



Nortel CallPilot

# 600r Server Hardware Installation

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 <b>Warning</b>
Please be aware of the following while installing the equipment: <ul style="list-style-type: none"><li>• Please use the connecting cables, power cord, and AC adaptors shipped with the equipment or specified by Nortel to be used with the equipment. If you use any other equipment, it may cause failures, malfunctioning or fire.</li><li>• Power cords shipped with this equipment must not be used with any other equipment. If the above guidelines are not followed, it may lead to death or severe injury.</li></ul>
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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 occur, in which case, the user may be required to take corrective action.



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## Publication History

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**May 2007**

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**March 2007**

CallPilot 5.0, Standard 01.01 of the *CallPilot 600r Server Hardware Installation* guide is issued for GA.



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# Chapter 1

## How to get help

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This section explains how to get help for Nortel products and services.

### Getting help from the Nortel Web site

The best way to get technical support for Nortel products is from the Nortel Technical Support Web site:

[www.nortel.com/support](http://www.nortel.com/support)

This site provides quick access to software, documentation, bulletins, and tools to address issues with Nortel products. More specifically, the site enables you to:

- download software, documentation, and product bulletins
- search the Technical Support Web site and the Nortel Knowledge Base for answers to technical issues
- sign up for automatic notification of new software and documentation for Nortel equipment
- open and manage technical support cases

### Getting help over the phone from a Nortel Solutions Center

If you do not find the information you require on the Nortel Technical Support Web site, and have a Nortel support contract, you can also get help over the phone from a Nortel Solutions Center.

In North America, call 1-800-4NORTEL (1-800-466-7835).

Outside North America, go to the following Web site to obtain the phone number for your region:

[www.nortel.com/callus](http://www.nortel.com/callus)

### **Getting help from a specialist by using an Express Routing Code**

To access some Nortel Technical Solutions Centers, you can use an Express Routing Code (ERC) to quickly route your call to a specialist in your Nortel product or service. To locate the ERC for your product or service, go to:

[www.nortel.com/erc](http://www.nortel.com/erc)

### **Getting help through a Nortel distributor or reseller**

If you purchased a service contract for your Nortel product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller.

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## Chapter 2

# 600r server description

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### In this chapter

"Conventions for Warnings" (page 11)

"Server features" (page 12)

"PCI riser assembly" (page 16)

"Network connectivity" (page 16)

"Supported peripheral devices" (page 19)

"Reference documents" (page 20)

### Conventions for Warnings

You can encounter the following types of warnings in this guide. Do not ignore them.



#### **DANGER**

##### **Risk of electric shock**

Warns you of an immediate electrical hazard, which, if not avoided, results in shock, serious injury, or death.



#### **WARNING**

Warns you of a situation in which you can be injured if instructions are not followed exactly as stated.



**CAUTION**

Alerts you to situations where data can be lost or damaged, equipment can be damaged, actions can result in service interruption, and productive time can be lost.

**ATTENTION**

Provides information that is essential to the completion of a task.

**Server features**

This section provides a general overview of the 600r server.

The 600r CallPilot server is a long-life industrial computer server in a standard rack-mount 1U form factor. The 600r utilizes current Intel P4 hyper-threading technology and proven, reliable SCSI hard-drive technology. Before you install your 600r server, Nortel recommends that you read this guide completely through. Ensure that CallPilot has the latest antivirus software. Do not install third-party antivirus software unless approved by Nortel. For information about the antivirus software packages that are approved by Nortel for CallPilot, see *Product Bulletin P-2007-0101-Global : CallPilot Support for Anti-Virus Applications*. Also, ensure your CallPilot application resides behind your network firewall.

If you have any questions about installing your 600r, contact a Nortel representative.

Ensure a single-point ground reference is available for all the power outlets serving the CallPilot server and its peripherals. Before the CallPilot server installation, a qualified electrician must implement the single-point ground reference requirement between the power outlets of the CallPilot server and the power outlets of the switch.

