# Intel® TSRMT2
# Carrier/Industrial Grade Server
# Quick Start Guide

Order Number: A89939-002

**This guide contains basic instructions for setting up the system and accessing the Product Guide from the CD.**

**Disclaimer**

The TSRMT2 server may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

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This document contains information on products in the design phase of development. The information here is subject to change without notice. Do not finalize a design with this information.

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.

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# Contents

Intel TSRMT2 Carrier/Industrial Grade Server
Quick Start Guide

# Specifications

**Table 1.     TSRMT2 Server Physical Specifications**

| Specification | Value |
|---|---|
| Height | 1.7 inches (43 mm) |
| Width | 17.12 inches (43.5 mm) |
| Depth | 20 inches (508 mm) |
| Front clearance, minimum | 2 inches (50.8 mm) |
| Side clearance, minimum | 1 inches (25.4 mm) |
| Rear clearance, minimum | 3.6 inches (92 mm) |



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**Figure 1.  Front View**

# Regulatory Specifications and Disclaimers

## Declaration of the Manufacturer or Importer

We hereby certify that this product is in compliance with European Union EMC Directive 89/336/EEC, using standards EN55022 (Class A) and EN55024 and Low Voltage Directive 73/23/EEC, Standard EN60950.

## Safety Compliance

| | |
|---|---|
| USA: | UL 1950 – 3rd Edition/CSA 22.2. No. 950-M93 |
| Canada: | UL Certified – 3rd Edition/CSA 22.2. No. 950-M93 for Canada (product bears the single UL mark for U.S. and Canada) |
| Europe: | Low Voltage Directive, 73/23/EECTUV/GS to EN60950 2nd Edition with Amendments, A1 = A2 + A3 + A4 |
| International: | TUV/CB to IEC 60950 3rd Edition, EN60 950 2nd Edition + Amd 1-4, EMKO-TSE (74-SEC) 207/94 plus international deviations |
| Australian / New Zealand: | CB Report to IEC 60950, 3rd Edition plus Australian deviations |

## Electromagnetic Compatibility (EMC)

| | |
|---|---|
| USA: | FCC CFR 47 Part 2 and 15, Verified Class A Limit |
| Canada: | IC ICES-003 Class A Limit |
| Europe: | EMC Directive, 89/336/EEC<br><br>• EN55022, Class A Limit, Radiated & Conducted Emissions<br>• EN55024, ITE Specific Immunity Standard<br>• EN61000-4-2, ESD Immunity (Level 2 Contact Discharge, Level 3 Air Discharge)<br>• EN61000-4-3, Radiated Immunity (Level 2)<br>• EN61000-4-4, Electrical Fast Transient (Level 2)<br>• EN61000-4-5, AC Surge<br>• EN61000-4-6, Conducted RF<br>• EN61000-4-8, Power Frequency Magnetic Fields<br>• EN61000-4-11, Voltage Dips and Interrupts<br>• EN61000-3-2, Limit for Harmonic Current Emissions<br>• EN61000-3-3, Voltage Flicker |
| Japan: | VCCI Class A ITE (CISPR 22, Class A Limit) IEC 1000-3-2 Limit for Harmonic Current Emissions |
| Australia/New Zealand: | AS/NZS 3548, Class A |
| Taiwan: | BSMI Approval, Class A |
| Korea: | RRL Approval, Class A |
| Russia: | GOST Approved |
| International: | CISPR 22, Class A Limit |

## FCC Electromagnetic Compatibility Notice (USA)

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 operating in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference. In this case, the user is required to correct the interference at their own expense. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on; the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment. The customer is responsible for ensuring compliance of the modified product.

## FCC Declaration of Conformity

### Product Type:  TSRMT2

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.

For questions related to the EMC performance of this product, contact:

Intel Corporation
250 Berry Hill Rd., Suite 100
Columbia, SC 29210

## Electromagnetic Compatibility Notices (International)

### Europe (CE Declaration of Conformity)

This product has been tested in accordance too, and complies with the Low Voltage Directive (73/23/EEC) and EMC Directive (89/336/EEC). The product has been marked with the CE Mark to illustrate its compliance.

**Japan EMC Compatibility**

　この装置は、情報処理装置等電波障害白主規制協議会（ＶＣＣＩ）の基準に基づくクラス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。

**English translation of the notice above:**

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI).  If this equipment is used in a domestic environment, radio disturbance may arise.  When such trouble occurs, the user may be required to take corrective actions.

**ICES-003 (Canada)**

Cet appareil numérique respecte les limites bruits radioélectriques applicables aux appareils numériques de Classe A prescrites dans la norme sur le matériel brouilleur:  "Appareils Numériques", NMB-003 édictée par le Ministre Canadian des Communications.

**English translation of the notice above:**

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of the Canadian Department of Communications.

**BSMI (Taiwan)**

The BSMI Certification number and the following warning is located on the product safety label which is located visibly on the external chassis.

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。

# Removing the Server from the Box

Carefully unpack the server. Save all packing materials in case the server needs to be shipped at a later time.

# Selecting a Site

The server operates reliably within normal office environmental limits. Select a site that meets these criteria:

- Clean and relatively free of excess dust.
- Well-ventilated and away from sources of heat, with the ventilating openings on the server kept free of obstructions.
- Away from sources of vibration or physical shock.
- Isolated from strong electromagnetic fields and noise caused by electrical devices such as elevators, copy machines, air conditioners, large fans, large electric motors, radio and TV transmitters, and high-frequency security devices.

**For AC-powered servers:**

- Place the server near a properly earthed, grounded, three-pronged power outlet.
  - — In the United States and Canada: a NEMA-compliant, 110-125 V outlet rated for 20 amps.
  - — In other geographic areas: a properly earthed, grounded outlet in accordance with the local electrical authorities and electrical code of the region.

**For DC-powered servers:**

- Place the server near a -48 to -60 V DC supply.
- Verify that proper DC grounding is provided.
- Verify that proper insulation protects the DC connection terminals and wires.

