IBM System Storage 7214 Tape and DVD Enclosure Express incorporates IBM DAT320 tape drive technology

Table of contents

1 Overview
2 Key prerequisites
3 Planned availability date
4 Description
5 Publications
6 Technical information
11 Terms and conditions
11 Prices
12 Announcement countries

At a glance

The IBM® System Storage™ 7214 Tape and DVD Enclosure Express® is an excellent choice for applications where:

- The availability of internal server bays for storage devices is limited or no bays are available (depending on server model)
- It is important to consolidate storage devices in a single, convenient location to minimize space and cabling impacts
- 19-inch rack space is limited

The two bays of the 7214 Express can accommodate the following tape or DVD drives for IBM POWER6™, IBM POWER7™, and IBM POWER5™ server models:

- DAT160 80 GB Tape Drive -- Up to two drives
- DAT320 160 GB Tape Drive -- Up to two drives
- Half-high LTO Ultrium 4 800 GB Tape Drive -- Up to two drives
- DVD-RAM Optical Drive -- Up to two drives
- DVD-ROM Optical Drive -- Up to two drives

Overview

The IBM System Storage 7214 Tape and DVD Enclosure Express (Model 1U2) is designed to attach to specific models of the IBM POWER7, IBM POWER6, and IBM POWER5 models through an external serial attached SCSI (SAS) adapter.

The 7214 Express delivers external tape or optical drive options that allow customers to transfer data with similar archival storage and retrieval technologies already installed in existing IT facilities.

Optional drive technologies available in the 7214 Express offering are:

- DAT160 80 GB Tape Drive: Read-write compatible with DAT160 and DAT72 data cartridges, and read-only compatible with DDS4 data cartridges
• DAT320 160 GB Tape Drive: Read-write compatible with DAT320 and DAT160 data cartridges
• Half-high LTO Ultrium 4 800 GB Tape Drive: Read-write compatible with LTO Ultrium 4 and LTO Ultrium 3 data cartridges, and read-only compatible with Ultrium 2 data cartridges
• DVD-ROM - 9.4 GB Slim Optical Drive
• DVD-RAM - 9.4 GB Slim Optical Drive

**Note:** Most standard DVD disks can be used in the 7214 Express DVD drive.

A control card sensor in the 7214 Express can track drive function and notify the user of maintenance requirements.

The 7214 Express offers IBM's Customer Replaceable Unit (CRU) maintenance service to help make installation or replacement of new drives efficient. Other 7214 Model 1U2 components are also designed for CRU maintenance.

**Key prerequisites**

IBM POWER6 Systems and IBM POWER7 Systems™ software options:

• **AIX®**
  – Level 5L for Power® V5.3 with the 5300-07 Technology Level and Service Pack 4, or later
  – Level 5L for Power V5.3 with the 5300-06 Technology Level and Service Pack 7, or later
  – Level 5L for Power V5.3 with 5300-08 Technology Level
  – Level V6.1 with Service Pack 5, or later
  – Level V6.1 with 6100-01 Technology Level

• **Linux®**
  – SUSE Linux Enterprise Server 10 SP1 for Power Systems™, or later
  – Red Hat Enterprise Linux for Power V4.6, or later
  – Red Hat Enterprise Linux for Power V5.1, or later

• **IBM i (OS/400®)**
  – IBM i 5.4.5 operating system, IBM i 6.1 operating system, or later

IBM POWER5 Systems software options:

• **AIX**
  – Level 5L for Power V5.3 with the 5300-09 Technology Level and Service Pack 7, or later
  – Level V6.1 with 6100-02 Technology Level, or later

PCI-E DDR Dual-x4 External SAS Controller Adapter (#5901) or PCI-X DDR Dual-x4 External SAS Controller Adapter (#5912) must be installed to attach 7214 Express to IBM POWER5, IBM POWER6, or IBM POWER7 processor-based servers.

Attaching 7214 to an IBM POWER5, IBM POWER6, or IBM POWER7 processor-based server through the integrated SAS adapter is not supported. The boot function is not supported when attaching 7214 to IBM POWER5 processor-based servers.

