



## DXi8500 Site Planning Guide

The DXi8500 disk backup and replication appliances use Quantum's data de-duplication technology to expand the amount of backup data users can retain on fast-recovery RAID systems by 10 to 50 times. The result is a cost-effective way for IT departments to store backup data on disk for months instead of days, provide high speed, reliable restores, increase available data recovery points, and reduce media management. For disaster recovery in distributed environments, the DXi8500 system makes automated WAN replication practical by dramatically reducing the bandwidth required to move backup data securely between sites.

DXi8500 solutions are integrated systems that are easy to install and use with all leading backup applications. They provide best-in-class performance and flexible, easy-to-use interface options including NAS, virtual library, or mixed presentations along with Fibre Channel and Ethernet connectivity. These systems are part of a comprehensive set of backup solutions that are serviced and supported by Quantum, the leading global specialist in backup, recovery, and archive.

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# Included with your DXi8500

The DXi8500 is fully configured to your specifications and pre-tested in the factory. Every DXi8500 Base system arrives either on several pallets with all parts included or partially installed in a rack. Each system comes with an accessory kit containing rack-mount hardware and a documentation CD, which includes the *Quantum DXi8500 User's Guide*.

## Installation

### Rack Compatibility

Nearly all standard four-post EIA 19" server racks are compatible with the DXi8500 rack mount kits. Refer to [Table 7](#) on page 18 for information about the physical characteristics and depth requirements for the DXi8500 system.

### DXi8500 Setup and Configuration

After the hardware has been installed and initially configured by a Quantum field engineer, you are ready to use your DXi8500. The remote management web pages allow you to reconfigure your DXi8500 at any time.

**Required Network Information:** To utilize the remote management pages of the DXi8500, you must connect it to your network.

Note the following considerations:

- Dynamic Host Command Protocol (DHCP) is not supported. You must provide a static IP address at the time of installation.
- The default IP Address is: **10.1.1.1**

You and other administrative users can always return to the remote management pages to modify all DXi8500 settings, including network settings. For additional information about initially configuring your DXi8500, refer to the *Quantum DXi8500 User's Guide*, which is located on the documentation CD.

### Network Segmentation

The DXi8500 system allows you to configure the network settings to utilize network segmentation, which allows you to configure separate network settings for each of the primary types of network traffic:

- Replication
- Management
- Data

If network segmentation is selected, each segment (replication, management, and data) requires its own network information such as an IP address, network mask, and default gateway. The number of IP addresses required for each DXi8500 system depends on the

type of segmentation selected. The following section provides additional information about segmented and non-segmented networks.

### Segmented and Non-Segmented Networks

The DXi8500 can be configured for either segmented or non-segmented networks. Note that there are two different configurations for DXi8500 segmentation and bonding:

- 4 x 1 GbE ports and 2 x 10 GbE ports ([Table 1](#))
- 4 x 1 GbE ports and 4 x 10 GbE ports ([Table 2](#))

Table 1 Segmentation and Bonding (2 x 10 GbE ports)

Segmentation Type	Description
<b>BOND ALL 1 GB (not segmented)</b>	All 1GbE ports (ETH2, ETH3, ETH4, and ETH5) are bonded together and require a single set of network settings on the IP page. (The 10 GbE ports are not used in this configuration.)
<b>BOND ALL 10 GB (not segmented)</b>	Both 10 GbE ports (ETH6 and ETH7) are bonded together and require a single set of network settings on the IP page. (The 1GbE ports are not used in this configuration.)
<b>BOND ALL 1 GB (Replication/Management/Data)</b>	All 1 GbE ports (ETH2, ETH3, ETH4, and ETH5) are bonded together for all traffic types. Each traffic type (Data, Management, and Replication) requires a set of network settings on the IP page. (The 10 GbE ports are not used in this configuration.)
<b>BOND ALL 10 GB (Replication/Management/Data)</b>	Both 10 GbE ports (ETH6 and ETH7) are bonded together for all traffic types. Each traffic type (Data, Management, and Replication) requires a set of network settings on the IP page. (The 1 GbE ports are not used in this configuration.)
<b>BOND ALL 1 GB (Replication), BOND ALL 10GB (Management/Data)</b>	All Replication traffic takes place on ports ETH2, ETH3, ETH4, and ETH5. Data and Management traffic take place on ports ETH6 and ETH7. Each traffic type (Data, Management, and Replication) requires a set of network settings on the IP page.

Segmentation Type	Description
<b>BOND ALL 1 GB (Management), BOND ALL 10 GB (Replication/Data)</b>	All Management traffic takes place on ports ETH2, ETH3, ETH4, and ETH5. Data and Replication traffic take place on ports ETH6 and ETH7. Each traffic type (Data, Management, and Replication) requires a set of network settings on the IP page.
<b>BOND ALL 10 GB (Data), BOND ALL 1 GB (Replication/Management)</b>	All Data traffic takes place on ports ETH6 and ETH7. Management and Replication traffic take place on ports ETH2, ETH3, ETH4, and ETH5. Each traffic type (Data, Management, and Replication) requires a set of network settings on the IP page.

Table 2 Segmentation and Bonding (4 x 10 GbE ports)

Segmentation Type	Description
<b>BOND ALL 1 GB (not segmented)</b>	All 1 GbE ports (ETH2, ETH3, ETH4, and ETH5) are bonded together and require a single set of network settings on the IP page. (The 10 GbE ports are not used in this configuration.)
<b>BOND ALL 10 GB (not segmented)</b>	All 10 GbE ports (ETH6, ETH7, ETH8, and ETH9) are bonded together and require a single set of network settings on the IP page. (The 1 GbE ports are not used in this configuration.)
<b>BOND ALL 1 GB (Replication/Management/Data)</b>	All 1 GbE ports (ETH2, ETH3, ETH4, and ETH5) are bonded together for all traffic types. Each traffic type (Data, Management, and Replication) requires a set of network settings on the IP page. (The 10 GbE ports are not used in this configuration.)
<b>BOND ALL 10 GB (Replication/Management/Data)</b>	All 10 GbE ports (ETH6, ETH7, ETH8, and ETH9) are bonded together for all traffic types. Each traffic type (Data, Management, and Replication) requires a set of network settings on the IP page. (The 1 GbE ports are not used in this configuration.)

