



Installing or replacing DS5100 or DS5300 memory

This document provides the installation and replacement instructions and the safety, warranty, environmental, and electronic emission notices for the IBM® System Storage® DS5100 and DS5300 cache and flash memory options. Store this document with your other product documentation for future reference.

Safety information

The multilingual *IBM Safety Information* document is provided on the *IBM Documentation* CD that came with your DS5100 or DS5300 storage controller. Before you install or replace cache or flash memory, review the Safety information that came with the storage controller and the following notice:

Statement 1:



DANGER

Electrical current from power, telephone, and communication cables is hazardous.

To avoid a shock hazard:

- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- Connect all power cords to a properly wired and grounded electrical outlet.
- Connect to properly wired outlets any equipment that will be attached to this product.
- When possible, use one hand only to connect or disconnect signal cables.
- Never turn on any equipment when there is evidence of fire, water, or structural damage.
- Disconnect the attached power cords, telecommunications systems, networks, and modems before you open the device covers, unless instructed otherwise in the installation and configuration procedures.
- Connect and disconnect cables as described in the following table when installing, moving, or opening covers on this product or attached devices.

To Connect:	To Disconnect:
1. Turn everything OFF. 2. First, attach all cables to devices. 3. Attach signal cables to connectors. 4. Attach power cords to outlet. 5. Turn device ON.	1. Turn everything OFF. 2. First, remove power cords from outlet. 3. Remove signal cables from connectors. 4. Remove all cables from devices.

Getting started

The DS5100 and DS5300 controller cache options support two types of memory: cache memory DIMMs and flash memory modules. The flash memory module is used to store the data in the cache memory DIMMs in the event of power failure to the DS5100/DS5300 storage subsystem. When the power is restored, the data in the Flash memory module will be written to disks preventing the loss of data in cache memory in the event of the power outage. The items that ship with the memory upgrade option vary, based on the memory upgrade option that you purchased.

Important:

1. Most cache memory upgrades require an equivalent capacity flash memory upgrade. In the event of a power outage, flash memory is used to store the cache memory information.
2. The minimum controller firmware version required to support the 32 GB and 64 GB cache options is firmware version 7.60.13.05.
3. The storage subsystem must be offline when you upgrade the cache memory. Schedule storage subsystem downtime to upgrade the cache memory.
4. Replacing a failed cache memory DIMM or a flash memory module does not required the storage subsystem to be offline.

To install or replace a cache memory DIMM or a flash memory module, you must remove the DS5100 or DS5300 controller from its bay, insert or replace the memory, and reinstall the controller. See Table 1 for an overview of the cache memory upgrade installation procedure and to verify that you have all of the items that you need to complete the installation; then, use the instructions in “Installing or replacing cache and flash memory” on page 3 to install the memory upgrade.

Note: If you are replacing defective memory, see “FRU part numbers” on page 9 to verify that you received the correct replacement part.

Table 1. Memory upgrade option contents and installation overview.

Memory upgrade	Memory upgrade option contents	Memory upgrade installation overview
8 GB to 16 GB	• 1 GB cache memory DIMMs (8) • 4 GB flash memory modules (2) • Installation instructions (1) (this document)	1. Install the 1 GB cache DIMMs in the empty cache memory slots. 2. Install the 4 GB flash memory modules in the USB 4 flash memory slots.
8 GB to 32 GB	• 2 GB cache memory DIMMs (16) • 4 GB flash memory modules (6) • Installation instructions (1) (this document)	1. Remove all of the 1 GB cache DIMMs. 2. Install the 2 GB cache DIMMs in all eight cache memory DIMM slots. 3. Install the 4 GB flash memory modules in the USB 1, USB 2, and USB 4 flash memory slots.
8 GB to 64 GB	• 4 GB cache memory DIMMs (16) • 8 GB flash memory modules (8) • Installation instructions (1) (this document)	1. Remove all of the 1 GB cache DIMMs. 2. Install the 4 GB cache DIMMs in all eight cache memory DIMM slots. 3. Remove the 4 GB flash memory modules. 4. Install the 8 GB flash memory modules in the USB 1, USB 2, USB 3, and USB 4 flash memory slots.
16 GB to 32 GB	• 2 GB cache memory DIMMs (16) • 4 GB flash memory modules (4) • Installation instructions (1) (this document)	1. Remove all of the 1 GB cache DIMMs. 2. Install the 2 GB cache DIMMs in all eight cache memory DIMM slots. 3. Install the 4 GB flash memory modules in the USB 1 and USB 2 flash memory slots.
16 GB to 64 GB	• 4 GB cache memory DIMMs (16) • 8 GB flash memory modules (8) • Installation instructions (1) (this document)	1. Remove all of the 1 GB cache DIMMs. 2. Install the 4 GB cache DIMMs in all eight cache memory DIMM slots. 3. Remove the 4 GB flash memory modules. 4. Install the 8 GB flash memory modules in the USB 1, USB 2, USB 3, and USB 4 flash memory slots.

Table 1. Memory upgrade option contents and installation overview. (continued)

Memory upgrade	Memory upgrade option contents	Memory upgrade installation overview
32 GB to 64 GB	• 4 GB cache memory DIMMs (16) • 8 GB flash memory modules (8) • Installation instructions (1) (this document)	1. Remove all of the 2 GB cache DIMMs. 2. Install the 4 GB cache DIMMs in all eight cache memory DIMM slots. 3. Remove the 4 GB flash memory modules. 4. Install the 8 GB flash memory modules in the USB 1, USB 2, USB 3, and USB 4 flash memory slots.

Installing or replacing cache and flash memory

To install or replace cache or flash memory, complete the following steps:

1. If you are upgrading the cache memory, schedule downtime for the upgrade because the cache memory upgrade must be performed with the storage subsystem enclosure power turned off. Once the storage subsystem can be powered off, power it off and wait for all of the LEDs and the seven-segment display on the back of the controllers to become unlit. Proceed to step 3
2. If you are replacing a failed cache memory DIMM or flash memory module, record the information from the seven-segment display on the rear of the controller tray.

Notes:

- a. The seven-segment display provides information that identifies the memory slot of an unresponsive memory DIMM or module.
- b. An L8 display on the seven-segment display indicates that an invalid cache configuration exists.
- c. A CF display on the seven-segment display indicates a component failure, which is followed by a display of the slot number for the component. The slot number uses alphanumeric characters from C1 to C8 to identify the location. C1 is the cache memory slot on the left, and C8 is the cache memory slot on the right.
- d. A CF display followed by alphanumeric characters from F1 to F4 indicates a flash memory module location.

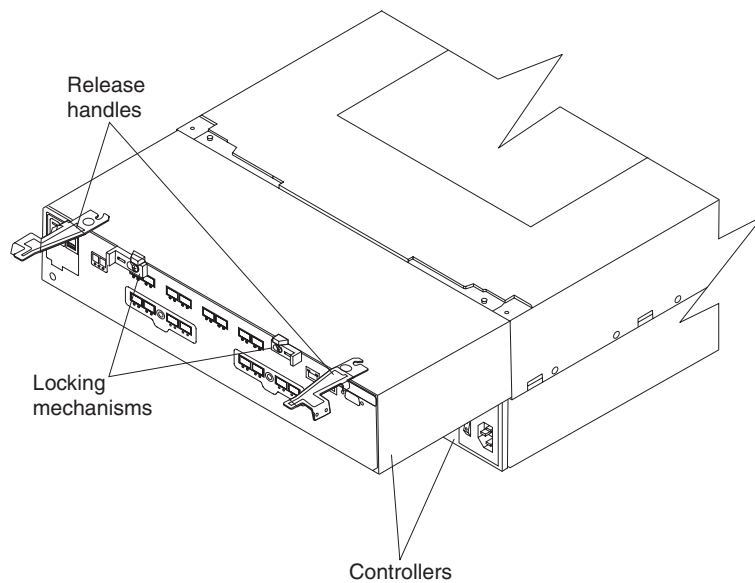
After recording the location of the failed cache memory DIMM or flash memory module, take the controller offline using the appropriate menu function in the Subsystem Management window of the DS Storage Manager client program and, if necessary, wait for the Service Action Allowed LED to turn on.

