



# IBM 2 TB 7.2K NL SATA 3.5-inch HS and SS HDDs offer highest capacity and performance for storage for selected System x servers

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## At a glance

IBM® 2 TB SATA HDDs can provide the performance required for extensive storage capacity while providing the flexibility to use both HS and SS.

- 2 TB HDD capacity
- 7,200-rpm HDDs -- Deliver SATA device reliability and largest capacity performance in the IBM HDD family
- 3.5-inch, slim-line form factor -- Optimizes storage capacity
- S.M.A.R.T. Technology -- Through use of software utilities, can alert you of certain impending drive failures, so replacements can be made
- Available hot-swap and simple-swap versions
- One-year warranty

## Overview

The addition of 2 TB HDD offerings to the IBM System x® family of 3.5-inch SATA drives offers the highest performance options and provides a wider selection of choices to satisfy a wide range of applications. These new drives are positioned at the top of our SATA HDD line.

These two 2 TB SATA NL HDDs provide 3.5-inch form factor options that are available as hot-swap or 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 put together a winning combination for data-storage applications when you install these new high-performance SATA HDDs in your IBM System x configurations.

### Performance

2 TB performance characteristics include:

- Formatted capacity of 2,000,000 MB
- Drive to host interface that supports up to 3.0 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
- Average latency of 4.17 ms
- Hot-swap or simple-swap capability
- SAS interface with dual port option

### **Reliability**

- SAS compliance enables these HDDs to connect directly into 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<sup>1</sup>.

<sup>1</sup> For information on the IBM Statement of Limited Warranty, visit

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

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.

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### **Key prerequisites**

System x system with SATA capability

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### **Planned availability date**

January 20, 2010

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### **Description**

#### **IBM 2 TB 7,200 RPM NL SATA 3.5-inch HDDs (42D0782, 42D0787)**

These two 7,200 rpm 2 TB HDDs provide 3.5-inch form factor options that can be used as hot-swap or simple-swap drives. These new 7,200 rpm HDD offerings for the IBM System x family of 3.5-inch SATA HDDs are the highest performing SATA options and will provide a wider selection of choices to satisfy a range of applications. These new drives are positioned at the top of our SATA 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 3.5-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)

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## Product positioning

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These high-performance 2 TB 7,200 rpm NL SATA HDD options are positioned at the top of IBM's SATA HDD line based on the SATA technology. They are available in either 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

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## Product number

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### Single Entity Offerings (SEOs)

Description	SEO number
IBM 2TB 7200 NL SATA 3.5" HS HDD	42D0782
IBM 2TB 7200 NL SATA 3.5" SS HDD	42D0787

The MES entries for MT 3331

Description	MT	Model	Feature
IBM 2TB 7200 NL SATA 3.5" HS HDD	3331	HC1	5415
IBM 2TB 7200 NL SATA 3.5" SS HDD	3331	HC1	5416

The following are features already announced for the 3331, 4190, 4192, 4193, 4194, 4251, 4252, 4367, 4368, 7327, 7328, 7836, 7837, 7839, 7978, and 7979 machine types:

Description	MT	Model	Feature
IBM 2TB 7200 NL SATA 3.5" HS HDD	4190	AC1	5415
IBM 2TB 7200 NL SATA 3.5" HS HDD	4192	AC1	MC1
IBM 2TB 7200 NL SATA 3.5" HS HDD	4193	AC1	MC1
IBM 2TB 7200 NL SATA 3.5" HS HDD	4194	AC1	MC1
IBM 2TB 7200 NL SATA 3.5" HS HDD	4251	AC1	MC1
IBM 2TB 7200 NL SATA 3.5" HS HDD	4252	AC1	MC1
IBM 2TB 7200 NL SATA 3.5" HS HDD	4367	AC1	MC1
IBM 2TB 7200 NL SATA 3.5" HS HDD	4368	AC1	MC1
IBM 2TB 7200 NL SATA 3.5" HS HDD	7327	AC1	MC1
IBM 2TB 7200 NL SATA 3.5" HS HDD	7328	AC1	MC1
IBM 2TB 7200 NL SATA 3.5" HS HDD	7836	AC1	MC1
IBM 2TB 7200 NL SATA 3.5" HS HDD	7837	AC1	MC1
IBM 2TB 7200 NL SATA 3.5" HS HDD	7839	AC1	MC1
IBM 2TB 7200 NL SATA 3.5" HS HDD	7978	AC1	MC1
IBM 2TB 7200 NL SATA 3.5" HS HDD	7979	AC1	MC1

