



IBM Enterprise and Enterprise Value io3 PCIe Flash Adapters for System x engineered to deliver industry's highest application acceleration and highest density flash medium

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At a glance

Engineered for application acceleration through innovative software advancements, the third-generation Fusion-io flash adapters for System x® can deliver much higher performance than typical solid-state devices at a fraction of the cost and space, making it a perfect fit for a broad range of applications including database and cloud applications, big data analytics, and hyperscale data center workloads.

Benefits include:

- One of industry's largest densities of up to 6.4 TB of flash memory per device.
- High-performance design for ultimate application acceleration for database, VDI, cloud, Hyperscale, and big data.

Overview

IBM® Enterprise and Enterprise Value io3 PCIe Flash Adapters

The third-generation Fusion-io flash adapters are split into two System x product lines: IBM Enterprise Value io3 Flash Adapters for System x and IBM Enterprise io3 Flash Adapters for System x.

These new flash adapters deliver twice the capacity with 6.4 TB being the highest and they also deliver increased performance of previous generation with the fastest write performance of any flash medium currently in the market.

The IBM Enterprise Value io3 Flash Adapters for System x and IBM Enterprise io3 Flash Adapters for System x are covered under IBM warranty. These drives carry a 1-year limited warranty, or when installed in a System x server, these drives assume the system's base warranty. Solid-state devices do have finite write or program/erase cycles (P/E cycles) and are listed as Total Bytes Written (TBW). Refer to the [Limitations](#) section and the device specifications for details.

Features and functions:

- IBM 1250 GB Enterprise Value io3 Flash Adapter for System x (00AE983)
- IBM 1600 GB Enterprise Value io3 Flash Adapter for System x (00AE986)
- IBM 3200 GB Enterprise Value io3 Flash Adapter for System x (00AE989)
- IBM 6400 GB Enterprise Value io3 Flash Adapter for System x (00AE992)

- IBM 1000 GB Enterprise io3 Flash Adapter for System x (00AE995)
- IBM 1300 GB Enterprise io3 Flash Adapter for System x (00AE998)
- IBM 2600 GB Enterprise io3 Flash Adapter for System x (00JY001)
- IBM 5200 GB Enterprise io3 Flash Adapter for System x (00JY004)
- One of the industry's largest densities of up to 6.4 TB of flash memory per device.
- High-performance design for ultimate application acceleration for database, VDI, cloud, Hyperscale, and big data.

Providing that additional peace of mind, your IBM Flash Adapter Enterprise and Enterprise Value purchase is covered under IBM warranty.

Warranty

IBM Enterprise and Enterprise Value Flash Adapter options offer a 1-year limited warranty or system warranty¹.

Solid-state memory cells have an intrinsic, finite number of program/erase cycles that each cell can incur. As a result, solid-state storage has a maximum amount of program/erase cycles to which it can be subjected. IBM's warranty for the solid-state storage is limited to devices that have not reached the maximum guaranteed number of program/erase cycles, as documented in the Official Published Specifications for the product. A drive that reaches this limit may fail to operate according to its specifications.

¹ For information on the IBM Statement of Limited Warranty, visit

http://www-947.ibm.com/systems/support/machine_warranties

Alternatively, this information is available through your IBM representative or reseller. Copies are available upon request. With respect to on-site service, IBM sends a technician after attempting to diagnose and resolve the problem remotely.

Feature exchange

None

Key prerequisites

Enterprise and Enterprise Value flash adapters can be used on supported System x servers with an available PCI Express® expansion slot.

- x3650 M4, MT 7915
- x3550 M4, MT 7914
- x3650 M4 HD, MT 5460
- x3650 M4 BD, MT 5466
- x3850/x3950 X6, MT 3837

Planned availability date

September 16, 2014

Description

IBM Enterprise and Enterprise Value io3 PCIe Flash Adapters for System x

The IBM Enterprise and Enterprise Value io3 PCIe Flash Adapters for IBM System x are designed for the application of solid-state storage to webscale and cloud data centers. Delivering high-speed, low latency, and high efficiency, the new line of flash adapters brings scalable and optimized performance to distributed architectures at low cost.

Features:

- Investment protection
- Ease of use
- Compatibility

Product positioning

None

Reference information

Solid-state memory cells have an intrinsic, finite number of write cycles that each cell can incur. As a result, solid-state storage has a maximum amount of data written that it can be subjected, documented as TBW (Total Bytes Written).

IBM's warranty for the solid-state storage is limited to devices that have not reached the maximum guaranteed number of program/erase cycles, as documented in the notation below. A drive that reaches this limit may fail to operate according to its specifications.