Note: The DS Storage Manager contains the status for the cache memory DIMMs. This information is displayed as part of the controller properties information, as well as part of the profile.

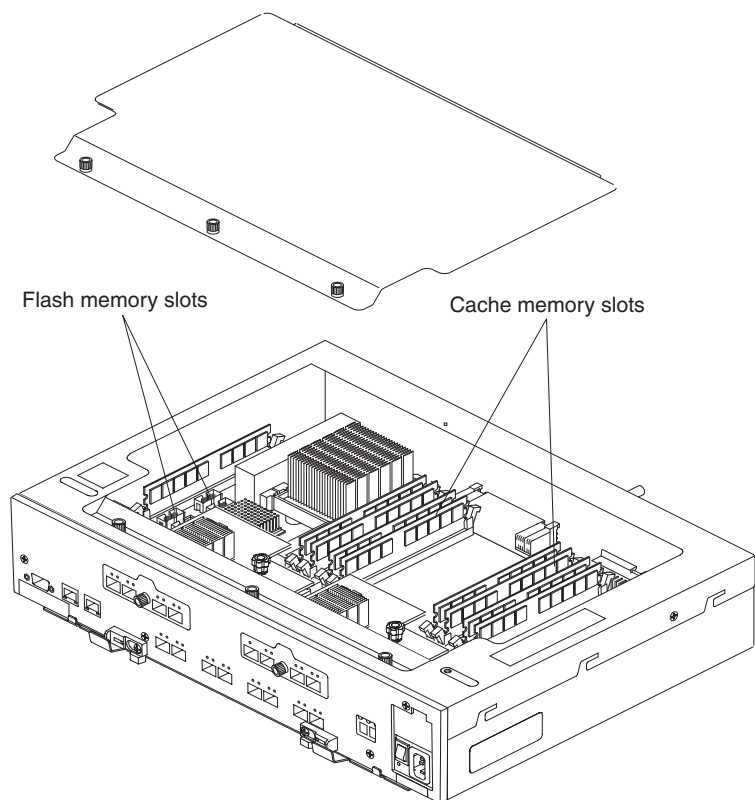
3. Put on antistatic protection.

Attention: To avoid potential hardware damage, always use proper antistatic protection when handling the memory and bay components.

4. Label each fiber-optic cable that is attached to the controller so that you can reconnect the fiber-optic cables correctly after the controller is reinstalled.
5. Turn off the Power switch on the controller.
6. Unplug the power cord from the controller, and set the power cord aside.
7. Disconnect all host interface cables from the controller.
8. Disconnect all drive interface cables from the controller.
9. Remove the controller. (For more information about removing and reinserting the controller, see the "Releasing and locking a component lever" section of the *IBM System Storage DS5100 and DS5300 Storage Subsystems Installation, User's, and Maintenance Guide*.)
 - a. Unlock and pull the release handles outward to release the controller.
 - b. Using the release handles and then your hands, slide the controller out of the controller bay.



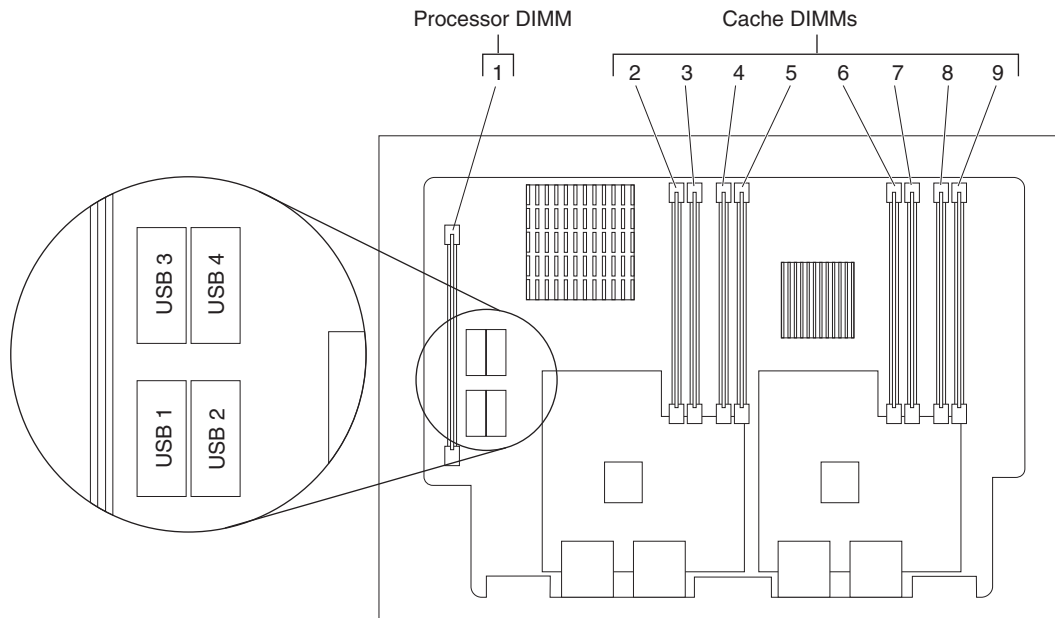
10. Set the controller on a flat, static-free surface with the release handles down and the host interface ports up.
11. Remove the three thumbscrews that secure the top cover to the controller; then, remove the top cover.



12. Locate the memory DIMM or module that you want to replace, or identify the slot location for a new memory DIMM or module. (If this is a cache memory upgrade, see Table 1 on page 2 to determine which slots to use, based on the upgrade option that you are installing.)

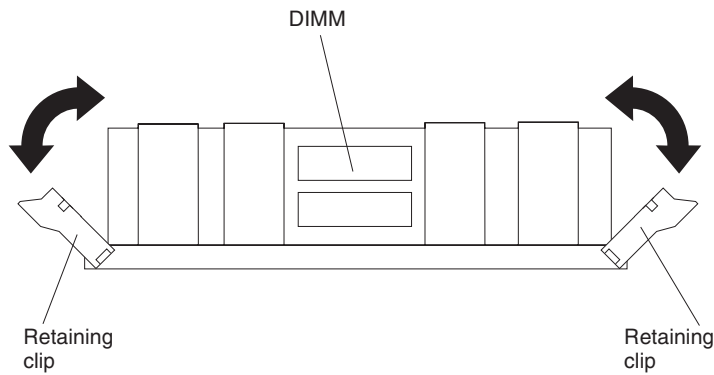
Notes:

- a. The cache memory DIMM slots are numbered from 2-9 on the service label that is attached to the top of the controller. However, the cache memory slots are numbered 1-8 on the memory circuit board.
- b. You must replace memory DIMMs and modules with memory DIMMs and modules of the same size. A cache memory size of 4 GB occupies only slots 3, 5, 6, and 8 as they are numbered on the system service label, or slots 2, 4, 5, and 6 as they are numbered on the memory circuit board. A 4 GB cache memory controller will have only the 4 GB flash memory module in slot USB 3.

