IBM System Storage 7216 Multi-Media Enclosure with Quad External SAS Cable and DAT160 SAS Tape Drive and Media

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At a glance

IBM® System Storage® 7216 Multi-Media Enclosure (Model 1U2) attaches to specific IBM POWER6™ and POWER7™ models through a USB port on the server, or through an external USB or Serial Attach SCSI (SAS) adapter.

The 7216 delivers external tape, removable disk drive, and DVD-RAM drive options for data transfer between similar archival storage and retrieval technologies.

The two bays of the 7216 can accommodate the following media devices:

- DAT160 80 GB SAS Tape Drive -- Up to two drives
- Half-high LTO Ultrium 5 1.5 TB SAS Tape Drive -- Up to two drives
- DVD-RAM SAS Optical Drive -- Up to four drives
- RDX Removable USB Disk Drives -- Up to two drives

With the standard 7216 offering, each drive device attaches individually to IBM Power® Server ports. With the Quad External SAS Cable (feature number 5544) up to four SAS tape or DVD-RAM drive devices may be attached to a single SAS Host Bus Adapter.

Overview

IBM System Storage 7216 Multi-Media Enclosure offers both SAS and USB electronic interface options to accommodate up to two tape drives, two RDX Removable HDD Docking Stations, or four DVD-RAM drives. The 7216 delivers external tape, removable disk drive, and DVD-RAM drive options that allow data transfer with similar archival storage and retrieval technologies already installed in existing IT facilities.

Optional drive technologies available in the 7216 offering are:

- **DAT160 80 GB SAS Tape Drive**: Read-write compatible with DAT160, DAT72, and DDS4 data cartridges
- **Half-high LTO Ultrium 5 1.5 TB SAS Tape Drive**: Read-write compatible with LTO Ultrium 5 and LTO Ultrium 4 data cartridges, and read-only compatible with Ultrium 3 data cartridges
- **DVD-RAM**: 9.4 GB SAS Slim Optical Drive supports most standard DVD disks
• **RDX Removable USB Disk Drives**: RDX Docking Station is compatible with most RDX disk drive cartridge and supports RDX Removable drives with 160 GB and 500 GB capacity options

Removable RDX Drives (feature numbers 1106 and 1107) are in a rugged cartridge to be used in the RDX Removable Disk Docking Station (feature number 1103). The uncompressed capacity in the 160 GB Removable RDX Drive (feature number 1106) is up to 160 GB, and up to 320 GB with typical 2:1 compression. The uncompressed capacity in the 500 GB Removable RDX Drive (feature number 1107) is up to 500 GB, and up to 1000 GB with typical 2:1 compression. Compression and decompression are provided by the operating system, not the drive itself.

DAT160 80 GB SAS tape drives are read-write compatible with DAT160, DAT72, and DDS4 media. Media used in the 7216 DAT160 tape drive feature is compatible with DAT160 tape drives installed in the IBM 7214 Tape and DVD Storage Enclosure, and DAT160 drives installed internally in an IBM Power Server.

LTO Ultrium 5 1.5 TB tape drives are read-write compatible with media used in LTO Ultrium 5 and LTO Ultrium 4 tape drives and read-only compatible with media used in LTO Ultrium 3 tape drives.

**Note:** Although the transfer rate on the enclosure can provide high performance, other components of the system may limit the actual performance achieved.

The 7216 offers Customer Replaceable Unit (CRU) maintenance service to help make installation or replacement of new drives efficient. Other 7216 Model 1U2 components are also designed for CRU maintenance.

The 7216 drive features attach to an IBM Power System port using either an external SAS or USB cable that is provided with each tape drive, DVD-RAM, or RDX drive feature ordered. Each USB device in 7216 may be attached to available USB server ports. In order to attach 7216 SAS drive devices, a SAS host bus adapter (HBA) is required. Each 7216 SAS device may either be attached individually to an IBM Power Server SAS HBA port, or up to four 7216 SAS devices may be attached to a single SAS port using a one-to-four Quad External SAS Cable (feature number 5544). The four 7216 SAS devices may be installed in more than one 7216 storage enclosure.

