



IBM System x 3.5-inch 15,000 rpm 6 Gbps SAS drives offer higher performance options for optimizing storage and data management for IBM System x servers

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At a glance

IBM® 300 GB, 450 GB, and 600 GB SAS 3.5-inch HDDs are available as hot-swap drives. They are RoHS compliant.

IBM 300 GB, 450 GB, and 600 GB 15,000 rpm 6 Gbps 3.5-inch hot-swap SAS HDDs can provide the performance required for extensive storage capacity while providing the flexibility of hot-swapping.

- 15,000 rpm HDDs deliver SAS device reliability and large capacity performance in the IBM HDD family.
- 3.5-inch, slim-line form factor optimizes storage capacity.
- Through use of software utilities, Self-Monitoring, Analysis, and Reporting Technology (S.M.A.R.T.) can alert you of certain impending drive failures so that replacements can be made.
- Hot-swap versions of the HDD options are available.
- One-year warranty included.

Overview

The newest additions to the IBM System x® family of 3.5-inch SAS 15,000 rpm 6 Gbps G2HS drives offer higher performance options and provide a wider selection of choices to satisfy a wide range of applications. These new drives are positioned at the top of the IBM SAS HDD line.

The new 15,000 rpm 300 GB, 450 GB, and 600 GB, 6 Gbps SAS HDDs provide 3.5-inch form factor options. These SAS drives are available as hot-swap versions.

Key features and benefits:

- 15,000 rpm 3.5-inch SAS drives are RoHS compliant
- 15,000 rpm 3.5-inch SAS drives meet client requirements for large capacities and increased speeds in larger form factor
- Speeds up to 15,000 rpm help optimize performance
- Outstanding reliability enables operation in RAID environments without compromising application performance or availability

You can increase your storage and data management effectiveness when you install these new high-performance SAS HDDs in your IBM System x configurations.

Performance and reliability

- SAS compliance enables these HDDs to connect directly to selected System x systems.
- S.M.A.R.T. technology allows software utilities to alert you of certain impending drive failures so replacements can be made before a problem occurs.
- Rigorous testing through the ServerProven® program instills confidence that your storage subsystem is compatible and will function reliably.
- These HDDs include a one-year, limited warranty.

Feature exchange

None

Key prerequisites

IBM System x system with SAS capability.

Planned availability date

July 10, 2012

Description

IBM 300 GB, 450 GB, and 600 GB 15,000 rpm 6 Gbps 3.5-inch hot-swap SAS HDDs

These new 15,000 rpm HDDs provide 3.5-inch form factor options that can be used as hot-swap SAS drives. The new HDD offerings for the IBM System x family of 3.5-inch SAS HDDs are higher performing SAS options and provide a wider selection of choices to satisfy a range of applications. These new drives are positioned at the top of the IBM SAS HDD line based on increased performance.

Key features and benefits include:

- 15,000 rpm speed to optimize performance
- Outstanding reliability that enables operation in RAID environments without compromising application performance or availability
- A 3.5-inch wide, form factor that allows maximum installations in supported System x systems

Configurator support

- Configuration and Options Guide (COG)
- IBM Advanced Solutions Integration Tool (ASIT)

Product positioning

These high-performance 15,000 rpm 6 Gbps SAS HDD options are positioned at the top of the IBM SAS HDD line. These SAS drives are available in a hot-swap version.

These HDDs support entry-level server and workstation applications, such as:

- Transaction processing
- Data mining

- Data warehousing
- Professional video and graphics

Product number

Options (SEOs)

Description	SEO number
IBM 300GB 15K 6 Gbps SAS 3.5" G2HS HDD	49Y6092
IBM 450GB 15K 6 Gbps SAS 3.5" G2HS HDD	49Y6097
IBM 600GB 15K 6 Gbps SAS 3.5" G2HS HDD	49Y6102

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

Description	MT	Model	Feature
IBM 300GB 15K 6 Gbps SAS 3.5" G2HS HDD	3331	HC1	A3DV
IBM 450GB 15K 6 Gbps SAS 3.5" G2HS HDD	3331	HC1	A3DW
IBM 600GB 15K 6 Gbps SAS 3.5" G2HS HDD	3331	HC1	A3DX

The following are new features for the machine types 7158 and 7914, Models AC1 and MC1:

Description	MT	Model	Feature
IBM 300GB 15K 6Gbps SAS 3.5" G2HS HDD	7158	AC1	A3DV
	7914	AC1	MC1
IBM 600GB 15K 6Gbps SAS 3.5" G2HS HDD	7158	AC1	A3DX
	7914	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=112-129>

