

Dell® Latitude® LM Port Replicator



The port replicator enables you to use your Dell Latitude LM portable computer in a desktop environment. With the port replicator, you can establish connections to external devices and use those connections repeatedly. Use the instructions in this document to attach external devices to the port replicator and connect your computer to the port replicator.

NOTE: Before connecting your system to the port replicator, upgrade the basic input/output system (BIOS) on your Dell Latitude LM portable computer using the BIOS upgrade diskette that shipped with the port replicator. For instructions on how to upgrade your BIOS, refer to the document entitled "Upgrading the BIOS" that accompanied the upgrade diskette.

Connecting External Devices to the Port Replicator

The input/output (I/O) connectors on the back of the port replicator duplicate those on the back and side of your computer, so you can attach any external device to the port replicator that you can attach to the computer.

The following list shows the icons for each of the connectors on the back and side of the port replicator and indicates the type of external device(s) that can be attached to each connector.



An external Personal System/2 (PS/2) mouse connected to the PS/2 mouse connector



An external PS/2 keyboard or external numeric keypad connected to the PS/2 keyboard connector



A musical instrument digital interface (MIDI) audio device connected to the MIDI connector



A serial device, such as a serial mouse or external modem, connected to the serial port connector



A parallel device, such as a printer, connected to the parallel port connector



An external monitor connected to the monitor connector



A speaker connected to the speaker-out connector



A microphone connected to the microphone connector



The line-out connector of an audio device, such as a compact disc player, connected to the audio line-in connector



The AC adapter that shipped with the port replicator, connected to the AC adapter connector



A slot on the back for a Kensington lock, which you can use to secure the port replicator to your desktop

Use the following instructions to attach external devices to the port replicator:

1. Refer to Figure 1 to attach external devices to the appropriate connectors on the back and side of the port replicator.

CAUTION: The connectors on the back of the port replicator are inverted (as viewed while facing the back of the port replicator). Before attaching any device cables, verify that the connector pins are aligned correctly to avoid damaging the connectors.

NOTES: If the cable connector from the external device has thumbscrews, be sure to tighten them to ensure a proper connection.

When inserting the AC adapter connector into the replicator, push firmly till the connector clicks into place.

When you connect an external speaker to the speaker jack of the replicator, the speakers on the Dell Latitude LM computer do not mute.

To connect the Dell Latitude LM computer to a network, you must attach a network PC Card to your

computer. Likewise, to connect the computer to a SCSI device, you must attach a SCSI PC Card to your computer. See the "Using Internal Devices" section of the online Dell Latitude LM System User's Guide for information about using PC Cards.

For detailed information on using external devices with your portable computer, see the "Using External Devices" section in the online *System User's Guide*.

2. Connect the external devices to their power sources, if applicable.

Connecting the Computer to the Port Replicator

Use the following instructions to connect your computer to the port replicator.

1. Save all your work, and exit all open application programs.
2. If you have not already done so, connect the AC adapter to the port replicator and plug the AC power cable into an AC power source.