### Key prerequisites

**Mandatory software**

For a current list of host software versions and release levels that support the IBM System Storage 7216 Multi-Media Enclosure, refer to the following website

http://www-03.ibm.com/systems/support/storage/config/ssic/index.jsp

**Note:** All new IBM tape device drivers will be posted to the web through the Fix Central download portal. IBM maintains the latest levels of System Storage tape drive and library device drivers and documentation on the Internet. Utilize the Fix Central download portal by accessing the following website

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

There are a few pull down menus to navigate to the correct download as follows:

- In the first pull down menu labeled "Product Group" select "Storage Systems".
- In the next pull down menu that appears which is labeled "Product Family" select "Tape Systems".
- With the next pull down menu, "Product Type", select "Tape Device Drivers and Software".
- This will in turn bring up the "Product" menu, which provides selections for "Platform drivers, Tools, or Software".
- Under "Platform drivers", in order to download your driver, select the correct operating system.
- Two more pull down menus will appear with information. Click "Continue".
The next screen can be used to narrow the search, however just click "Continue" to view what is available.

The IBM Tape Device Drivers Installation and User’s Guide can be found at the following website

http://www-01.ibm.com/support/docview.wss?rs=577&uid=ssg1S7002972

Planned availability date

May 27, 2011

Description

IBM System Storage 7216 Multi-Media Enclosure has two bays designed to accommodate up to two tape drives, two RDX Removable HDD Docking Stations, or four DVD-RAM drives. The initial order for the 7216 Multi-Media Enclosure must include at least one of the following drive features.

RDX Removable Disk Drive Docking Station (feature number 1103)

The RDX Removable Disk Drive Docking Station accommodates a 160 GB or 500 GB removable disk drive or data cartridge. The disks are in a protective rugged enclosure that plug into the docking station. The docking station holds one removable rugged disk drive or data cartridge at a time. The rugged removable disk cartridge and docking station backs up information similar to tape drives. The RDX docking station interface is USB level 2.0. Any industry standard RDX removable disk drive may be installed in the RDX Docking Station. The RDX removable disk docking station feature includes a half-high drive latch, a USB interface assembly, and an external USB cable. A docking station with an RDX removable disk drive or data cartridge can be an excellent alternative to DAT320 and LTO5 tape drives and cartridges. One of the two RDX Removable Disk Drive cartridges (feature numbers 1106 and 1107) must be specified with each Docking Station feature order.

DVD Sled with DVD-RAM Drive (feature number 1420)

This Drive Sled feature allows the installation of two slim-height DVD optical drives in a single bay of the 7216 Storage Enclosure. Included in this feature is a DVD-RAM optical drive, a DVD-RAM test disk, a half-high drive latch, two slim latches, a slim blank, a drive sled with SATA re-driver card, a SAS interface assembly, and an external SAS cable. A second DVD-RAM drive (feature number 1422) drive may be added to the drive slot in the DVD sled by removing the DVD blank panel.

DVD-RAM Slim Optical Drive (feature number 1422)

The flexibility and compatibility offered in the 7216 SAS DVD-RAM feature makes it an excellent solution for your DVD-RAM read and write requirements. Included with this feature are one DVD-RAM optical drive, a DVD-RAM test disk, a SATA re-driver card, a SAS interface assembly, and an external SAS cable. 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:

- 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)
- Loading tray support of 12 cm and 8 cm disks (8 cm, horizontal only)
- Asynchronous and synchronous data transfer support
- Multimedia compliance (MPC-3)
• CD-DA Digital Audio standard Red Book audio
• DVD-ROM and CD-ROM media readability in Modes 1 or 2, XA, CDDA, and audio formats
• Multisession disc, CD-recordable disc, and CD-RW disc readable

**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 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, user and technical manuals, and documentation. Many other multimedia applications are also well-suited for capture and distribution on DVD and CD disks.

**DAT160 SAS Tape Drive (feature number 5619)**

The DAT160 feature provides a migration and interchange path on IBM Power Systems™ from other DAT technology 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, DAT72, and DDS4 media formats.

The DAT160 SAS tape drive feature includes a test cartridge, a cleaning cartridge, a half-high drive latch, a SAS interface assembly, and an external SAS cable.

**Half-high LTO Ultrium 5 SAS Tape Drive (feature number 8247)**

The Half-high LTO Ultrium 5 feature is a high-performance tape drive with a native capacity of up to 1.5 TB (3.0 TB with 2:1 compression). This fifth 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 5 drive offers a data rate of up to 280 MB/sec with compression.

It also provides read-write compatibility with Ultrium 5 and Ultrium 4 media formats, and read-only compatibility with Ultrium 3 media formats.

The Half-High LTO Ultrium 5 SAS tape drive feature includes a test cartridge, a cleaning cartridge, a half-high drive latch, a SAS interface assembly, and an external SAS cable.

