IBM 250 GB, 500 GB, and 1 TB 7,200 rpm NL SATA 2.5-inch hot-swap and simple-swap HDDs offer highest capacity and performance for storage for selected IBM System x servers

Table of contents
1 Overview
2 Key prerequisites
2 Planned availability date
2 Description
3 Product positioning
3 Product number
4 Publications
5 Technical information
8 Terms and conditions
8 Prices
8 Announcement countries

At a glance

IBM® 250 GB, 500 GB, and 1 TB SATA and 1 TB NL SAS HDDs can provide the performance required for extensive storage capacity while providing the flexibility of hot-swap or simple-swap versions.

- 7,200 rpm HDDs deliver SATA device reliability and largest capacity performance in the IBM HDD family.
- 2.5-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 replacements can be made.
- Hot-swap and simple-swap versions HDD options available.
- One-year warranty included.

Overview

As the newest additions to the IBM System x® family of 2.5-inch SATA drives, these new IBM 250 GB, 500 GB, and 1 TB 7200 6 Gbps NL SATA HDDs and 1 TB 7.2K 6 Gbps NL SAS HDDs offer the highest 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 our SATA and NL SAS HDD line.

The new 250 GB, 500 GB, and 1 TB SATA 6 Gbps NL and 1 TB 7.2K 6 Gbps NL SAS HDDs provide 2.5-inch form factor options that are available in hot-swap and simple-swap configurations.

Key features and benefits include:

- Up to 7,200 rpm speed to help optimize performance
- Outstanding reliability that 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 SATA and SAS HDDs in your IBM System x configurations.
Performance

250 GB, 500 GB, and 1 TB performance characteristics include:

- Formatted capacity of 250,000 MB (250 GB)
- Formatted capacity of 500,000 MB (500 GB)
- Formatted capacity of 1,000,000 MB (1 TB)
- Drive-to-host interface that supports up to 6.0 Gb/s burst rate
- Drive media to buffer interface that supports sustained interface data transfers of up to 112 MB/s average
- Spindle speed of 7,200 rpm
- Hot-swap or simple-swap capability
- SAS interface with 1 TB option

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.
- The HDDs come with a one-year, limited warranty.

Key prerequisites

IBM System x system with SATA capability.

Planned availability date

May 5, 2011

Description

IBM 250 GB, 500 GB, and 1 TB 7,200 rpm 6 Gbps NL SATA 2.5-inch hot-swap and simple-swap HDDs

These new 7,200 rpm HDDs provide 2.5-inch form factor options that can be used as hot-swap and simple-swap drives. The new HDD offerings for the IBM System x family of 2.5-inch SATA HDDs are the highest performing SATA options and provide a wider selection of choices to satisfy a range of applications. These new drives are positioned at the top of our SATA and SAS HDD line based on increased performance.

Key features and benefits include:

- 7,200 rpm speed to optimize performance
- Outstanding reliability that enables operation in RAID environments without compromising application performance or availability
- A 2.5-inch wide, NL 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 7,200 rpm 6 Gbps NL SATA and SAS HDD options are positioned at the top of IBM's SATA/SAS HDD line based on the SATA/ SAS technology. They are available in a hot-swap or simple-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

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
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<tbody>
<tr>
<td>IBM 250GB 7.2K 6Gbps NL SATA 2.5&quot; SFF HS HDD</td>
<td>81Y9722</td>
</tr>
<tr>
<td>IBM 250GB 7.2K 6Gbps NL SATA 2.5&quot; SFF SS HDD</td>
<td>81Y9734</td>
</tr>
<tr>
<td>IBM 500GB 7.2K 6Gbps NL SATA 2.5&quot; SFF HS HDD</td>
<td>81Y9726</td>
</tr>
<tr>
<td>IBM 500GB 7.2K 6Gbps NL SATA 2.5&quot; SFF SS HDD</td>
<td>81Y9738</td>
</tr>
<tr>
<td>IBM 1TB 7.2K 6Gbps NL SATA 2.5&quot; SFF HS HDD</td>
<td>81Y9730</td>
</tr>
<tr>
<td>IBM 1TB 7.2K 6Gbps NL SATA 2.5&quot; SFF SS HDD</td>
<td>81Y9742</td>
</tr>
<tr>
<td>IBM 1TB 7.2K 6Gbps NL SAS 2.5&quot; SFF HS HDD</td>
<td>81Y9690</td>
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</table>

Note: The following Pseudo part numbers cannot be ordered as stand-alone parts and can only be ordered as part of a configuration.

Following are Pseudo Options.