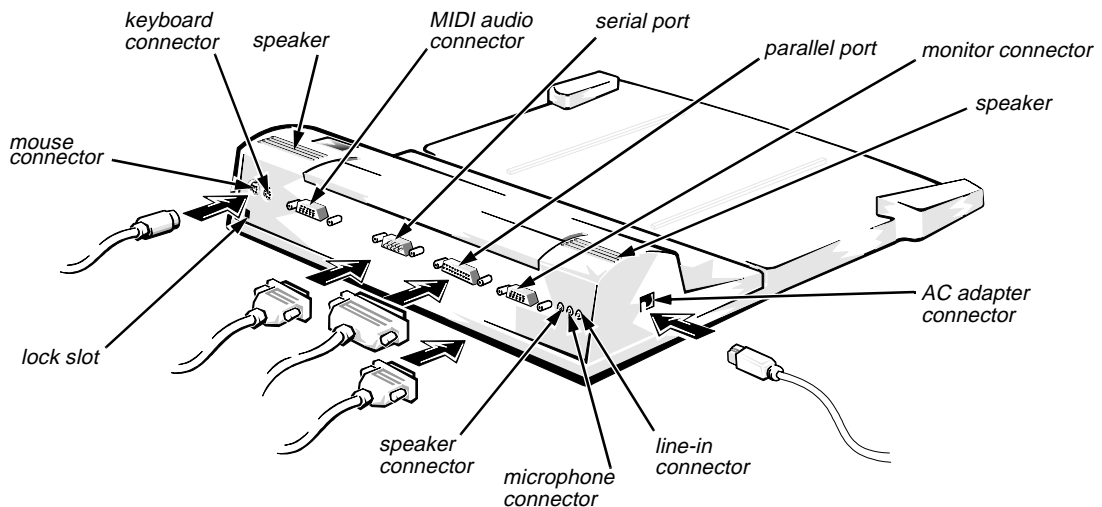


Figure 1. Attaching External Devices to the Port Replicator

3. **Open the connector door on the back of the computer. Fold over the docking connector panel inside the connector door (see Figure 2), and then close the connector door.**

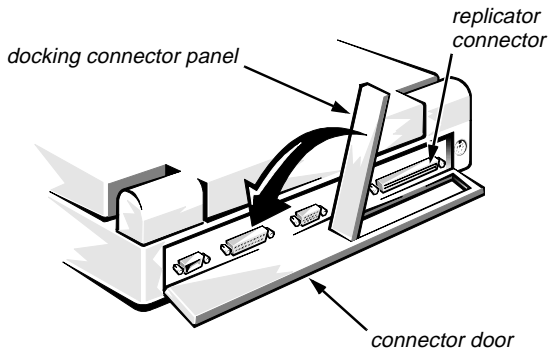


Figure 2. Opening the Docking Connector Panel

4. **Place the computer on the port replicator platform, with the back of the computer facing the port replicator's docking connector (see Figure 3).**

Make sure that the grooves on the bottom of the computer align properly on the platform rails.

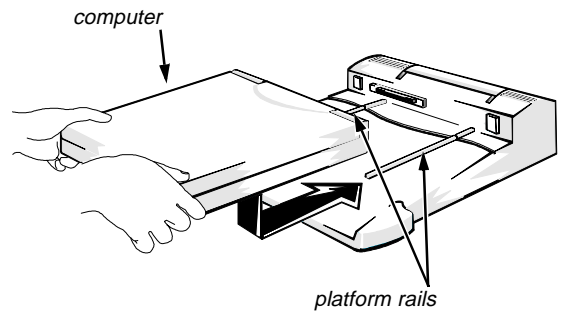


Figure 3. Positioning the Computer on the Port Replicator

5. **Position your fingers on the platform grips, as shown in Figure 4, and use your thumbs to push the computer forward until the docking connectors are fully engaged.**

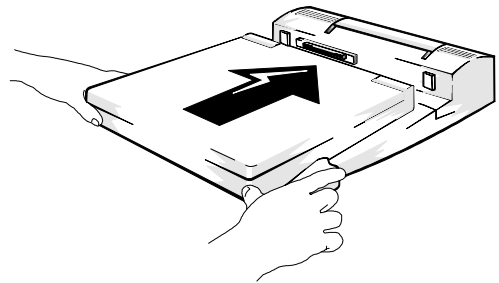


Figure 4. Docking the Computer

Detaching the Computer From the Port Replicator

How you detach the computer from the replicator depends on whether you are using the Microsoft® Windows® 95 or Windows 3.1 operating system. Refer to the following subsections for instructions pertaining to your operating system.