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/index.html>

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

System x and BladeCenter 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 300 GB 15,000 rpm 6 Gbps SAS 3.5-inch G2HS HDD, IBM 450 GB 15,000 rpm 6 Gbps SAS 3.5-inch G2HS HDD, and IBM 600 GB 15,000 rpm 6 Gbps SAS 3.5-inch G2HS HDD

- Approximate height: 26.2 mm (1.0 in)
- Approximate width: 101.6 mm (4.0 in)
- Approximate depth: 147.0 mm (5.8 in)
- Approximate weight: 690 g (1.540 lb)

Shipping dimensions

- Approximate height: 146 mm (5.8 in)
- Approximate width: 203 mm (8.0 in)
- Approximate depth: 244 mm (9.6 in)
- Approximate weight: 1740 g (3.88 lb)

Agency approvals

- UL
- CSA
- TUV
- CE Mark
- C-Tick Mark
- IEC
- Taiwan (BSMI Certification)
- Korea EMI

Standards

None

Operating environment

- Temperature: 5°C to 60°C (41°F to 140°F) at -60.96 m to 3,048 m (-200 ft to 10,000 ft)
- Relative humidity: 5% to 90% (noncondensing)
- Maximum altitude: 2,133 m (7,000 ft)

Hardware requirements

The HDDs must be installed in selected System x servers.

Software requirements

IBM 300 GB, 450 GB, and 600 GB SAS 3.5-inch HDDs come as hot-swap drives. They are RoHS compliant and are supported with most system operating systems.

For further information, contact your IBM representative.

Compatibility

For latest compatibility information, visit

<http://www.ibm.com/servers/eserver/serverproven/compat/us/>

Note: Some configurations may not be compatible.

Limitations

None

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

IBM 300 GB, 450 GB, and 600 GB SAS 3.5-inch HDDs are available as hot-swap drives and are RoHS compliant.

These new IBM drives are designated as customer setup. Customer installation instructions are shipped with each option part.

Cable orders

None

Installability

IBM 300 GB, 450 GB, and 600 GB SAS 3.5-inch HDDs are available as hot-swap drives and are customer installable.

Installation take approximately 20 minutes.

Installation includes unpacking, attaching customer-provided power cord, setting up, and powering on.

Packaging

IBM 300 GB, 450 GB, and 600 GB 15,000 rpm 6 Gbps HDDs

Product	Package description	Boxes
IBM 300 GB, 450 GB, and 600 GB SAS 3.5-inch G2HS HDDs	Option Unit Box	1
	Contents:	
	Harddrive	
	Installation pub and warranty	
	Safety flyer	

All the SAS HDDs are shipped as a single package. Other items are in zipped bags.

Supplies

For end users: All the SAS HDDs can be purchased through dealers.

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

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 features

Yes

Warranty period

One year.

All SAS 15,000 rpm 6 Gbps 3.5-inch hot-swap HDDs offer a one year limited warranty¹.

- Warranty period: 1 year
- Service type (IOR/IOE/CCE/CCR): CRU
- Maintenance agreement: No

- Optional upgrade: No

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 in.

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

http://www.ibm.com/servers/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.

Customer setup

Yes

Machine code

No license terms apply.

Prices

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

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

Description	Part number
IBM 300GB 15K 6Gbps SAS 3.5" G2HS HDD	49Y6092
IBM 450GB 15K 6Gbps SAS 3.5" G2HS HDD	49Y6097
IBM 600GB 15K 6Gbps SAS 3.5" G2HS HDD	49Y6102

Field install only	Plant install only	MES removal	Cables required
N	N	N	N

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

Description	Model Number	Feature Number	Initial/MES/Both/Support
IBM 300GB 15K 6Gbps SAS 3.5" G2HS HDD	HC1	A3DV	MES
IBM 450GB 15K 6Gbps SAS 3.5" G2HS HDD	HC1	A3DW	MES
IBM 600GB 15K 6Gbps SAS 3.5" G2HS HDD	HC1	A3DX	MES

The following are new features for the machine types 7158 and 7914 Models AC1 and MC1:

Description	Model Number	Feature Number	Initial/MES/Both/Support
IBM 300GB 15K 6Gbps SAS 3.5"	G2HS HDD AC1 MC1	A3DV	Initial Initial
IBM 600GB 15K 6Gbps SAS 3.5"	G2HS HDD AC1 MC1	A3DX	Initial Initial

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