**Planned availability date**

April 16, 2010
Description

The IBM System Storage 7214 Tape and DVD Enclosure Express has two bays designed to accommodate up to two tape or DVD optical storage drives. The initial order of the 7214 Express must include at least one of the following drive features.

**DAT160 Tape Drive (#1401):** The DAT160 feature provides a migration and interchange path on IBM POWER® Systems from other 4 mm formatted tape drives, and is designed to provide a solution for save, restore, and archiving functions. This tape drive provides physical storage capacity of up to 80 GB (160 GB with 2:1 compression) per data cartridge and is designed to achieve a data rate of up to 13.8 MB/sec with compression. It is designed to provide read-write compatibility with DAT160 and DAT72 media formats, and read-only compatibility with DDS4 media formats.

The DAT160 tape drive feature includes one data cartridge, one cleaning cartridge, one test cartridge, and an internal SAS cable.

The DAT160 tape drive feature on the IBM 7214 is a replacement for the DAT72 36 GB Tape Drive feature. DAT160 is read and write compatible with DAT160, DAT72, and DDS4 tape technologies only.

**DAT320 Tape Drive (#1402):** The DAT320 feature provides a migration and interchange path on IBM POWER Systems from other 4 mm formatted tape drives, and is designed to provide a solution for save, restore, and archiving functions. This tape drive provides physical storage capacity of up to 160 GB (320 GB with 2:1 compression) per data cartridge and is designed to achieve a data rate of up to 13.8 MB/sec with compression. It is designed to provide read-write compatibility with the DAT160 media formats.

The DAT320 tape drive feature includes one data cartridge, one cleaning cartridge, one test cartridge, and an internal SAS cable.

**Half-High LTO Ultrium 4 Tape Drive (#1404):** The Half-High LTO Ultrium 4 feature is a high-performance tape drive with a native capacity of up to 800 GB (1,600 GB with 2:1 compression). This fourth generation of LTO Ultrium tape drives provides a migration and an interchange path on IBM POWER Systems from other LTO-formatted tape drives, and is designed to provide a solution for save, restore, and archiving functions. The LTO Ultrium 4 drive offers a data rate of up to 240 MB/sec with compression. It is also designed to provide read-write compatibility with Ultrium 4 and Ultrium 3 media formats, and read-only compatibility with Ultrium 2 media formats.

The Half-High LTO Ultrium 4 Tape Drive feature includes one data cartridge, one cleaning cartridge, one test cartridge, and an internal SAS cable.

**Note:** Although the above tape drive features can give you high tape performance, other components of the system may limit the actual performance achieved. In addition, although the compression technology is designed to double the amount of data that can be stored on the media, the actual degree of compression achieved is highly sensitive to the characteristics of the data that is being compressed.

**DVD Sled with One DVD-RAM Drive (#1420):** This Drive Sled feature allows the installation of two slim-height DVD optical drives in a single bay of the 7214 Storage Enclosure. Included in this feature is one DVD-RAM optical drive and one DVD-RAM test disk. A second DVD-RAM (#1422) or a DVD-ROM (#1423) drive may be added to the drive slot in the DVD sled by removing the DVD blank panel.

**DVD Sled with One DVD-ROM Drive (#1421):** This Drive Sled feature allows the installation of two slim-height DVD optical drives in a single bay of the 7214 Storage Enclosure. Included in this feature is one DVD-ROM optical drive and one DVD-ROM test disk. A second DVD-ROM (#1423) or a DVD-RAM (#1422) drive may be added to the drive slot in the DVD sled by removing the DVD blank panel.
**DVD-RAM Slim Optical Drive (#1422):** The flexibility and compatibility offered in the 7214 DVD-RAM feature makes it an excellent solution for your DVD-RAM read and write requirements. One DVD-RAM test disk is also included. The DVD-RAM Slim Optical Drive can read and write on 4.7 GB and 9.4 GB DVD-RAM media. The DVD-RAM uses only bare media to help reduce media costs and is also read compatible with multisession CD, CD-RW, CD recordable, and 2.6 GB and 5.2 GB DVD-RAM media.