Product number

| Description | Machine | | | Part Number |
|--|---------|-------|--------------|-------------|
| | type | Model | Feature SEO | |
| IBM 1250GB Enterprise Value io3 Flash Adapter for System x | 3331 | HC1 | ARYK 00AE983 | 00AE983 |
| IBM 1600GB Enterprise Value io3 Flash Adapter for System x | 3331 | HC1 | ARYL 00AE986 | 00AE986 |
| IBM 3200GB Enterprise Value io3 Flash Adapter for System x | 3331 | HC1 | ARYM 00AE989 | 00AE989 |
| IBM 6400GB Enterprise Value io3 Flash Adapter for System x | 3331 | HC1 | ARYN 00AE992 | 00AE992 |
| IBM 1000GB Enterprise io3 Flash Adapter for System x | 3331 | HC1 | ARYP 00AE995 | 00AE995 |
| IBM 1300GB Enterprise io3 Flash Adapter for System x | 3331 | HC1 | ARYQ 00AE998 | 00AE998 |
| IBM 2600GB Enterprise io3 Flash Adapter for System x | 3331 | HC1 | ARYR 00JY001 | 00JY001 |
| IBM 5200GB Enterprise io3 Flash Adapter for System x | 3331 | HC1 | ARYS 00JY004 | 00JY004 |

The following are features already announced for the 3331, 3837, 5460, 5466, 7914, 7915 machine types:

| Description | MT | Model | Feature |
|--|------|---|---------|
| IBM 1250GB Enterprise Value io3 Flash Adapter for System x | 3331 | HC1 | ARYK |
| IBM 1250GB Enterprise Value io3 Flash Adapter for System x | 3837 | AC1 AC2 AC3 AC4 AC5 AC6 AC7 MC1 MC2 | |
| IBM 1250GB Enterprise Value io3 Flash Adapter for System x | 5460 | AC1 MC1 | |
| IBM 1250GB Enterprise Value io3 Flash Adapter for System x | 5466 | AC1 MC1 | |
| IBM 1250GB Enterprise Value io3 Flash Adapter for System x | 7914 | AC1 MC1 | |
| IBM 1250GB Enterprise Value io3 Flash Adapter for System x | 7915 | AC1 MC1 | |
| IBM 1600GB Enterprise Value io3 Flash Adapter for System x | 3331 | HC1 | ARYL |
| IBM 1600GB Enterprise Value io3 Flash Adapter for System x | 3837 | AC1 AC2 AC3 AC4 AC5 AC6 AC7 MC1 MC2 | |
| IBM 1600GB Enterprise Value io3 Flash Adapter for System x | 5460 | AC1 MC1 | |
| IBM 1600GB Enterprise Value io3 Flash Adapter for System x | 5466 | AC1 MC1 | |
| IBM 1600GB Enterprise Value io3 Flash Adapter for System x | 7914 | AC1 MC1 | |
| IBM 1600GB Enterprise Value io3 Flash Adapter for System x | 7915 | AC1 MC1 | |
| IBM 3200GB Enterprise Value io3 Flash Adapter for System x | 3331 | HC1 | ARYM |
| IBM 3200GB Enterprise Value io3 Flash Adapter for System x | 3837 | AC1 AC2 AC3 AC4 AC5 AC6 AC7 MC1 MC2 | |
| IBM 3200GB Enterprise Value io3 Flash Adapter for System x | 5460 | AC1 MC1 | |
| IBM 3200GB Enterprise Value io3 Flash Adapter for System x | 5466 | AC1 MC1 | |
| IBM 3200GB Enterprise Value io3 Flash Adapter for System x | 7914 | AC1 MC1 | |
| IBM 3200GB Enterprise Value io3 Flash Adapter for System x | 7915 | AC1 MC1 | |