## ⚠ CAUTION, ESD precautions

Electrostatic discharge (ESD) can damage disk drives, add-in boards, and other parts. This server can withstand normal levels of environmental ESD. However, we recommend doing all procedures in this guide only at an ESD-protected workstation. If one is not available, you can provide some ESD protection by wearing an anti-static wrist strap attached to chassis ground of the server when handling components (e.g. any unpainted metal surface).

## ⚠ CAUTION, Use grounded outlet

Make sure that the power service connection is through a properly grounded outlet.

# Checking the Power Connection

⚠ **WARNING**

> The Power button on the Front Control Panel of the server does not completely remove AC power. To completely remove AC power from the server, you must unplug/disconnect the power connection from the system. Unplugging/disconnecting the power connection removes the +12 Volt standby power that is present when the server is powered down.

⚠ **WARNING**

> Do not modify or use a supplied AC power cord if it is not the exact type required in the region where the server will be installed and used. Replace the cord with the correct type. Refer to the cord requirements described below.

> Do not connect power to the server (AC or DC) if you will be adding internal parts (boards, DIMMs, removable media drives). For these installation procedures, see the *Intel® TSRMT2 Server System Product Guide.*

⚠ **WARNING**

> The DC power source may produce hazardous voltage levels exceeding -60 VDC and high energy levels above 240VA that may cause electric shock or burns. All DC input connections should be made only by a qualified service person only to prevent injury. All wiring terminals connected to the DC input terminal block must be fully insulated with no exposed bare metal.

> If an AC power supply is installed:

> Mains AC power disconnect: The AC power cord(s) is considered the mains disconnect for the server and must be readily accessible when installed. If the individual server power cord(s) will not be readily accessible for disconnection then you are responsible for installing an AC power disconnect for the entire rack unit. This mains disconnect must be readily accessible, and it must be labeled as controlling power to the entire rack, not just to the server(s). To remove all power, the AC cord must be removed.

**Grounding the rack installation:** To avoid the potential for an electrical shock hazard, you must include a third wire safety ground conductor with the rack installation. If the server power cord is plugged into an AC outlet that is part of the rack, then you must provide proper grounding for the rack itself. If the server power cord is plugged into a wall AC outlet, the safety ground conductor in the power cord provides proper grounding only for the server. You must provide additional, proper grounding for the rack and other devices installed in it.

**Overcurrent protection:** The server is designed for an AC line voltage source with up to 20 amperes of overcurrent protection per cord feed. If the power system for the equipment rack is installed on a branch circuit with more than 20 amperes of protection, you must provide supplemental protection for the server. The overall current rating of the server is less than 4 amperes.

**If a DC power supply is installed:**

The DC source must be electrically isolated by double or reinforced insulation from any hazardous AC or DC source. The DC source must be capable of providing up to 300 mW of continuous power. Connection with a DC source should only be performed by trained service personnel.

**Mains DC power disconnect:** You are responsible for installing a DC power disconnect for the entire rack unit. This mains disconnect must be readily accessible, and it must be labeled as controlling power to the entire unit, not just to the servers(s).

**Grounding the rack installation:** To avoid the potential for an electrical shock hazard, you must include a third wire safety ground conductor with the rack installation. The safety grounding conductor must be a minimum 14AWG connected to the earth ground stud on the rear of the server. The safety ground conductor should be connected to the chassis stud with a two hole crimp terminal with a maximum width of 0.25 inch. The nuts on the chassis studs should be installed with a 10 in/lbs torque. The safety ground conductor provides proper grounding only for the server. You must provide additional, proper grounding for the rack and other devices installed in it.

**Overcurrent protection:** Overcurrent protection circuit breakers must be provided as part of each host equipment rack and must be installed between the DC source and the server. The server is designed for a DC line voltage power source with up to 10 amperes of overcurrent protection per feed pair. If the DC power system for the equipment rack is installed with more than 10 amperes of protection, you must provide supplemental protection for the server. The overall current rating of the server is less than 7 amperes.

⚠ **WARNING**

**Do not attempt to modify or use an AC power cord that is not the exact type required. You must use a power cord that meets the following criteria:**

- **Rating: For U.S./Canada cords must be UL Listed/CSA Certified type SJT, 18-3 AWG. For outside U.S./Canada cords must be flexible harmonized (<HAR>) or VDE certified cord with 3 x 0.75mm conductors rated 250 VAC.**
- **Connector, wall outlet end: Cords must be terminated in grounding-type male plug designed for use in your region. The connector must have certification marks showing certification by an agency acceptable in your region and for U.S. must be rated 125% of overall current rating of the server.**
- **Connector, server end: The connectors that plug into the AC receptacle on the server must be an IEC 320, sheet C19, type female connector.**
- **Cord length and flexibility: Cords must be less than 4.5 meters (14.76 feet) long.**

✏ **NOTES**

**Surge Suppressor Recommendations:** In geographic regions that are susceptible to electrical storms, we highly recommend that you plug the server into a surge suppressor.

**EMI Information:** For information about complying with electromagnetic interference regulations, see "Electromagnetic Compatibility" in the *Intel TSRMT2 Server System Product Guide.*

⚠ **CAUTION**

**Temperature**: The temperature in which the server operates when installed in an equipment rack, must not go below 5 °C (41 °F) or rise above 40 °C (104 °F). Extreme fluctuations in temperature can cause a variety of problems in your server.

**Ventilation:** The equipment rack must provide sufficient airflow to the front of the server to maintain proper cooling. The rack must also include ventilation sufficient to exhaust a maximum of 1023 BTU's per hour for the server. The rack selected and the ventilation provided must be suitable to the environment in which the server will be used.

# Connections and Controls

## Front Panel

Figure 2 shows the front view of the system including the front panel. The front panel contains system control switches, alarm indicators relays, connectors, and status indicators. Front panel features are summarized in Table 2.