Other DVD-RAM drive characteristics are:

- A maximum data rate of up to 2.77 MB per second (DVD-RAM, read)
- 165 ms average test random access (DVD), 125 ms average access (CD-ROM and CD-RW)
- A loading tray that supports 12 cm and 8 cm disks (8 cm, horizontal only)
- Support of asynchronous and synchronous data transfer
- Multimedia compliance (MPC-3)
- CD-DA Digital Audio standard Red Book audio
- The ability to read DVD-ROM, as well as to read CD-ROM media in Modes 1 or 2, XA, CDDA, and audio formats
- The ability to read multisession disks, CD-recordable disks, and CD-RW disks

**DVD-ROM Slim Optical Drive (#1423):** The compatibility offered in the 7214 DVD-ROM feature makes it well-suited for DVD-ROM read requirements. One DVD-ROM test disk is also included. The DVD-ROM Slim Optical Drive can read 4.7 GB and 9.4 GB DVD-RAM media. This drive uses only bare media to help reduce media costs and is also read-compatible with multisession CD and CD-RW media.

Other DVD-ROM drive characteristics are:

- A maximum data rate of up to 2.77 MB per second
- 165 ms average test random access (DVD), 125 ms average access (CD-ROM and CD-RW)
- A loading tray that supports 12 cm and 8 cm disks (8 cm, horizontal only)
- Support of asynchronous and synchronous data transfer
- Multimedia compliance (MPC-3)
- CD-DA Digital Audio standard Red Book audio
- The ability to read CD-ROM media in Modes 1 or 2, XA, CDDA, and audio formats
- The ability to read multisession discs, CD-recordable discs, and CD-RW discs

**Note:** Disk physical capacity options are 2.6 GB and 4.7 GB per side. The 5.2 GB and 9.4 GB physical capacities may be achieved by using double-sided DVD-RAM and DVD-ROM disks.

Key application areas include access to any information widely distributed via DVD-RAMS, CD-RW, and CD-ROMs, such as licensed software, software updates, as well as user and technical manuals and documentation. Many other multimedia applications are also well suited for capture and distribution on DVD and CD disks.

---

**Product number**

<table>
<thead>
<tr>
<th>Description</th>
<th>Machine type</th>
<th>Model</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tape and DVD Enclosure Express</td>
<td>7214</td>
<td>1u2</td>
<td></td>
</tr>
<tr>
<td>DAT320 Tape Drive</td>
<td></td>
<td></td>
<td>1402</td>
</tr>
<tr>
<td>DAT320 Cleaning Cartridge</td>
<td></td>
<td></td>
<td>2504</td>
</tr>
<tr>
<td>DAT320 160 GB Data Cartridge</td>
<td></td>
<td></td>
<td>2524</td>
</tr>
<tr>
<td>5-DAT320 Multi-media Kit</td>
<td></td>
<td></td>
<td>2526</td>
</tr>
</tbody>
</table>
**Note:** The power cord options are used in the country listed and other countries. Refer to the *7214 Model 1U2 Storage Device Enclosure Setup and Operator Guide* (SA23-2302) for specific country availability or contact your IBM representative.

**Model conversions**

Not applicable.

**Feature conversions (machine type 7214, Model 1U2)**

Drive features on the 7214 Tape and DVD Enclosure Express may be removed or replaced by one of the other tape or DVD drive features available on 7214. Drive features may be purchased through an MES order, and are customer removable and replaceable. Removed drives remain the property of the customer. Refer to the *7214 Model 1U2 Storage Device Enclosure Setup and Operator Guide* (SA23-2302).

- If one bay of the 7214 is empty, the Drive Panel (Blank) (#1440) is installed. The blank drive panel may be removed and replaced with either the DAT160 Tape Drive (#1401), the DAT320 Tape Drive (#1402), the Half-High LTO Ultrium 4 Tape Drive (HHLTO4) (#1404), or with one of two drive options: DVD Sled with 1 DVD-RAM Drive (#1420) or DVD Sled with 1 DVD-ROM Drive (#1421). Tape drives may be installed in either or both of the two drive bays in the 7214 enclosure.