**Server dimensions**

Height	1.75 inches (44.4 mm)
Width	17.5 inches (444.3 mm)
Depth (distance from front to back)	20 inches (507.8 mm)

Clearance	<ul style="list-style-type: none"> <li>• front: 2 inches (50.8 mm)</li> <li>• rear: 3.6 inches (92 mm)</li> <li>• side: 1 inch (25 mm)</li> </ul>
Weight of fully loaded system with:	approximately 10 kg (23 lbs)
	<ul style="list-style-type: none"> <li>• SCSI hard drive</li> <li>• MPB96 board</li> <li>• DVD/CD/CDRW drive</li> </ul>

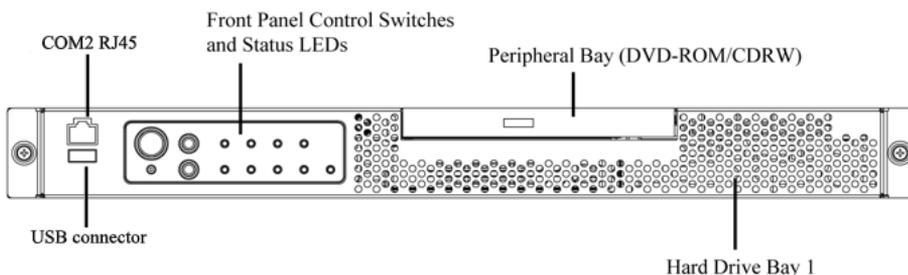
## Environmental specifications

Environmental condition	Specification
Operating temperature	+5°C to +35°C (41°F to 95°F)  Maximum rate of change must not exceed 10°C (50°F) per hour.
Non-operating (storage) temperature	-40°C to +70°C (-40°F to +158°F)
Non-operating humidity	95% @ 23-40°C
Altitude	<6000 ft. (1829 m)
Electrostatic discharge	<= 15 kV
Acoustic noise	< 55 dBA
Operating shock	No errors with a half sine wave shock of 2G (with 1 millisecond duration)
Handling drop	2g 11 mS  18" free-fall when packaged

## Front panel features

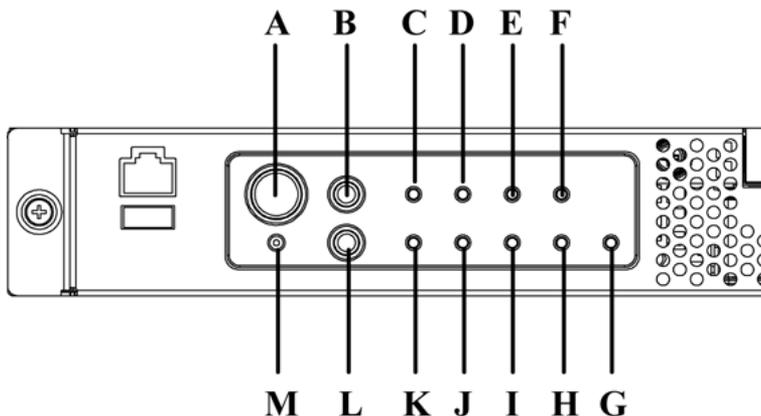
The following diagram shows the front view of the server chassis with the bezel cover in place. When the bezel cover is removed, Drive Bay 1 is accessible.

**Figure 1**  
Front panel



The following diagram shows the front panel controls and status LEDs. For more information about the front panel controls and status LEDs, see *CallPilot 600r Server Maintenance and Diagnostics* (NN44200-703.)

**Figure 2**  
Front panel control switches and status LEDs



**Note:** The faults described in the following table are hardware faults and are independent of CallPilot application faults.