<table>
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<tr>
<th>Description</th>
<th>Part number</th>
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<tr>
<td>2.8m, 10A/230V, C13 to CEE7-VII (Europe)</td>
<td>59Y8142</td>
</tr>
<tr>
<td>Power Cord - 2.8m, 10A/250V, C13 to BS 1363/A (UK)</td>
<td>59Y8143</td>
</tr>
<tr>
<td>QLogic 20-port 8Gb SAN Switch Module for IBM BladeCenter®</td>
<td>59Y8145</td>
</tr>
<tr>
<td>QLogic 8Gb Intelligent Pass-thru Module for IBM BladeCenter®</td>
<td>59Y8146</td>
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</table>

Model conversions

None

Feature conversions

None
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


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.

<table>
<thead>
<tr>
<th>Title</th>
<th>Order number</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation Pubs ship with HDDs</td>
<td>None</td>
<td>None</td>
</tr>
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</table>

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


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

Specified operating environment

Physical specifications
IBM 250 GB 7200 6 Gbps NL SATA 2.5-inch SFF HS and SS HDDs

- Approximate height: 14.8 mm (0.583 in)
- Approximate width: 70.0 mm (2.76 in)
- Approximate depth: 100.5 mm (3.957 in)
- Approximate weight: 179 g (0.395 lb)

Shipping dimensions

- Approximate height: 39 mm (1.5 in)
- Approximate width: 115 mm (4.5 in)
- Approximate depth: 160 mm (6.3 in)
- Approximate weight: 1150 g (2.32 lb)

IBM 500 GB 7200 6 Gbps NL SATA 2.5-inch SFF HS and SS HDDs

- Approximate height: 14.8 mm (0.583 in)
- Approximate width: 70.0 mm (2.76 in)
- Approximate depth: 100.5 mm (3.957 in)
- Approximate weight: 183 g (0.403 lb)

Shipping dimensions

- Approximate height: 39 mm (1.5 in)
- Approximate width: 115 mm (4.5 in)
- Approximate depth: 160 mm (6.3 in)
- Approximate weight: 1150 g (2.32 lb)

IBM 1 TB 7200 6 Gbps NL SATA 2.5-inch SFF HS and SS HDD

- Approximate height: 14.8 mm (0.583 in)
- Approximate width: 70.0 mm (2.76 in)
- Approximate depth: 100.5 mm (3.957 in)
- Approximate weight: 200 g (0.441 lb)

Shipping dimensions

- Approximate height: 39 mm (1.5 in)
- Approximate width: 115 mm (4.5 in)
- Approximate depth: 160 mm (6.3 in)
- Approximate weight: 1150 g (2.32 lb)

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**
The new IBM 250 GB, 500 GB, and 1 TB 7,200 rpm SATA HDDs and 1 TB 7.2K NL SAS HDD work with most system operating systems.

For further information, contact your IBM representative.

**Compatibility**
For latest compatibility information, visit


**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**
The new IBM 250 GB, 500 GB, and 1 TB 7.2K NL SATA 2.5-inch HS and SS HDD and 1 TB 7.2K NL SAS HDD products are designated as customer setup. Customer installation instructions are shipped with each option part.

**Cable orders**
None

**Installability**
The IBM 250 GB, 500 GB, and 1 TB NL SATA HDDs require about 20 minutes for installation. Same for the 1 TB NL SAS HDD.

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

**Packaging**

**IBM 200 GB, 500 GB, 1 TB 7,200 NL SATA/SAS 2.5-inch HDDS**

<table>
<thead>
<tr>
<th>Product</th>
<th>Package description</th>
<th>Boxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM 250 GB, 500 GB, 1 TB 7200 NL SATA 2.5-inch HS and SS HDDs</td>
<td>Option Unit Box</td>
<td>1</td>
</tr>
</tbody>
</table>
Contents:

- Hard drive
- Installation pub and warranty
- Safety flyer

The 250 GB, 500 GB, and 1 TB SATA/SAS HDDs are shipped as a single package. Other items are in zipped bags.

Retail only

Packaging dimensions/weight

- Single box (HxDxW): 133 mm (1.5 in) 63 mm (4.5 in) 174 mm (6.3 in)
- Package weight: 0.36 kg (2.32 lb)

Note: All measurements are approximate.

Supplies

For end users

IBM 250 GB, 500 GB, and 1 TB 7,200 rpm NL SATA 2.5-inch HS and SS HDDs and 1 TB NL SAS HDD 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.

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 features*
Yes

*Warranty period*
One year

250 GB, 500 GB, and 1 TB 7,200 rpm 6 Gbps NL SATA 2.5-inch HS and SS HDDs and 1 TB 7.2K 6 Gbps NL SAS HDD offer a one year warranty.

- Warranty period: 1 yr.
- 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.

¹ For information on IBM's Statement of Limited Warranty, contact your local IBM representative. Copies are available upon request.

*Customer setup*
Yes

*Machine code*
No license terms apply.

**Prices**

For all local charges, contact your IBM representative.

**Announcement countries**

All European, Middle Eastern, and African countries.

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