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| | | | |
|---|---|---|---|
| A | NMI Switch | G | Alarm: PWR (green) |
| B | System Power Switch | H | Status: NIC (green) |
| C | System Reset | I | Status: DSK (HDD Activity, green) |
| D | Alarm: CRT (Critical) | J | Status: Main Power (green) |
| E | Alarm: MJR (Major) | K | Status: User ID (white) |
| F | Alarm: MNR (Minor) | | |
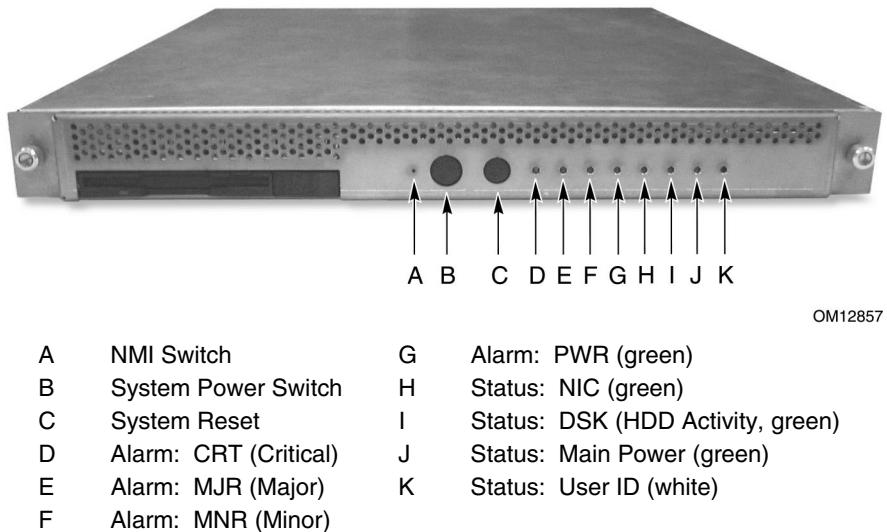
**Figure 2.  Front Panel Control Locations**

**Table 2.    Front Panel Features**

| Item | Feature | Description |
|------|---------|-------------|
| **Front Panel Switches** | | |
| A | NMI switch | A momentary switch used to instruct the processor to copy system memory to the hard drive.  Pressing the recessed button with a paper clip or pin puts the server in a halt state for diagnostic purposes and allows you to issue a non-maskable interrupt.  After issuing the interrupt, a memory dump can be performed to determine the cause of the problem. |
| B | Power switch | Toggles the system power. |
| C | Reset switch | Reboots and initializes the system. |
| **Front Panel Alarm LEDs and Relays** | | |
| D | Critical (amber) | When continuously lit, indicates the presence of a Critical System Fault.  A critical system fault is an error or event that is detected by the system with a fatal impact to the system.  In this case, the system cannot continue to operate.  An example could be the loss of a large section of memory or other corruption that renders the system not operational.  The front panel critical alarm relay will be engaged. |
| E | Major (amber) | When continuously lit, indicates the presence of a Major System Fault.  A major system fault is an error or event that is detected by the system that has discernable impact to system operation.  In this case, the system can continue to operate but in a "degraded" fashion (reduced performance or loss of non-fatal feature reduction).  An example could be the loss of one of two mirrored disks.  The front panel major alarm relay will be engaged. |
| F | Minor (amber) | When continuously lit, indicates the presence of a Minor System Fault.  A minor system fault is an error or event that is detected by the system but has little impact to actual system operation.  An example would be a correctable ECC error.  The front panel minor alarm relay will be engaged. |
| G | Power (amber) | When continuously lit indicates the presence of a Power System Fault.  Additionally, the front panel power alarm relay will engage. |
| **Front Panel Status LEDs** | | |
| H | NIC activity LED (green) | Indicates NIC activity. |
| I | HDD activity LED (green) | Indicates any system SCSI hard drive activity. |
| J | Main power LED (green) | When continuously lit, indicates the presence of DC power in the server.  The LED goes out when the power is turned off or the power source is disrupted.  When it is blinking green, it indicates that the system is in ACPI sleep mode. |
| K | User ID LED (white) | When continuously lit, indicates that the user ID function has been activated. |
| **Front Panel Connectors (Concealed by the Bezel)** | | |
| | RJ45 Serial Connector | Serial Connector (also available on the back panel through a second RJ45 connector). |
| | 2 x USB Connectors | USB Port 2 and USB Port 3. |

# Back Panel

Figure 3 shows the back panel view of the system.
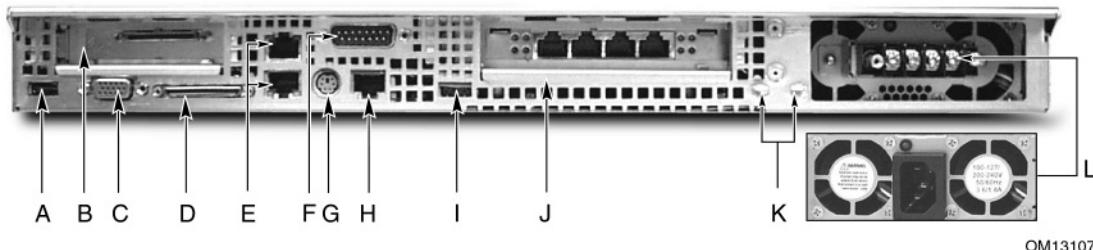


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**Figure 3.  DC Input Back Panel (AC Input Power Supply Shown Below)**

You will find the back panel's feature summary in Table 3.

**Table 3.     Back Panel Features**

| Item | Description |
|------|-------------|
| A | USB port 1 |
| B | One low profile, half-length 64-bit, 66 MHz PCI add-in board slot (3.3V riser board) |
| C | Video connector |
| D | External wide SCSI Ultra160 68-pin connector |
| E | Dual NIC 10/100 E/N RJ45 connectors NIC 1 (lower) and NIC 2 (upper) |
| F | DB-15 male connector for front panel alarm relay contacts |
| G | PS/2[†]-compatible keyboard port, 6-pin connector |
| H | Serial port, 8-pin RJ45 connector |
| I | USB port 0 |
| J | One full height, full length 64-bit, 33 MHz PCI add-in board slot (5 V riser board), or, One full height, full length 64-bit, 66 MHz PCI add-in board slot (3.3 V riser board) |
| K | Two grounding lugs for attachment of grounding wire to chassis.  For use only when configured for DC input power supply |
| L | 250 W power supply (DC input version shown above, AC Input version shown below) |

# Connecting the Monitor, Keyboard, and Mouse

⚠ **CAUTION:**

> UNPLUG THE SERVER.  Before connecting external devices, make sure
> the server is not plugged in, or equipment could be damaged.

