

Qtm: 0-16151-01
ECO #C050064 **Rev: B**

Purpose
Convey the QXS interoperability and certificaion matrices for the QXS-3/4/6 product line.

Quantum Branded QXS-3/4/6 Interoperability and Certifications

Models: QXS-312/324/412/424/448/456/648/656

StorNext Support

Quantum Model Numbers	Firmware Release	Primary Storage To StorNext (See Important Note 1)	One Button Configuration Profiles Available	Extended Integration with StorNext Connect
QXS-312RC	GL22x	✓		
	GL210	✓		
QXS-324RC	GL22x	✓		
	GL210	✓		
QXS-312RS	Not applicable			
QXS-324RS	Not applicable			
QXS-412RC	GL22x	✓	✓	StorNext 5.3 or later
	GL210	✓	✓	StorNext 5.3 or later
QXS-424RC	GL22x	✓	✓	StorNext 5.3 or later
	GL210	✓	✓	StorNext 5.3 or later
QXS-448RC	GL22x	✓		
	GL210	✓		
QXS-456RC	GL22x	✓	✓	StorNext 5.3 or later
	GL210	✓	✓	StorNext 5.3 or later
QXS-412RS	Not applicable			
QXS-424RS	Not applicable			
QXS-448RS	Not applicable			
QXS-456RS	Not applicable			
QXS-648RC	GF22x	✓		
QXS-656RC	GF22x	✓		
QXS-648RS	Not applicable			
QXS-656RS	Not applicable			

Notes: **NOTE 1:** All Quantum-branded QXS-3/4/6 fibre channel (RC models with fibre channel connectivity kit) models can be used as primary storage in a StorNext environment. Usage of virtual volumes is not recommended for StorNext file systems used for bandwidth intensive streaming workloads. Thin-provisioned and tiered storage devices should not be used if performance or consistency of performance is expected or desired.

Quantum Branded QXS-3/4/6 Interoperability and Certifications
Models: QXS-312/324/412/424/448/456/648/656
Firmware Certifications

Quantum Model Numbers	Other Designators	Firmware Release	Microsoft WHQL/WHCK				VMware HCL (includes VAAI)	
			2008 R2	2012	2012 R2	2016	5.0/5.1	5.5/6.0
QXS-312RC QXS-324RC	3834 3824	GL22X	✓	✓	✓	✓	✓	✓
		GL210	✓				✓	✓
QXS-312RS QXS-324RS	3534 3524	GL22X	✓	✓	✓	✓	✓	✓
		GL210	✓				✓	✓
QXS-412RC QXS-424RC QXS-448RC QXS-456RC	4834 4824 4844 4854	GL22X	✓	✓	✓	✓	✓	✓
		GL210	✓				✓	✓
QXS-412RS QXS-424RS QXS-448RS QXS-456RS	4534 4524 4544 4554	GL22X	✓	✓	✓	✓	✓	✓
		GL210	✓				✓	✓
QXS-648RC QXS-656RC	6844 6854	GF22X	✓	✓	✓	✓	✓	✓
		GF210						
QXS-648RS QXS-656RS	6544 6554	GF22X	✓	✓	✓	✓	✓	✓
		GF210						

Notes:

Quantum Branded QXS-3/4/6 Interoperability and Certifications
Models: QXS-312/324/412/424/448/456/648/656
RAID Hardware Certifications

Quantum Model Numbers	Other Designators	NEBS Level 3	ETSI	MIL-STD 810G See NOTE 1
QXS-312RC QXS-324RC	3834 3824	Compliant	Compliant	Compliant
QXS-312RS QXS-324RS	3534 3524	Compliant	Compliant	Compliant
QXS-412RC QXS-424RC QXS-448RC QXS-456RC	4834 4824 4844 4854	Compliant	Compliant	Compliant
QXS-412RS QXS-424RS QXS-448RS QXS-456RS	4534 4524 4544 4554	Compliant	Compliant	Compliant
QXS-648RC QXS-656RC	6844 6854			
QXS-648RS QXS-656RS	6544 6554			

