

# MRS-815

Rack-Mount 15" Flat Panel Console w/KVM Switch

## Installer/User Guide



## **Legal Information**

Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. Rackit Technology Corporation is not liable for any injury or loss that results from the use of this equipment.

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# Packing List

This product ships with the following items:

- One 1U rack mount console
- Two keys
- Two rear L-brackets (Pre-installed)
- KVM cables (if purchased). [8 cables included as of October 1, 2003]  
(3-in-1 cable for PS/2 mouse, PS/2 keyboard, and VGA DB15)
- Eight audio cables
- One power cord

# Safety Instructions

1. Unplug equipment before cleaning. Don't use liquid or spray detergent; use a moist cloth.
2. Keep equipment away from excessive humidity and heat. Preferably, keep it in an air-conditioned environment with temperatures not exceeding 40° Celsius (104° Fahrenheit).
3. When installing, place the equipment on a sturdy, level surface to prevent it from accidentally falling and damaging other equipment or injuring persons nearby.
4. When the unit is in an open position, do not cover, block or in any way obstruct the gap between it and the power supply. Proper air convection is necessary to keep it from overheating.
5. Arrange the equipment's power cord in such a way that others won't trip or fall over it.
6. If you are using a power cord that didn't ship with the equipment, ensure that it is rated for the voltage and current labeled on the equipment's electrical ratings label. The voltage rating on the cord should be higher than the one listed on the equipment's ratings label.
7. Observe all precautions and warnings attached to the equipment.
8. If you don't intend on using the equipment for a long time, disconnect it from the power outlet to prevent being damaged by transient over-voltage.
9. Keep all liquids away from the equipment to minimize the risk of accidental spillage. Liquid spilled on the power supply or other hardware may cause damage, fire or electrical shock.
10. Only qualified service personnel should open the chassis. Opening it yourself could irreparably damage the equipment and invalidate its warranty.
11. If any part of the equipment becomes damaged or stops functioning, have it checked by qualified service personnel.

## Product Overview

The MRS-815 Rack-Mount Flat Panel Console w/KVM Switch is the network administrator's tool of choice when working in space-restricted server farms, crowded industrial and factory environments, and facilities where it isn't convenient or cost-effective to install a full-sized computer in order to interface with and manipulate a multi-server network.

The MRS-815 features an exceptionally sturdy, industrial strength nickel-coated rack-mount drawer designed to withstand the most demanding industrial hazards; a high quality PS/2-compatible keyboard and touchpad pointing device to give you unparalleled ease-of-use; and a high-resolution 15-inch monitor arranged to provide maximum visual real-estate in as compact a space as possible. Additionally, a key attribute is the built-in KVM switch, which lets administrators instantly connect to any server on the network and remotely control any computer connected to the console.

Because the MRS-815 is rack-mounted, it fits comfortably into a standard server rack, taking up significantly less space than a standard-sized network management tool. If necessary, you can adapt the unit to fit deep rack configurations up to 36 inches. The keyboard, monitor, touchpad and other controls can be pulled out from the main rack body by means of a sliding drawer, opened and then used on the spot. For security, the unit has a built-in key lock to prevent unsanctioned access.

The MRS-815's monitor is a state-of-the-art LCD device. Its active matrix screen is as vivid as a traditional desktop computer monitor or television screen. It is made with thin film transistors, which are resistant to electro-magnetism.

## Specifications

The MRS-815's technical specifications are as follows:

### DISPLAY AREA

- 12.125 (W) x 9.125 (H)
- 15.0 inch diagonal

### RESOLUTION

1024 x 768 pixels

### NUMBER OF COLORS

True Color 16.7M  
(24-bit color)

### BRIGHTNESS

250 (cd/m<sup>2</sup>)

### BACKLIGHT UNIT

2 replaceable CCFLs

### OPERATION TEMPERATURE

0° ~ 40° C (104° Fahrenheit)

### VIEWING ANGLE

- -60 ~ 60 (H)
- -55 ~ 45 (V) (Typ.)