- A DVD Sled with 1 DVD-RAM Drive (#1420) or DVD Sled with 1 DVD-ROM Drive (#1421) contains one DVD Slim Optical drive. A second DVD-RAM Slim Optical Drive (#1422), or DVD-ROM Slim Optical Drive (#1423) may also be added to either DVD Sled feature by removing DVD Drive Panel (Blank) (#1425) and installing a second DVD drive. A DVD drive may also be removed. Empty DVD drive slots should have DVD Drive Panel (Blank) (#1425) installed to assure proper air flow inside the 7214 enclosure. DVD drives may only be installed in the right bay of the 7214 enclosure.

**Note:** There is a limit of two DVD drives per 7214 Express Enclosure.

**Publications**

The following publications are shipped with the product. Additional copies are available. To order, contact your IBM representative.

<table>
<thead>
<tr>
<th>Title</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>7214 Model 1U2 Storage Device Enclosure Setup and Operator Guide</td>
<td>SA23-2302</td>
</tr>
<tr>
<td>External Devices Safety Information</td>
<td>SA26-2004</td>
</tr>
<tr>
<td>7214 Model 1U2 Storage Device Enclosure Service Guide</td>
<td>SY38-0802</td>
</tr>
</tbody>
</table>

The following publications are available. To order, contact your IBM representative.

<table>
<thead>
<tr>
<th>Title</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>7214 Model 1U2 Storage Device Enclosure Setup and Operator Guide</td>
<td>SA23-2302</td>
</tr>
<tr>
<td>External Devices Safety Information</td>
<td>SA26-2004</td>
</tr>
<tr>
<td>7214 Model 1U2 Storage Device Enclosure Service Guide</td>
<td>SY38-0802</td>
</tr>
</tbody>
</table>

The IBM Systems Information Center provides you with a single information center where you can access product documentation for IBM systems hardware, operating...
systems, and server software. Through a consistent framework, you can efficiently find information and personalize your access. The IBM Systems Information Center is at


**IBM Publications Center Portal**

http://www.ibm.com/shop/publications/order

The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive search facilities are provided, as well as payment options via credit card. A large number of publications are available online in various file formats, which can currently be downloaded free of charge.

The following publications will be available after planned availability.

<table>
<thead>
<tr>
<th>Title</th>
<th>Order number</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>7214 Model 1U2 Storage Device Enclosure Setup and Operator Guide</td>
<td>SA23-2302</td>
<td>English/U.S.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>German</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spanish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brazilian Portuguese</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Japanese</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Simplified Chinese</td>
</tr>
</tbody>
</table>

**Services**

**Global Technology Services**

IBM services include business consulting, outsourcing, hosting services, applications, and other technology management.

These services help you learn about, plan, install, manage, or optimize your IT infrastructure to be an On Demand Business. They can help you integrate your high-speed networks, storage systems, application servers, wireless protocols, and an array of platforms, middleware, and communications software for IBM and many non-IBM offerings. IBM is your one-stop shop for IT support needs.

For details on available services, contact your IBM representative or visit

http://www.ibm.com/services/

For details on available IBM Business Continuity and Recovery Services, contact your IBM representative or visit

http://www.ibm.com/services/continuity

For details on education offerings related to specific products, visit


Select your country, and then select the product as the category.

**Technical information**

**Specified operating environment**

**Physical specifications**

- Width: 446 mm (17.5 in)
- Depth: 736 mm (29.0 in)
• Height: 44 mm (1.72 in)
• Weight: 11.0 kg (24.2 lb)

To assure installability and serviceability in non-IBM industry-standard racks, review the installation planning information for any product-specific installation requirements.