Segmentation Type	Description
<b>BOND ALL 1 GB (Replication), BOND ALL 10 GB (Management/Data)</b>	All Replication traffic takes place on ports ETH2, ETH3, ETH4, and ETH5. Data and Management traffic take place on ports ETH6, ETH7, ETH8, and ETH9. Each traffic type (Data, Management, and Replication) requires a set of network settings on the IP page.
<b>BOND ALL 1 GB (Management), BOND ALL 10 GB (Replication/Data)</b>	All Management traffic takes place on ports ETH2, ETH3, ETH4, and ETH5. Data and Replication traffic take place on ports ETH6, ETH7, ETH8, and ETH9. Each traffic type (Data, Management, and Replication) requires a set of network settings on the IP page.
<b>BOND ALL 10 GB (Data), BOND ALL 1 GB (Replication/Management)</b>	All Data traffic takes place on ports ETH6, ETH7, ETH8, and ETH9. Management and Replication traffic take place on ports ETH2, ETH3, ETH4, and ETH5. Each traffic type (Data, Management, and Replication) requires a set of network settings on the IP page.

### Replication — Firewall Ports

The following firewall ports must be opened for replication to operate:

- Port 80
- Port 1062

### Installation and Integration Services

Installation and integration of the DXi8500 system by Quantum is required. Please contact your Quantum sales representative to discuss installation services.

### Path to Tape Options

Path to tape options are licensed features on the DXi8500 that allow you to export virtual media to an attached physical tape library. This feature is used in conjunction with Quantum's *Backup Application Specific* license and one of the following:

- Symantec NetBackup
- Symantec Backup Exec
- Oracle Secure Backup
- Atempo Time Navigator
- EMC Networker

Once this feature is enabled and configured, backup data can be moved directly from the DXi8500 system to a tape library. For a list of supported drives and libraries in the Backup Application Specific, see [Table 3](#).

Table 3 Supported Tape Libraries in Backup Application Specific

Vendor	Tape Library
Quantum	Scalar i500
	Scalar i2000
	Scalar 24
	Scalar 50 (PX502)
	PX500
	PX720
Dell	PV132T
	PVT136T
	ML6000
HP	ESL E Series
	EML Series
IBM	TS3500
Sun/STK	L180 (FC only)
	L700 (FC only)
	SL500 (FC only)
	SL3000 (FC only)

## Service

### DXi8500 Warranty

The DXi8500s warranty includes one year of Quantum's **Bronze** Support Plan for hardware. This includes 5x9xNBD onsite response time, 5x9 telephone support, and online resources. This warranty covers the DXi8500 and all drives including firmware downloads, telephone support, e-mail Home, and Internet access to Quantum's online Customer Support Web site.

The Quantum Customer Support Web site features online service request processing, web-based event status tracking, and a comprehensive Knowledge Base. Quantum's Knowledge Base gives you 7X24 real-time electronic access to complete product and support resources and the expertise of Quantum's Global Services organization.

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## Service Package Upgrades

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Quantum's Global Service organization is geared towards delivering the fastest possible response and root cause resolution, helping you maximize your backup investments, better manage processes, and make the best use of your resources. We ensure total customer satisfaction by providing comprehensive, responsive services on a worldwide basis.

A variety of support options are available to meet a range of budget and availability requirements. Quantum offers the following support plans:

- **Gold Support Plan** — 7x24x4 Hr on-site, 7x24 telephone support, 7x24 web support
- **Next Business Day (NBD) Gold Support Plan** — 5x9xNBD on-site response time, 7x24 telephone support, 7x24 web support
- **Bronze Support Plan** — 5x9xNBD on-site, 5x9 telephone support

For more information about these service plans, visit [www.quantum.com](http://www.quantum.com) or contact your Quantum sales representative.

Quantum service engineers are available around the world and are deployed to respond to onsite service demands. In addition, spare part depots are strategically located across the globe; service technicians have access to the parts and equipment necessary to maintain or repair your DXi8500.

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## StorageCare™ Guardian

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StorageCare Guardian is a remote monitoring and diagnostic solution that enables Quantum to monitor the health of Quantum systems over the Internet and to remotely service the equipment if issues arise. StorageCare Guardian enables Quantum to identify the root cause for rapid problem resolution at no additional cost to the customer for supported products under warranty or service contract. StorageCare Guardian can be downloaded from the following Web site:

[www.quantum.com/ServiceandSupport/Services/GuardianInformation/Index.aspx](http://www.quantum.com/ServiceandSupport/Services/GuardianInformation/Index.aspx)

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## DXi Advanced Reporting

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DXi Advanced Reporting, which is included on all DXi appliances, sets new standards for onboard intelligence by giving users a detailed view of internal appliance operations and provides them with years of backup and replication data for extended trend analysis.

DXi Advanced Reporting reduces administration time, improves operations, streamlines performance tuning, and helps users maximize the value of their DXi appliances. For systems with a larger scope, Quantum Vision™ management software provides industry-unique capabilities, giving IT departments global management of all their Quantum disk and tape systems from a single console. Vision's centralized reporting and flexible trend analysis tools help users optimize system value by giving them automated, flexible access to the information they need to make proactive decisions concerning on-going system administration, dynamic capacity planning, and system-wide troubleshooting.