Detaching Under Windows 95

Use the following procedure to detach the computer from the replicator if you are using Windows 95:

- 1. Make sure there is a charged battery in the computer.**
- 2. Click the Start button, point to Eject PC, and click.**
The display goes blank.
- 3. Raise the release handle at the top of the replicator (see Figure 5) to undock the computer.**

Detaching Under Windows 3.1

Use the following procedure to detach the computer from the replicator if you are using Windows 3.1:

- 1. Save all your work and exit all open application programs.**
- 2. Exit Windows and turn off your computer.**
- 3. Raise the release handle at the top of the replicator (see Figure 5) to undock the computer.**

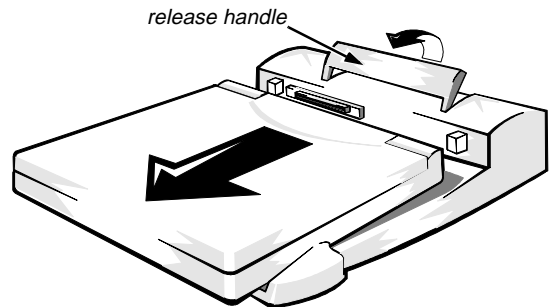


Figure 5. Detaching the Computer From the Port Replicator

Technical Specifications

Table 1 lists the technical specifications for the port replicator.

Table 1. Technical Specifications

Physical	
Height	81.5 mm (3.21 inches)
Depth	320.0 mm (12.60 inches)
Width	356.9 mm (14.05 inches)
Weight	1.67 kg (3.68 lb)
Connectors	
Expansion (to connect to computer)	one card-edge connector
Serial (DTE)	one 9-pin male connector
Parallel	one 25-hole female connector
PS/2-style keyboard/keypad	one 6-pin external keyboard connector
PS/2-style mouse	one 6-pin external PS/2 mouse connector
Monitor	one 15-hole female connector
Audio jacks	one speaker-out, one line-in, one microphone-in
MIDI port	one 15-hole female for MIDI in/out
Environmental	
Operating temperature	5° to 35°C (41° to 95°F)
Storage temperature.	-20° to 50°C (-4° to 122°F)
Storage relative humidity	10% to 90% (noncondensing)

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the online System User's Guide.

Regulatory Notices

All regulatory notices for the Dell Latitude LM Port Replicator are located on the bottom of the port replicator.

FCC Class B Notice (U.S. Only)

NOTE: This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause interference with radio and television reception. This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the Federal Communications Commission (FCC) Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference with radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the computer with respect to the receiver.
- Move the computer away from the receiver.
- Plug the computer into a different outlet so that the computer and the receiver are on different branch circuits.

If necessary, consult a representative of Dell Computer Corporation or an experienced radio/television technician for additional suggestions. You may find the following booklet helpful: *FCC Interference Handbook, 1986*, available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00450-7.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Note that FCC regulations provide that changes or modifications not expressly approved by Dell Computer Corporation could void your authority to operate this equipment.

A Notice About Shielded Cables: Use only shielded cables for connecting peripherals to any Dell device to reduce the possibility of interference with radio and television reception. Using shielded cables ensures that you maintain the appropriate FCC certification for a Class B device of this product. For parallel printers, a cable is available from Dell Computer Corporation.

IC Notice (Canada Only)

Most Dell computer systems (and other Dell digital apparatus) are classified by the Industry Canada (IC) Interference-Causing Equipment Standard #3 (ICES-003) as Class B digital devices. To determine which classification (Class A or B) applies to your computer (or other Dell digital apparatus), examine all registration labels located on the bottom or the back panel of your computer (or other digital apparatus). A statement in the form of "IC Class A ICES-3" or "IC Class B ICES-3" will be located on one of these labels.

Note that Industry Canada regulations provide that changes or modifications not expressly approved by Dell Computer Corporation could void your authority to operate this equipment.

This Class B (or Class A, if so indicated on the registration label) digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulations.


Cet appareil numérique de la Classe B (ou Classe A, si ainsi indiqué sur l'étiquette d'enregistrement) respecte toutes les exigences du Règlement sur le Matériel Brouilleur du Canada.