### KEYBOARD

- Sunrex K9505
- PS/2, 88 keys

### TOUCHPAD

Synaptics Corp., PS/2

### SPEAKERS

Two 2-watt stereo speakers

### SCREEN ADJUSTMENT CONTROLS

- Menu: auto, brightness, pitch, contrast, color
- Built-in OSD microchip
- Plug & Play
- VESA DDC1 and DDC2B

### POWER BUTTON

On/Off button & indicator

### MUTE BUTTON

Speaker on/off button & indicator

### PS/2 CONNECTORS

Eight keyboard/mouse 6-pin Mini  
DIN sockets

### D-SUB CONNECTORS

- Eight 15-pin VGA sockets
- Analog RGB input (DDC2B)

### AC PLUG

AC inlet

### AUDIO-IN CONNECTORS

Eight 3.5  $\phi$  audio jacks

### POWER

- Built-in AC adaptor
- 40 Watts
- 90~264V universal

### SECURITY

Cover lock

### Chassis Dimensions - Fully open (Inches)

- 17 3/8W x 14 1/4H x 23 3/4D

### COLOR

- Black
- Fine-texture coating

### EMI/SAFETY

FCC, UL, TUV, CE, CUL

## **Hardware Requirements**

The computers to which you connect the console must have either a VGA, SVGA or Multisync video card in order for the MRS-815 LCD monitor to function properly. The video card drivers should already be installed (if you must install new drivers, refer to the operating system's documentation).

Other requirements are:

- Available PS/2 pointing device port
- Available PS/2 keyboard port
- VGA port

If connecting to an Apple Macintosh computer or server, then you should have the appropriate video adapter in order to use the video display.

If you don't use the KVM cables that shipped with the MRS-815, we strongly recommend ones that possess optimum signal integrity and which are of sufficient length to connect the unit with the interfacing computer.

## **About the Rack-Mounted Chassis**

The chassis comprising the MRS-815 Rack-Mount Flat Panel Console w/KVM Switch conforms to the 19" EIA rack-mount standard, making it easy to slide into any standard server rack.

The outside of the chassis is electroplated with nickel, giving it a scratch resistant veneer and enhancing its sturdy structure.

## **Securing the Unit**

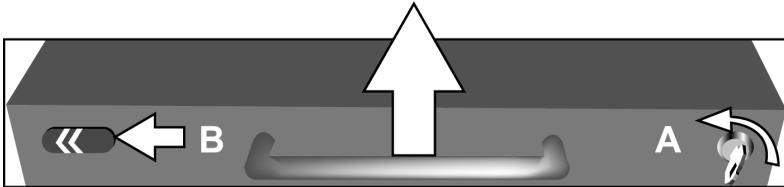
Your network security is of utmost importance. As such, the MRS-815 Rack-Mount Flat Panel Console w/KVM Switch has a built-in external locking mechanism and removable keys.

The equipment ships with two keys. Be sure to always keep one in a secure place in case the other one gets misplaced.

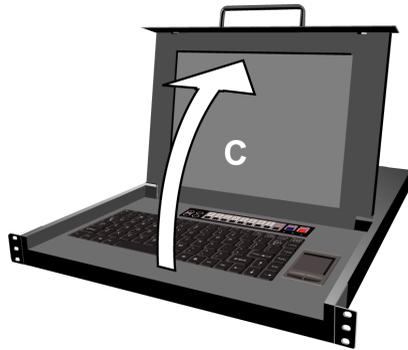
The external lock consists of two parts: a sliding lock and a key lock. Both locks must be disengaged before you can release the unit and open it.

**To unlock the unit:**

1. Insert the key into the lock.
2. Turn the key to the left (counterclockwise – **A**).

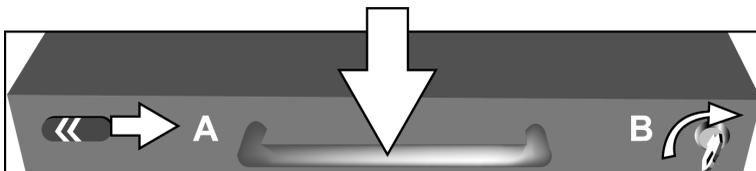


3. Press the sliding lock outward in the direction of the arrow (**B**).
4. Lift the cover open with the handle (**C**).



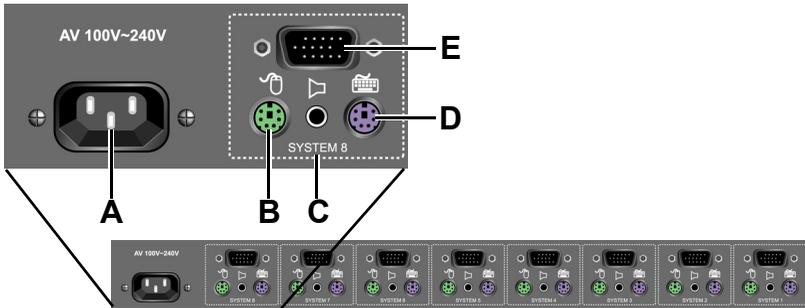
**To lock the unit:**

1. Close the cover. The sliding lock clicks shut (**A**).
2. Insert the key into the lock.
3. Turn the key to the right (clockwise – **B**).