# DXi8500 Configurations

The DXi8500 is a disk appliance designed to work with leading backup applications. DXi8500 systems are available with 20TB-200TB native usable capacity (with 1TB drives) or 40TB-200TB (with 2TB drives).

### Array Module and Expansion Modules

Array modules and Expansion modules contain SATA hard drives in a RAID 6 configuration. Each Array module and Expansion module contains 16 hard drives and provides a usable capacity of 10TB (with 1TB drives) or 20TB (with 2TB drives).

### New DXi8500 Systems Shipped from the Factory

Customers can purchase a DXi8500 system with all 1TB drives or a DXi8500 system with all 2TB drives.

### DXi8500 Capacity Upgrades

Customers can add capacity to their DXi8500 system by adding Array modules or Expansion modules. The capacity expansion strategy is to add all Array modules first and then begin adding Expansion modules.

**If the Existing System Uses 1TB Drives:** Up to 9 Array modules can be added in the base rack. A 10th Array module can be added in an expansion rack. From 1 to 10 Expansion modules can be added to an expansion rack. Each module (array or expansion) can include all 1TB drives or all 2TB drives, up to the maximum usable capacity of 200TB for the system. For detailed configuration information, see [Table 4](#) on page 9.

**If the Existing System Uses 2TB Drives:** Up to 9 Array modules can be added in the base rack. A 10th Array module can be added in an expansion rack. No Expansion modules are used when using all 2TB drives. For detailed configuration information, see [Table 5](#) on page 14.

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**Note:** The un-racked 1TB and 2TB configurations can only have up to 8 Array modules in the base rack and two Array modules in the expansion rack.

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In [Table 4](#) and [Table 5](#), the quantity specified in the “Required Rack Space” column indicates the total U’s for just the components shown in each configuration. In Quantum’s racked configuration, there is an additional 2U’s of open air between the two switches.



The DXi8500 can be ordered and shipped in the following 1TB and 2TB configurations:

Table 4 DXi8500 Configurations (1TB)

Native Usable Capacity (TB)	Raw Capacity (TB)	Required Rack Space	Components	QTY	Total Weight Pounds / Kg	Number of Racks / Pallets
20	32	15U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata module</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Rack</li> </ul>	1 1 1 1 2 1 1	712.1 / 323.0	1 / 1
30	48	18U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata module</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Rack</li> </ul>	1 1 1 1 3 1 1	799.1 / 362.5	1 / 1
40	64	21U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata module</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Rack</li> </ul>	1 1 1 1 4 1 1	886.1 / 401.9	1 / 1
The following systems have 2 Metadata modules						
50	80	26U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Rack</li> </ul>	1 1 1 2 5 1 1	1,031.9 / 468.1	1 / 1

Native Usable Capacity (TB)	Raw Capacity (TB)	Required Rack Space	Components	QTY	Total Weight Pounds / Kg	Number of Racks / Pallets
60	96	29U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Rack</li> </ul>	1 1 1 2 6 1 1	1,118.9 / 507.5	1 / 1
70	112	32U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Rack</li> </ul>	1 1 1 2 7 1 1	1,205.9 / 547.0	1 / 1
80	128	35U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Rack</li> </ul>	1 1 1 2 8 1 1	1,292.9 / 586.4	1 / 1
90	144	38U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Racks</li> </ul>	1 1 1 2 9 1 1	1,379.9 / 625.9	1 / 1
<b>Note:</b> For un-racked DXi8500 systems using 1TB drives, up to 8 Array modules can be used in the base rack due to space requirements for the PDUs. A maximum of 2 Array modules and 10 Expansion modules can be used in the expansion rack.						

Native Usable Capacity (TB)	Raw Capacity (TB)	Required Rack Space	Components	QTY	Total Weight Pounds / Kg	Number of Racks / Pallets
100	160	41U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Racks</li> </ul>	1 1 1 2 10 1 2	1,796.9 / 815.1	2 / 2
The following systems have 1 — 10 Expansion modules:						
110	176	44U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Expansion modules</li> <li>• Racks</li> </ul>	1 1 1 2 10 1 1 2	1,886.4 / 855.7	2 / 2
120	192	47U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Expansion modules</li> <li>• Racks</li> </ul>	1 1 1 2 10 1 2 2	1,975.9 / 896.3	2 / 2
130	208	50U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Expansion modules</li> <li>• Racks</li> </ul>	1 1 1 2 10 1 3 2	2,065.4 / 936.8	2 / 2

Native Usable Capacity (TB)	Raw Capacity (TB)	Required Rack Space	Components	QTY	Total Weight Pounds / Kg	Number of Racks / Pallets
140	224	53U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Expansion modules</li> <li>• Racks</li> </ul>	1 1 1 2 10 1 4 2	2,154.9 / 977.4	2 / 2
150	240	56U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Expansion modules</li> <li>• Racks</li> </ul>	1 1 1 2 10 1 5 2	2,244.4 / 1,018.0	2 / 2
160	256	59U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Expansion modules</li> <li>• Racks</li> </ul>	1 1 1 2 10 1 6 2	2,333.9 / 1,058.6	2 / 2
170	272	62U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Expansion modules</li> <li>• Racks</li> </ul>	1 1 1 2 10 1 7 2	2,423.4 / 1,099.2	2 / 2

Native Usable Capacity (TB)	Raw Capacity (TB)	Required Rack Space	Components	QTY	Total Weight Pounds / Kg	Number of Racks / Pallets
180	288	65U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Expansion modules</li> <li>• Racks</li> </ul>	1 1 1 2 10 1 8 2	2,512.9 / 1,139.8	2 / 2
190	304	68U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Expansion modules</li> <li>• Racks</li> </ul>	1 1 1 2 10 1 9 2	2,602.4 / 1,180.4	2 / 2
200	320	71U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Expansion modules</li> <li>• Racks</li> </ul>	1 1 1 2 10 1 10 2	2,691.9 / 1,221.0	2 / 2

**Note:** Power strips are available as an option to an un-racked configuration (1 pallet / 4 boxes). Optional Power Strip Upgrade Kit (US version: PN 8-00726-01 / International version: PN 8-00726-02).