The HHLTO5 tape drive feature on IBM System Storage 7216 Multi-Media Enclosure supports data encryption on the base drive with media meeting LTO consortium specifications and Application Managed Encryption (IEEE P1619.1-2007 compliant AES-GCM 256 bit encryption algorithm). Data encryption is performed after data compression and has a minimal affect on data rate and capacity.

**Note:** Performance on the tape drive features 1402, 5619, 5673, and 8247 offered in the 7216 Multi-Media Enclosure may be limited by other components of the system. Data compression technology is designed to double the amount of data that can be stored on the media, although the actual degree of compression achieved is sensitive to the characteristics of the data that is being compressed.

**Note:** DAT320 SAS Tape Drive (feature number 1402) and DAT320 USB Tape Drive (feature number 5673) are also compatible drive features for the 7216 Multi-Media Enclosure. For more information on these drives, refer to the Hardware Announcements listed in the Reference information section.

**Reference information**

DAT320 SAS Tape Drive (feature number 1402) and DAT320 USB Tape Drive (feature number 5673) are also compatible drive features for the 7216 Multi-Media Enclosure. For more information on these drives, refer to Hardware Announcement...

**Product number**

<table>
<thead>
<tr>
<th>Description</th>
<th>Machine type</th>
<th>Model</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAT160 SAS Tape Drive</td>
<td>7216</td>
<td>1U2</td>
<td>5619</td>
</tr>
<tr>
<td>DAT160 80 GB Data Cartridge</td>
<td>7216</td>
<td>1U2</td>
<td>2516</td>
</tr>
<tr>
<td>Quad External SAS Cable</td>
<td>7216</td>
<td>1U2</td>
<td>5544</td>
</tr>
</tbody>
</table>

**Note:** Since the IBM 7216 is a rack mount storage enclosure, a Rack Device to PDU Cord will be shipped with each order. Additional power cord options on the above Power Cord list can be selected. Refer to the 7216 Model 1U2 Multi-Media Enclosure Setup, Operator and Service Guide (SA23-2271) for specific country availability or contact your IBM representative.

**Model conversions**

Not applicable.

**Feature conversions**

SAS tape and DVD-RAM drive features may be added or converted by the customer by ordering one of the SAS features available on the IBM 7216. An MES order for the desired feature will include an internal SAS cable, an external SAS cable, a cleaning tape, and a test tape or DVD disk. A Quad External SAS Cable may also be ordered by specifying feature #5544.

RDX features may be also added or converted by the customer by ordering one of the USB features available on the IBM 7216. An MES order for the desired features will include an internal USB cable and an external USB cable. An RDX Removable disk drive MES order must include both the RDX Docking Station (Feature #1104) and at least one RDX Disk Drive (Features #1106 and #1107).

The 7216 drive slots may hold the following drive combinations:

- One tape drive (DAT160 SAS or Half-high LTO Ultrium 5 SAS) with second bay empty
- Two tape drives (DAT160 SAS or Half-high LTO Ultrium 5 SAS) in any combination
- One tape drive (DAT160 SAS or Half-high LTO Ultrium 5 SAS) and one DVD-RAM SAS drive sled with one or two DVD-RAM SAS drives
- Up to four DVD-RAM drives
- One tape drive (DAT160 SAS or Half-high LTO Ultrium 5 SAS) in one bay, and one RDX Removable HDD Docking Station in the other drive bay
- One RDX Removable HDD Docking Station and one DVD-RAM SAS drive sled with one or two DVD-RAM SAS drives
- Two RDX Removable HDD Docking Stations

Parts removed during a feature conversion are the property of the customer.

**Publications**

The following publication is shipped with the product. Additional copies will be available after planned availability.
The following publication will be available after planned availability. To order, contact your IBM representative.

<table>
<thead>
<tr>
<th>Title</th>
<th>Order number</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>7216 Model 1U2 Multi-Media Enclosure</td>
<td>SA23-2271</td>
<td>46C1679</td>
</tr>
<tr>
<td>Setup, Operator and Service Guide</td>
<td></td>
<td></td>
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<tr>
<td>(English)</td>
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</table>

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**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.

- Select a country/region/language to begin
- Then click on "Search for publications"
- Type in the "Publication number" and click "Go"

The following publications addressing these new feature announcements will be available after planned availability.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>7216 Model 1U2 Multi-Media Enclosure</td>
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<tr>
<td>Setup, Operator and Service Guide (English)</td>
<td></td>
<td></td>
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<tr>
<td>Safety Information</td>
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<tr>
<td>Warranty Information</td>
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**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.