## About the Rear Ports

The rear of the MRS-815 Rack-Mount Flat Panel Console w/KVM Switch has eight port arrays (System 1 ~ System 8):



**A. Power** — Receives a power cord validated for 100 ~ 240V AC, 50 ~ 60Hz. Don't use any other cords with the unit; inconsistent current may damage the unit.

**B. Pointing Device** — The pointing device cable plugs in here from the interfacing computer. Once plugged in, the touchpad on the console functions normally.

**C. Audio** — The audio cable plugs in here from the interfacing computer. Once plugged in, the speakers on the console function normally.

**D. Keyboard** — The keyboard cable plugs in here from the interfacing computer. Once plugged in, the keyboard on the console functions normally.

**E. VGA** — The video cable plugs in here from the interfacing computer. Once plugged in, the monitor on the console functions normally.

## About the Keyboard

This is a standard sized keyboard. Once the console has been connected to the interfacing computer, it functions according to all the rules of the operating system driving it.



## About the Touchpad

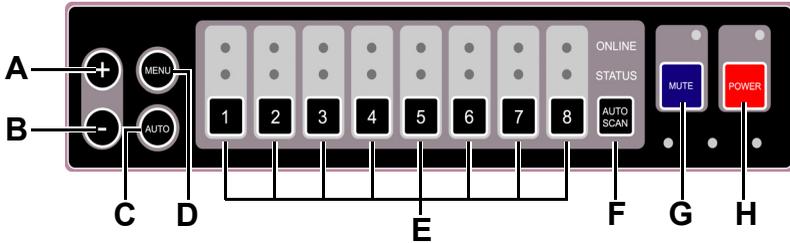
This is a standard touchpad pointing device. Once the unit has been connected to the interfacing computer, it functions according to the operating system driving it.

Sliding your finger over the touchpad moves the mouse on-screen. You can “left-click” either by single-tapping the pad or clicking the left button. Double-click by tapping the pad or clicking the left button twice.



## Using the Control Panel

The control panel enables you to adjust monitor parameters; raise, lower, and mute the volume; and select a connected computer in order to access and control it through the built-in KVM switch.



**A. Up** — Increases the volume. However, after pressing the Menu key, it may be used to scroll *up* through the available menu options.

**B. Down** — Decreases the volume. However, after pressing the Menu key, it may be used to scroll *down* through the available menu options.

**C. Auto** — Automatically sets the monitor defaults for horizontal and vertical position, brightness, contrast, and screen resolution. As MRS-815 adjusts the monitor, the message ‘Auto tuning’ appears.

**D. Menu** — Pressing this button once opens the monitor/audio setup and adjustment menu. Pressing it again while the menu is open enters a command.

**E. Ports** — Press the button corresponding to the port array at the rear of the MRS-815 to access and control the attached computer.

**F. Auto Scan** — Press this button to scan the port array and automatically detect which computers are attached.

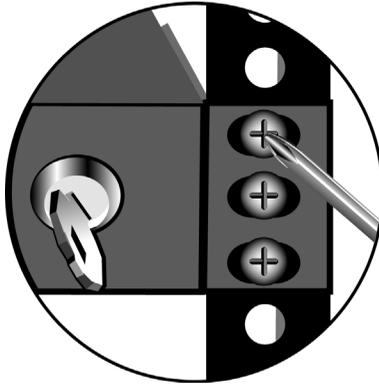
**G. Mute** — Turns the sound on and off.

**H. Power** — Turns the MRS-815 on and off.

## Installation

The MRS-815 unit is designed designed to fit in a standard 19 inch server rack or cabinet. MRS-815 uses only 1 rack-unit space (1U) when folded. MRS-815 supports mounting depth of 23½ to 36 inches.

To mount the MRS-815, use the screws that came with your server rack to mount the brackets onto the rack -- on all four corners -- adjusting the rear brackets to fit the rack's depth.