Table 5 DXi8500  
Configurations (2TB)

Native Usable Capacity (TB)	Raw Capacity (TB)	Required Rack Space	Components	Quantity	Total Weight Pounds / Kg	Number of Racks / Pallets
40	64	15U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Rack</li> </ul>	<ul style="list-style-type: none"> <li>1</li> <li>1</li> <li>1</li> <li>1</li> <li>2</li> <li>1</li> <li>1</li> </ul>	717.1 / 325.3	1 / 1
60	96	18U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Rack</li> </ul>	<ul style="list-style-type: none"> <li>1</li> <li>1</li> <li>1</li> <li>1</li> <li>3</li> <li>1</li> <li>1</li> </ul>	806.6 / 365.9	1 / 1
80	128	21U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Rack</li> </ul>	<ul style="list-style-type: none"> <li>1</li> <li>1</li> <li>1</li> <li>1</li> <li>4</li> <li>1</li> <li>1</li> </ul>	896.1 / 406.5	1 / 1
The following systems have 2 Metadata modules.						
100	160	26U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Rack</li> </ul>	<ul style="list-style-type: none"> <li>1</li> <li>1</li> <li>1</li> <li>2</li> <li>5</li> <li>1</li> <li>1</li> </ul>	1,044.4 / 473.7	1 / 1

Native Usable Capacity (TB)	Raw Capacity (TB)	Required Rack Space	Components	Quantity	Total Weight Pounds / Kg	Number of Racks / Pallets
120	192	29U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Racks</li> </ul>	1 1 1 2 6 1 1	1,133.9 / 514.3	1 / 1
140	224	32U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Racks</li> </ul>	1 1 1 2 7 1 1	1,223.4 / 554.9	1 / 1
160	256	35U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Racks</li> </ul>	1 1 1 2 8 1 1	1,312.9 / 595.5	1 / 1
180	288	38U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Racks</li> </ul>	1 1 1 2 9 1 1	1,402.4 / 636.1	1 / 1

**Note:** For un-racked DXi8500 systems using 2TB drives, up to 8 Array modules can be used in the base rack due to space requirements for the PDUs, and a maximum of 2 Array modules can be used in the expansion rack.

Native Usable Capacity (TB)	Raw Capacity (TB)	Required Rack Space	Components	Quantity	Total Weight Pounds / Kg	Number of Racks / Pallets
The following system requires an Expansion rack.						
200	320	41U	<ul style="list-style-type: none"> <li>• System Node</li> <li>• Ethernet switch</li> <li>• Fibre Channel switch</li> <li>• Metadata modules</li> <li>• Array modules</li> <li>• RPS for Ethernet switch</li> <li>• Racks</li> </ul>	1 1 1 2 10 1 2	1,821.9 / 826.4	2 / 2



## DXi8500 Shipping Information

For detailed information about the various DXi8500 configurations that can be shipped to you, see [DXi8500 Configurations](#) on page 8.

### Cables Shipped with the DXi8500

The DXi8500 includes four Ethernet cables, six Fibre Channel cables, and two 10 GbE Optical or Copper (Twinax) cables. See [Table 6](#).

Table 6 Cables Shipped with the DXi8500

Type of DXi8500 Cables	Quantity
Ethernet — 25 ft.	4
Fibre Channel — 6 m	6
Includes one of the following cable options: <ul style="list-style-type: none"> <li>• 10 GbE Optical — 10 m</li> <li>• 10 GbE Copper (Twinax) — 5 m, compatible with Cisco 5000 Series Data Center Class switches</li> </ul>	2 or 4 Two 10 GbE cables are shipped with the DXi8500 system, either optical or copper (Twinax), but only one type of cable can be used. If the optional 10 GbE card is selected, then two additional cables will be shipped. <b>Note:</b> The 10 GbE Copper (Twinax) cable options that Quantum provides do not support all switches. Please note the supported switches during the purchase-configuration process, and if the Twinax cables supplied by Quantum are NOT compatible with your switch, then you will need to provide your own compatible Twinax cables from your switch vendor. Be sure to have these available before the system installation takes place.

## DXi8500 Specifications

The DXi8500 has the following specifications, which are categorized as follows:

- [Physical Specifications](#)
- [Environmental Specifications](#)

**Note:** For hard drive specifications, see the appropriate hard drive product manual.

## Physical Specifications

This section provides information about the dimensions and other physical characteristics of the DXi8500 system components:

- [Table 7 — Physical Characteristics](#)
- [Adjustable Leveling Feet and Cutout Locations](#)
- [Table 8 — Storage Capacity](#)
- [Table 9 — Cable Drops](#)
- [Table 10 — Interfaces](#)
- [Table 11 — Software Capabilities](#)
- [Table 12 — Rack Power Specifications](#)
- [Table 13 — Power Requirements \(1TB Drives\)](#)
- [Table 15 — Power Receptacle Requirements](#)