| | | | |
|--|------|---|------|
| IBM 6400GB Enterprise Value io3 Flash Adapter for System x | 3331 | HC1 | ARYN |
| IBM 6400GB Enterprise Value io3 Flash Adapter for System x | 3837 | AC1 AC2 AC3 AC4 AC5 AC6 AC7 MC1 MC2 | |
| IBM 6400GB Enterprise Value io3 Flash Adapter for System x | 5460 | AC1 MC1 | |
| IBM 6400GB Enterprise Value io3 Flash Adapter for System x | 5466 | AC1 MC1 | |
| IBM 6400GB Enterprise Value io3 Flash Adapter for System x | 7914 | AC1 MC1 | |
| IBM 6400GB Enterprise Value io3 Flash Adapter for System x | 7915 | AC1 MC1 | |
| IBM 1000GB Enterprise io3 Flash Adapter for System x | 3331 | HC1 | ARYP |
| IBM 1000GB Enterprise io3 Flash Adapter for System x | 3837 | AC1 AC2 AC3 AC4 AC5 AC6 AC7 MC1 MC2 | |
| IBM 1000GB Enterprise io3 Flash Adapter for System x | 5460 | AC1 MC1 | |
| IBM 1000GB Enterprise io3 Flash Adapter for System x | 5466 | AC1 MC1 | |
| IBM 1000GB Enterprise io3 Flash Adapter for System x | 7914 | AC1 MC1 | |
| IBM 1000GB Enterprise io3 Flash Adapter for System x | 7915 | AC1 MC1 | |
| IBM 1300GB Enterprise io3 Flash Adapter for System x | 3331 | HC1 | ARYQ |
| IBM 1300GB Enterprise io3 Flash Adapter for System x | 3837 | AC1 AC2 AC3 AC4 AC5 AC6 AC7 MC1 MC2 | |
| IBM 1300GB Enterprise io3 Flash Adapter for System x | 5460 | AC1 MC1 | |
| IBM 1300GB Enterprise io3 Flash Adapter for System x | 5466 | AC1 MC1 | |
| IBM 1300GB Enterprise io3 Flash Adapter for System x | 7914 | AC1 MC1 | |
| IBM 1300GB Enterprise io3 Flash Adapter for System x | 7915 | AC1 MC1 | |
| IBM 2600GB Enterprise io3 Flash Adapter for System x | 3331 | HC1 | ARYR |

| | | | |
|---|------|---|------|
| IBM 2600GB Enterprise io3 Flash Adapter for System x | 3837 | AC1 AC2 AC3 AC4 AC5 AC6 AC7 MC1 MC2 | |
| IBM 2600GB Enterprise io3 Flash Adapter for System x | 5460 | AC1 MC1 | |
| IBM 2600GB Enterprise io3 Flash Adapter for System x | 5466 | AC1 MC1 | |
| IBM 2600GB Enterprise io3 Flash Adapter for System x | 7914 | AC1 MC1 | |
| IBM 2600GB Enterprise io3 Flash Adapter for System x | 7915 | AC1 MC1 | |
| IBM 5200GB Enterprise io3 Flash Adapter for System x | 3331 | HC1 | ARYS |
| IBM 5200GB Enterprise io3 Flash Adapter for System x | 3837 | AC1 AC2 AC3 AC4 AC5 AC6 AC7 MC1 MC2 | |
| IBM 5200GB Enterprise io3 Flash Adapter for System x | 5460 | AC1 MC1 | |
| IBM 5200GB Enterprise io3 Flash Adapter for System x | 5466 | AC1 MC1 | |
| IBM 5200GB Enterprise io3 Flash Adapter for System x | 7914 | AC1 MC1 | |
| IBM 5200GB Enterprise io3 Flash Adapter for System x | 7915 | AC1 MC1 | |

Model conversions

None

Feature conversions

None

Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld® ID and password are required (use IBM ID).

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=114-138>

Publications

Publications are shipped with the announced product.

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

<http://publib14.boulder.ibm.com/infocenter/systems>

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.

Displayable softcopy publications: None

Source file publications: None

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

<http://www.ibm.com/services/learning/>

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

System x support services

Recommended core technical support

When you buy IBM System x technology, include the support services you need -- to help keep both your hardware and software working for you, day after day, at peak performance. It is your first step toward helping to protect your investment and sustain high levels of system availability. We offer service-level and response-time options to fit your business needs. And we will help you get started with a core support package that includes:

- **Continuous system monitoring**

Electronic monitoring that helps speed up problem-solving with automated, early detection of potential problems and system errors.

- **Hardware maintenance**

World-class remote and on-site hardware problem determination and repair services.

- **Software technical support**

Access to help line calls for fast, accurate answers to your questions during installation and throughout ongoing operations.