Notes:	<p>"Compliant" indicates the product has been designed to meet the specifications defined in the standard.</p> <p>"Conformant" indicates Declaration of Conformance to Standards. This statement declares that the product has been subjected to, and passed, specific environmental tests to demonstrate that the product meets the specifications defined in the standard.</p> <p>NOTE 1: Depending on the application, additional testing, rack and chassis stabilization, and other measures may be required.</p>
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		QMH2562	8G	8G				8G	8G					8G					
		QMH2572 (Gen8)	8G	8G				8G	8G					8G					
		8Gb Dual Port for IBM System x	8G	8G				8G	8G					8G					
		16Gb Dual Port for IBM System x	16G	16G				16G	16G					16G					
	Brocade	82B	8G	8G				8G	8G					8G					
		825	8G	8G				8G	8G					8G					
		804	8G	8G				8G	8G					8G					
		16Gb Dual Port for IBM System x	16G	16G				16G	16G					16G					
	ATTO	FC-161E	16G	16G				16G	16G					16G					
		FC-162E	16G	16G				16G	16G					16G					
		FC-164E	16G	16G				8G	16G					16G					
		FC-81EN	8G	8G				8G	8G					8G					
		FC-82EN	8G	8G				8G	8G					8G					
		FC-84EN	8G	8G				8G	8G					8G					
		Thunderlink FC-1082XXX Tunderlink FC-2162XXX	8G 16G	8G 16G				8G 16G	8G 16G					8G 16G					
	HP	SN1000E	16G	16G				16G	16G					16G					
		SN1100e	16G	16G				16G	16G					16G					
		SN1000Q	16G	16G				16G	16G					16G					
		82E	8G	8G				8G	8G					8G					
		82Q	8G	8G				8G	8G					8G					
		82B	8G	8G				8G	8G					8G					
		4GE	8G	8G				8G	8G					8G					
		4GQ	8G	8G				8G	8G					8G					
		42B	8G	8G				8G	8G					8G					
		FC2242SR FC1242SR	8G 8G	8G 8G				8G 8G	8G 8G					8G 8G					
	Promise	SanLink F1002 4G (Thunderbolt)	4G	4G				4G	4G					4G					
		SANLINK 2 8GB HBA	8G	8G				8G	8G					8G					
1 Gbit iSCSI HBA	Broadcom	5709c			1G	1G				1G	1G								1G
		NC382T			1G	1G				1G	1G								1G
		NC382m			1G	1G				1G	1G								1G
		NC373i			1G	1G				1G	1G								1G
		NC551i (Emulex OCe10102-I)			1G	1G				1G	1G								1G
		554FLB (Elulex BE3)			1G	1G				1G	1G								1G
		Intel	Pro1000			1G	1G				1G	1G							
	QLogic	QLE4062c			1G	1G				1G	1G								1G
	VMWare	VMKNic			1G	1G				1G	1G								1G
10 Gbit iSCSI HBA	Emulex	Oce10102-NX			10G	10G				10G	10G								10G
		Oce11102-FC			10G	10G				10G	10G								10G
		Oce14102-U			10G	10G					10G	10G							10G
		OCm14102-UX-L			10G	10G					10G	10G							10G
		P008827			10G	10G					10G								10G
		VFA III for IBM System x			10G	10G					10G	10G							10G
		VFA 5+ for IBM System x			10G	10G					10G	10G							10G
							10G	10G				10G	10G						
	HP	NC522m (QLogic QLE3142)			10G	10G					10G	10G							10G
		NC532m (Broadcom 57711)			10G	10G					10G	10G							10G
		NC550m (Emulex OCe10102-N)			10G	10G					10G	10G							10G
		NC551			10G	10G					10G	10G							10G
		NC551m (Emulex OCe10102-I)			10G	10G					10G	10G							10G
		NC553			10G	10G					10G	10G							10G
		NC553i			10G	10G					10G	10G							10G
		CN1000Q			10G	10G					10G	10G							10G
		CN1000e (Emulex BE2)			10G	10G					10G	10G							10G
		CN1100e (Emulex BE3)			10G	10G					10G	10G							10G
		CN1100r (Broadcom)			10G	10G					10G	10G							10G