Table 7 Physical Characteristics

DXi8500 Rack	
Width (side to side)	23.75 inches (60.3 cm)
Depth (front to back)	40.75 inches (103.5 cm) <b>Note:</b> Without the doors installed, the depth is two inches shorter, or 38.75 inches (98.4 cm).
Height	78 inches (198.1 cm)
Weight (stand alone)	330 pounds (149.7 kg)
DXi8500 System Node	
Bezel width	19 inches (48.3 cm)
Chassis width	16.6 inches (42.2 cm)
Chassis depth	27.5 inches (69.9 cm)
Chassis height	6.8 inches (17.3 cm)
Weight	105 pounds (47.6 kg)
DXi8500 Metadata Modules	
Bezel width	19 inches (48.3 cm)
Chassis width	17.6 inches (44.7 cm)
Chassis depth	20 inches (50.8 cm)
Chassis height	3.4 inches (8.6 cm)
Weight	58.8 pounds (26.7 kg)

<b>DXi8500 Array Modules</b>	
Bezel width	19 inches (48.2 cm)
Chassis width	17.5 inches (44.4 cm)
Chassis depth	21.5 inches (54.6 cm)
Chassis height	5.25 inches (13.3 cm) – 3U per Array module
Weight	1TB drives — 87.0 pounds (39.5 kg) 2TB drives — 89.5 pounds (40.6 kg)
<b>DXi8500 Expansion Modules</b>	
Bezel width	19 inches (48.2 cm)
Chassis width	17.5 inches (44.4 cm)
Chassis depth	21.5 inches (54.6 cm)
Chassis height	5.25 inches (13.3 cm) – 3U per Expansion module
Weight	1TB drives — 89.5 pounds (40.6 kg) 2TB drives — 92.0 pounds (41.7 kg)
<b>Ethernet Switch</b>	
Chassis width	17.3 inches (43.9 cm)
Chassis depth	15.2 inches (38.6 cm)
Chassis height	1.7 inches (4.3 cm)
Weight	12.2 pounds (5.5 kg)
<b>Fibre Channel Switch</b>	
Chassis width	16.9 inches (42.9 cm)
Chassis depth	24 inches (61.1 cm)
Chassis height	1.7 inches (4.3 cm)
Weight	21 pounds (9.5 kg)
<b>RPS for Ethernet Switch</b>	
Chassis width	17.3 inches (43.9 cm) <b>Note:</b> The bezel is the same width as the unit.
Chassis depth	10.1 inches (25.7 cm)
Chassis height	1.7 inches (4.3 cm)
Weight	11.1 pounds (5.0 kg)

Power Strips (Un-racked)	
Power Strip (installed)	Width (with mounting ears): 19 in. (48.26 cm)
	Depth: 7 in. (17.7 cm)
	Height: 4 – 1U, 1.75 in. (4.44 cm) panels — one panel needed for every six expansion modules
	Weight: 11 pounds (4.98 kg)
Power Strip (shipping)	Width: 38 in. (96.5 cm)
	Depth: 27 in. (68.5 cm)
	Height: 19 in. (48.26 cm)
	Weight: 75 pounds (34 kg)

**DXi8500 Weights**

A fully-configured base rack with 1TB drives weighs approximately 1,380 pounds (626 Kg), and a fully-configured expansion rack weighs approximately 1,312 pounds (595 Kg).

A fully-configured base rack with 2TB drives weighs approximately 1,402 pounds (636 Kg), and a fully-configured expansion rack weighs approximately 420 pounds (191 Kg).

Depending on your needs, the DXi8500 can be ordered and shipped in different configurations. For detailed information about the different weights for various DXi8500 system component configurations, see [DXi8500 Configurations](#) on page 8.