		MC1	
IBM 2TB 7200 NL SATA 3.5" SS HDD	4190	AC1	5416
		MC1	
IBM 2TB 7200 NL SATA 3.5" SS HDD	4192	AC1	
		MC1	
IBM 2TB 7200 NL SATA 3.5" SS HDD	4193	AC1	
		MC1	
IBM 2TB 7200 NL SATA 3.5" SS HDD	4194	AC1	
		MC1	
IBM 2TB 7200 NL SATA 3.5" SS HDD	4251	AC1	
		MC1	
IBM 2TB 7200 NL SATA 3.5" SS HDD	4252	AC1	
		MC1	
IBM 2TB 7200 NL SATA 3.5" SS HDD	4367	AC1	
		MC1	
IBM 2TB 7200 NL SATA 3.5" SS HDD	4368	AC1	
		MC1	
IBM 2TB 7200 NL SATA 3.5" SS HDD	7327	AC1	
		MC1	
IBM 2TB 7200 NL SATA 3.5" SS HDD	7328	AC1	
		MC1	
IBM 2TB 7200 NL SATA 3.5" SS HDD	7836	AC1	
		MC1	
IBM 2TB 7200 NL SATA 3.5" SS HDD	7837	AC1	
		MC1	
IBM 2TB 7200 NL SATA 3.5" SS HDD	7839	AC1	
		MC1	

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## 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>

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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.

Installation pubs ship with the HDDs.

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## Services

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### 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.

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## Technical information

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### Specified operating environment

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#### *Physical specifications*

IBM 2 TB 7200 NL SATA 3.5-inch HS HDD - 42D0782

IBM 2 TB 7200 NL SATA 3.5-inch SS HDD - 42D0787

- 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: 750 g (1.7 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)

#### **Hardware requirements**

The HDDs must be installed in selected System x servers.

**Note:** There are limitations for use of the new 2 TB options with Adaptec SAS/SATA controllers.

#### **Agency approvals**

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

#### **Standards**

None

#### **Operating environment**

Temperature:

- 10 to 35 degrees C (50 to 95 F) at 0 to 914 m (0 to 3,000 ft)
- 10 to 32 degrees C (50 to 90 degrees F) at 914 to 2133 m (3,000 to 7,000 ft)

Relative humidity: 8% to 80% (noncondensing)

Maximum altitude: 2,133 m (7,000 ft)

### ***Hardware requirements***

None

### ***Software requirements***

The new IBM 2 TB 7,200 rpm SATA HDDs work with most system operating systems.

**Note:** There may be some GPT partitioning issue with LSI SAS controllers when installing Linux® based OSs on to the 2 TB capacity.

For further information, contact your IBM representative.

### ***Compatibility***

For the 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**

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### ***Customer responsibilities***

The new IBM 2 TB 7.2K NL SATA 3.5-inch HS and SS HDD products are designated as customer setup. Customer installation instructions are shipped with each option part.

### ***Cable orders***

None

### ***Installability***

The IBM 2 TB SATA HDDs require about 20 minutes for installation.

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

### ***Packaging***

## **IBM 2 TB 7,200 NL SATA 3.5-inch HS and SS HDDs**

Product	Package description	Boxes
IBM 2 TB 7200 NL SATA 3.5-inch HS and SS HDDs	Option Unit Box	1

Contents:

Hard drive  
 Installation pub and warranty  
 Safety flyer

The 2 TB SATA HDDs are shipped as a single package. Other items are in zipped bags. **Retail only.**

*Packaging dimensions and weight*

- Single box (HxDxW): 39 mm (1.5 in) x 115 mm (4.5 in) x 160 mm (6.3 in)
- Package weight: 1150 g (2.32 lb)

**Note:** All measurements are approximate.

**Supplies**

**For end users:**

IBM 2 TB 7,200 rpm NL SATA 3.5-inch HS and SS HDDs can be purchased through dealers.

**Security, auditability, and control**

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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.

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**IBM Electronic Services**

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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>

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## Terms and conditions

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### **Field installable features**

Yes

### **Warranty period**

One year

2 TB 7,200 rpm NL SATA 3.5-inch HS and SS HDDs offer a one year warranty<sup>1</sup>.

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

If installed in system when purchased, these features assume the same warranty or maintenance terms as the machine in which they are installed for the remainder of the warranty or maintenance period for such machine.

### **Customer setup**

Yes

### **Machine code**

No license terms apply.

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## Pricing

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

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

Prices are subject to change without notice.

GST, QST, and Sales Taxes, where applicable, are extra.

Description		Part number			
IBM 2TB 7200 NL SATA 3.5" HS HDD		42D0782			
IBM 2TB 7200 NL SATA 3.5" SS HDD		42D0787			
Field install only	Plant install only	MES removal	MES removal charge	MES add charge	Cables required
N	N	N			N

If field installed on a purchased machine, parts removed or replaced become the property of IBM and must be returned.

### **Trade-marks**

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