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Technical information

Specified operating environment

Physical specifications

- Width: 480 mm (18.9 in)
- Depth: 454 mm (17.9 in)
- Height: 43 mm (1.69 in)
- Weight:
  - Empty enclosure - 5.1 kg (11.2 lbs)
  - Typical configuration - 7.1 kg (15.6 lbs)

To assure installability and serviceability in non-IBM industry-standard racks, review the installation planning information for any product-specific installation requirements located in the 7216 Model 1U2 Setup, Operator and Service Guide (Document SA23-2271).

Operating environment

- Temperature: 10 to 40° C (50 to 104° F)
- Relative humidity: 20% to 80% (non-condensing, 23° C (73° F))
- Wet bulb (caloric value): 26° C max
- Electrical voltage: 100 - 127 V ac or 200 - 240 V ac, 50 - 60 Hz, auto-ranging
- Electrical power: 0.047 kVA 140 watt power supply
- Capacity of exhaust: >1.0 cubic meter/minute
- Power Supply: 140 watts
- Noise level: 5.5 Bel idle, 6.2 Bel operating

Hardware requirements

IBM Power Systems support IBM System Storage 7216 Multi-Media Enclosure

The 7216 Multi-Media Enclosure offers two bays for tape, RDX Removable HDDs, or DVD-RAM drives, and can be attached to IBM POWER6 and IBM POWER7 Systems™ as listed below.

<table>
<thead>
<tr>
<th>Feature description</th>
<th>Feature number</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDX Removable Disk Docking Station</td>
<td>1103</td>
</tr>
<tr>
<td>160 GB Removable RDX Drive</td>
<td>1106</td>
</tr>
</tbody>
</table>
500 GB Removable RDX Drive  1107
DAT160 SAS Tape Drive  5619
DVD-RAM Sled w/1 DVD-RAM SAS Drive  1420
DVD-RAM SAS Drive Only  1422
HHLT05 SAS Tape Drive  8247

**Note:** Blank drive or Blank DVD Panels must be installed when slots are empty for proper air flow.

The 7216 will attach to selected IBM POWER6 and IBM POWER7 Systems. A current list of supported host platforms is available at

http://www-03.ibm.com/systems/support/storage/config/ssic/index.jsp

**RDX Removable Disk Drives**

RDX Removable Disk Drives (features numbers 1106 and 1107) require an RDX Drive Docking Station (feature number 1103).

**Cables and Host System Bus adapters**

**SAS Controller Adapter and Cable**

PCI-E DDR Dual-x4 External SAS Controller Adapter (feature numbers 5278 or 5901) must be installed in IBM POWER7 or IBM POWER6 processor-based servers in order to attach to a 7216 Model 1U2 Multi-Media Storage Enclosure.

For each SAS tape drive and DVD-RAM drive feature installed in the 7216, the appropriate external SAS cable will be included for attachment to an IBM Power server.

Up to two 7216 storage enclosure SAS features may be attached per PCI-E DDR Dual-x4 SAS Adapter (feature numbers 5278 or 5901).

An optional Quad External SAS cable is available by specifying feature number 5544 with each 7216 order. The Quad External Cable allows up to four 7216 SAS tape or DVD-RAM features to attach to a single System SAS adapter.

Attaching 7216 to an IBM Power processor-based server through the integrated SAS adapter is not supported.

**7216 USB Adapter and Cable**

The Removable RDX HDD Docking Station feature on the 7216 only supports the USB cable that is provided as part of the feature code. Additional USB hubs, add-on USB cables, or USB cable extenders are not supported.

For each RDX Docking Station feature installed in the 7216, the appropriate external USB cable will be included for attachment to an IBM Power server.

The 7216 RDX Docking Station feature can be connected to the external, integrated USB ports on POWER7 Systems or to the USB ports on 4-Port USB PCI Express® Adapter (feature number 2728).

**Power cords**

Power cords are available by country designation and may be specified by feature number. One Rack Device to PDU Cord will be shipped with each IBM System Storage 7216 Multi-Media Enclosure order. Additional power cords may be specified with the 7216 order from the feature list below.