### Adjustable Leveling Feet and Cutout Locations

Figure 1 Bottom View

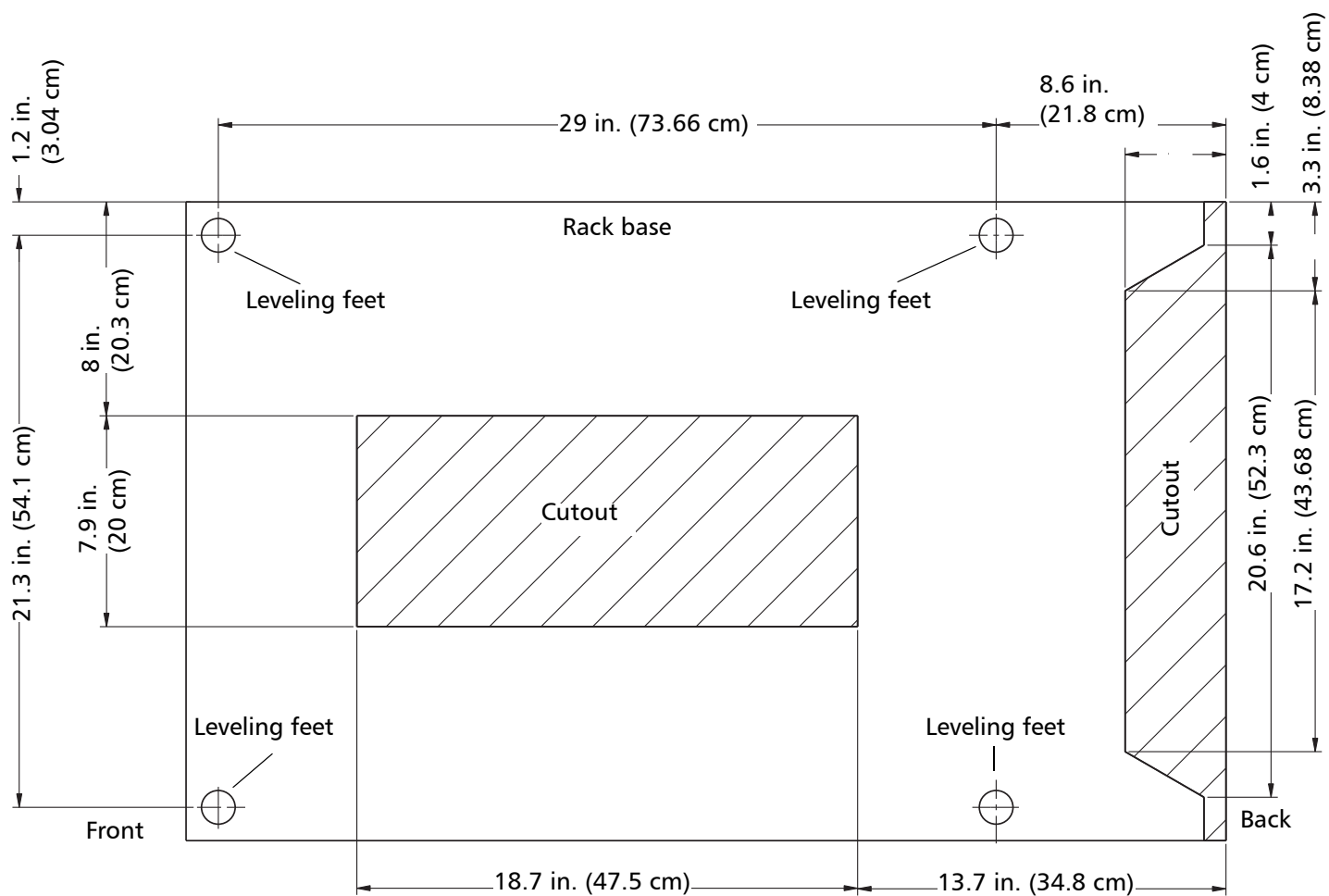


Figure 2 Top View

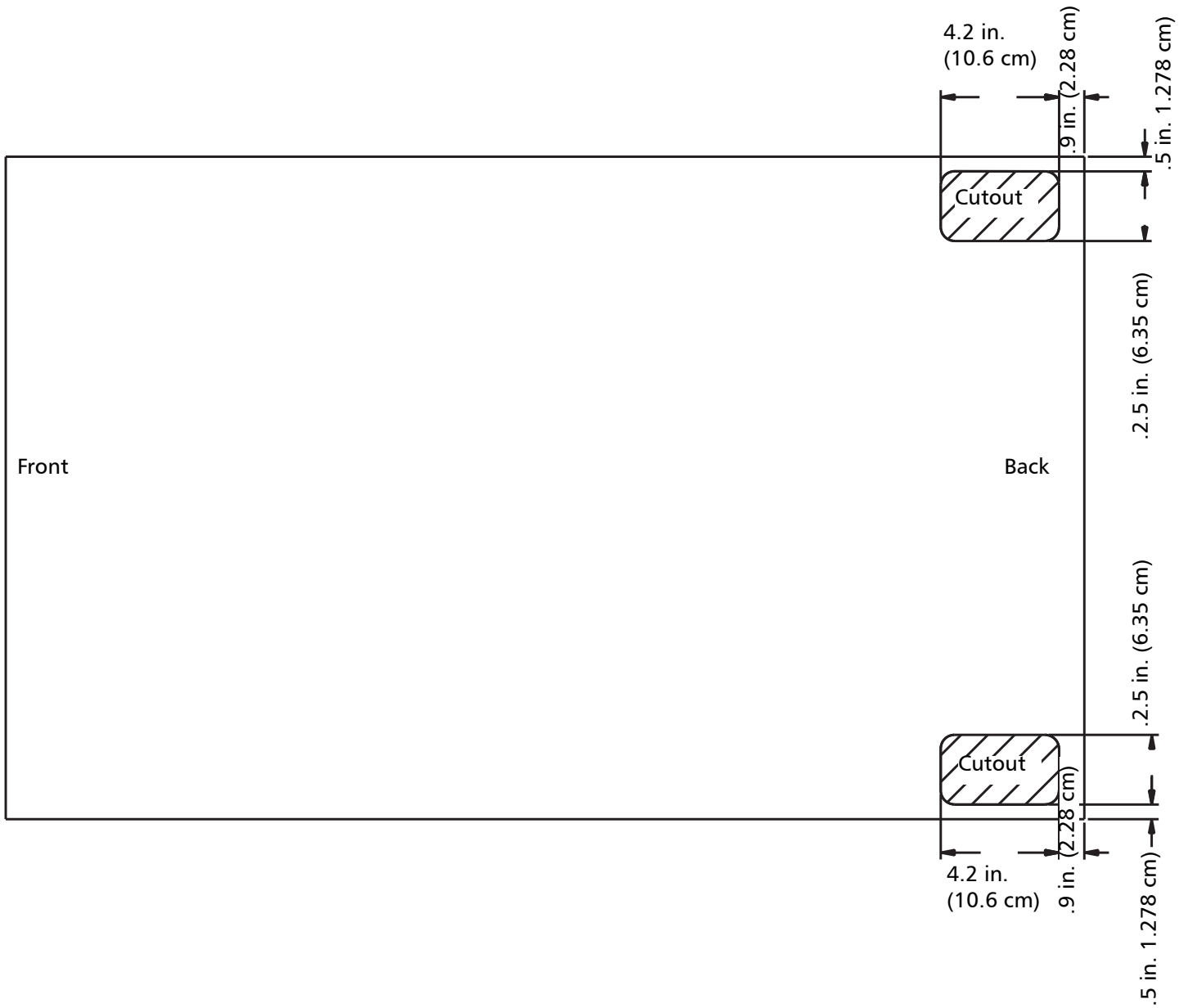


Table 8 Storage Capacity

DXi8500 System Capacity (RAID 6)	
Raw Capacity	1TB drives — From 32 to 320TB 2TB drives — From 64 to 320TB
Native Usable Capacity	1TB drives – From 20 to 200TB 16 — 1TB drives, RAID 6 with two hot spare per array (factory default) 2TB drives – From 40 to 200TB 16 — 2TB drives, RAID 6 with two hot spare per array (factory default)
Capacity increments per Array module and Expansion module.	1TB drives – The capacity is increased by increments of 10TB. 16 — 1TB drives, RAID 6 with two hot spare per array (factory default) 2TB drives – The capacity is increased by increments of 20TB. 16 — 2TB drives, RAID 6 with two hot spare per array (factory default)