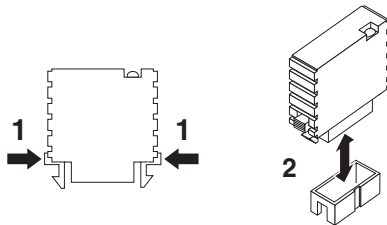


A cache memory upgrade will either replace 1 GB cache memory DIMMs with a 2 GB or 4 GB cache memory DIMM, or add 1 GB cache memory DIMMs to the empty cache memory slots. A cache memory upgrade also consists of installing additional 4 GB or 8 GB flash memory modules in the empty flash memory slots, or replacing 4 GB flash memory modules with 8 GB flash memory modules to provide backup of the additional cache memory. See Table 1 on page 2 for information about the contents of the DS5100 and DS5300 memory upgrade options and for an overview of the memory upgrade installation procedure.

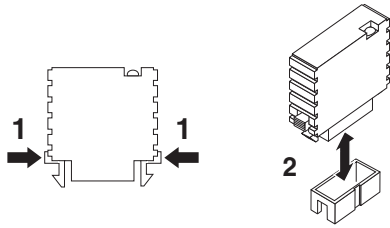
13. Determine your next step:
 - If you are replacing a failed cache memory DIMM or installing a cache memory upgrade that requires the removal of existing DIMMs, continue with Step 14.
 - If you are installing a cache memory upgrade that requires only the installation of new cache memory DIMMs and flash memory modules, go to Step 16 on page 6.
 - If you are replacing a failed flash memory module and do not need to remove or replace any cache memory DIMMs, go to Step 18 on page 6.
14. To remove a cache memory DIMM, pull back on the retaining clips to release the DIMM from the connector; then, lift the DIMM out of the connector. Repeat this step until you have removed all of the affected DIMMs.



15. Place the removed cache memory DIMMs on a static-free surface.
16. Complete the following steps to install the new cache memory DIMMs:
 - a. Make sure that both of the retaining clips are in the fully open position.
 - b. Remove a DIMM from its static-protective package.
 - c. Orient the DIMM so that the DIMM keys align correctly with the DIMM connector on the controller board; then, gently press down on the DIMM until it is fully seated in the connector. Make sure that the retaining clips raise up and snap into the closed positions.
Attention: If there is a gap between the DIMM and the retaining clips, the DIMM has not been correctly installed. In this case, open the retaining clips and remove the DIMM, reorient the DIMM to the connector; then, reinsert the DIMM in the connector.
 - d. Repeat Steps 16a, 16b, and 16c until you have installed all of the required DIMMs on the controller board.
17. Determine your next step:
 - If you are installing a cache memory upgrade that requires the removal and replacement of existing flash memory, continue with Step 18.
 - If you are installing a cache memory upgrade that does not require the removal of existing flash memory, go to Step 20 to install the additional flash memory modules, ensuring that their total memory capacity equals the total cache memory size of the controller.
 - If you just replaced a failed cache memory DIMM and do not need to install or remove any flash memory, go to Step 21 on page 7.
18. To remove a flash memory module, push down on the notches along the sides of the module (1); then, pull the module away from the connector on the controller board (2). Repeat this step until you have removed all of the affected flash memory modules.

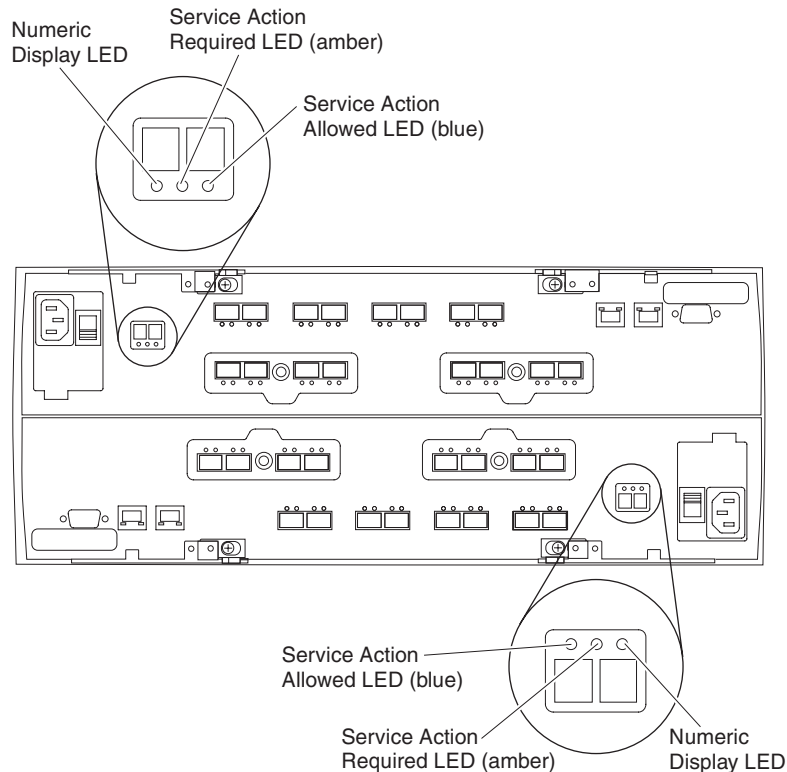


19. Place the removed flash memory modules on a static-free surface.
20. Complete the following steps to install a new flash memory module:
 - a. Remove a flash memory module from its static-protective package.
 - b. Align the new flash memory module with the empty connector (2); then, gently push down on the module until it clicks into place in the connector.



- c. Repeat Steps 20a on page 6 and 20b on page 6 until you have installed all of the required flash memory modules on the controller board.
21. Replace the top cover; then, tighten the cover thumbscrews.
 22. Make sure that the controller latch handles are opened outward, approximately forming an 80 degree angle with the sides of the controller.
 23. Slide the controller all the way into the bay, until the latches catch the notches on the chassis; then, push both latches inward to lock the controller into place.
 24. Reconnect all of the host interface cables to the appropriate host interface port.
 25. Reconnect all of the drive interface cables from the ESM canisters to the controller canister.
 26. Plug in the power cord to the controller canister.
 27. If this is a cache memory upgrade, repeat step 4 on page 3 to step 26 for the second controller canister in the storage subsystem.
 28. Turn on the Power switch on the controller canisters.

29. Look at the LEDs on the controller canister to make sure that the controller is rebooting correctly.



The LEDs come on and go off intermittently for approximately 60 seconds (possibly longer). After this time, you are able to discover the new controller through the storage management software.

30. Look at the Controller Service Action Required LED on the controller canister and look at all of the Service Action Required LEDs on the controller bay. Based on the LED status, perform one of the following actions:

- If all of the Service Action Required LEDs are off and the Array Management Window indicates an Optimal status, go to Step 32.
- If any of the Service Action Required LEDs on the controller bay are on, check to see that the controller has been installed correctly. Reinstall the controller, if necessary; then, go to Step 31.

For additional information about LEDs or for troubleshooting procedures, see the *IBM System Storage DS5100 and DS5300 Storage Subsystems Installation, User's, and Maintenance Guide*.

Note: If your storage array does not have an Optimal status, click the Recovery Guru toolbar button in the Storage Subsystem Management Window to determine if any other actions are required.

31. Did this action correct the problem?
- Yes – Go to Step 32.
 - No – If the problem remains, contact an IBM Support representative.
32. Remove the antistatic protection.
33. Check the status of all of the bays in the storage subsystem.
34. Does any component have a Needs Attention status?
- Yes – Click the Recovery Guru toolbar button in the Storage Subsystem Management Window, and complete the recovery procedure. If the problem remains, contact an IBM Support representative.
 - No – Go to Step 35.
35. Create, save, and print a new storage subsystem profile, in addition to collecting the Support Data bundle.