		P3P			10G	10G					10G	10G					10G					
		534M			10G	10G					10G	10G					10G					
		554			10G	10G					10G	10G					10G					
	Broadcom	57810S			10G	10G					10G	10G					10G					
	Intel	X520-T2			10G	10G					10G	10G					10G					
	QLogic	QLE8242			10G	10G					10G	10G					10G					
		QLE8340			10G	10G					10G	10G					10G					
		QLE8200 for IBM X Systems			10G	10G					10G	10G					10G					
		QLE8342			10G	10G					10G	10G					10G					
	IBM (Flex System)	CN4054R (By Emulex)			10G	10G					10G	10G					10G					
		CN4052R (By Emulex)			10G	10G					10G	10G					10G					
		CN4022 (By Broadcom)			10G	10G					10G	10G					10G					
		EN2024 (By Broadcom)			10G	10G					10G	10G					10G					
SAS HBA	LSI	SAS 9200-8e (6Gb)					6Gb	6Gb									6Gb			6Gb		
		SAS 9280 6Gb					6Gb	6Gb									6Gb					
		SAS 9286 6Gb					6Gb	6Gb									6Gb					
		SAS 9300-8e 12Gb					12Gb	12Gb									12Gb					
		PMC SAS 8885 12Gb					12Gb	12Gb									12Gb					
	HP	H221 (Gen8 SAS9207)															6G	6G				6G
		H241															6G	6G				6G
		P431															6G	6G				6G
		P441															6G	6G				6G
		P711															6G	6G				6G
		P712															6G	6G				6G
		P721															6G	6G				6G
		P731															6G	6G				6G
	P741															6G	6G				6G	
	IBM	6Gb						6G	6G								6G	6Gb				6Gb
		N2125							6G									6Gb				6Gb
		N2226							12Gb									12Gb				12Gb
	ATTO	H12F0 12Gb SAS HBA						12Gb									12G	12Gb				12Gb

Notes: Red check marks are gaps in Seagate reporting to be reconciled with Seagate prior to this document becoming final

Quantum Branded QXS-3/4/6 Interoperability and Certifications
Models: QXS-312/324/412/424/448/456/648/656
Supported Operating Systems

Quantum Model Numbers	Other Designators	QXS-312RC QXS-324RC		QXS-312RS QXS-324RS		QXS-412RC QXS-424RC QXS-448RC QXS-456RC				QXS-412RS QXS-424RS QXS-448RS QXS-456RS		QXS-648RC QXS-656RC				QXS-648RS QXS-656RS				
		3834/3824 8G/16G FC EX		3834/3824 1G/10G iSCSI EX		3534/3524 6G/12G SAS EX		4834/4824/4844/4854 8G/16G FC LX		4834/4824/4844/4854 1G/10G iSCSI LX		4534/4524/4544/4554 6G/12G SAS LX		6844/6854 8G/16G FC FX		6844/6854 1G/10G iSCSI FX		6544/6554 6G/12G SAS FX		
		Required Array Firmware Version		GL210	G22x	GL210	G22x	GL210	G22X	GL210	G22X	GL210	G22x	GL210	G22X	GL210	G22x	GL210	G22x	GL210
Operating System	O.S. Version	O.S. Platform																		
Microsoft Windows Server	Server 2008	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Server 2008 R2	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Server 2012	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Server 2012 R2	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Server 2016	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Red Hat Enterprise Linux	Version 5	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Version 6	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Version 7	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SUSE Linux	Server 10	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Server 11	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Server 12	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VMware ESX Server	Server 5.0	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Server 5.5	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Server 6.0	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Server 6.5	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Apple	10.6 - Snow Leopard	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6G Only	6G Only					
	10.8 - Mountain Lion	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6G Only	6G Only					
	10.9 - Mavericks	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6G Only	6G Only					
	10.10 - Yosemite	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6G Only	6G Only					
	10.11 - El Capitan	x64																		
	10.12 - Sierra	x64																		
Oracle Solaris	Solaris 10	x86																		
		x64													✓		✓			✓
	Solaris 11	x86																		
	x64													✓		✓			✓	
XenServer	5.6	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	6.0	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	6.5	x64	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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Quantum Branded QXS-3/4/6 Interoperability and Certifications
Models: QXS-312/324/412/424/448/456/648/656
Tested Servers

Brand	Model Family
Lenovo	x Series
	Think
	Flex
Dell	PowerEdge R Series
	PowerEdge M Series
HP	Proliant DL
	Proliant BL

Notes: List above demonstrates servers that were tested. The list is NOT intended to indicate the complete list of servers that are expected to work properly.

Quantum Branded QXS-3/4/6 Interoperability and Certifications

Models: QXS-312/324/412/424/448/456/648/656

Tested Switches

Switch Category	Brand and Model
FC Switches	Astek A54812
	Brocade 6505
	Brocade 6510
	Brocade VDX 6720
	Cisco DS-C9148S-K9
	Dell powerconnect 8024F
	Dell Powerconnect 8132F
	HP StorageWorks 8/20q
	HP Storageworks 8/24
	IBM RackSwitch G8124E
	Qlogic SANbox 5800
Silkworm 4100	
1Ghz/10Ghz Switches	Cisco Catalyst 3560G
	Dell Powerconnect 2724
	Dell powerconnect 5424
	HP Procurve 2510G-24
	HP2530-24G
	Netgear Prosafe 16 JGS516

Notes:

List above demonstrates switches that were tested. The list is NOT intended to indicate the complete list of switches that are expected to work properly.