For more information, visit

<http://www.ibm.com/servers/eserver/xseries/services.html>

Technical information

Specified operating environment

Physical specifications

- IBM 1250 GB, 1600 GB, and 3200 GB Enterprise Value io3 Flash Adapters for System x
 - Approximate height: 69 mm (2.7 in.)
 - Approximate width: 167 mm (6.60 in.)
 - Approximate depth: 17.5 mm (0.70 in.)
 - Approximate weight: 152 g (0.335 lb)
- IBM 6400 GB Enterprise Value io3 Flash Adapter for System x
 - Approximate height: 112 mm (4.40 in.)
 - Approximate width: 167 mm (6.60 in.)
 - Approximate depth: 17.5 mm (0.70 in.)
 - Approximate weight: 212 g (0.467 lb)
- IBM 1000 GB, 1300 GB, and 2600 GB Enterprise io3 Flash Adapters for System x
 - Approximate height: 69 mm (2.7 in.)
 - Approximate width: 167 mm (6.60 in.)
 - Approximate depth: 17.5 mm (0.70 in.)
 - Approximate weight: 152 g (0.335 lb)
- IBM 5200 GB Enterprise io3 Flash Adapter for System x
 - Approximate height: 112 mm (4.40 in.)
 - Approximate width: 167 mm (6.60 in.)
 - Approximate depth: 17.5 mm (0.70 in.)
 - Approximate weight: 212 g (0.467 lb)

Shipping dimensions

- IBM 1250 GB, 1600 GB, 3200 GB, and 6400 GB Enterprise Value io3 Flash Adapters for System x
 - Approximate height: 65 mm (2.6 in.)
 - Approximate width: 245 mm (9.6 in.)
 - Approximate depth: 225 mm (8.9 in.)
 - Approximate weight: 421 g (0.928 lb)
- IBM 1000 GB, 1300 GB, 2600 GB, and 5200 GB Enterprise io3 Flash Adapters for System x
 - Approximate height: 65 mm (2.6 in.)
 - Approximate width: 245 mm (9.6 in.)
 - Approximate depth: 225 mm (8.9 in.)

- Approximate weight: 421 g (0.928 lb)

Hardware requirements

The controller must be installed in a selected System x server:

- x3650 M4 MT 7915 / All
- x3650 M4 HD, MT 5460 / All
- x3650 M4 BD, MT 5466 / All
- x3550 M4 MT 7914 / All
- x3850/x3950 X6, MT 3837 / All

Agency approvals

- FCC Title 47, Part 15 Subpart B, Class A
- CAN ICES-3 (A) NMB-3 (A)
- EN 55022: 2010
- EN 61000-3-2: 2006 plus A1:2009 and A2:2009
- EN 61000-3-3: 2008
- EN 55024: 2010
- VCCI V-3/2013.04 Class A & EN 55022: 2010 Class A
- ANSI C63.4: 2009
- BSMI CNS 13438: 2006 Class A
- EN 55022 (2006)A1 (2007) Class A
- AS/NZS CISPR 22: 2009 plus A1:2010
- MSIP-REM-FIO-ioScale3
- EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 and IEC 60950-1:2005 A1:2009
- DIRECTIVE 2011/65/EU
- MIL-STD-810

Standards

None

Operating environment

- Temperature:
 - Operational: 0°C to 55°C (32°F to 131°F) at 0 to 3048 m (0 to 10,000 ft)
 - Non-operational: -40°C to 70°C (-40°F to 158°F)
- Humidity: 5% to 95% (non-condensing)
- Maximum altitude:
 - Operational: 3,048 m (10,000 ft)
 - Non-operational: 9,144 m (30,000 ft)

Homologation

This product is not certified for direct connection by any means whatsoever to interfaces of public telecommunications networks. Certification may be required by law prior to making any such connection. Contact an IBM representative or reseller for any questions.

Hardware requirements

None

Software requirements

The IBM Enterprise Flash Adapter products are supported on the following 64-bit version of these operating systems:

- Windows™ 2008 R2
- Windows 2012, 2012 R2
- Red Hat Enterprise Linux™ 5
- Red Hat Enterprise Linux 6
- Red Hat Enterprise Linux 7
- SUSE Linux Enterprise Server 11
- VMware ESXi 5.1, 5.5

Compatibility

- Support for popular network operating systems
- ServerProven® testing, which verifies servers, HDDs, and the controllers will function properly

For latest compatibility information, visit

<http://www-03.ibm.com/systems/info/x86servers/serverproven/compat/us/>

Note: Some configurations may not be compatible.

Limitations

Solid-state memory cells have an intrinsic, finite number of write cycles that each cell can incur. As a result, solid-state storage has a maximum amount of write cycles to which it can be subjected, documented as Total Bytes Written (TBW).

IBM is not responsible for replacement of hardware that has reached the maximum guaranteed number of write cycles. This limit may be revealed as the device failing to respond to system generated commands or becoming incapable of being written to.