**Operating environment**

• Temperature: 16° to 32° C (0° to 90° F)
• Relative humidity: 20% to 80% (non-condensing, 23° C (73° F))
• Electrical voltage: 100 - 127 V ac or 200 - 240 V ac, 50 - 60 Hz, Autoranging
• Electrical power: 0.047 kVA 90 watt power supply
• Noise level: 5.6 dBA idle, 5.8 dBA operating
• Leakage and starting current: 3.5 mA at 240 V ac/50 Hz
• In-rush current: 60 amperes peak (a 10 amp fuse is sufficient for overload protection)

**Hardware requirements**

**IBM POWER Systems support of the 7214 Tape and DVD Enclosure Express**

The 7214 Tape and DVD Enclosure Express offers two bays for tape or optical drives, and can be attached to IBM POWER Systems as listed below.

<table>
<thead>
<tr>
<th>Feature description</th>
<th>Feature number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAT160 4mm format Tape Drive</td>
<td>1401</td>
</tr>
<tr>
<td>DAT320 4mm 160 GB Tape Drive</td>
<td>1402</td>
</tr>
<tr>
<td>Half-high LTO Ultrium 4 Tape Drive</td>
<td>1404</td>
</tr>
<tr>
<td>DVD Sled w/1 DVD-ROM Drive</td>
<td>1420</td>
</tr>
<tr>
<td>DVD Sled w/1 DVD-ROM Drive</td>
<td>1421</td>
</tr>
<tr>
<td>DVD-ROM Slim Optical Drive only</td>
<td>1422</td>
</tr>
<tr>
<td>DVD-ROM Slim Optical Drive only</td>
<td>1423</td>
</tr>
<tr>
<td>Blank DVD Panel to install in empty DVD slot</td>
<td>1425</td>
</tr>
<tr>
<td>Blank Drive Panel to install in empty bay</td>
<td>1440</td>
</tr>
</tbody>
</table>

**Note:** Tape drive feature numbers 1400, 1401, 1402, and 1404 may be installed in both bays. A DVD Sled feature (#1420 or #1421) may only be installed in the right-side bay of the 7214-1U2 enclosure, and is a prerequisite to the DVD-ROM feature (#1422) and DVD-ROM feature (#1423). Blank DVD feature (#1425) and Blank Drive Panels feature (#1440) must be installed when slots are empty for proper air flow.

The 7214 Tape and DVD Enclosure Express is supported for attachment to the PCI-E DDR Dual-x4 SAS Adapter feature (#5901) or PCI-X DDR Dual-x4 SAS Adapter feature (#5912) in the following IBM POWER Systems models:

IBM Power Systems models:

**POWER7 System Models**

• 8233-E8B
• 8236-E8C
• 9117-MMB
• 9179-MHB

**IBM POWER6 System Models**

• 5094 Expansion Unit (attached to an IBM POWER6 System)
• 5294 Expansion Unit (attached to an IBM POWER6 System)
• 7311-D11 I/O Drawer (attached to an IBM POWER6 System)
• 7311-D20 I/O Drawer (attached to an IBM POWER6 System)
• 8203-E4A
• 8204-E8A
• 9117-MMA
• 9119-FHA
• 9125-F2A
• 9406-MMA
• 9407-M15
• 9408-M25
• 9409-M50

IBM POWER5 System Models

The 7214 Tape and DVD Enclosure Express is supported for attachment to the PCI-X DDR Dual-x4 SAS Adapters (#5912) in the following IBM POWER5 System Models:

• 9110-510
• 9111-520
• 9113-550
• 9115-505
• 9116-561
• 9117-570
• 9119-550, 595
• 9124-720
• 9131-52A
• 9133-55A

The 7214 Tape and DVD Enclosure Express is supported for attachment to the above IBM POWER5 System models using the PCI-E Dual-x4 SAS Adapter (#5901) installed in the following IBM Power System drawers:

• 12X Expansion I/O Drawer (#5802)
• 12X Expansion I/O Drawer (#5803)
• 12X Expansion I/O Drawer (#5873)
• 12X Expansion I/O Drawer (#5877)

Note: The boot function is not supported on the 7214 when it is attached to an IBM POWER5 System model.

Up to two 7214 storage enclosures may be attached per PCI-X DDR Dual-x4 SAS Adapters (#5901 or #5912).

Attaching 7214 to an IBM POWER7, POWER6, or POWER5 System through the integrated SAS adapter is not recommended.