**Table 1**  
Front panel

Label	Description	Label	Description
A	Power button	M	NMI button (not used)
B	Reset button	L	ID button
C	Critical fault LED	K	System ID LED (white)

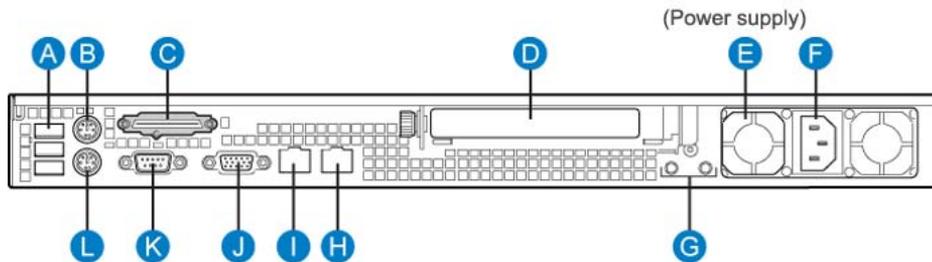
Label	Description	Label	Description
D	Major fault LED	J	NIC activity LED (green)
E	Minor fault LED	I	Main power LED (green)
F	Power LED	H	not used
G	Disk 0 Activity/Fault LED (green/amber)		

### Rear panel controls and features

The following diagram shows the back panel controls and features. On the right is the AC power supply bank. The PCI card bracket is in the middle of the back panel, while the connectors and ports are along the bottom and the left side.

**Note:** Nortel provides only AC power supply. The server works with a DC-to-AC converter, however, you must ensure converter meets AC requirements as specified on label of power supply cover. To access the power supply cover, remove server cover. For more information about the server cover, see "[To remove the server cover](#)" (page 24).

**Figure 3**  
Rear panel



**Table 2**  
Rear panel

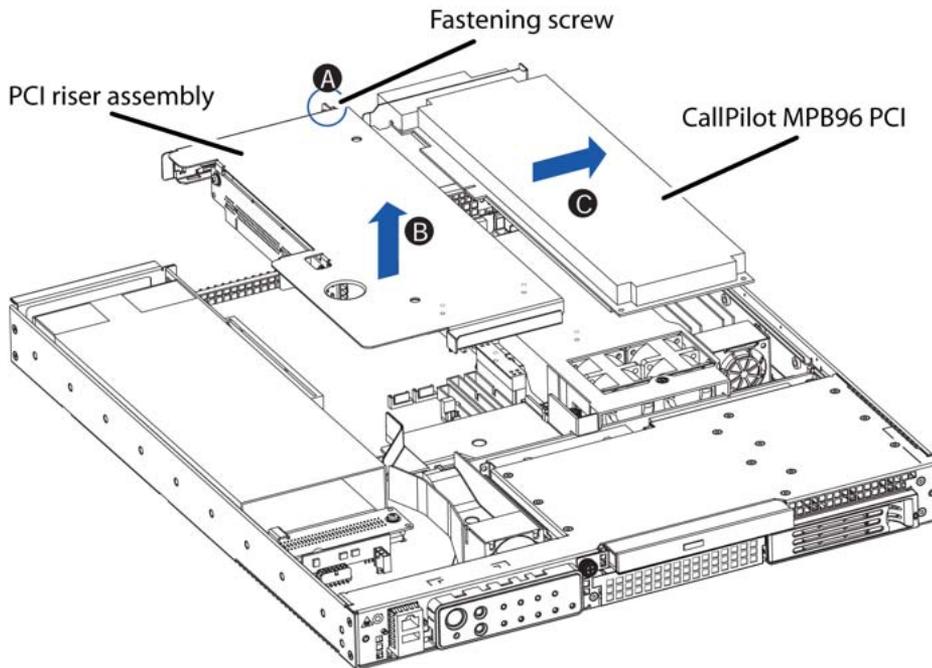
Label	Description	Label	Description
A	USB 0, USB 1, USB 2 (labelled 0, 1, 2 on the server)	G	Ground studs (used with system with DC input power supply)
B	PS/2 Mouse	H	RJ45 NIC 2 Embedded Local Area Network (ELAN) connector for the ELAN subnet (engraved 2 on server)
C	SCSI port	I	RJ45 NIC 1 Customer Local Area Network (CLAN) connector for Nortel server subnet (engraved 1 on server)

Label	Description	Label	Description
D	PCI card bracket (full-height) for MPB96	J	Video connector
E	Power supply	K	COM1 DB-9 serial port
F	AC power input	L	PS/2 Keyboard connector

### PCI riser assembly

The PCI riser assembly holds the MPB96 voice-processing card. The following diagram shows the PCI riser assembly above the server.