EN 55022 Compliance (Czech Republic Only)

This device belongs to category B devices as described in EN 55022, unless it is specifically stated that it is a category A device on the specification label. The following applies to devices in category A of EN 55022 (radius of protection up to 30 meters). The user of the device is obliged to take all steps necessary to remove sources of interference to telecommunication or other devices.

Pokud není na typovém štítku počítače uvedeno, že spadá do třídy A podle EN 55022, spadá automaticky do třídy B podle EN 55022. Pro zařízení zarazená do třídy A (ochranné pásmo 30m) podle EN 55022 platí následující. Dojde-li k rušení telekomunikačních nebo jiných zařízení, je uživatel povinen provést taková opatření, aby rušení odstranil.

CE Notice

Marking by the symbol  indicates compliance of this Dell system to the EMC (Electromagnetic Compatibility) directive of the European Community. Such marking is indicative that this Dell system meets or exceeds the following technical standards:

- EN 55022 — “Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment.”

NOTE: EN 55022 emissions requirements provide for two classifications—Class A and Class B. If any one of the registration labels (located on the bottom or back panel of your computer, on card-mounting brackets, or on the cards themselves) carries an FCC Class A rating, the following warning applies to your system.

CAUTION: 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.

- EN 50082-1 — “Electromagnetic compatibility—Generic immunity standard Part 1: Residential, commercial, and light industry.”
- IEC 801-2 — “Electromagnetic compatibility for industrial-process measurement and control equipment Part 2: Electrostatic discharge requirements.” — Severity level 3.
- IEC 801-3 — “Electromagnetic compatibility for industrial-process measurement and control equipment Part 3: Radiated electromagnetic field requirements.” — Severity level 2.
- IEC 801-4 — “Electromagnetic compatibility for industrial-process measurement and control equipment Part 4: Electrical fast transient/burst requirements.” — Severity level 2.
- EN60950:1992 + Amd.1:1993 + Amd.2:1993 — Safety of Information Technology Equipment including Electrical Business Equipment.

A “Declaration of Conformity” in accordance with the above standards has been made and is on file at Dell Products Europe BV, Limerick, Ireland.

VCCI Notices (Japan Only)

Most Dell computer systems are classified by the Voluntary Control Council for Interference (VCCI) as Class 2 information technology equipment (ITE). However, the inclusion of certain options changes the rating of some configurations to Class 1. To determine which classification applies to your computer system, examine the FCC classification on the registration labels located on the bottom or the back panel of your compute. If any one of the labels carries an FCC Class A designation, your entire system is considered to be VCCI Class 1 ITE. If all labels carry an FCC Class B identification number, your system is considered to be VCCI Class 2 ITE.

Once you have determined your system's VCCI classification, read the appropriate VCCI notice. Note that VCCI regulations provide that changes or modifications not expressly approved by Dell Computer Corporation could void your authority to operate this equipment.

Class 1 Notice

This equipment complies with the limits for a Class 1 digital device (devices used in commercial and/or industrial environments) and conforms to the standards for information technology equipment that are set by the Voluntary Control Council for Interference for preventing radio frequency interference in commercial and/or industrial areas.

Consequently, when used in a residential area or in an area adjacent to a residential area, this equipment may cause radio interference with radio and television receivers or other communications equipment.

To ensure that such radio interference does not occur, it is important to install and use this equipment in accordance with the manufacturer's instruction manual.

Class 2 Notice

This equipment complies with the limits for a Class 2 digital device (devices used in or adjacent to a residential environment) and conforms to the standards for information technology equipment that are set by the Voluntary Control Council for Interference for preventing radio frequency interference in residential areas.

However, this equipment does generate, use, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause interference with radio and television reception. Therefore, it is important to adhere to the manufacturer's instructions for installing and using this equipment.

Korean Regulatory Notice

To determine which classification (Class A or B) applies to your computer system (or other Dell digital apparatus), examine all registration labels located on the bottom or the back panel of your computer (or other digital apparatus), on card-mounting brackets, and on the cards themselves. If any one of the labels carries a Class A rating, your entire system is considered to be a Class A digital device. If all labels carry the Class B rating, your system is considered to be a Class B digital device.