Before turning on the server, you must connect these devices to the back of the TSRMT2 server.

1. Connect a video monitor to the video port (C in Figure 3 ).
2. Connect a keyboard to the PS/2 port (G in Figure 3).
3. Connect a USB mouse to the USB port (A in Figure 3).

# Applying Power for the First Time

⚠ **WARNING**

> **The DC power source may produce hazardous voltage levels exceeding
> –72 VDC and high energy levels above 240VA that may cause electric
> shock or burns.  All DC input connections should be made only by a
> qualified service person only to prevent injury.  All wiring terminals
> connected to the DC input terminal block must be fully insulated with no
> exposed bare metal.**

The first time you turn the server on you need to enter the BIOS Setup Utility and set the correct date and time values.  After setting these values the server executes its Power-On Self-Test (POST) sequence and passes control to the Boot Manager.

For information on the Boot Manager, refer to the *Intel TSRMT2 Server System Product Guide*.

Follow these steps to power up the TSRMT2 server for the first time:

1. Make sure all external devices, such as a monitor, keyboard, and mouse, have been connected.
2. Plug in the AC power cord or connect the DC power wiring to the back of the chassis (L in Figure 3).
3. Plug the male ends of the server AC power cords into wall outlets (grounded, three-pronged AC power outlets).
4. Turn on the video monitor.
5. Press the Power button on the front panel (B in Figure 2).  Pressing this button causes the server fans to start up and POST to begin.
6. When POST displays the message:  "Hit <F2> if you want to run SETUP," enter <F2> and the system will enter the BIOS Setup Utility.  (If you see a prompt asking for a system password, pressing the <ENTER> key will get you directly to the BIOS Setup Utility.)

🖙 **NOTE**

> For information on how to use the BIOS Setup Utility, see the *Intel
> TSRMT2 Server System Product Guide*.

7. From the **Main** menu of the BIOS Setup Utility, use the arrow keys to move the cursor down to the system date and time selections. Position the cursor over the date and time values and enter appropriate values.

8. Use the <TAB> key to access the Exit menu and select the item to save changes and exit the BIOS Setup Utility. After you exit the utility the boot procedure resumes. You can monitor the remainder of the boot progress on the video display.

# The TSRMT2 Resource CD

The *TSRMT2 Resource CD* has the following contents:

- Utilities:
  — CSSU
  — SSU
  — ISC 3.5
  — FRU/SDR Load Utility
  — Firmware Update Utility
  — Smart Tool
  — Service Partition Admin Utility
- *Intel TSRMT2 Server System Product Guide*
- Adobe† Acrobat† Reader

The resource CD comes with a menu driven program that can be used for the following:

1. Create a diskette containing drivers for various operating systems.
2. Install ISC Service Partition. The ISC service partition provides the ability to remotely access TSRMT2 via modem or LAN for the purpose of executing configuration/setup utilities and diagnostics.
3. Run TSRMT2 ISC based utilities.

To invoke the Resource CD from Windows† 2000:

1. Insert the Resource CD in the CD-ROM drive.
2. If the Menu Program does not autorun, execute artorun.exe on the CD.

To invoke the Resource CD from Red Hat† Linux†:

1. Start the X Window System (preferable GNOME).
2. Insert the Resource CD in the CD-ROM drive.
3. If the Menu Program does not autorun, mount the CD (mount/mnt/cdrom) and execute autorun (not autorun.exe) on the CD (/mnt/cdrom/autorun). Automatic CD mounting and autorun is configured, by default, in the GNOME desktop environment but not in the KDE desktop environment.

To invoke the CD Boot features of the Resource CD:

1. Insert the Resource CD in the CD-ROM drive.
2. Turn the system on and boot to the Resource CD.

See README.TXT on the Resource CD for more information on using the Resource CD.

✐ **NOTE**

> If copying drivers or utilities to a disk, insert a blank diskette in the floppy drive.

# The Intel® TSRMT2 Server System Product Guide

The *Intel TSRMT2 Server System Product Guide* comes as a single .PDF file shipped on the resource CD.  You can use the Acrobat Reader to view the product guide.

✐ **NOTE**

> The product guide can only be read and printed from an IA-32 operating system.

# Warnings

**WARNING:  English (US)**

**AVERTISSEMENTS :  Français**

**WARNUNG:  Deutsch**

**AVVERTENZA:  Italiano**

**ADVERTENCIA:  Español**

# WARNING:  English (US)
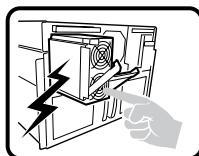
The power supply in this product contains no user-serviceable parts.  There may be more than one supply in this product.  Refer servicing only to qualified personnel.
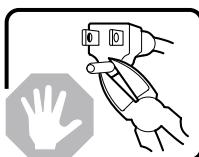
Do not attempt to modify or use the supplied AC power cord if it is not the exact type required.  A product might be equipped with more than one AC power cord.
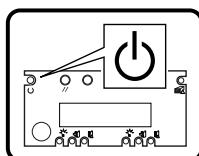
The Power button on the system does not turn off all system power.  To remove all power from the system, you must unplug/disconnect the power cord from the system.
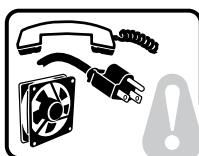
**To avoid injury from electrical and mechanical hazards, chassis covers should only be removed by qualified service personnel.**

**SAFETY STEPS:**  Whenever you remove the chassis covers to access the inside of the system, follow these steps:

1. Turn off all peripheral devices connected to the system.
2. Turn off the system by pressing the Power button.
3. Unplug/disconnect the power cord from the system.
4. Label and disconnect all telecommunication cables and all other cables connected to I/O connectors or ports on the back of the system.
5. Provide some electrostatic discharge (ESD) protection by wearing an anti-static wrist strap attached to chassis ground of the system—any unpainted metal surface—when handling components.
6. Do not operate the system with the chassis covers removed.
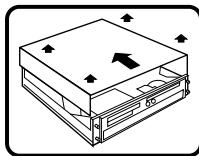
After you have completed the five SAFETY steps above, you can remove the system covers. To do this:

1. Remove and save all screws from the covers.
2. Remove the covers.
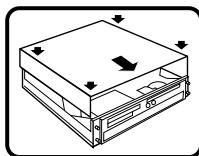
For proper cooling and airflow, always reinstall the chassis covers before turning on the system.  Operating the system without the covers in place can damage system parts.  To install the covers:

1. Check first to make sure you have not left loose tools or parts inside the system.
2. Check that cables, add-in boards, and other components are properly installed.
3. Attach the covers to the chassis with the screws removed earlier, and tighten them firmly.
4. Connect all external cables and the power cord to the system.
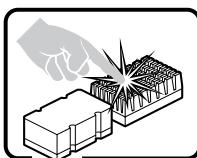
A microprocessor and heat sink might be hot if the system has been running.  Also, there might be sharp pins and edges on some board and chassis parts.  Contact should be made with care.  Consider wearing protective gloves.
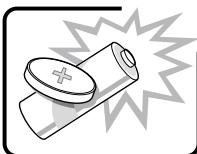
Danger of explosion if the battery is incorrectly replaced.  Replace only with the same or equivalent type recommended by the equipment manufacturer.  Discard used batteries according to manufacturer's instructions.
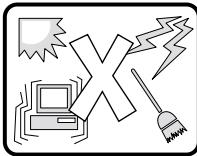
The system is designed to operate in a typical office environment.  Choose a site that is:

- Clean and free of airborne particles (other than normal room dust).
- Well-ventilated and away from sources of heat including direct sunlight.
- Away from sources of vibration or physical shock.
- Isolated from strong electromagnetic fields produced by electrical devices.
- Protected when in regions that are susceptible to electrical storms.  We recommend you plug your system into a surge suppresser and disconnect telecommunication lines to your modem during an electrical storm.
- Provided with a properly grounded wall outlet.
- Provided with sufficient space to access the power supply cords, because they serve as the product's main power disconnect.
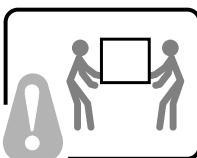
Servers can be too heavy for a single person to lift or move safely.  Depending on the server, use two people or a mechanical assist to lift or move the server.

# AVERTISSEMENTS :  Français
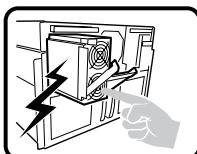
Le bloc d'alimentation de ce produit ne contient aucune pièce pouvant être réparée par l'utilisateur.  Ce produit peut contenir plusieurs blocs d'alimentation.  Veuillez contacter un technicien qualifié en cas de problème.
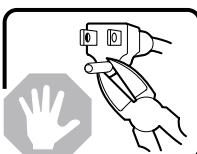
Ne pas essayer d'utiliser ni de modifier le câble d'alimentation CA fourni, s'il ne correspond pas exactement au type requis.  Un produit peut être équipé de plus d'un câble d'alimentation CA.
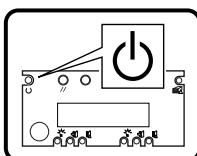
Le bouton d'alimentation du système n'éteint pas toutes les alimentations CA du système. Pour mettre complètement le système hors tension, vous devez débrancher chaque cordon d'alimentation CA de sa prise.
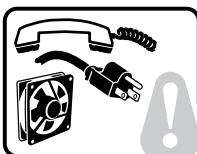
**Pour éviter toute lésion à la suite de risques électriques et mécaniques, les panneaux du châssis ne doivent être démontés que par un personnel qualifié.**

**CONSIGNES DE SÉCURITÉ :**  Lorsque vous retirez les panneaux du châssis pour accéder à l'intérieur du système, suivez les étapes ci-dessous :

1. Mettez hors tension tous les périphériques connectés au système.
2. Mettez hors tension le système en appuyant sur le bouton d'alimentation.
3. Débranchez tous les cordons d'alimentation CA du système ou des prises murales.
4. Identifiez et déconnectez tous les câbles de télécommunications et tous les autres câbles reliés aux connecteurs E/S ou aux ports derrière le système.
5. Pour prévenir les décharges électrostatiques lorsque vous touchez aux composants, portez une bande antistatique pour poignet et reliez-la à la masse du système (toute surface métallique non peinte du boîtier).
6. Ne faites pas fonctionner le système si les panneaux du châssis sont enlevés.
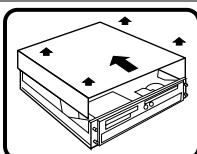
Après avoir suivi les six consignes de SECURITE ci-dessus, vous pouvez retirer les panneaux du système.  Pour effectuer cette opération :

1. Retirez et conservez toutes les vis des panneaux.
2. Retirez les panneaux.
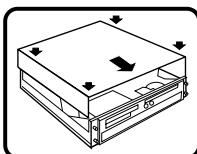
Afin de permettre le refroidissement et l'aération du système, réinstallez toujours les panneaux du châssis avant de mettre le système sous tension.  Le fonctionnement du système en l'absence des panneaux risque d'endommager ses pièces.  Pour installer les panneaux, procédez comme suit :

1. Assurez-vous ne pas avoir oublié d'outils ou de pièces démontées dans le système.
2. Assurez-vous que les câbles, les cartes d'extension et les autres composants sont bien installés.
3. Revissez solidement les panneaux du châssis avec les vis retirées plus tôt.
4. Rebranchez tous les cordons d'alimentation CA et câbles externes au système.