Table 9 Cable Drops

DXi8500 Ethernet and Fibre Channel Cable Drops	
1 GbE Ethernet Cable Drops	1 to 4 Ethernet connections for NAS connectivity, replication, and remote management
Fibre Channel Cable Drops (with path to tape)	4 Fibre Channel connections for VTL host or SAN connections and 2 Fibre Channel connections for Path to Tape connection.
10 GbE — Embedded 10 GbE — PCI Optional	2 or 4 (10 GbE) Ethernet connections (2 standard / 2 optional) The 10 GbE is available in an optical or copper (Twinax) type, but only one type of cable can be used. <b>Note:</b> The 10 GbE Copper (Twinax) cable options that Quantum provides do not support all switches. Please note the supported switches during the purchase-configuration process, and if the Twinax cables supplied by Quantum are NOT compatible with your switch, then you will need to provide your own compatible Twinax cables from your switch vendor. Be sure to have these available before the system installation takes place.

Table 10 Interfaces

Virtual (Emulated) Tape Library Interfaces	
Interfaces	<p>SCSI-2 medium changer command sets:</p> <ul style="list-style-type: none"> <li>• ATL P1000, ATL P7000, or ATL M2500</li> <li>• Quantum PX500 or Quantum PX720</li> <li>• ADIC Scalar 100, ADIC Scalar i500, or ADIC Scalar i2000</li> <li>• ADIC Pathlight VX</li> <li>• Quantum DXi8500</li> <li>• Quantum DX3000 or Quantum DX5000</li> </ul> <p>Tape drive command sets:</p> <ul style="list-style-type: none"> <li>• Quantum DLT7000 (default), SDLT 320, SDLT 600, or DLT-S4</li> <li>• Quantum LTO2 or LTO3</li> <li>• HP LTO1, LTO2, HP LTO3, LTO4 or LTO5</li> <li>• IBM LTO1, LTO2, LTO3, LTO4, or LTO5</li> </ul> <p>NAS backup target: NFS or CIFS            Virtual library: Fibre Channel connectivity            Different partitions in same appliance can present different interfaces simultaneously</p>
Number of virtual drives	160 maximum
Number of partitions	64 maximum
Number of shares	128 maximum <b>Note:</b> Samba version: 3.5.2
Node Interfaces	
Hardware	<ul style="list-style-type: none"> <li>• 4 port 10/100/1000 BaseT Ethernet (RJ45 connector) and up to 6 ports of 8 Gb Fibre Channel (LC Connector) per system. Path to Tape option uses 2 FC ports.</li> <li>• 10 GbE Optical or Twinax — Uses 2 ports or 4 ports (Optional).</li> </ul>



Table 11 Software Capabilities

Software Capabilities	
Policy based data de-duplication options	<p><b>Adaptive In-line De-duplication:</b> Data is de-duplicated on ingest.</p> <p><b>Deferred Processing De-duplication:</b> Data is ingested to disk first, and de-duplicated in a separate process at a time set by the user. Both methodologies may be enabled for different data sets in the same DXi8500.</p>
Application Specific Path to Tape	Physical tape can be written in background over a dedicated Fibre Channel connection without using media server or backup SAN. Function maintains barcode integrity between virtual and physical tapes and is compatible with backup software direct to tape commands (e.g., NetBackup 6.5)
High availability Hardware Features	<p>Dual RAID controllers (active-active)</p> <p>Redundant power</p> <p>Redundant cooling</p> <p>Hot swap drives, power supplies, and fans</p>
Replication	<p>DXi8500 models offer support for remote replication.</p> <p>Replication is asynchronous, one-to-one or multiple-to-one configurations; partitions in same unit act as replication source or target; units with partitions acting as replication targets can also support local backup.</p>

Table 12 Rack Power Specifications

Location	Total AC Line Cords For Each Rack	Voltage Single Phase 50-60 hz	Required Protective Service	Delivered Power Connector	Line Cord Amps
North America	4	200–240	30 amp	NEMA L6-30P	30
International	4	240	32 amp	IEC60309	32

Table 13 Power Requirements  
(1TB Drives)

Racked Capacity (TB)	Power (Watts)	Number of Primary AC Connections Required	Number of Secondary AC Connections Required	Total Primary AC Current @220 Vac	Total Secondary AC Current @220 Vac
20	2023	2	2	9.2	9.2
30	2388	2	2	10.9	10.9
40	2753	2	2	12.5	12.5
50	3325	2	2	15.1	15.1
60	3690	2	2	16.8	16.8
70	4055	2	2	18.4	18.4
80	4420	2	2	20.1	20.1
90	4785	2	2	21.7	21.7
100	5150	4	4	23.4	23.4
110	5465	4	4	24.8	24.8
120	5779	4	4	26.3	26.3
130	6094	4	4	27.7	27.7
140	6409	4	4	29.1	29.1
150	6724	4	4	30.6	30.6
160	7038	4	4	32.0	32.0
170	7353	4	4	33.4	33.4
180	7668	4	4	34.9	34.9
190	7983	4	4	36.3	36.3
200	8297	4	4	37.7	37.7