Notes:

- 4 petabytes lifetime writes on the 1250GB IBM Flash Adapter F825 Enterprise Value for System x
- 5.5 petabytes lifetime writes on the 1600GB IBM Flash Adapter F1650 Enterprise Value for System x
- 11 petabytes lifetime writes on the 3200GB IBM Flash Adapter F3200 Enterprise Value for System x
- 22 petabytes lifetime writes on the 6400 GB IBM Flash Adapter F3200 Enterprise Value for System x
- 12 petabytes lifetime writes on the 1000 GB IBM Flash Adapter F825 Enterprise Value for System x
- 16 petabytes lifetime writes on the 1300GB IBM Flash Adapter F1650 Enterprise Value for System x
- 32 petabytes lifetime writes on the 2600GB IBM Flash Adapter F3200 Enterprise Value for System x
- 64 petabytes lifetime writes on the 5200 GB IBM Flash Adapter F3200 Enterprise Value for System x

Note: 1 Peta-Byte = 1024 TeraBytes of writes. Writes are tracked and reported by the adapter's management utility and may be affected by application writes, data patterns, and maintenance designed to maximize data integrity

Additional information is available at

- <http://www-03.ibm.com/systems/x/options/storage/solidstate/adapters.html>

User group requirements

This announcement satisfies or partially satisfies the requirements from one or more of the worldwide user group communities. Groups include COMMON, COMMON Europe, Guide Share Europe (GSE), InterAction (Australia/New Zealand), Japan Guide Share (JGS), and SHARE Inc.

Planning information

Customer responsibilities

The IBM Enterprise and Enterprise Value Flash Adapter products are designed as a customer setup. Customer installation instructions are shipped with each option part.

Cable orders

None

Installability

All IBM Enterprise and Enterprise Value io3 PCIe Flash Adapters for System x require about 20 minutes for installation.

Installation includes unpacking, powering off the server, installing adapter in available, supported PCIe slot, and powering server back on.

Packaging

IBM Enterprise io3 PCIe Flash Adapters

| Product | Package description | Boxes |
|--|---|-------|
| IBM Enterprise and Enterprise Value io3 PCIe Flash Adapters for System x | Option Unit Box | 1 |
| | Contents: | |
| | Flash adapter with 3U bracket 2U bracket, if required One USB Key with documentation One Quick Install Guide One Important Notices One Warranty notice | |

Each of the IBM Flash Adapters is shipped as a single package.

Retail only

Packaging dimensions/weight

- IBM Enterprise Value Flash Adapter
 - Single box (HxDxW): 65 mm (2.6 in.) x 245 mm (9.6 in.) x 225 mm (8.9 in.)
 - Package weight: 421 g (0.928 lb)
- IBM Enterprise Flash Adapter
 - Single box (HxDxW): 65 mm (2.6 in.) x 245 mm (9.6 in.) x 225 mm (8.9 in.)
 - Package weight: 421 g (0.928 lb)

Security, auditability, and control

It is a customer's responsibility to ensure that the server is secure to prevent sensitive data from being removed.

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

IBM Electronic Services

Electronic Service Agent™ and the IBM Electronic Support web portal are dedicated to providing fast, exceptional support to IBM Systems customers. The IBM Electronic Service Agent tool is a no-additional-charge tool that proactively monitors and reports hardware events, such as system errors, performance issues, and inventory. The Electronic Service Agent tool can help you stay focused on your company's strategic business initiatives, save time, and spend less effort managing day-to-day IT maintenance issues. Servers enabled with this tool can be monitored remotely around the clock by IBM Support all at no additional cost to you.

Now integrated into the base operating system of AIX® 5.3, AIX 6.1, and AIX 7.1, Electronic Service Agent is designed to automatically and electronically report system failures and utilization issues to IBM, which can result in faster problem resolution and increased availability. System configuration and inventory information collected by the Electronic Service Agent tool also can be viewed on the secure Electronic Support web portal, and used to improve problem determination and resolution by you and the IBM support team. To access the tool main menu, simply type "smitty esa_main", and select "Configure Electronic Service Agent." In addition, ESA now includes a powerful web user interface, giving the administrator easy access to status, tool settings, problem information, and filters. For more information and documentation on how to configure and use Electronic Service Agent, refer to

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

The IBM Electronic Support portal is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. This portal enables you to gain easier access to IBM resources for assistance in resolving technical problems. The My Systems and Premium Search functions make it even easier for Electronic Service Agent tool-enabled customers to track system inventory and find pertinent fixes.