**Avertissements : Français** (suite)
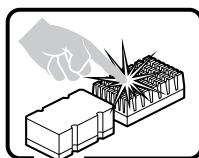
Le microprocesseur et le dissipateur de chaleur peuvent être chauds si le système a été sous tension. Faites également attention aux broches aiguës des cartes et aux bords tranchants du capot. Les contacts doivent être établis avec soin. L'usage de gants de protection est conseillé.
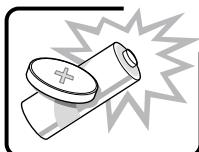
Danger d'explosion si la batterie n'est pas remontée correctement. Remplacer uniquement par une pile du même type ou de type équivalent recommandé par le fabricant. Débarrassez-vous des piles usagées conformément aux instructions du fabricant.
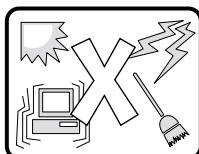
Le système a été conçu pour fonctionner dans un cadre de travail normal. L'emplacement choisi doit être :

- Propre et dépourvu de poussières en suspension (sauf la poussière normale).
- Bien aéré et loin des sources de chaleur, y compris du soleil direct.
- À l'abri des chocs et des sources de vibration.
- Isolé des forts champs électromagnétiques générés par des appareils électriques.
- Protégé s'il se trouve dans des régions sujettes aux orages magnétiques. Nous vous recommandons de connecter votre système à un suppresseur de surtension et de déconnecter les lignes de télécommunications de votre modem pendant un orage magnétique.
- Muni d'une prise murale correctement mise à la terre.
- Suffisamment spacieux pour vous permettre d'accéder aux câbles d'alimentation (ceux-ci étant le seul moyen de mettre le système hors tension).
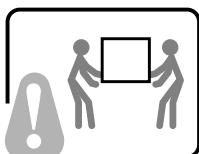
Il se peut que les serveurs soient trop lourds pour qu'une seule personne puisse les soulever et les déplacer en toute sécurité. En fonction du serveur, utilisez deux personnes ou utilisez un équipement mécanique auxiliaire pour soulever ou déplacer le serveur.

# WARNUNG:  Deutsch
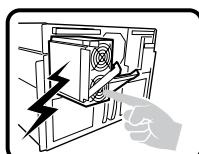
Das Netzteil dieses Computers enthält keine wartungsbedürftigen Teile.  Dieses Produkt kann über mehrere Netzteile verfügen.  Überlassen Sie Wartungsarbeiten nur qualifizierten Fachleuten.
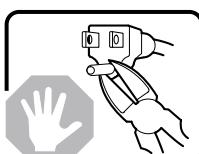
Versuchen Sie nicht, das mitgelieferte Netzkabel zu verändern oder einzusetzen, wenn es nicht exakt dem benötigten Kabeltyp entspricht.  Das Produkt kann über mehrere Netzkabel verfügen.
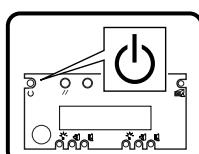
Durch Ausschalten des Netzschalters wird die Wechselstromversorgung des Systems nicht unterbrochen.  Um das System vom Netz zu trennen, müssen Sie das Netzkabel aus der Steckdose oder vom Netzteil abziehen.
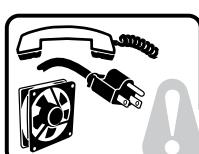
**Vermeiden Sie Verletzungen aufgrund elektrischer oder mechanischer Gefahren; lassen Sie daher den Gehäusedeckel nur von technisch qualifiziertem Personal abnehmen.**

**SICHERHEITSHINWEISE:**  Beachten Sie beim Abnehmen der Gehäuseabdeckung und Arbeiten im Inneren des Systems folgende Schritte:
1.  Schalten Sie alle am System angeschlossenen Peripheriegeräte ab.
2.  Drücken Sie den Netzschalter, um das System abzuschalten.
3.  Ziehen Sie alle Wechselstromkabel vom System und den Steckdosen ab.
4.  Kennzeichnen Sie alle Telekommunikationsleitungen und sonstigen Kabel an den E/A-Steckern bzw.  Anschlüssen an der Rückseite des Systems, und trennen Sie diese vom Netz.
5.  Um sich gegen elektrostatische Entladung zu schützen, sollten Sie eine Antistatik-Manschette tragen, die Sie beim Arbeiten mit Komponenten zur Erdung an einem beliebigen unlackierten Metallteil befestigen.
6.  Nehmen Sie das System nicht ohne Abdeckung in Betrieb.
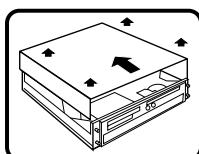
Nachdem Sie die fünf Sicherheitshinweise oben beachtet haben, können Sie die Gehäuse-abdeckung abnehmen.  Gehen Sie wie folgt vor:
1.  Entfernen Sie sämtliche Schrauben der Gehäuseabdeckung, und bewahren Sie diese auf.
2.  Nehmen Sie die Gehäuseabdeckung ab.
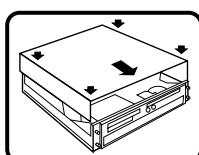
Um eine ordnungsgemäße Kühlung und Belüftung zu gewährleisten, sollten Sie stets die Gehäuseabdeckung anbringen, bevor Sie das System in Betrieb nehmen.  Wenn das System ohne obere und vordere Abdeckung betrieben wird, kann es zu einer Beschädigung der Systemkomponenten kommen.  So entfernen Sie die Gehäuseabdeckung:
1.  Prüfen Sie, daß weder Werkzeuge noch Kleinteile im Innern des Systems vergessen wurden.
2.  Prüfen Sie, ob die Kabel und anderen Komponenten richtig installiert sind.
3.  Schrauben Sie die Abdeckung mit den zuvor gelösten Schrauben gut am Gehäuse fest.
4.  Schließen Sie alle externen Kabel und das Netzkabel an das System an.

Fortsetzung
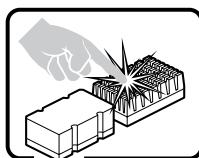
Mikroprozessor und Kühlkörper können heiß sein, wenn das System längere Zeit einge-schaltet war.  Einige Platinen- und Gehäuseteile können scharfe Spitzen und Kanten auf-weisen.  Gehen Sie auf jeden Fall mit Vorsicht heran.  Das Tragen von Schutzhandschuhen wird empfohlen.
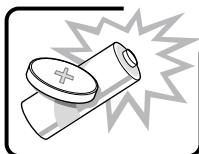
Wird die Batterie unsachgemäß ausgewechselt, besteht Explosionsgefahr.  Ersetzen Sie die Batterie nur durch denselben oder einen gleichwertigen Batterietyp, der vom Geräte-hersteller empfohlen wird.  Entsorgen Sie verbrauchte Batterien gemäß den Hersteller-empfehlungen.
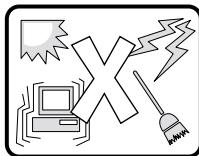
Das System ist für den Betrieb innerhalb normaler Büroumgebungen geeignet.  Der Standort sollte folgende Anforderungen erfüllen:

- Saubere, möglichst staubfreie Umgebung.
- Gut belüftet und weit entfernt von Wärmequellen wie direkte Sonneneinstrahlung.
- Vibrations- und erschütterungsfreie Umgebung.
- Abgeschirmt von starken elektromagnetischen Feldern, die durch elektrische Geräte erzeugt werden.
- Entsprechender Schutz bei Betrieb in gewittergefährdeten Gebieten.  Es empfiehlt sich, den Computer über einen Überspannungsschutz anzuschließen und die Verbindung zwischen dem Modem und dem Telefonanschluß im Falle eines Gewitters zu trennen.
- Ausgestattet mit einer ordnungsgemäß geerdeten Wandsteckdose.
- Sorgen Sie für ausreichend Platz, damit das Servernetzkabel problemlos erreicht werden kann, da das Gerät nur über dieses Kabel vom Netz getrennt wird.
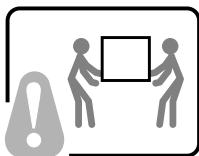
Um einen Server sicher anzuheben und zu bewegen ist eine Person nicht ausreichend.  Bewegen Sie den Server, je nach Größe, entweder zu zweit oder mittels einer mecha-nischen Hilfe.

# AVVERTENZA:  Italiano
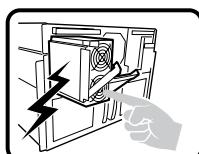
L'alimentatore contenuto nel computer non contiene parti riparabili dall'utente.  Questo prodotto può essere fornito con più alimentatori.  Per l'assistenza fare riferimento solo a personale qualificato.
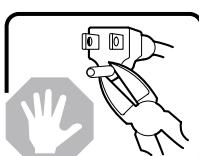
Non tentare di modificare o utilizzare cavi di alimentazione in c.a. che non siano del tipo prescritto.  Un prodotto potrebbe contenere più di un cavo di alimentazione in c.a.
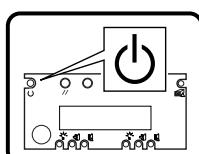
L'interruttore di accensione del sistema non scollega tutta l'alimentazione in c.a. del sistema.  Per scollegare tutta l'alimentazione in c.a., è necessario disinserire ogni cavo di alimentazione in c.a. dalla presa a muro o dall'alimentatore.
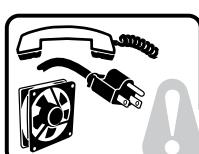
**Per evitare incidenti elettrici e meccanici, i coperchi del telaio devono essere rimossi da personale qualificato.**

**MISURE DI SICUREZZA**:  Nel caso sia necessario rimuovere i coperchi del telaio per accedere alle parti interne del sistema, procedere nel seguente modo:
1. Spegnere tutte le periferiche collegate al sistema.
2. Spegnere il sistema premendo il pulsante di accensione.
3. Scollegare tutti i cavi di alimentazione in c.a. dal sistema o dalle prese a muro.
4. Apporre un'etichetta e scollegare tutti i cavi di telecomunicazione e i cavi collegati ai connettori di I/O o alle porte sulla parte posteriore del sistema.
5. Assicurare un minimo di protezione da scariche elettrostatiche (ESD) indossando un bracciale antistatico collegato a un componente metallico non verniciato del telaio quando si maneggiano i componenti.
6. Non attivare il sistema nel caso in cui i coperchi del telaio siano stati rimossi.
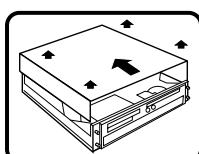
Dopo aver effettuato le operazioni di SICUREZZA descritte in precedenza, è possibile rimuovere i coperchi del sistema.  Procedere nel modo seguente:
1. Rimuovere e conservare tutte le viti dei coperchi.
2. Rimuovere i coperchi.
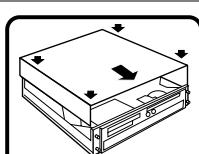
Per evitare che il sistema si surriscaldi e per garantire una ventilazione adeguata, reinstallare sempre i coperchi prima di attivare il sistema.  Se si attiva il sistema senza aver riposizionato i coperchi correttamente, alcune parti del sistema potrebbero risultare danneggiate.  Per installare i coperchi:
1. Verificare innanzitutto di non aver lasciato utensili o altre parti all'interno del sistema.
2. Verificare che i cavi, le schede aggiuntive e gli altri componenti siano stati installati correttamente.
3. Fissare saldamente i coperchi al telaio utilizzando le viti precedentemente rimosse.
4. Collegare tutti i cavi esterni e il cavo o i cavi di alimentazione in c.a. al sistema.
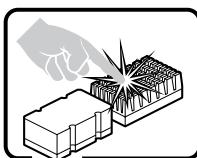
Se il sistema è stato in funzione, il microprocessore e il dissipatore di calore potrebbero essere caldi. Inoltre su alcune parti della scheda e del telaio potrebbero esserci piedini appuntiti e bordi taglienti. Prestare quindi molta attenzione nel toccarli. Indossare guanti protettivi.
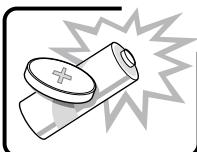
Se sostituita in modo errato, la batteria potrebbe esplodere. Sostituire le batterie scariche solo con batterie originali o del tipo consigliato dal produttore dell'apparecchiatura. Per lo smaltimento delle batterie usate attenersi alle istruzioni del produttore.
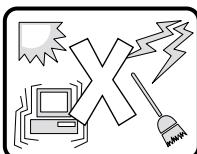
Il sistema è concepito per l'utilizzo in ambienti adibiti a ufficio. Scegliere una postazione con le caratteristiche riportate di seguito.