**Figure 4**  
PCI riser assembly



### Network connectivity

This section describes how the 600r server can be integrated into your network. The 600r can connect to legacy Meridian 1 (M1) and Communication Server 1000 (CS 1000) systems.

**ATTENTION**

To secure the CallPilot server from unauthorized access, ensure that the CallPilot network resides behind your network firewall.

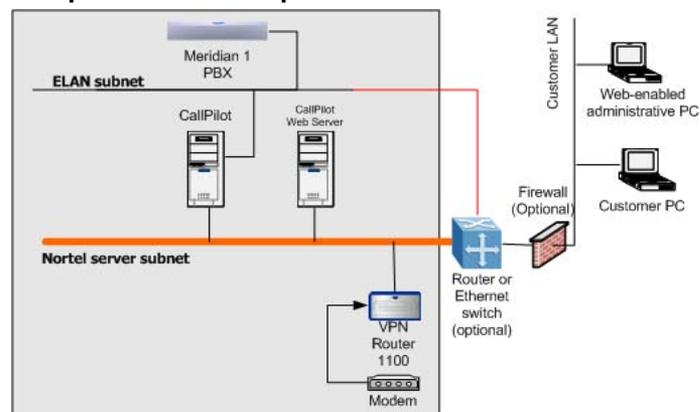
### Sample network setup: Meridian 1

The Meridian 1 switch can be one of the following:

- Option 11C or Option 11C Mini using fiber connections
- Option 51C
- Option 61C
- Options 81 and 81C

The following diagram shows a CallPilot 600r server network setup with a Meridian 1 switch.

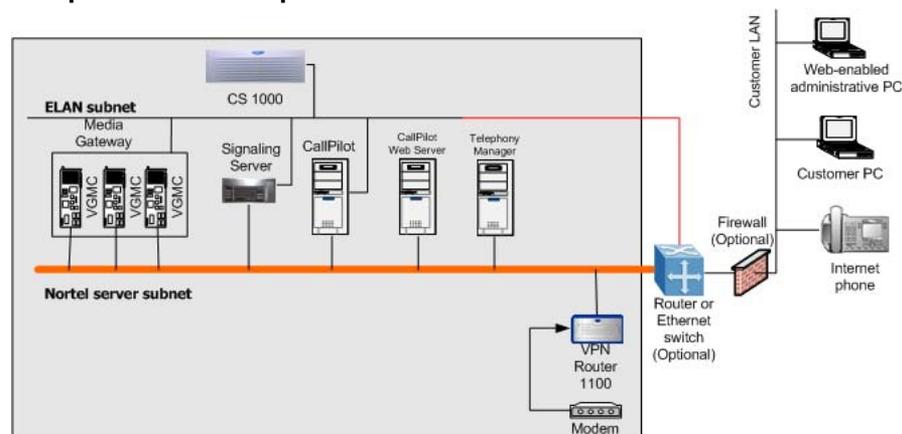
**Figure 5**  
Sample network setup with Meridian 1



### Sample network setup: Communication Server 1000

The following diagram shows a CallPilot 600r server network setup with a CS 1000 system:

**Figure 6**  
Sample network setup with Communication Server 1000



In the previous diagram, the telephony LAN (TLAN) subnet provides IP connectivity between the CS 1000 system and the IP Phones. The connection between the Call Server and Media Gateway can be point-to-point, or it can be through the LAN, if the system is installed in a distributed data network.

