+
iSCSI Models	
Initiators	10 Gb NIC or 1 Gb, 10 Gb iSCSI
Interface Type	SFP+
SAS	
Initiators	12 Gb, 6 Gb, SAS 3.0 [serial-attached SCSI] SAS modules support eight total host ports with an optional host port expansion cable
Interface Type	Mini-SAS HD

EXPANSION EBODS

x12ES (6 Gb)	[One RAID, three EBODs] 48 drives, part #: GQA12-AE12-SL1A
x24ES (6 Gb)	[One RAID, three EBODs] 96 drives, part #: GQA24-AE24-SS1A

HIGH-AVAILABILITY FEATURES

Redundant Hot-Swap Controllers
Redundant Hot-Swap Disk, Fans, and Power
Dual Power Cords
Hot Standby Spare
Automatic Failover
Multi-Path Support

PROTOCOLS AND STANDARDS

IP (RFC, 984, 1092)	SCSI-2 and SCSI-3
OpenStack Cinder compatible	

SUPPORT

Standard Software Warranty	Includes 30 days of 5x9 telephone and email software support.
Standard Hardware Warranty	Three-year next business day parts replacement. Replacement item shipment targeted for next business day. Customer will perform the replacement and return of the failed item. Parts replacement service available 5x9 via telephone or email.

RAID

Levels Supported	0, 1, 3, 5, 6, 10, and 50
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SYSTEM CONFIGURATION

Cache Memory	6 GB per controller
Virtual Disks per System	32
Volumes per System	1,024
Mirrored Cache	Yes—Q-Turbo
Super Capacitor Cache Backup	Yes
Cache Backup to Flash	Yes—non-volatile

MANAGEMENT

Interface Types	10/100/1000 Ethernet, Mini USB
Protocols Supported	SNMP, SSL, SSH, SMTP, SMI-S Provider, HTTP(s)
Management Software	Q-Tools
Remote Diagnostics	
Non-Disruptive Updates	
Volume Expansion	

COMPLIANCE AND STANDARDS

NEBS Level 3, MIL-STD-810G
IP (RFC, 894, 1092), SCSI-2, and SCSI-3

POWER REQUIREMENTS—AC INPUT

Input Power Requirements	100–240 VAC, 50/60 Hz
Maximum Input Power	375 W maximum continuous QXS-312 400 W maximum continuous QXS-324
Heat Dissipation	1,488 BTU/hr

BRONZE RATE—HIGH EFFICIENCY

82% @ 20% load
86% @ 80% load
85% @ 100% load

POWER REQUIREMENTS—DC INPUT

Voltage	-39 DC to -72 DC, -48/-60 V nominal
Maximum Input Power	500 W maximum continuous
Heat Dissipation	1,706 BTU/hr

TEMPERATURE AND HUMIDITY RANGES

Operating Temperature	41 °F to 104 °F [5 °C to 40 °C]
Shipping Temperature	-40 °F to 158 °F [-40 °C to 70 °C] Note: Derate 2 °C for every kilometer, up to 3,000 meters
Operating Humidity	10% to 90% RH @ 104 °F [40 °C], non-condensing
Non-Operating Humidity	Up to 93% RH @ 104 °F [40 °C], non-condensing

DECLARED ACOUSTIC NOISE LEVELS

Sound Power	LWAd = 6, 75 dB
Sound Pressure	LpAM = 55 dBA

SHOCK AND VIBRATION

Shock, Operational	3 Gs for 10 ms, half sine
Shock, Non-Operational	10 Gs for 11 ms, half sine
Vibration, Operational	5 Hz to 500 Hz, 0.21 Grms flat spectrum
Vibration, Non-Operational	3-365-3 Hz, 1.22 Grms, z-axis, 0.85 Grms, x- and y-axis shaped spectrum

REGULATORY

Safety	UL 60950-1, second edition (United States) CAN/CSA-C22.2 No. 60950-1, second edition (Canada) EN 60950-1 (European Union) IEC 60950-1 (International) EN 60950-1 (GS Mark, Germany) CCC Mark (China PRC)
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ELECTROMAGNETIC COMPATIBILITY

Emissions	CFR47 Part 15 Subpart B Class A (United States) ICES-003 Class A (Canada) EN 55022 Class A (EU) EN 300 386 Class A (EU Telco) AS/NZS CISPR 22 Class A (Australia, New Zealand) VCCI Class A (Japan) GOST R 51318.22 Class A (Russia) KN 22 Class A (S. Korea) CMS 13438 Class A (Taiwan)
Harmonics	EN 61000-3-2 (EU)
Flicker	EN 61000-3-3 (EU)
Immunity	EN 55024 (EU) EN 300 386 (EU Telco) GOST R 51318.24 (Russia) KN 24 (S. Korea)
RoHS and WEEE	RoHS-6/6 compliance, China RoHS, WEEE
Country Approvals	United States, Canada, European Union (EU), Australia/ New Zealand, Japan, China (PRC), Russia, Mexico, Germany, South Korea, Taiwan, India

ABOUT QUANTUM

Quantum is a leading expert in scale-out tiered storage, archive, and data protection, providing solutions for capturing, sharing, and preserving digital assets over the entire data lifecycle. From small businesses to major enterprises, more than 100,000 customers have trusted Quantum to address their most demanding data workflow challenges. Quantum's end-to-end, tiered storage foundation enables customers to maximize the value of their data by making it accessible whenever and wherever needed, retaining it indefinitely and reducing total cost and complexity. See how at www.quantum.com/customerstories.