FRU part numbers

The cache and flash memory field replaceable units (FRUs) available for the DS5100 and DS5300 storage controllers are as follows:

Table 2. Cache and flash memory FRU contents and part numbers

Cache memory FRUs	Flash memory FRUs
• 1 GB cache memory DIMM—FRU 46C8888 – 1 GB memory DIMM (1) – Installation instructions (1) • 2 GB cache memory DIMM—FRU 59Y5097 – 2 GB memory DIMM (1) – Installation instructions (1) • 4 GB cache memory DIMM—FRU 59Y5098 – 4 GB memory DIMM (1) – Installation instructions (1)	• 4 GB Flash memory module—FRU 46C8890 – 4 GB Flash memory module (1) – Installation instructions (1) • 8 GB Flash memory module—FRU 59Y5099 – 8 GB Flash memory module (1) – Installation instructions (1)

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Warranty information

IBM Warranty Information

Machine Type(s)	Country of Purchase	Warranty Period (Years)	Type of Warranty Service*	Service Level*
IBM Memory Upgrade	Worldwide	1	1	1

Types of Warranty Service: 1) Customer Replaceable Unit (CRU); 5) CRU and On-site; 6) CRU and Courier or Depot; 7) CRU and Customer Carry-in or Mail-in; 8) CRU and Machine Exchange.

Service Levels: 1) Next Business Day (NBD), 9x5; 2) Same Business Day (SBD), 9x5; 3) Same Day, 24x7.

* See "Type of Warranty Service" and "Service Levels" in the *IBM Statement of Limited Warranty* for explanations of warranty service types and service levels.

You can obtain a copy of the *IBM Statement of Limited Warranty* for this product from the IBM Web site at http://www.ibm.com/servers/support/machine_warranties/. The Statement of Limited Warranty is available on this site in 17 languages. The table above provides the product-specific information for "Part 3 - Warranty Information" of the Statement of Limited Warranty.

You can also obtain a copy of the Statement of Limited Warranty from your IBM Sales Representative or your IBM reseller. For IBM in Canada or the United States, call 1-800-IBM-SERV (or 1-800-426-7378). For IBM in the European Union (EU), Asia Pacific, and Latin America countries, contact IBM in that country or visit the IBM Directory of Worldwide Contacts at the following IBM Internet website: <http://www.ibm.com/planetwide/>.

Informace o záruce IBM

Typ stroje (strojů)	Země nákupu	Záruční doba (roky)	Typ záručního servisu *	Servisní úroveň *
IBM Memory Upgrade	Celosvětově	1	1	1

Typy záručního servisu: 1) CRU (Customer Replaceable Unit); 5) CRU and On-site; 6) CRU and Courier or Depot; 7) CRU and Customer Carry-in or Mail-in; 8) CRU and Machine Exchange.

Servisní úroveň: 1) Další pracovní den (Next Business Day, NBD), 9x5; 2) Stejný pracovní den (Same Business Day, SBD), 9x5; 3) Stejný den (Same Day), 24x7.

* Vysvětlení termínů "Typ záručního servisu" a "Servisní úroveň" najdete v dokumentu *Prohlášení o omezené záruce*.

Dokument *Prohlášení o omezené záruce* pro tento produkt získáte na webové stránce IBM http://www.ibm.com/servers/support/machine_warranties/. Dokument *Prohlášení o omezené záruce* je k dispozici v 17 jazykových verzích. Ve výše uvedené tabulce najdete informace specifické pro daný produkt, které se vztahují k části "Část 3 - Informace o záruce" v dokumentu *Prohlášení o omezené záruce*.

Dokument *Prohlášení o omezené záruce* můžete získat také od vašeho zástupce IBM nebo prodejce IBM. V Kanadě nebo ve Spojených státech volejte 1-800-IBM-SERV (nebo 1-800-426-7378). V zemích Evropské unie (EU), v zemích Asie a Pacifické oblasti a v zemích Latinské Ameriky kontaktujte IBM v dané zemi nebo navštivte adresář IBM celosvětových kontaktů na těchto webových stránkách IBM: <http://www.ibm.com/planetwide/>.

IBM 保修信息

机器类型	购买地所在国家或地区	保修期 (年)	保修服务类型*	服务级别*
IBM Memory Upgrade	全球	1	1	1

保修服务类型：1) 客户可更换部件 (CRU)；5) CRU 和现场服务；6) CRU 和专人取送或仓库维修；7) CRU 和客户送修或邮寄送修；8) CRU 和机器更换服务。

服务级别：1) 下一个工作日 (NBD)，9x5；2) 同一个工作日 (SBD)，9x5；3) 当天，24x7。

* 请参阅 *IBM 有限保证声明* 中的“保修服务类型”和“服务级别”，获取保修服务类型和服务级别的说明。

您还可以从以下 IBM Web 站点获得 *IBM 有限保证声明* 的副本：

http://www.ibm.com/servers/support/machine_warranties/。该站点提供 17 种语言的有限保证声明。上表提供该有限保证声明中“第三部分 — 保修信息”的特定于产品的信息。

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機型	採購國家或地區	保固期間 (年)	保固服務類型*	服務等級*
IBM Memory Upgrade	全球	1	1	1

保固服務類型：1) 客戶可自行更換組件 (CRU)；5) CRU 及站上；6) CRU 及快遞或維修站；7) CRU 及客戶親自送件或郵寄送件；8) CRU 及機器交換。**服務等級：**1) 營業日隔天 (NBD)，9x5；2) 營業日當天 (SBD)，9x5；3) 當天，全年 24 小時無休。

* 請參閱「*IBM 有限保證聲明*」中的「保固服務類型」及「服務等級」，以取得保固服務類型及服務等級的說明。

您可以從 IBM 網站取得本產品的「*IBM 有限保證聲明*」：

http://www.ibm.com/servers/support/machine_warranties/。

此網站提供 17 種語言之「有限保證聲明」。上表提供「有限保證聲明」中「第三部分 - 保證資訊」的產品特定資訊。

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Informations relatives à la garantie IBM

Type(s) de machine	Pays d'acquisition	Période de garantie (en années)	Type de service prévu par la garantie*	Niveau de service*
IBM Memory Upgrade	Monde	1	1	1

Types de garantie : 1) Unité remplaçable par l'utilisateur (CRU) ; 5) CRU et Service sur site ; 6) CRU et Service de collecte ou de dépôt ; 7) CRU et Service de livraison ou d'expédition par le client ; 8) CRU et Service de remplacement de Machine.

Niveaux de service : 1) Jour ouvré suivant (NBD), 9x5 ; 2) Même jour ouvré (SBD), 9x5 ; 3) Même jour, 24x7.

* Pour plus d'informations sur les types de garantie et les niveaux de service, voir "Type de garantie" et "Niveaux de service" dans la Déclaration de Garantie IBM.

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Informationen zum Herstellerservice von IBM

Maschinen-typ(en)	Land des Erwerbs	Zeitraum des Herstellerservice (Jahre)	Art des Herstellerservice*	Service-Level*
IBM Memory Upgrade	Weltweit	1	1	1

Art des Herstellerservice: 1) CRU-Service; 5) CRU-Service und Service vor Ort; 6) CRU-Service und Kurier- oder Aufbewahrungsservice; 7) CRU-Service und Anlieferung durch den Kunden oder Versand; 8) CRU-Service und Maschinenaustauschservice.