For information about the CS 1000 system and IP Phone bandwidth and network requirements, see the planning and installation documentation for the CS 1000 (NN430xx).

### Switch connectivity

For more details about how the connection between the 600r server and the switch is established, refer to the switch and server setup document for your switch.

- *Communication Server 1000 and CallPilot Server Configuration (NN44200-312)*
- *Meridian 1 and CallPilot Server Configuration (NN44200-302)*

### LAN connectivity

The 600r server contains two Ethernet controllers on the motherboard that provide the following:

- 10/100Base-T Ethernet network connectivity to the ELAN subnet

ELAN subnet is a network connection from the switch to the CallPilot server. The ELAN subnet is an Ethernet LAN that enables signaling and administration access to applications related to the Meridian 1 switch or CS 1000 system. The ELAN subnet is an isolated 10BaseT subnet required for management traffic and intra-system signaling traffic between the system call server and any devices requiring call server processing. A number of configurations are available, depending on whether the switch has an address on the Nortel server subnet.

For information about the ELAN subnet's purpose and requirements, see the *Planning and Engineering Guide (NN44200-200)*.

- 10/100/1000Base-T Ethernet connectivity to the Nortel server subnet

Nortel server subnet is a network set up by a customer for its data network. The Nortel server subnet is an optional connection that provides data connectivity among desktop and Web messaging clients, administrative PCs, and the CallPilot server. Typically, a Nortel server subnet already exists before CallPilot is installed at a customer site. Nortel recommends that the customer separate the Nortel server subnet from the rest of the enterprise IP network by a Layer 3 switch. The Nortel server subnet connects to the CLAN port on the 600r CallPilot server.

For information about how to identify the location of the network interface connectors, see "[Rear panel controls and features](#)" (page 15).

### Network requirements

Appropriate networking equipment must be available for the ELAN subnet and the optional Nortel server subnet, if it is used.

The ELAN subnet (and the optional Nortel server subnet, if used) must be properly configured for correct CallPilot operation. To ensure correct configuration, Nortel recommends that you consult a network specialist.

### Remote access connectivity

Use the USB connection on the rear of the 600r server to connect to an external dial-up modem. With the modem, administrators and technical support personnel can administer the 600r server from a remote location. You can also access the 600r server from a remote location directly over the network, without the use of a modem.

## Supported peripheral devices

This section identifies external devices that are supported by the 600r server.