Benefits

Increased uptime: The Electronic Service Agent tool is designed to enhance the Warranty or Maintenance Agreement by providing faster hardware error reporting and uploading system information to IBM Support. This can translate to less wasted time monitoring the "symptoms," diagnosing the error, and manually calling IBM Support to open a problem record. Its 24 x 7 monitoring and reporting mean no more dependence on human intervention or off-hours customer personnel when errors are encountered in the middle of the night.

Security: The Electronic Service Agent tool is designed to be secure in monitoring, reporting, and storing the data at IBM. The Electronic Service Agent tool securely transmits either via the Internet (HTTPS or VPN) or modem, and can be configured to communicate securely through gateways to provide customers a single point of exit from their site. Communication is one way. Activating Electronic Service Agent does not enable IBM to call into a customer's system. System inventory information is stored in a secure database, which is protected behind IBM firewalls. It is viewable only by the customer and IBM. The customer's business applications or business data is never transmitted to IBM.

More accurate reporting: Since system information and error logs are automatically uploaded to the IBM Support center in conjunction with the service request, customers are not required to find and send system information, decreasing the risk of misreported or misdiagnosed errors. Once inside IBM, problem error data

is run through a data knowledge management system and knowledge articles are appended to the problem record.

Customized support: Using the IBM ID entered during activation, customers can view system and support information in the "My Systems" and "Premium Search" sections of the Electronic Support website at

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

My Systems provides valuable reports of installed hardware and software using information collected from the systems by Electronic Service Agent. Reports are available for any system associated with the customer's IBM ID. Premium Search combines the function of search and the value of Electronic Service Agent information, providing advanced search of the technical support knowledgebase. Using Premium Search and the Electronic Service Agent information that has been collected from your system, customers are able to see search results that apply specifically to their systems.

For more information on how to utilize the power of IBM Electronic Services, contact your IBM Systems Services Representative, or visit

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

Terms and conditions

MES discount applicable

No

Field installable feature

Yes

Warranty period

IBM Enterprise and Enterprise Value Flash Adapter Options offer a 1-year limited warranty or System warranty.

Solid-state memory cells have an intrinsic, finite number of program/erase cycles that each cell can incur. As a result, solid-state storage has a maximum amount of program/erase cycles to which it can be subjected. IBM's warranty for the solid-state storage is limited to devices that have not reached the maximum guaranteed number of program/erase cycles, as documented in the Official Published Specifications for the product. A drive that reaches this limit may fail to operate according to its specifications

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 that 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 are the same as those for the machine in which it is installed.

Customer setup

Yes

Machine code

No license terms apply.

Optional features warranty period

- Optional features: One year

Flash options offer a 1-year limited warranty¹.

- Warranty period: One year
- Service type (IOR/IOE/CCE/CCR): CRU
- Maintenance agreement: No
- Optional upgrade: No

¹

For information on the IBM Statement of Limited Warranty, visit

http://www-947.ibm.com/systems/support/machine_warranties

Alternatively, this information is available through your IBM representative or reseller. Copies are available upon request. With respect to on-site service, IBM sends a technician after attempting to diagnose and resolve the problem remotely.

Prices

For current prices, contact IBM at 888-Shop-IBM (746-7426) or visit

<http://www-03.ibm.com/systems/x/>

To locate the web price, search on the feature number in the Search field.

| Description | SEO number |
|--|------------|
| IBM 1250GB Enterprise Value io3 Flash Adapter for System x | 00AE983 |
| IBM 1600GB Enterprise Value io3 Flash Adapter for System x | 00AE986 |
| IBM 3200GB Enterprise Value io3 Flash Adapter for System x | 00AE989 |
| IBM 6400GB Enterprise Value io3 Flash Adapter for System x | 00AE992 |
| IBM 1000GB Enterprise io3 Flash Adapter for System x | 00AE995 |
| IBM 1300GB Enterprise io3 Flash Adapter for System x | 00AE998 |
| IBM 2600GB Enterprise io3 Flash Adapter for System x | 00JY001 |
| IBM 5200GB Enterprise io3 Flash Adapter for System x | 00JY004 |