Service-Levels: 1) Am nächsten Arbeitstag (NBD), 9x5; 2) Am selben Arbeitstag (SBD), 9x5; 3) Am selben Tag, 24x7.

* Unter "Art des Herstellerservice" und "Service-Levels" im Dokument "Freiwilliger Herstellerservice" werden die verschiedenen Arten des Herstellerservice und die Service-Levels näher erläutert.

Ein Exemplar des Dokuments "Freiwilliger Herstellerservice" für dieses Produkt kann über die IBM Website http://www.ibm.com/servers/support/machine_warranties/ heruntergeladen werden. Das Dokument steht auf dieser Site in 17 Sprachen zur Verfügung. Die obige Tabelle enthält die produkt-spezifischen Informationen für "Teil 3 - Informationen zum Herstellerservice".

Das Dokument "Freiwilliger Herstellerservice" ist auch beim zuständigen IBM Vertriebsbeauftragten oder IBM Reseller erhältlich. In Kanada und den Vereinigten Staaten von Amerika lautet die Telefonnummer des IBM Service wie folgt: 1-800-IBM-SERV (oder 1-800-426-7378). In den Ländern der Europäischen Union (EU), des asiatisch-pazifischen Raums und Lateinamerikas sollte sich der Kunde direkt an IBM vor Ort wenden oder die Kontaktinformationen im IBM Directory of Worldwide Contacts auf der folgenden IBM Internet-Website nachschlagen: <http://www.ibm.com/planetwide/>.

IBM - Πληροφορίες σχετικά με την Εγγύηση

Τύπος(-οι) Μηχανής	Χώρα Αγοράς	Περίοδος Εγγύησης (Έτη)	Είδος Υπηρεσιών Εγγύησης*	Επίπεδο των Υπηρεσιών*
IBM Memory Upgrade	Παγκοσμίως	1	1	1

Είδη Υπηρεσιών Εγγύησης: 1) Υπηρεσίες Μονάδων Αντικαθιστώμενων από τον Πελάτη ("μονάδες CRU"), 5) Υπηρεσίες CRU και Επί Τόπου Υπηρεσίες, 6) Υπηρεσίες CRU και Υπηρεσίες Courier ή Depot, 7) Υπηρεσίες CRU και Υπηρεσίες με Μεταφορά ή Αποστολή από τον Πελάτη, 8) Υπηρεσίες CRU και Ανταλλαγής Μηχανής.

Επίπεδα των Υπηρεσιών: 1) Επόμενη Εργάσιμη Ημέρα (Next Business Day - NBD), 9x5, 2) Ίδια Εργάσιμη Ημέρα (Same Business Day - SBD), 9x5, 3) Ίδια Ημέρα, 24x7.

* Ανατρέξτε στις ενότητες "Είδη Υπηρεσιών Εγγύησης" και "Επίπεδα των Υπηρεσιών" στη Δήλωση Περιορισμένης Εγγύησης της IBM για μια επεξήγηση των διαφόρων ειδών υπηρεσιών εγγύησης και επιπέδων υπηρεσιών.

Μπορείτε να αποκτήσετε ένα αντίγραφο της Δήλωσης Περιορισμένης Εγγύησης της IBM για αυτό το προϊόν από την ακόλουθη ιστοσελίδα της IBM στο Internet:

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

Η Δήλωση Περιορισμένης Εγγύησης της IBM διατίθεται σε αυτή την ιστοσελίδα σε 17 γλώσσες.

Στον παραπάνω πίνακα παρέχονται οι πληροφορίες για το συγκεκριμένο προϊόν για το "Μέρος 3 - Πληροφορίες σχετικά με την Εγγύηση" της Δήλωσης Περιορισμένης Εγγύησης.

Μπορείτε επίσης να αποκτήσετε ένα αντίγραφο της Δήλωσης Περιορισμένης Εγγύησης από τον Εκπρόσωπο Πωλήσεων της IBM ή το μεταπωλητή προϊόντων της IBM. Για να επικοινωνήσετε με την IBM στον Καναδά ή στις Ηνωμένες Πολιτείες, καλέστε τον αριθμό 1-800-IBM-SERV (ή 1-800-426-7378). Για να επικοινωνήσετε με την IBM στην Ευρωπαϊκή Ένωση (ΕΕ), στην Ασία/Ειρηνικός και στις χώρες της Λατινικής Αμερικής, απευθυνθείτε στα τοπικά γραφεία της IBM στη συγκεκριμένη χώρα ή επισκεφθείτε τον κατάλογο "IBM Directory of Worldwide Contacts" στην ακόλουθη ιστοσελίδα της IBM στο Internet: <http://www.ibm.com/planetwide/>.

Informazioni di Garanzia di IBM

Tipi di macchine	Paese di acquisto	Periodo di garanzia (anni)	Tipo di garanzia Servizio*	Livello di servizio*
IBM Memory Upgrade	Worldwide	1	1	1

Tipi di garanzia di servizio: 1) Customer Replaceable Unit (CRU); 5) CRU e On-site; 6) CRU e Courier o Depot; 7) CRU e Customer Carry-in o Mail-in; 8) CRU e Machine Exchange.

Livelli di servizio: 1) Next Business Day (NBD), 9x5; 2) Same Business Day (SBD), 9x5; 3) Same Day, 24x7.

* Fare riferimento a “Tipo di servizio di garanzia” e a “Livelli di servizio” nell’*IBM Statement of Limited Warranty* per informazioni sui tipi di servizi di garanzia e sui livelli di servizio.

È possibile ottenere una copia dell’*IBM Statement of Limited Warranty* per questo prodotto dal sito Web IBM all’indirizzo http://www.ibm.com/servers/support/machine_warranties/. La Statement of Limited Warranty è disponibile su questo sito in 17 lingue. La tabella precedente fornisce le informazioni specifiche del prodotto per “Parte 3 - Informazioni sulla garanzia” della Statement of Limited Warranty.

È inoltre possibile ottenere una copia della Statement of Limited Warranty dal rappresentante IBM o dal rivenditore IBM. Per IBM in Canada o negli Stati Uniti, contattare 1-800-IBM-SERV (o 1-800-426-7378). Per IBM in Europa (EU), Asia Pacifico e America latina, contattare IBM in quel paese oppure visitare la IBM Directory of Worldwide Contacts sul sito Web IBM all’indirizzo: <http://www.ibm.com/planetwide/>.

IBM 保証情報

マシン・タイプ	購入した国	保証期間 (年)	保証サービスの種類	サービス・レベル*
IBM Memory Upgrade	世界共通	1	1	1

保証サービスの種類: 1) カスタマー交換可能ユニット (CRU); 5) CRU と オンサイト・サービス; 6) CRU と クーリエ・サービス; 7) CRU と 持ち込みまたは郵送サービス; 8) CRU と 機械交換サービス
サービス・レベル: 1) Next Business Day (NBD)、9 時間×週 5 日; 2) Same Business Day (SBD)、9 時間×週 5 日; 3) Same Day、24 時間×週 7 日

* 保証サービスの種類とサービス・レベルの説明については、「IBM 保証の内容と制限」の「保証サービスの種類」と「保証サービスのサービス・レベル」を参照してください。

本製品向けの「IBM 保証の内容と制限」のコピーは、IBM Web サイト (http://www.ibm.com/servers/support/machine_warranties/) から入手可能です。上記のサイトでは、「保証の内容と制限」が、17 カ国語で表示されます。上の表では、「保証の内容と制限」の『第 3 章 - 保証情報』にある製品固有の情報を示しています。