**Table 3**  
**Supported peripheral devices**

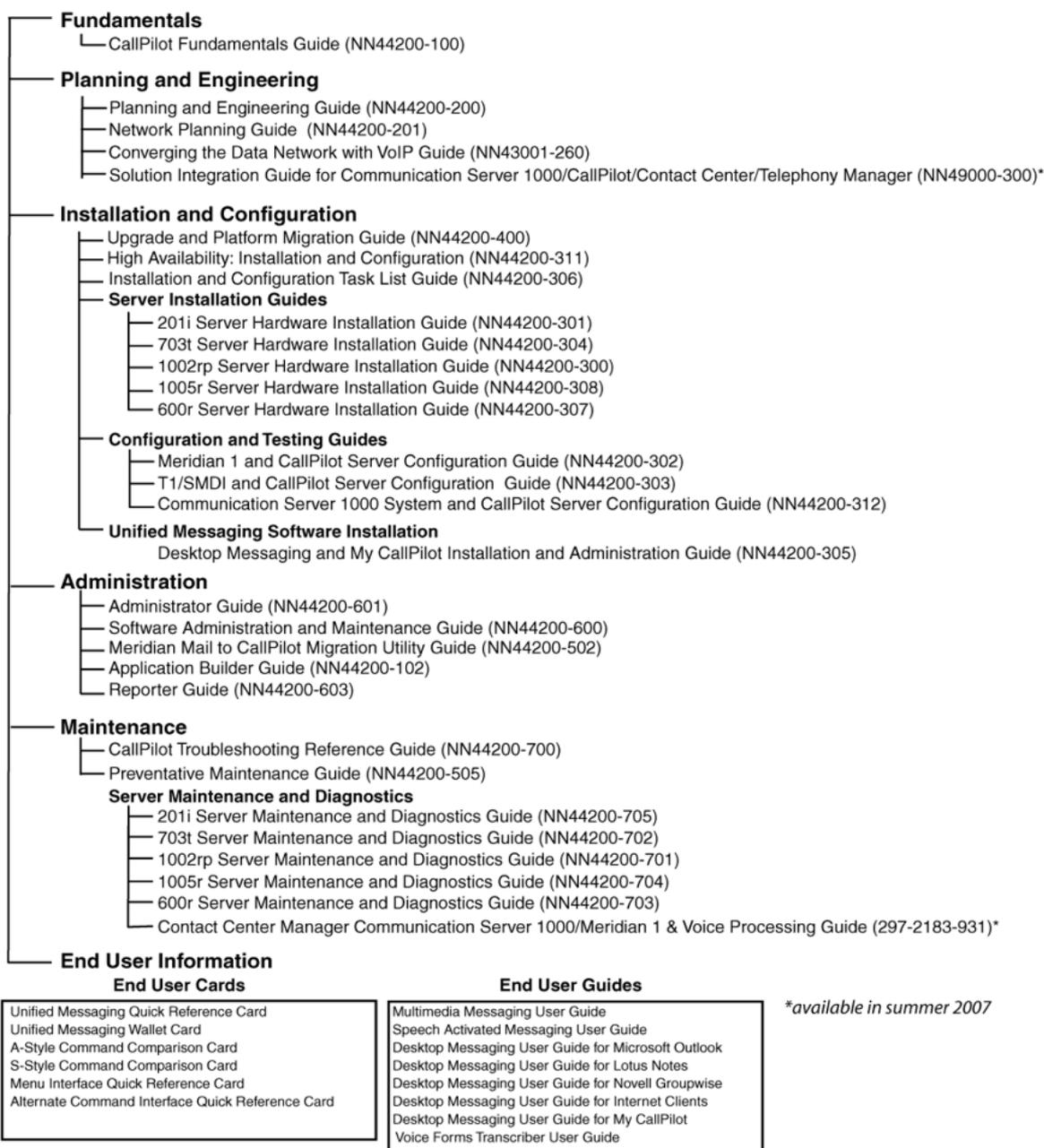
Device	Description
Modem	Use a 56 Kb/s external modem to provide remote access to the 600r server. The modem connects to a USB connector (USB 2, the top connector) on the rear of the server.
Ethernet switch or hub	A 10Base-T compliant Ethernet switch or hub provides the ELAN connection between the 600r server and the Meridian 1 switch or CS 1000 system. The customer can supply a Ethernet switch or hub from third-party vendors or from Nortel. Because the Ethernet switch or hub is an external device, the Ethernet switch or hub requires an AC power source.
Monitor, keyboard, and mouse	<ul style="list-style-type: none"> <li>• Monitor: (customer supplied). Because the monitor is an external device, it requires its own AC power source.</li> <li>• Keyboard: (customer supplied)</li> <li>• Mouse: (customer supplied)</li> </ul>
External tape drive	Tandberg SLR75 (optional)
Nortel software feature dongle	The software feature dongle or key is a security device that stores the unique serial number of the server. The dongle plugs into a USB connector (USB 0, the bottom connector) on the rear panel.

## Reference documents

For a list of all CallPilot documents, see the following CallPilot Customer Documentation Map.