IBM Systems cable orders

The appropriate external SAS cables must be included in the customer order by specifying the feature numbers below:

<table>
<thead>
<tr>
<th>Specify code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9743</td>
<td>3.0 m External SAS Cable</td>
</tr>
<tr>
<td>9746</td>
<td>6.0 m External SAS Cable</td>
</tr>
</tbody>
</table>

Additional external SAS cables may be purchased as MES features by ordering the feature numbers below:
Feature number  Description
5743     3.0 m External SAS Cable
5746     6.0 m External SAS Cable

Power cords

Power cords are available by country designation and should be specified by feature number. If a power cord is not specified with an order, the feature number for the ordering country will be provided. Power cords available:

<table>
<thead>
<tr>
<th>Description</th>
<th>Feature number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.7m (9 ft) Power Cords:</td>
<td></td>
</tr>
<tr>
<td>- 125V, 15A, U.S./Canada</td>
<td>9800</td>
</tr>
<tr>
<td>- 250V, 16A (AC), France</td>
<td>9820</td>
</tr>
<tr>
<td>- 250V, 11A, Denmark</td>
<td>9821</td>
</tr>
<tr>
<td>- 250V, 13A, United Kingdom</td>
<td>9825</td>
</tr>
<tr>
<td>- 250V, 6-16A, Israel</td>
<td>9827</td>
</tr>
<tr>
<td>- 255V, 10A, Switzerland</td>
<td>9828</td>
</tr>
<tr>
<td>- 250V, 16A, South Africa</td>
<td>9829</td>
</tr>
<tr>
<td>- 250V, 10 and 16A, Italy</td>
<td>9830</td>
</tr>
<tr>
<td>- 250V, 10A, Australia</td>
<td>9831</td>
</tr>
<tr>
<td>- 250V, 15A, U.S./Canada</td>
<td>9833</td>
</tr>
<tr>
<td>- 250V, 10A, Uruguay</td>
<td>9834</td>
</tr>
<tr>
<td>- 250V, 6A, China (PRC)</td>
<td>9840</td>
</tr>
<tr>
<td>- 125V, 10A, Taiwan</td>
<td>9841</td>
</tr>
<tr>
<td>Rack Power Cord, AC, Single (US/Canada)</td>
<td>9860</td>
</tr>
<tr>
<td>Rack Power Cord, AC, Bifurcated (US/Canada)</td>
<td>9861</td>
</tr>
<tr>
<td>1.8 m (6 ft) Power Cord:</td>
<td></td>
</tr>
<tr>
<td>- 125V, 15A, Chicago U.S./Canada</td>
<td>9986</td>
</tr>
</tbody>
</table>

Software requirements

IBM POWER6 Systems and IBM POWER7 Systems software options:

- **AIX**
  - Level 5L for Power V5.3 with the 5300-07 Technology Level and Service Pack 4, or later
  - Level 5L for Power V5.3 with the 5300-06 Technology Level and Service Pack 7, or later
  - Level 5L for Power V5.3 with 5300-08 Technology Level
  - Level V6.1 with Service Pack 5, or later
  - Level V6.1 with 6100-01 Technology Level
- **Linux**
  - SUSE Linux Enterprise Server 10 SP1 for Power Systems, or later
  - Red Hat Enterprise Linux for Power V4.6, or later
  - Red Hat Enterprise Linux for Power V5.1, or later
- **IBM i (OS/400)**
  - IBM i 5.4.5 operating system, IBM i 6.1 operating system, or later

IBM POWER Systems software options:

- **AIX**
  - Level 5L for Power V5.3 with the 5300-09 Technology Level and Service Pack 7, or later
  - Level V6.1 with 6100-02 Technology Level, or later
PCI-E DDR Dual-x4 External SAS Controller Adapter (#5901) or PCI-X DDR Dual-x4 External SAS Controller Adapter (#5912) must be installed to attach 7214 Express to IBM POWER Systems.

Attaching 7214 to an IBM POWER System through the integrated SAS adapter is not supported. The boot function is not supported when attaching 7214 to IBM POWER5 Systems.