NOTE: Class A devices are for business purposes. Class B devices are for nonbusiness purposes.

Class A Device

Please note that this device has been approved for business purposes with regard to electromagnetic interference. If you find that this device is not suitable for your use, you may exchange it for a device that has been approved for use in residential as well as business environments.

Class B Device

Please note that this device has been approved for non-business purposes and may be used in any environment, including residential areas.

Warranties

The following warranties apply to the Dell Latitude LM Port Replicator.

Limited One-Year Warranty (U.S. Only)

Dell Computer Corporation ("Dell") manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry-standard practices. Dell warrants that the hardware products it manufactures will be free from defects in materials and workmanship. The warranty term is one year beginning on the date of invoice, as described in the following text.

Damage due to shipping the products to you is covered under this warranty. Otherwise, this warranty does not cover damage due to external causes, including accident, abuse, misuse, problems with electrical power, servicing not authorized by Dell, usage not in accordance with product instructions, failure to perform required preventive maintenance, and problems caused by use of parts and components not supplied by Dell.

This warranty does not cover any items that are in one or more of the following categories: software; sound cards; speakers; external devices (except as specifically noted); accessories or parts added to a Dell system after the system is shipped from Dell; accessories or parts added to a Dell system through Dell's system integration department; accessories or parts that are not installed in the Dell factory; or DellWare® products. Monitors, keyboards, and mice that are Dell-branded or that are included on Dell's standard price list are covered under this warranty;

all other monitors, keyboards, and mice (including those sold through the DellWare program) are not covered.

Dell will repair or replace products covered under this limited warranty that are returned to Dell's facility. To request warranty service, you must call Dell's Customer Technical Support within the warranty period. Refer to the topic titled "Contacting Dell" in your online *System User's Guide* to find the appropriate telephone number for obtaining customer assistance. If warranty service is required, Dell will issue a Return Material Authorization Number. You must ship the products back to Dell in their original or equivalent packaging, prepay shipping charges, and insure the shipment or accept the risk of loss or damage during shipment. Dell will ship the repaired or replacement products to you freight prepaid if you use an address in the continental U.S. Shipments to other locations will be made freight collect.

NOTE: Before you ship the product(s) to Dell, back up the data on the hard-disk drive(s) and any other storage device(s) in the product(s). Remove any removable media, such as diskettes, CDs, or PC Cards.

Dell owns all parts removed from repaired products. Dell uses new and reconditioned parts made by various manufacturers in performing warranty repairs and building replacement products. If Dell repairs or replaces a product, its warranty term is not extended.

DELL MAKES NO EXPRESS WARRANTIES BEYOND THOSE STATED IN THIS WARRANTY STATEMENT. DELL DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SOME STATES DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES, SO THIS LIMITATION MAY NOT APPLY TO YOU.

DELL'S RESPONSIBILITY FOR MALFUNCTIONS AND DEFECTS IN HARDWARE IS LIMITED TO REPAIR AND REPLACEMENT AS SET FORTH IN THIS WARRANTY STATEMENT. THESE WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

DELL DOES NOT ACCEPT LIABILITY BEYOND THE REMEDIES SET FORTH IN THIS WARRANTY STATEMENT OR LIABILITY FOR INCIDENTAL OR

CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION ANY LIABILITY FOR PRODUCTS NOT BEING AVAILABLE FOR USE OR FOR LOST DATA OR SOFTWARE.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE PRECEDING EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU.

These provisions apply to Dell's U.S. limited one-year warranty only. For provisions of any service contract covering your system, refer to the separate service contract that you will receive.

Limited One-Year Warranty (Canada Only)

Dell Computer Corporation ("Dell") manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry-standard practices. Dell warrants that the hardware products it manufactures will be free from defects in materials and workmanship. The warranty term is one year beginning on the date of invoice, as described in the following text. This warranty is transferrable with the warranted products.