「保証の内容と制限」のコピーは、IBM 営業担当員あるいは販売店から入手いただくことも可能です。カナダまたは米国では、1-800-IBM-SERV (または 1-800-426-7378) に電話してください。EU 諸国、アジア太平洋諸国、およびラテンアメリカ諸国の IBM の場合、それぞれの国の IBM にお問い合わせいただくか、または次の IBM インターネット Web サイトにある IBM Directory of Worldwide Contacts をご覧ください。 <http://www.ibm.com/planetwide/>

IBM 보증 정보

시스템 유형	구매 국가	보증 기간(년)	보증 서비스 유형*	서비스 레벨*
IBM Memory Upgrade	전세계	1	1	1

보증 서비스 유형: 1) 고객 교체 가능 장치(CRU) 5) CRU 및 현장 방문 6) CRU 및 특급 배송 또는 디포(Depot) 7) CRU 및 고객 직접 운송 또는 택배 접수 8) CRU 및 시스템 교체
서비스 레벨: 1) 익영업일(NBD), 9x5 2) 당일 영업일(SBD), 9x5 3) 당일, 24x7

* 보증 서비스 유형 및 서비스 레벨에 대한 자세한 내용은 IBM 제한 보증서의 "보증 서비스 유형"의 "서비스 레벨"을 참조하십시오.

이 제품에 대한 IBM 제한 보증서는 IBM 웹 사이트

(http://www.ibm.com/servers/support/machine_warranties/)에서 얻을 수 있습니다.

제한 보증서는 이 사이트에서 17개국 언어로 제공됩니다. 위 표는 제한 보증서의 "3부 - 보증 정보"에 대한 제품별 정보를 제공합니다.

IBM 영업 대표 또는 IBM 리셀러를 통해 제한 보증서를 얻을 수도 있습니다. 캐나다 또는 미국 IBM의 경우 1-800-IBM-SERV 또는 1-800-426-7378로 문의하십시오. 유럽 연합(EU), 아시아 태평양 및 라틴 아메리카 국가의 경우 해당 국가의 IBM에 문의하거나, 다음 IBM 인터넷 웹 사이트에서 IBM 전세계 연락처를 방문하십시오. <http://www.ibm.com/planetwide/>

IBM garantijos informacija

Įrenginio tipas (-ai)	Pirkimo šalis	Garantijos laikotarpis (metais)	Garantinės priežiūros paslaugos tipas*	Paslaugos lygis*
IBM Memory Upgrade	Pasaulinis	1	1	1

Garantinės priežiūros paslaugų tipai: 1) Kliento keičiamos dalys (CRU); 5) CRU ir priežiūros paslauga, teikiama vietoje; 6) CRU ir kurjerio arba saugojimo paslauga; 7) CRU ir kliento atgabenimo ar atsuntimo paslauga; 8) CRU ir Įrenginio keitimo paslauga.

Paslaugos lygiai: 1) Kitą darbo dieną (NBD), 9x5; 2) Tą pačią darbo dieną (SBD), 9x5; 3) Tą pačią dieną, 24x7.

* Paaiškinimus apie garantinės priežiūros paslaugos tipus ir paslaugų lygius žr. IBM ribotos garantijos pareiškimo skyriuose „Garantinės priežiūros paslaugos tipas“ ir „Paslaugos lygiai“.

IBM ribotos garantijos pareiškimo kopiją galite įsigyti IBM žiniatinklio svetainėje

http://www.ibm.com/servers/support/machine_warranties/. Ribotos garantijos pareiškimas svetainėje pateikiamas 17 kalbų. Aukščiau esančioje lentelėje pateikiama Ribotos garantijos pareiškimo skyriaus „3 dalis – garantijos informacija“ specifinė produkto informacija.

Ribotos garantijos pareiškimo kopiją taip pat galite įsigyti iš IBM pardavimo atstovo arba

IBM perpardavėjo. Kanadoje arba Jungtinėse Amerikos Valstijose IBM skambinkite 1-800-IBM-SERV (arba 1-800-426-7378). Europos Sąjungos (ES), Azijos ir Ramiojo vandenyno regiono bei Lotynų Amerikos šalyse susisiekite su tos šalies IBM padaliniu arba apsilankykite IBM pasaulio kontaktų kataloge, kuris yra šioje IBM interneto svetainėje: <http://www.ibm.com/planetwide/>.

Informacje gwarancyjne IBM

Typ Maszyny	Kraj zakupu	Okres gwarancyjny (w latach)	Typ serwisu gwarancyjnego*	Poziom usług*
IBM Memory Upgrade	Cały świat	1	1	1

Typy serwisu gwarancyjnego: 1) Części wymieniane przez Klienta (Customer Replaceable Units, zwane dalej "Częściami CRU"); 5) Części CRU wymieniane na miejscu u Klienta; 6) Części CRU i serwis wysyłkowy lub kurierski; 7) Części CRU i serwis z wysyłką lub transportem przez Klienta; 8) Części CRU i wymiana maszyny.

Poziomy świadczenia serwisu: 1) następny dzień roboczy, 9x5; 2) ten sam dzień roboczy, 9x5; 3) ten sam dzień, 24x7.

* Typy serwisu gwarancyjnego oraz poziomy usług zostały wyjaśnione w paragrafach:

"Typ serwisu gwarancyjnego" i "Poziomy usług" Warunków Ograniczonej Gwarancji IBM.

Egzemplarz Warunków Ograniczonej Gwarancji dla tego produktu można pobrać z serwisu WWW IBM, znajdującego się pod adresem http://www.ibm.com/servers/support/machine_warranties/. Warunki Ograniczonej Gwarancji są tam dostępne w 17 językach. Powyższa tabela zawiera informacje specyficzne dla produktu, uzupełniające "Część 3 - Informacje gwarancyjne" Warunków Ograniczonej Gwarancji.

Egzemplarz Warunków Ograniczonej Gwarancji można otrzymać od przedstawiciela handlowego IBM lub reselera IBM. W Kanadzie i w Stanach Zjednoczonych należy zadzwonić pod numer 1-800-IBM-SERV (1-800-426-7378). W krajach Unii Europejskiej, Azji Wschodniej i Ameryki Łacińskiej należy skontaktować się z oddziałem IBM w danym kraju lub skorzystać z wykazu danych kontaktowych IBM na świecie (IBM Directory of Worldwide Contacts) pod adresem: <http://www.ibm.com/planetwide/>.

Informações sobre a Garantia da IBM

Tipo(s) de Máquina	País de Aquisição	Período de Garantia (Anos)	Tipo de Serviço de Garantia*	Nível de Serviço*
IBM Memory Upgrade	Todo o mundo	1	1	1

Tipos de Serviço de Garantia: 1) Unidade Substituível pelo Cliente (CRU); 5) CRU e no Local (On-site); 6) CRU e Correio Expresso ou Recolha; 7) CRU e Entrega ou Envio para a Entidade Reparadora; 8) CRU e Troca de Máquinas.

Níveis de Serviço: 1) No dia útil seguinte (DUS), 9x5; 2) No mesmo dia útil (MDU), 9x5; 3) No mesmo dia, 24x7.

* Para obter uma explicação dos tipos de serviço de garantia e dos níveis de serviço, consulte "Tipo de Serviço de Garantia" e "Níveis de Serviço" na *Declaração de Garantia Limitada IBM*.