**Planning information**

**Customer responsibilities**

The IBM System Storage 7214 Tape and DVD Enclosure Express is designated as customer setup. Customer setup, operation, and service publications are available.

The specific 7214 configuration ordered will arrive fully assembled and with drive firmware installed.

You are responsible for downloading or obtaining from IBM, and installing designated Machine Code (microcode, basic input/output system code (called "BIOS"), utility programs, device drivers, and diagnostics delivered with an IBM machine) and other software updates in a timely manner from an IBM Internet Web site or from other electronic media, and following the instructions that IBM provides. You may request IBM to install Machine Code changes; however, you may be charged for that service.

**Cable orders**

At least one SAS cable (no-charge feature number 9743 or 9746) must be specified for the IBM System Storage 7214 Tape and DVD Enclosure Express on the initial order. Refer to the Hardware requirements section for cabling requirements.

**Supplies**

**For end users and remarketers (IBM tape supplies)**

IBM System Storage 7214 Tape and DVD Enclosure Express supplies can be ordered directly through AAS using machine type 7214.

IBM-branded media and media supplies can be also purchased through Priority Fulfillment Services and its distribution channel in North America, Latin America, and Asia Pacific.

For information about Priority Fulfillment Services Europe distribution channels, call +31-433-502-756. Other country-specific numbers can be found at http://www.ibm.com/storage/media

**Security, auditability, and control**

These products use the security and auditability features of the host system and application programs.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communications facilities.

**Global Technology Services**

Contact your IBM representative for the list of selected services available in your country, either as standard or customized offerings, for the efficient installation, implementation, and/or integration of this product.
IBM Electronic Services

IBM has transformed its delivery of hardware and software support services to help you achieve higher system availability. Electronic Services is a Web-enabled solution that offers an exclusive, no-additional-charge enhancement to the service and support available for IBM servers. These services are designed to provide the opportunity for greater system availability with faster problem resolution and preemptive monitoring. Electronic Services comprises two separate, but complementary, elements: Electronic Services news page and Electronic Services Agent.

The Electronic Services news page is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. The news page enables you to gain easier access to IBM resources for assistance in resolving technical problems.

The Electronic Service Agent™ is no-additional-charge software that resides on your server. It monitors events and transmits system inventory information to IBM on a periodic, client-defined timetable. The Electronic Service Agent automatically reports hardware problems to IBM. Early knowledge about potential problems enables IBM to deliver proactive service that may result in higher system availability and performance. In addition, information collected through the Service Agent is made available to IBM service support representatives when they help answer your questions or diagnose problems. Installation and use of IBM Electronic Service Agent for problem reporting enables IBM to provide better support and service for your IBM server.

To learn how Electronic Services can work for you, visit

http://www.ibm.com/support/electronic

Terms and conditions

**Field installable feature**
Yes

**Warranty period**
One year.

This feature or features assume the same warranty or maintenance terms as the machine in which it is installed for the full warranty or maintenance period announced for such machine.

**Customer setup**
Yes

**Machine code**
Same license terms and conditions as base machine

**Prices**

For all local charges, contact your IBM representative.
Announcement countries

All European, Middle Eastern, and African countries.

Trademarks

System Storage, POWER6, POWER7, POWER5, POWER7 Systems, Power Systems and Electronic Service Agent are trademarks of IBM Corporation in the United States, other countries, or both.

IBM, Express, AIX, Power, OS/400 and POWER are registered trademarks of IBM Corporation in the United States, other countries, or both.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Other company, product, and service names may be trademarks or service marks of others.

Terms of use

IBM products and services which are announced and available in your country can be ordered under the applicable standard agreements, terms, conditions, and prices in effect at the time. IBM reserves the right to modify or withdraw this announcement at any time without notice. This announcement is provided for your information only. Reference to other products in this announcement does not necessarily imply those products are announced, or intend to be announced, in your country. Additional terms of use are located at


For the most current information regarding IBM products, consult your IBM representative or reseller, or visit the IBM worldwide contacts page

http://www.ibm.com/planetwide/