Power cords available:

<table>
<thead>
<tr>
<th>Description</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.8 m (9 ft) Power Cords:</td>
<td></td>
</tr>
<tr>
<td>- 125V, 10A, U.S./Canada</td>
<td>9800*</td>
</tr>
<tr>
<td>- 250V, 16A (AC), France/Germany</td>
<td>9820*</td>
</tr>
</tbody>
</table>
- 250V, 11A, Denmark 9821*
- 250V, 13A, United Kingdom 9825*
- 250V, 6-16A, Israel 9827*
- 250V, 10A, Switzerland 9828*
- 250V, 16A, South Africa 9829*
- 250V, 10 and 16A, Italy 9830*
- 250V, 10A, Australia 9831*
- 250V, 15A, U.S./Canada 9833*
- 250V, 10A, Uruguay/Argentina 9834*
- 125V, 10A, Taiwan 9835*
- 250V, 6A, China (PRC) 9840*
- 250V, 10A, Taiwan 9841*
- 125V, 12A, Japan 9842*
- 250V, 12A, Japan 9843*
- 250V, 12A, Korea 9844*
- 250V, 10A, India 9845*
- 250V, 10A, Brazil 9847*
- Rack Device to PDU Cord 9848*

**Note:** * Previously announced feature

**Software requirements**

For a current list of host software versions and release levels that support the IBM System Storage 7216 Multi-Media Enclosure, refer to the System Storage Interoperation Center (SSIC) website

http://www-03.ibm.com/systems/support/storage/config/ssic/index.jsp

IBM maintains the latest levels of System Storage tape drive firmware documentation on the Internet. Utilize the Fix Central download portal by accessing the following website

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There are a few pull down menus to navigate to the correct download as follows:

- In the first pull down menu labeled "Product Group" select "Storage Systems".
- In the next pull down menu that appears which is labeled "Product Family" select "Tape Systems".
- With the next pull down menu, "Product Type", select "Tape Device Drivers and Software".
- This will in turn bring up the "Product" menu, which provides selections for "Platform drivers, Tools, or Software".
- Under "Platform drivers", in order to download your driver, select the correct operating system.
- Two more pull down menus will appear with information. Click "Continue".
- The next screen can be used to narrow the search, however just click "Continue" to view what is available.

The IBM Tape Device Drivers Installation and User's Guide can be found at the following website

http://www-01.ibm.com/support/docview.wss?rs=577&uid=ssg1S7002972

**Planning information**

**Customer responsibilities**

The IBM System Storage 7216 Multi-Media Enclosure is designated as customer setup. Customer setup, operation, and service publications are included with all 7216 Storage Enclosure shipments, or are available by ordering the IBM 7216 Model 1U2 Multi-Media Enclosure Setup, Operator and Service Guide (English version document SA23-2271, or available on multiple language CD).

The specific 7216 configuration ordered will arrive fully assembled and with drive firmware installed.
IBM maintains the latest levels of System Storage tape drive firmware levels and storage documentation on the Internet. Obtain them by accessing the IBM Fix Central at

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

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 website 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

**SAS Cables:** At least one SAS external cable will be provided with each tape or DVD-RAM drive specified on the IBM System Storage 7216 Multi-Media Enclosure. Each SAS device attaches to a separate IBM Power System SAS port.

If the availability of IBM Power System Host Bus Adapter ports is limited, a Quad External SAS Cable may be ordered by specifying feature number 5544. The Quad External SAS Cable allows the attach of up to four SAS Tape or DVD-RAM drive devices to a single Power Server adapter port.

**USB Cables:** One USB external cable will be provided with each USB drive or RDX docking station specified on the IBM System Storage 7216 Multi-Media Enclosure. Each USB device attaches to a separate IBM Power System USB port.

Refer to the Hardware requirements section for individual drive and cabling requirements. Customers are advised to use only the cables provided by IBM.

Supplies

**IBM tape supplies for users and remarketers**

IBM System Storage 7216 Multi-Media Enclosure supplies can be ordered directly through AAS using machine type 7216.

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

An IBM part or feature installed during the initial installation of an IBM machine is subject to a full warranty effective on the date of installation of the machine. An IBM part or feature which replaces a previously installed part or feature assumes the remainder of the warranty period for the replaced part or feature. An IBM part or feature added to a machine without replacing a previously installed part or feature is subject to a full warranty effective on its date of installation. Unless specified otherwise, the warranty period, type of warranty service, and service level of a part or feature is the same as the machine it is installed.

Customer setup

Yes

Machine code

Same license terms and conditions as base machine

Optional features warranty period

- Optional feature(s) - One year
An IBM part or feature installed during the initial installation of an IBM machine is subject to a full warranty effective on the date of installation of the machine. An IBM part or feature which replaces a previously installed part or feature assumes the remainder of the warranty period for the replaced part or feature. An IBM part or feature added to a machine without replacing a previously installed part or feature is subject to a full warranty effective on its date of installation. Unless specified otherwise, the warranty period, type of warranty service, and service level of a part or feature is the same as the machine it is installed.

Pricing

For all local charges, contact your IBM representative.

Announcement countries

All European, Middle Eastern, and African countries.

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