Poderá obter uma cópia da *Declaração de Garantia Limitada IBM* referente a este produto no sítio da Web da IBM em http://www.ibm.com/servers/support/machine_warranties/. A Declaração de Garantia Limitada está disponível neste sítio em 17 idiomas. A tabela anterior fornece as informações específicas sobre o produto para a "Parte 3 - Informações Sobre a Garantia" da Declaração de Garantia Limitada.

Poderá igualmente obter uma cópia da Declaração de Garantia Limitada junto do seu Representante de Vendas ou revendedor IBM. Para contactar a IBM no Canadá ou nos E.U.A., ligue 1-800-IBM-SERV (ou 1-800-426-7378). Para contactar a IBM na União Europeia (UE), Ásia e Pacífico, e países da América Latina, contacte a IBM do respectivo país ou visite o Directório IBM de Contactos Mundiais no seguinte sítio da Web da IBM: <http://www.ibm.com/planetwide/>.

Гарантийная информация IBM

Тип Машины	Страна приобретения	Гарантийный срок (в годах)	Тип гарантийного обслуживания*	Уровень обслуживания*
IBM Memory Upgrade	Все страны	1	1	1

Типы Гарантийного Обслуживания: 1) Блоки, Заменяемые Заказчиком (“CRU”); 5) CRU и Обслуживание на Месте; 6) CRU и Курьерские или Складские Услуги; 7) CRU и Обслуживание при Доставке или Пересылке по Почте Силами Заказчика; 8) CRU и Обслуживание с Заменой Машины.

Уровни обслуживания: 1) На следующий рабочий день (Next Business Day - NBD), 9x5; 2) В тот же рабочий день (Same Business Day - SBD), 9x5; 3) В тот же день (Same Day - SD), 24x7.

* Описание типов и уровней гарантийного обслуживания приведено в разделах “Типы Гарантийного Обслуживания” и “Уровни обслуживания” *Положения IBM об Ограниченной Гарантии*.

Вы можете получить копию *Положения IBM об Ограниченной Гарантии* для данного продукта с Web-сайта http://www.ibm.com/servers/support/machine_warranties/. На этом сайте приведены версии Положения IBM об Ограниченной Гарантии на 17 языках. В вышеприведенной таблице содержится информация раздела “Часть 3 - Информация о Гарантии” Положения об Ограниченной Гарантии, относящаяся к этому продукту.

Копию Положения об Ограниченной Гарантии могут также предоставить торговый представитель или реселлер IBM. В Канаде или в США звоните в IBM по телефону 1-800-IBM-SERV (или 1-800-426-7378). Чтобы связаться с IBM в странах Европейского Союза (ЕС), Азии и Тихоокеанского бассейна, а также Латинской Америки, обращайтесь в офисы IBM в этих странах или посетите Международный каталог контактов IBM (IBM Directory of Worldwide Contacts) на следующем Web-сайте IBM: <http://www.ibm.com/planetwide/>.

IBM-ove garancijske informacije

Tipi računalnikov	Država nabave	Garancijski rok (v letih)	Vrsta garancijskega servisa*	Raven servisa*
IBM Memory Upgrade	Po vsem svetu	1	1	1

Vrste garancijskega servisa: 1) Enota, ki jo zamenja stranka (CRU); 5) CRU in pri stranki; 6) CRU in kurirska služba ali skladišče; 7) CRU in strankina dostava ali pošiljanje po pošti; 8) CRU in zamenjava računalnika.

Ravni servisa: 1) Naslednji poslovni dan (NBD), 9x5; 2) Isti poslovni dan (SBD), 9x5; 3) Isti dan 24x7.

* Razlage vrst garancijskega servisa in ravni servisa boste našli v razdelkih "Vrsta garancijskega servisa" in "Ravni servisa" v IBM-ovi izjavi o omejeni garanciji.

Naročnik lahko pridobi kopijo IBM-ove izjave o omejeni garanciji za ta izdelek na IBM-ovem spletnem mestu na naslovu http://www.ibm.com/servers/support/machine_warranties/. Izjava o omejeni garanciji je na tem spletnem mestu na voljo v 17 jezikih. Zgornja tabela podaja informacije, specifične za izdelek, za "3. del - Garancijske informacije" iz izjave o omejeni garanciji.

Naročnik lahko pridobi kopijo izjave o omejeni garanciji tudi pri svojem IBM-ovem prodajnem predstavniku ali IBM-ovem prodajalcu. Za IBM v Kanadi ali v Združenih državah Amerike naj stranke pokličejo na številko 1-800-IBM-SERV (ali 1-800-426-7378). Za IBM v Evropski uniji (EU), v pacifiškem delu Azije in v državah Latinske Amerike naj se stranke obrnejo na IBM v tej državi ali pa naj obiščejo IBM-ov imenik svetovnih stikov na naslednjem IBM-ovem spletnem mestu: <http://www.ibm.com/planetwide/>.

Información de garantía de IBM

Tipo(s) de máquina	País de compra	Periodo de garantía (años)	Tipo de servicio de garantía*	Nivel de servicio*
IBM Memory Upgrade	Todo el mundo	1	1	1

Tipos de servicios de garantía: 1) Unidad reemplazable por el cliente (CRU); 5) CRU y servicio in situ; 6) CRU y servicio de mensajero o depósito; 7) CRU y servicios centralizados; 8) CRU e intercambio de máquina.

Niveles de servicio: 1) Siguiendo día laborable (NBD), 9x5; 2) Mismo día laborable (SBD), 9x5; 3) Mismo día, 24x7.

* Consulte "Tipos de servicios de garantía" y "Niveles de servicio" en la *Declaración de garantía limitada de IBM* para consultar las explicaciones de los tipos de servicios de garantía y niveles de servicio.

Puede obtener una copia de la *Declaración de garantía limitada de IBM* de este producto en el sitio web http://www.ibm.com/servers/support/machine_warranties/. La Declaración de garantía limitada está disponible en este sitio en 17 idiomas. La tabla anterior proporciona información específica del producto para la "Parte 3 - Información sobre la garantía" de la Declaración de garantía limitada.

También puede obtener una copia de la Declaración de garantía limitada a través de su representante comercial de IBM o distribuidor de IBM. Para IBM de Canadá o Estados Unidos, llame al 1-800-IBM-SERV (o 1-800-426-7378). Para IBM de la Unión Europea (UE), Asia-Pacífico y América Latina, póngase en contacto con IBM del país o visite el Directorio de contacto IBM en el mundo en el siguiente sitio web de IBM: <http://www.ibm.com/planetwide/>.

IBM Garanti Bilgileri

Makine Tip(ler)i	Satın Alınan Ülke	Garanti Süresi (Yıl)	Garanti Hizmeti Tipi*	Hizmet Seviyesi*
IBM Memory Upgrade	Dünya çapında	1	1	1

Garanti Hizmeti Tipleri: 1) Müşteri Tarafından Değiştirilebilir Birim (CRU); 5) CRU ve Müşteri Yerinde Teslim; 6) CRU ve Kurye veya Depo; 7) CRU ve Müşteri Tarafından Teslim veya Posta ile Teslim; 8) CRU ve Makine Değiştirme Hizmeti.

Hizmet Seviyeleri: 1) Sonraki İşgünü (NBD), 9x5; 2) Aynı İşgünü İçinde (SBD), 9x5; 3) Aynı Gün, 24x7.

* Garanti hizmeti tiplerine ve hizmet seviyelerine ilişkin ayrıntılı bilgi almak için *IBM Sınırlı Garanti Bildirimi* içinde yer alan “Garanti Hizmeti Tipi” ve “Hizmet Seviyeleri” başlıklı bölümlere bakın.