The following are features already announced for the 3331 machine type:

| Description | Model Number | Feature Number | Initial/MES/Both/Support |
|--|--------------|----------------|--------------------------|
| IBM 1250GB Enterprise Value io3 Flash Adapter for System x | HC1 | ARYK | MES |
| IBM 1600GB Enterprise Value io3 Flash Adapter for System x | HC1 | ARYL | MES |
| IBM 3200GB Enterprise Value io3 Flash Adapter for System x | HC1 | ARYM | MES |
| IBM 6400GB Enterprise Value io3 Flash Adapter for System x | HC1 | ARYN | MES |
| IBM 1000GB Enterprise io3 Flash Adapter for System x | HC1 | ARYP | MES |
| IBM 1300GB Enterprise io3 Flash Adapter for System x | | | |

| | | | |
|--|-----|------|-----|
| | HC1 | ARYQ | MES |
| IBM 2600GB Enterprise io3 Flash Adapter for System x | | | |
| | HC1 | ARYR | MES |
| IBM 5200GB Enterprise io3 Flash Adapter for System x | | | |
| | HC1 | ARYS | MES |

The following are features already announced for the 3837 machine type:

| Description | Model Number | Feature Number | Initial/MES/Both/Support |
|--|--------------|----------------|--------------------------|
| IBM 1250GB Enterprise Value io3 Flash Adapter for System x | | | |
| | AC1 | ARYK | Initial |
| | AC2 | | Initial |
| | AC3 | | Initial |
| | AC4 | | Initial |
| | AC5 | | Initial |
| | AC6 | | Initial |
| | AC7 | | Initial |
| | MC1 | | Initial |
| | MC2 | | Initial |
| IBM 1600GB Enterprise Value io3 Flash Adapter for System x | | | |
| | AC1 | ARYL | Initial |
| | AC2 | | Initial |
| | AC3 | | Initial |
| | AC4 | | Initial |
| | AC5 | | Initial |
| | AC6 | | Initial |
| | AC7 | | Initial |
| | MC1 | | Initial |
| | MC2 | | Initial |
| IBM 3200GB Enterprise Value io3 Flash Adapter for System x | | | |
| | AC1 | ARYM | Initial |
| | AC2 | | Initial |
| | AC3 | | Initial |
| | AC4 | | Initial |
| | AC5 | | Initial |
| | AC6 | | Initial |
| | AC7 | | Initial |
| | MC1 | | Initial |
| | MC2 | | Initial |
| IBM 6400GB Enterprise Value io3 Flash Adapter for System x | | | |
| | AC1 | ARYN | Initial |
| | AC2 | | Initial |
| | AC3 | | Initial |
| | AC4 | | Initial |
| | AC5 | | Initial |
| | AC6 | | Initial |
| | AC7 | | Initial |
| | MC1 | | Initial |
| | MC2 | | Initial |
| IBM 1000GB Enterprise io3 Flash Adapter for System x | | | |
| | AC1 | ARYP | Initial |
| | AC2 | | Initial |
| | AC3 | | Initial |
| | AC4 | | Initial |
| | AC5 | | Initial |
| | AC6 | | Initial |
| | AC7 | | Initial |
| | MC1 | | Initial |
| | MC2 | | Initial |
| IBM 1300GB Enterprise io3 Flash Adapter for System x | | | |

| | | | |
|--|-----|------|---------|
| | AC1 | ARYQ | Initial |
| | AC2 | | Initial |
| | AC3 | | Initial |
| | AC4 | | Initial |
| | AC5 | | Initial |
| | AC6 | | Initial |
| | AC7 | | Initial |
| | MC1 | | Initial |
| | MC2 | | Initial |
| IBM 2600GB Enterprise io3 Flash Adapter for System x | | | |
| | AC1 | ARYR | Initial |
| | AC2 | | Initial |
| | AC3 | | Initial |
| | AC4 | | Initial |
| | AC5 | | Initial |
| | AC6 | | Initial |
| | AC7 | | Initial |
| | MC1 | | Initial |
| | MC2 | | Initial |
| IBM 5200GB Enterprise io3 Flash Adapter for System x | | | |
| | AC1 | ARYS | Initial |
| | AC2 | | Initial |
| | AC3 | | Initial |
| | AC4 | | Initial |
| | AC5 | | Initial |
| | AC6 | | Initial |
| | AC7 | | Initial |
| | MC1 | | Initial |
| | MC2 | | Initial |