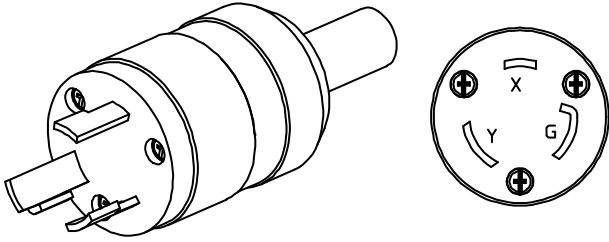
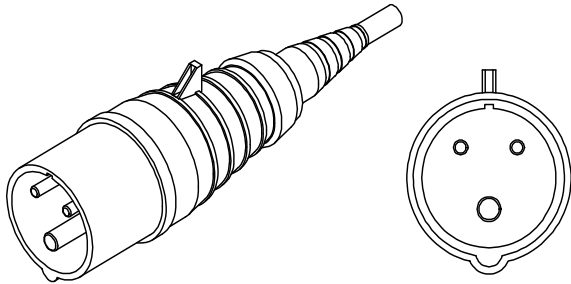
Table 14 Power Requirements  
(2TB Drives)

Racked Capacity (TB)	Power (Watts)	Number of Primary AC Connections Required	Number of Secondary AC Connections Required	Total Primary AC Current @220 Vac	Total Secondary AC Current @220 Vac
20	1570	2	2	7.1	7.1
40	1948	2	2	8.9	8.9
60	2326	2	2	10.6	10.6
80	2703	2	2	12.3	12.3
100	3271	2	2	14.9	14.9
120	3649	2	2	16.6	16.6
140	4027	2	2	18.3	18.3
160	4405	2	2	20.0	20.0
180	4782	2	2	21.7	21.7
200	5160	4	4	23.5	23.5

Table 15 Power Receptacle Requirements

#### DXi8500 Racked Power Receptacle Requirements

Power Cable Length	<p>The following cable lengths reflect the length of cable available outside of the rack.</p> <p>Power cable routed through the TOP of the rack:</p> <ul style="list-style-type: none"> <li>• 1 foot (.304 meters)</li> </ul> <p>Power cable routed through the BOTTOM of the rack:</p> <ul style="list-style-type: none"> <li>• 6 feet (1.82 meters)</li> </ul> <p>If the power source is further away than the above mentioned distances, contact Quantum Sales for an available 10 feet (3.04 meters) extension cable.</p>
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Power connector types	<p>North America: Each 30Amp power strip contains a single NEMA L6-30P power cord (Default power cord)</p> 
	<p>Outside North America: Each 32Amp power strip contains a single IEC60309 power cord:</p> 

**Note:** It is highly recommended that at least one power source has UPS protection.

## Environmental Specifications

[Table 16](#) provides various DXi8500 environmental specifications.

Table 16 Environmental Specifications

Climatic Environment		
Temperature	Operating	10° to 30°C (50° to 86°F)*
	Shipping and storage	-20° to 60°C (-4° to 140°F)
Relative humidity	Operating	20% to 80% non-condensing
	Shipping and storage	15% to 95%, non-condensing
Altitude	Operating	Up to 10,000 ft. (up to 3,048 m)
	Shipping and storage	Up to 39,370 ft. (up to 12,000 m)
Heat	Operating	1TB drives – 28,500 BTUs (maximum configuration for 2 racks) 2TB drives – 17,596 BTUs (maximum configuration for 2 racks)

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**Shock and Vibration — Operational Axis**


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Shock	Operational: 2 G's for 11ms, ½ sine Non-operational: 3.5 G's for 11ms, ½ sine
Vibration	Operational: 0.26 G's random vibration, 5–350 Hz Non-operational: 0.5 G's random vibration, 5–350 Hz

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**Acoustical Noise**


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Sound power level	Operating	72 dBA (single rack) 75 dBA (dual racks)
	Idle	72 dBA (single rack) 75 dBA (dual racks)
Sound pressure @ bystander	Operating	67 dBA (single rack) 70 dBA (dual racks)

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**Agency Certifications**


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Safety	IEC 60950, UL 60950 / CSA C22.2 - No. 60950-00, CE
Emissions	FCC Part 15 Class A, ICES-003 Class A, VCCI Class A, CISPR 22 Class A, EN55022 Class A, EN61000-3-2, EN61000-3-3

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\* 35°C (95°F) is the maximum temperature for the DXi8500 at sea level. For every 1000 feet (305 meters) of altitude, the maximum temperature is reduced by 1° (example: the maximum temperature for a DXi8500 at 1000 feet (305 meters) is 34°C (93°F)).

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**Caution:** The DXi8500 system is designed to be installed in a rack enclosure. Ensure that the operating temperature inside the rack enclosure does not exceed the maximum rated ambient temperature. Do not restrict air flow to the DXi8500 components.

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For assistance, contact the Quantum Customer Support Center:

USA: **800-284-5101 (toll free) or 949-725-2100**

EMEA: **00800-4-782-6886 (toll free) or +49 6131 3241 1164**

APAC: **+800 7826 8887 (toll free) or +603 7953 3010**

Worldwide: **<http://www.quantum.com/ServiceandSupport>**

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### About Quantum

Quantum Corp. (NYSE:QTM) is the leading global storage company specializing in backup, recovery and archive. Combining focused expertise, customer-driven innovation, and platform independence, Quantum provides a comprehensive range of disk, tape, media and software solutions supported by a world-class sales and service organization. This includes the DXi™-Series, the first disk backup solutions to extend the power of data deduplication and replication across the distributed enterprise. As a long-standing and trusted partner, the company works closely with a broad network of resellers, OEMs and other suppliers to meet customers' evolving data protection needs.