Bu ürün için *IBM Sınırlı Garanti Bildirimi*'nin bir kopyasını aşağıda URL adresi verilen IBM Web sitesinden de edinebilirsiniz: http://www.ibm.com/servers/support/machine_warranties/. Bu sitede 17 farklı dilde Sınırlı Garanti Bildirimi sağlanmaktadır. Yukarıdaki tabloda, Sınırlı Garanti Bildirimi “Bölüm 3 - Garanti Bilgileri” başlıklı bölümde yer alan ürüne özgü bilgiler bulunur.

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Environmental notices

The multilingual *IBM Systems Environmental Notices and User's Guide* is provided on the IBM Documentation CD that came with your storage controller. This section contains additional environmental notices.

Restriction of hazardous substances

有毒有害物质或元素名称及含量标识

Toxic / Hazardous Substances and Elements Table

部件名称 (Parts)	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
内存模块 memory modules	×	○	○	○	○	○

○: 指示部件的所有均质材料中 有毒和危险物质的含量均低于 **SJ/T 11363-2006** 中所描述的浓度限制要求。

○: indicates that the content of the toxic and hazardous substance in all the homogeneous materials of the part is below the concentration limit requirement as described in SJ/T 11363-2006.

×: 指示至少有一种部件均质材料中的有毒和危险物质的含量超过 **SJ/T 11363-2006** 中所描述的浓度限制要求。

×: indicates that the content of the toxic and hazardous substance in at least one homogeneous material of the part exceeds the concentration limit requirement as described in SJ/T 11363-2006.

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Environmental Protection Use Period (EPUP) Disclaimer: The number provided as the EPUP is provided solely to comply with applicable laws of the People's Republic of China. It does not create any warranties or liabilities on behalf of IBM to customer. The EPUP assumes that the product will be used under normal conditions in accordance with the IBM operating manual. Certain assemblies inside this product (for example, assemblies that contain a battery) may have an EPUP which is lower than the EPUP on this product.

Addendum to Environmental Notices and User's Guide

Restriction of hazardous substance notice for Turkey:

Çevreye İlişkin Bildirimlere ve Ürün Kullanım Kılavuzuna Ek:

Türkiye için;

Bu bildirim 30 Mayıs 2009 tarihi itibarıyla geçerlidir: Türkiye'de yayımlanan "Elektrikli ve Elektronik Eşyalarda Bazı Zararlı Maddelerin Kullanımının Sınırlandırılmasına Dair Yönetmelik" (EEE Yönetmeliği) uyarınca, 30 Mayıs 2009 tarihinden itibaren Türkiye'ye ithal edilecek IBM ürünleri "EEE Yönetmeliğine Uygun"dur".

Bu bildirim, EEE Yönetmeliğinin madde 2.(2) bendine göre kapsam dışı olan (*EEE Yönetmeliğinin yürürlüğe giriş tarihinden önce piyasaya sunulmuş olan ürünler için üretilen*) servis amaçlı yedek parçalar için uygulanmaz.

WEEE notice for Croatia:

Dodatak s Napomenama o zaštiti okoliša i Vodičem za korisnike

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U skladu s hrvatskim Pravilnikom o gospodarenju otpadnim električnim i elektroničkim uređajima i opremom, električna i elektronička oprema (EEE) se mora odvojeno skupljati i ponovno koristiti, reciklirati ili obnoviti na kraju korištenja. Simbol iz Dodatka IV ovog pravilnika označava potrebu odvojenog skupljanja za električni i elektronički otpad. Korisnici EEE s gornjom oznakom na proizvodu ne smiju nakon iskorištenja odbaciti EEE kao nerazvrstani gradski otpad, nego moraju koristiti načine koji su korisnicima dostupni za povrat, recikliranje i obnavljanje WEEE. Sudjelovanje korisnika je važno radi smanjenja mogućih EEE učinaka na okolinu i zdravlje ljudi, zbog moguće prisutnosti opasnih materijala u EEE.

Electronic emission notices

Federal Communications Commission (FCC) statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment

generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Industry Canada Class A emission compliance statement

This Class A digital apparatus complies with Canadian ICES-003.

Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Australia and New Zealand Class A statement

Attention: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

European Union EMC Directive conformance statement

This product is in conformity with the protection requirements of EU Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a nonrecommended modification of the product, including the fitting of non-IBM option cards.

Attention: This is an EN 55022 Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Responsible manufacturer:

International Business Machines Corp.
New Orchard Road
Armonk, New York 10504
914-499-1900

European Community contact:

IBM Technical Regulations, Department M456
IBM-Allee 1, 71137 Ehningen, Germany
Telephone: +49 7032 15-2937
E-mail: tjahn@de.ibm.com

Germany Class A statement

Deutschsprachiger EU Hinweis:

Hinweis für Geräte der Klasse A EU-Richtlinie zur Elektromagnetischen Verträglichkeit

Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2004/108/EG zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten und hält die Grenzwerte der EN 55022 Klasse A ein.

Um dieses sicherzustellen, sind die Geräte wie in den Handbüchern beschrieben zu installieren und zu betreiben. Des Weiteren dürfen auch nur von der IBM empfohlene Kabel angeschlossen werden. IBM

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EN 55022 Klasse A Geräte müssen mit folgendem Warnhinweis versehen werden: "Warnung: Dieses ist eine Einrichtung der Klasse A. Diese Einrichtung kann im Wohnbereich Funk-Störungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen zu ergreifen und dafür aufzukommen."

Deutschland: Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Geräten:

Dieses Produkt entspricht dem "Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG)". Dies ist die Umsetzung der EU-Richtlinie 2004/108/EG in der Bundesrepublik Deutschland.

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) (bzw. der EMC EG Richtlinie 2004/108/EG) für Geräte der Klasse A: Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Einhaltung der EMV Vorschriften ist der Hersteller:

International Business Machines Corp.
New Orchard Road
Armonk, New York 10504
914-499-1900

Der verantwortliche Ansprechpartner des Herstellers in der EU ist:

IBM Deutschland
Technical Regulations, Department M456
IBM-Allee 1, 71137 Ehningen, Germany
Telephone: +49 7032 15-2937
E-mail: tjahn@de.ibm.com

Generelle Informationen:

Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55022 Klasse A.

Japan VCCI Class A statement

この装置は、クラス A 情報技術装置です。この装置を家庭環境で使用する
と電波妨害を引き起こすことがあります。この場合には使用者が適切な対策
を講ずるよう要求されることがあります。 VCCI-A

This is a Class A product based on the standard of the Voluntary Control Council for Interference (VCCI). If this equipment is used in a domestic environment, radio interference may occur, in which case the user may be required to take corrective actions.

Korea Communications Commission (KCC) statement

이 기기는 업무용으로 전자파 적합등록을 받은 기기
이오니, 판매자 또는 사용자는 이점을 주의하시기
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Please note that this equipment has obtained EMC registration for commercial use. In the event that it has been mistakenly sold or purchased, please exchange it for equipment certified for home use.

Russia Electromagnetic Interference (EMI) Class A statement

ВНИМАНИЕ! Настоящее изделие относится к классу А.
В жилых помещениях оно может создавать радиопомехи, для
снижения которых необходимы дополнительные меры

People's Republic of China Class A electronic emission statement

中华人民共和国“A类”警告声明

声明

此为A级产品，在生活环境中，该产品可能会造成无线电干扰。在这种情况下，
可能需要用户对其干扰采取切实可行的措施。

Taiwan Class A compliance statement

警告使用者：
這是甲類的資訊產品，在
居住的環境中使用時，可
能會造成射頻干擾，在這
種情況下，使用者會被要
求採取某些適當的對策。

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