- Pulita, priva di particelle diverse dalla polvere normalmente presente nell'ambiente di lavoro.
- Aerata e lontana da fonti di calore, compresa la luce solare diretta.
- Lontana da fonti di vibrazione o urti.
- Isolata da forti campi elettromagnetici prodotti da apparecchi elettrici.
- Protetta nelle regioni soggette a temporali. Durante un temporale, si consiglia di collegare il sistema a un limitatore di corrente e di scollegare le linee di telecomunicazione dal modem.
- La posizione prescelta deve essere dotata di una presa a muro con adeguata messa a terra.
- Deve inoltre esserci sufficiente spazio per accedere ai cavi di alimentazione nel caso sia necessario scollegare l'alimentazione principale.
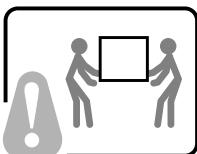
I server possono risultare troppo pesanti per essere sollevati o spostati da una sola persona. Alcuni server devono dunque essere sollevati o spostati da due persone o da un assistente tecnico.

# ADVERTENCIA: Español
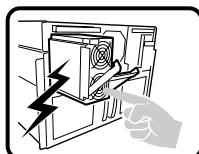
La fuente de alimentación de este producto no contiene piezas que puedan ser reparadas por el usuario. Puede que haya más de una fuente de alimentación en este producto. Para las reparaciones, consulte sólo con el personal cualificado.
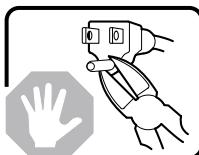
No intente modifica ni utilizar el cable de alimentación de CA suministrado si no es del tipo exacto requerido. Un producto puede estar equipado con más de un cable de alimentación de CA.
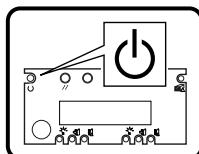
El botón de alimentación del sistema no desactiva toda la alimentación de CA del sistema. Para eliminar toda la alimentación de CA del sistema, deberá desenchufar todos los cables de alimentación de CA del enchufe de pared o de la fuente de alimentación.
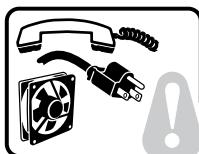
**Para evitar lesiones causadas por descargas eléctricas y mecánicas, únicamente puede retirar las cubiertas de las carcasas el personal técnico cualificado.**

**PASOS DE SEGURIDAD:** Siempre que retire las cubiertas de las carcasas para acceder al interior del sistema, siga las instrucciones que se especifican a continuación:

1. Desactive todos los dispositivos periféricos conectados al sistema.
2. Pulse el botón de alimentación para desactivar el sistema.
3. Desenchufe todos los cables de alimentación de CA del sistema o de los enchufes de pared.
4. Etiquete y desconecte todas las líneas de telecomunicaciones y todos los cables conectados a los puertos o conectores de E/S de la parte posterior del sistema.
5. Para contar con cierto grado de protección contra descargas electrostáticas (ESD), utilice un brazalete antiestático conectado a la toma de tierra del sistema (cualquier superficie de metal que no esté pintada) al manipular sus componentes.
6. No utilice el sistema sin las cubiertas de la carcasa.
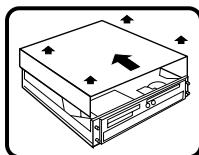
Una vez que haya completado los cinco pasos de SEGURIDAD, podrá retirar las cubiertas del sistema. Para ello:

1. Retire y guarde todos los tornillos de las cubiertas.
2. Retire las cubiertas.
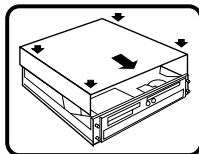
Para obtener una ventilación y un flujo de aire adecuados, reinstale siempre las cubiertas de la carcasa antes de encender el sistema. Si utiliza el sistema sin las cubiertas en su lugar, puede que se dañen algunas piezas del sistema. Para instalar las cubiertas:

1. Asegúrese primero de no haber dejado piezas o herramientas sueltas en el sistema.
2. Compruebe que los cables, tarjetas adicionales y demás componentes están correctamente instalados.
3. Fije las cubiertas a la carcasa con los tornillos que ha retirado anteriormente y apriételos firmemente.
4. Conecte todos los cables externos y los cables de alimentación de CA al sistema.

**Advertencia: Español** (continuación)
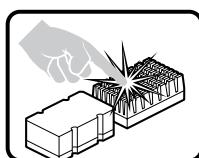
Puede que el microprocesador y el disipador de calor se recalienten si se ha estado ejecutando el sistema. Asimismo, puede que algunas tarjetas o piezas de la carcasa tengan patillas o bordes afilados. Los contactos deberán realizarse cuidadosamente. Puede que sea conveniente llevar guantes de protección.
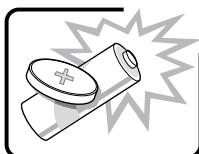
Existe peligro de explosión si la batería se sustituye incorrectamente. Sustitúyala sólo por el mismo tipo o uno equivalente recomendado por el fabricante del equipo. Deseche las baterías usadas según las instrucciones del fabricante.
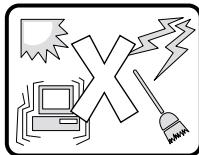
El sistema está diseñado para que funcione en un entorno de oficina típico. Elija un emplazamiento:

- Limpio y libre de partículas de transportadas por aire (aparte del polvo normal de la habitación).
- Bien ventilado y alejado de las fuentes de calor, incluida la luz del sol directa.
- Alejado de las fuentes de vibración o de los golpes físicos.
- Aislado de campos electromagnéticos fuertes producidos por dispositivos eléctricos.
- Protegido, si se encuentra en regiones susceptibles de tormentas eléctricas. Se recomienda que enchufe el sistema a un supresor de sobretensiones y desconecte las líneas de telecomunicaciones al módem durante una tormenta eléctrica.
- Que tenga un enchufe de pared correctamente conectado a tierra.
- Con suficiente espacio para acceder a los cables de la fuente de alimentación, ya que éstos sirven como desconectador de alimentación principal del sistema.
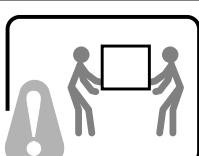
Los servidores pueden ser demasiado pesados para que una sola persona los levante o los mueva de forma segura.

Dependiendo del servido, utilice dos personas o una ayuda mecánica para levantar o mover el servidor.