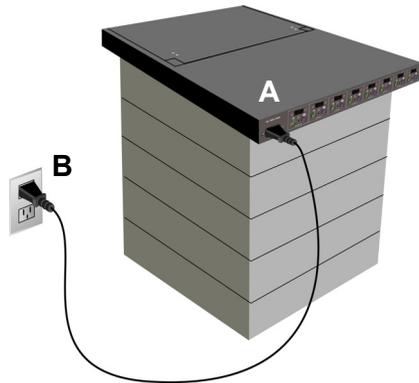


Do not over-tighten the screws; otherwise you may strip the threads.

## About the Power Supply

The MRS-815 Rack-Mount Flat Panel Console w/KVM Switch utilizes a built-in 40-watt AC power adapter.

Plug the female end of the MRS-815 cable into the AC jack at the rear of the case (A). Plug the male end of the cable into an available power socket (B).



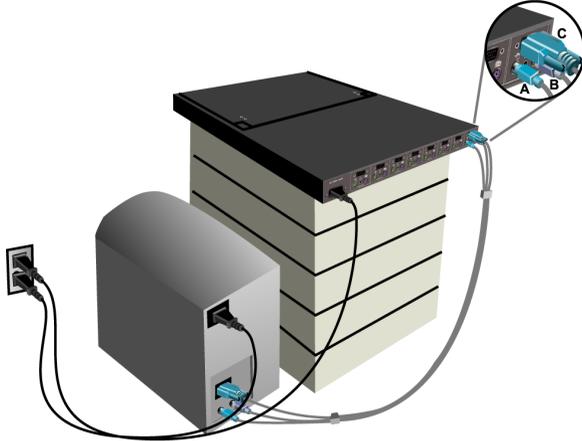
### Warning! To reduce the risk of injury:

- Do not use the unit near water.
- Do not place the unit on an unstable cart, stand or table. If the unit falls, it could injure a person or cause serious damage to the unit.
- Do not overload power outlets or extension cords. An overload can result in fire or electric shock.
- Do not use an extension cord unless absolutely necessary. Using an improper extension cord could result in a risk of fire and electric shock. If an extension cord must be used, make sure:
  - The pins on the extension cord's plug are of the same number, size, and shape as those of the plug on the power supply.
  - The extension cord is properly wired and in good electrical condition.
  - The extension cord's wire is at least 18 AWG.
- Do not disassemble the unit. Take the unit to a qualified service technician when service or repair is required. Improper reassembly may result in a risk of electric shock or fire.

## Making the Connection

Once you've installed the unit, connect the MRS-815 to the computers you want to control.

1. Turn off the computers to which you want to connect the MRS-815.



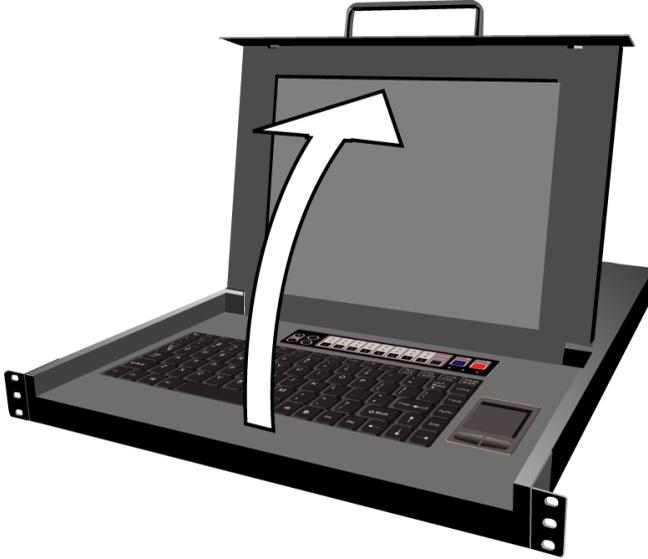
2. Connect the green pointing device PS/2 connector to the green PS/2 port on the back of the console. Connect the other end of the PS/2 line to the computer's mouse port.
3. Connect the purple keyboard connector to the purple keyboard port on the back of the console. Connect the other end of the keyboard line to the computer's keyboard port.
4. Connect the blue VGA connector to the VGA port at the back of the console. Connect the other end of the VGA line to the computer.
5. Follow steps 2 through 4 for the remaining computers.
6. Switch on the computers and then switch on the console. All of the attached computers can now be accessed and controlled directly through the console.