Damage due to shipping the products to you is covered under this warranty. Otherwise, this warranty does not cover damage due to external causes, including accident, abuse, misuse, problems with electrical power, servicing not authorized by Dell, usage not in accordance with product instructions, failure to perform required preventive maintenance, and problems caused by use of parts and components not supplied by Dell.

This warranty does not cover any items that are in one or more of the following categories: software; sound cards; speakers; external devices (except as specifically noted); accessories or parts added to a Dell system after the system is shipped from Dell; accessories or parts added to a Dell system through Dell's system integration department; accessories or parts that are not installed in the Dell factory; or DellWare products. Monitors, keyboards, and mice that are Dell-branded or that are included on Dell's standard price list are covered under this warranty; all other monitors, keyboards, and mice (including those sold through the DellWare program) are not covered.

Dell will repair or replace products covered under this limited warranty that are returned to Dell's facility. To request warranty service, you must call Dell's Customer Technical Support within the warranty period. Refer to the topic titled "Contacting Dell" in your online *System User's Guide* to find the appropriate telephone number for obtaining customer assistance. If warranty service is required, Dell will issue a Return Material Authorization Number. You must ship the products back to Dell in their original or equivalent packaging, prepay shipping charges, and insure the shipment or accept the risk of loss or damage during shipment. Dell will ship the repaired or replacement products to you freight prepaid if you use an address in Canada. Shipments to other locations will be made freight collect.

NOTE: Before you ship the product(s) to Dell, back up the data on the hard-disk drive(s) and any other storage device(s) in the product(s). Remove any removable media, such as diskettes, CDs, or PC Cards.

Dell owns all parts removed from repaired products. Dell uses new and reconditioned parts made by various manufacturers in performing warranty repairs and building replacement products. If Dell repairs or replaces a product, its warranty term is not extended, except as may be required by law.

DELL MAKES NO EXPRESS WARRANTIES BEYOND THOSE STATED IN THIS WARRANTY STATEMENT. DELL DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SOME JURISDICTIONS DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES, SO THIS LIMITATION MAY NOT APPLY TO YOU.

DELL'S RESPONSIBILITY FOR MALFUNCTIONS AND DEFECTS IN HARDWARE IS LIMITED TO REPAIR, REPLACEMENT, AND REFUND AS SET FORTH IN THIS WARRANTY STATEMENT. THESE WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM ONE JURISDICTION TO ANOTHER.

DELL DOES NOT ACCEPT LIABILITY BEYOND THE REMEDIES SET FORTH IN THIS WARRANTY STATEMENT OR LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION ANY LIABILITY FOR PRODUCTS NOT BEING AVAILABLE FOR USE OR FOR LOST DATA OR SOFTWARE.

SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE PRECEDING EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU.

These provisions apply to Dell's Canadian limited one-year warranty only. For provisions of any service contract covering your system, refer to the separate service contract that you will receive.

"Total Satisfaction" Return Policy (U.S. and Canada Only)

If you are an end-user customer who bought products directly from a Dell company, you may return them to Dell up to 30 days from date of invoice for a refund of the product purchase price if already paid. This refund will not include any shipping and handling charges shown on your invoice. If your organization bought the products from Dell under a written agreement with Dell, there may be different terms for the return of products under this policy, based on your agreement with Dell. To return products, you must call Dell Customer Service at the telephone number shown in the topic titled "Contacting Dell" in your online *System User's Guide* to receive a Credit Return Authorization Number. You must ship the products to Dell in their original packaging, prepay shipping charges, and insure the shipment or accept the risk of loss or damage during shipment. You may return software for refund or credit only if the sealed package containing the diskette(s) or CD(s) is unopened. Returned products must be in as-new condition, and all of the manuals, diskette(s), CD(s), power cables, and other items included with a product must be returned with it.

This "Total Satisfaction" Return Policy does not apply to DellWare products, which may be returned under DellWare's current return policy.