The following are features already announced for the 5460 machine type:

| Description | Model Number | Feature Number | Initial/ MES/ Both/ Support |
|--|--------------|----------------|--------------------------------------|
| IBM 1250GB Enterprise Value io3 Flash Adapter for System x | | | |
| | AC1 | ARYK | Initial |
| | MC1 | | Initial |
| IBM 1600GB Enterprise Value io3 Flash Adapter for System x | | | |
| | AC1 | ARYL | Initial |
| | MC1 | | Initial |
| IBM 3200GB Enterprise Value io3 Flash Adapter for System x | | | |
| | AC1 | ARYM | Initial |
| | MC1 | | Initial |
| IBM 6400GB Enterprise Value io3 Flash Adapter for System x | | | |
| | AC1 | ARYN | Initial |
| | MC1 | | Initial |
| IBM 1000GB Enterprise io3 Flash Adapter for System x | | | |
| | AC1 | ARYP | Initial |
| | MC1 | | Initial |
| IBM 1300GB Enterprise io3 Flash Adapter for System x | | | |
| | AC1 | ARYQ | Initial |
| | MC1 | | Initial |
| IBM 2600GB Enterprise io3 Flash Adapter for System x | | | |
| | AC1 | ARYR | Initial |
| | MC1 | | Initial |
| IBM 5200GB Enterprise io3 Flash Adapter for System x | | | |
| | AC1 | ARYS | Initial |
| | MC1 | | Initial |

The following are features already announced for the 5466 machine type:

| Description | Model Number | Feature Number | Initial/MES/Both/Support |
|--|--------------|----------------|--------------------------|
| IBM 1250GB Enterprise Value io3 Flash Adapter for System x | AC1 MC1 | ARYK | Initial Initial |
| IBM 1600GB Enterprise Value io3 Flash Adapter for System x | AC1 MC1 | ARYL | Initial Initial |
| IBM 3200GB Enterprise Value io3 Flash Adapter for System x | AC1 MC1 | ARYM | Initial Initial |
| IBM 6400GB Enterprise Value io3 Flash Adapter for System x | AC1 MC1 | ARYN | Initial Initial |
| IBM 1000GB Enterprise io3 Flash Adapter for System x | AC1 MC1 | ARYP | Initial Initial |
| IBM 1300GB Enterprise io3 Flash Adapter for System x | AC1 MC1 | ARYQ | Initial Initial |
| IBM 2600GB Enterprise io3 Flash Adapter for System x | AC1 MC1 | ARYR | Initial Initial |
| IBM 5200GB Enterprise io3 Flash Adapter for System x | AC1 MC1 | ARYS | Initial Initial |

The following are features already announced for the 7914 machine type:

| Description | Model Number | Feature Number | Initial/MES/Both/Support |
|--|--------------|----------------|--------------------------|
| IBM 1250GB Enterprise Value io3 Flash Adapter for System x | AC1 MC1 | ARYK | Initial Initial |
| IBM 1600GB Enterprise Value io3 Flash Adapter for System x | AC1 MC1 | ARYL | Initial Initial |
| IBM 3200GB Enterprise Value io3 Flash Adapter for System x | AC1 MC1 | ARYM | Initial Initial |
| IBM 6400GB Enterprise Value io3 Flash Adapter for System x | AC1 MC1 | ARYN | Initial Initial |
| IBM 1000GB Enterprise io3 Flash Adapter for System x | AC1 MC1 | ARYP | Initial Initial |
| IBM 1300GB Enterprise io3 Flash Adapter for System x | AC1 MC1 | ARYQ | Initial Initial |

| | | | |
|--|------------|------|--------------------|
| IBM 2600GB Enterprise io3 Flash Adapter for System x | AC1 MC1 | ARYR | Initial Initial |
| IBM 5200GB Enterprise io3 Flash Adapter for System x | AC1 MC1 | ARYS | Initial Initial |

The following are features already announced for the 7915 machine type:

| Description | Model Number | Feature Number | Initial/ MES/ Both/ Support |
|--|--------------|----------------|--------------------------------------|
| IBM 1250GB Enterprise Value io3 Flash Adapter for System x | AC1 MC1 | ARYK | Initial Initial |
| IBM 1600GB Enterprise Value io3 Flash Adapter for System x | AC1 MC1 | ARYL | Initial Initial |
| IBM 3200GB Enterprise Value io3 Flash Adapter for System x | AC1 MC1 | ARYM | Initial Initial |
| IBM 6400GB Enterprise Value io3 Flash Adapter for System x | AC1 MC1 | ARYN | Initial Initial |
| IBM 1000GB Enterprise io3 Flash Adapter for System x | AC1 MC1 | ARYP | Initial Initial |
| IBM 1300GB Enterprise io3 Flash Adapter for System x | AC1 MC1 | ARYQ | Initial Initial |
| IBM 2600GB Enterprise io3 Flash Adapter for System x | AC1 MC1 | ARYR | Initial Initial |
| IBM 5200GB Enterprise io3 Flash Adapter for System x | AC1 MC1 | ARYS | Initial Initial |

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