**Note:** The keyboard, VGA and mouse wires are all connected in a single, integrated unit called the KVM cable.

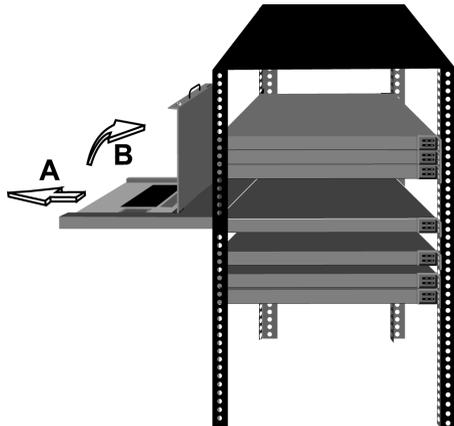


## Working with the MRS-815

The MRS-815 is quite simple to use. After unlocking the unit (for information on doing this, See “Securing the Unit” on page 8), open it by pulling up on the handle. The monitor, keyboard and touch-pad are immediately accessible.



If the MRS-815 is blocked from above by other devices, pull the unit out toward you sliding it away from the mounted chassis (A), and open it (B).



When you're done working on the MRS-815, remember to close it, slide the unit back into the chassis, and then lock it (See “Securing the Unit” on page 8).

# Touchpad Driver Installation

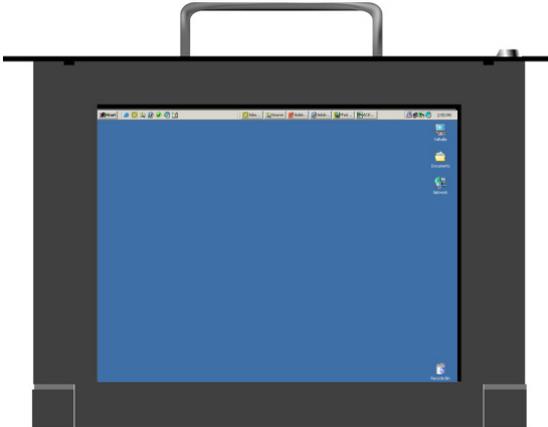
On most systems, the MRS-815 touchpad pointing device should work automatically. Microsoft® Windows® ME, 2000, NT and XP will detect the device and install generic drivers for it the first time MRS-815 is connected to a computer with one of these operating systems.

However, if you encounter problems with the touchpad drivers, you can go to the Windows® support Web site and download updated drivers, if available.

After downloading the driver installation package, run the setup program and follow the on-screen instructions to complete the process.

# Using the Monitor

The MRS-815 console monitor is functionally identical to a normal desktop or notebook monitor.



On the keyboard, press the menu button **MENU** to open the On Screen Display (OSD). Use the plus **+** and minus **-** buttons to navigate up and down the OSD menu. When you want to configure an option, press **MENU** when the submenu is highlighted.

## OSD Menu Items

Press the menu button on the keyboard to open the OSD menu. The following are the OSD menu options:

### **Brightness**

Adjusts monitor brightness. Press plus (+) to increase the brightness. Press minus (-) to decrease it. Press menu to exit.

### **Contrast**

Adjusts monitor contrast. Press plus (+) to increase the contrast. Press minus (-) to decrease it. Press menu to exit.

### **Display Adjust**

Modifies the positioning of the operating system interface on the display screen. Highlight an option on the Display Adjust sub-menu and press menu to display the menu items. Options are:

- **V-Position:** adjusts the vertical position of the screen.  
Press plus (+) to move the screen up. Press minus (-) to move it down.
- **H-Position:** adjusts the horizontal position of the screen.  
Press plus (+) to move the screen left. Press minus (-) to move it right.
- **Pitch:** adjusts the noise or distortion of the vertical display bars. Press plus (+) and minus (-) to adjust the bars.
- **Phase:** adjusts the noise or distortion of the horizontal display bars. Press plus (+) and minus (-) to adjust the bars.
- **Sharpness:** adjusts the clarity of the monitor. Press plus (+) to increase the sharpness. Press minus (-) to decrease the sharpness.
- **Auto Tuning:** automatically adjusts the monitor settings according to the VGA card of the target computer.
- **Recall:** resets monitor settings to the factory default values.
- **Return:** after making your adjustments, highlight this item and press menu to exit.

## **Color Temperature**

Adjusts the monitor's color temperature level. Adjust the color temperature to compensate for ambient light. The three default temperatures are: 9300 K, 7500 K, and 6500 K. Select User Preset to set a defined color temperature. Select Recall to load the factory default settings. Highlight Return and press menu to exit the Color Temperature submenu.

## **Language**

Sets the OSD language. Options are: English, Spanish, German, Italian, French, and Chinese. Press plus (+) and minus (-) to highlight the desired language. Press menu to select the language. Highlight Return and press menu to exit the Language submenu.

## **OSD Adjust**

Adjusts OSD menu options:

- **OSD H-Position:** adjusts the horizontal position of the OSD menu on the screen. Press plus (+) to move the OSD menu right. Press minus (-) to move it left.
- **OSD V-Position:** adjusts the vertical position of the OSD menu on the screen. Press plus (+) to move the OSD menu up. Press minus (-) to move it down.
- **OSD Timer:** adjusts the amount of time that the OSD menu is visible. Press plus (+) and minus (-) to adjust the time.
- **Tea Time:** enables an OSD screen saver. Press plus (+) and minus (-) to adjust the time at which the screensaver starts.
- **Recall:** resets OSD menu settings to the factory default values.
- **Return:** after making your adjustments, highlight this item and press Menu to exit.

## **Audio Control**

Adjust the volume of the onboard speakers.

- **Mute:** turns the sound off. Selecting this option a second time restores the volume.
- **Volume:** raises and lowers the audio volume. Press plus (+) to increase the volume. Press minus (–) to decrease the volume.
- **Recall:** resets audio settings to the factory default values.
- **Return:** after making your adjustments, highlight this item and press Menu to exit.

## **Reset**

Restores all settings back to the factory defaults.

## **Exit**

Exits the OSD menu.

# Troubleshooting

The following are answers to some commonly asked questions regarding problems operating the MRS-815 device.

**Q: I can't open the unit even though I've turned the key all the way to the left.**

A: You must press the sliding lock toward the left with your other hand after you've unlocked the key on the right.

**Q: The pointing device, keyboard and/or monitor either don't work at all or are behaving erratically.**

A: Check the KVM cables where they attach to the console and be sure none of the component wires are loose or detached.

**Q: The equipment won't turn on.**

A: Check to make sure the power cord is plugged in completely and that your power supply matches the MRS-815 device requirements.

**Q: The equipment powers up normally but the monitor displays nothing and neither the keyboard nor the touchpad respond. The OSD menu comes up as per normal.**

A: Check your connections to the interface computer. Ensure that the KVM cable is securely connected at both the interface computer and the MRS-815.

**Q: There is no sound from the speakers.**

A: Check that the audio cable is installed properly. Also check the drivers on the interface computer to which it is attached.

# Regulatory Notices

## Federal Communications Commission (FCC)

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 instructions, 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.

**FCC Caution:** Assure continued compliance (example - use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

## CE Notice (European Union)

The symbol indicates compliance of this equipment to the EMC Directive and the Low Voltage Directive of the European Union. These markings indicate that this system meets the following technical standards:

- EN 55022 — “Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment.”
- EN 55024 — “Information technology equipment - Immunity characteristics - Limits and methods of measurement.”
- EN 61000-3-2 — “Electromagnetic compatibility (EMC) - Part 3: Limits - Section 2: Limits for harmonic current emissions (Equipment input current up to and including 16 A per phase).”
- EN 61000-3-3 — “Electromagnetic compatibility (EMC) -Part 3: Limits - Section 3: Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current up to and including 16 A.”
- EN 60950 — “Safety of Information Technology Equipment.”

NOTE: EN 55022 emissions requirements provide for two classifications:

- Class A is for typical commercial areas.
- Class B is for typical domestic areas.

To determine which classification applies to your computer, examine the FCC registration label located on the back panel of the computer. If the label indicates a Class A rating, the following warning applies to your computer:

**RF INTERFERENCE WARNING:** This is a Class A product. In a domestic environment this product may cause radio frequency (RF) interference, in which case the user may be required to take adequate measures.

This device is classified for use in a typical Class B domestic environment.

## CCC Notice

On Class A systems, the following warning will appear near the regulatory label:

**Warning:** 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.