### CallPilot Customer Documentation Map



\*available in summer 2007

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## Chapter 3

# Preparing for installation

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### In this Chapter

"Installation overview" (page 21)

"Unpacking the 600r server" (page 23)

"Inspecting the interior of server" (page 24)

### Installation overview

#### Introduction

This section provides an overview of the steps required to install the 600r server and peripheral devices. For detailed instructions, see [Chapter 4 "Installing the server and peripheral devices" \(page 27\)](#)

When you are finished, continue with the switch and server setup as described in the documentation for your switch:

- *Communication Server 1000 and CallPilot Server Configuration (NN44200-312)*
- *Meridian 1 and CallPilot Server Configuration (NN44200-302)*

#### Installation checklist

Step	Description	Check
1	Review the "Installing the CallPilot server" section in the <i>Installation and Configuration Task List (NN44200-306)</i> , and complete stage 1 of the Installation checklist.	—

Step	Description	Check
2	<p>Unpack the server and ensure you have all the items you need (see <a href="#">"Unpacking the 600r server" (page 23)</a>).</p> <p>Complete the following checklists that are provided in the <i>Installation and Configuration Task List</i> (NN44200-306):</p> <ul style="list-style-type: none"> <li>• CallPilot software media and documentation checklist</li> <li>• CallPilot server hardware checklist</li> </ul>	—
3	Remove the top cover and inspect the interior (see <a href="#">"Inspecting the interior of server" (page 24)</a> ).	—
4	Replace the top cover.	—
5	Place the 600r server in the chosen location and connect the SCSI terminator (see <a href="#">"Installing the server" (page 27)</a> ).	—
6	<p>Connect the 600r server and devices as follows:</p> <ul style="list-style-type: none"> <li>• Connect the monitor, keyboard, and mouse (see <a href="#">"To connect the mouse, keyboard, and monitor to the server" (page 29)</a>).</li> <li>• Connect the modem (see <a href="#">"To connect the modem to the server" (page 30)</a>).</li> <li>• Connect the 600r server to the ELAN Ethernet switch or hub (see <a href="#">"To connect the server to the ELAN subnet (Meridian 1 or CS 1000 only)" (page 32)</a>).</li> </ul> <p><b>Note:</b> If you are connecting the optional Nortel server subnet, do not connect until you ensure that CallPilot has the latest antivirus software. Do not install third-party antivirus software unless approved by Nortel. For information about the antivirus software packages that are approved by Nortel for CallPilot, see <i>Product Bulletin P-2007-0101-Global : CallPilot Support for Anti-Virus Applications</i>. Also, ensure your CallPilot application resides behind your network firewall.</p> <ul style="list-style-type: none"> <li>• Connect the 600r server to the CLAN Ethernet switch or hub (optional); (see <a href="#">"Connecting the server to the Nortel server subnet (optional)" (page 33)</a>).</li> <li>• Install the software feature dongle (see <a href="#">"Installing the Nortel software feature dongle" (page 34)</a>).</li> <li>•</li> </ul>	— — — — —

Step	Description	Check
	Connect the power cords for all peripheral devices, and then power them up (see " <a href="#">Connecting the server to power</a> " (page 40) for power requirements).	
7	Start the 600r server (see " <a href="#">What is next?</a> " (page 43)).	—

## Unpacking the 600r server

### Introduction

Follow this procedure to unpack the server and peripherals.



#### WARNING

##### Risk of personal injury

The 600r CallPilot server weighs approximately 10 kg (23 lbs) as shipped from manufacturing. If necessary, and to prevent personal injury, ask someone to help you unpack and position the server.

### To unpack the equipment

#### ATTENTION

As you unpack each item, check it off against the packing list, as well as against the following checklists provided in the *Installation and Configuration Task List* (NN44200-306):

- CallPilot software media and documentation checklist
- CallPilot server hardware checklist

Step	Action
1	Carefully open the cardboard carton containing the server.
2	Remove the server from the carton and place on a secure surface.
3	Carefully open the cartons containing the monitor, keyboard, mouse, modem, and ELAN Ethernet switch or hub (if supplied), and set the peripherals aside.
4	Put all manuals, DVD/CD/CDRWs, operating system disks, and any disks for peripherals in a safe place.
5	Save all packing materials and cartons in case you must return any equipment to the carrier.

—End—

**What is next?**

Remove the top cover to inspect the interior of the server. For information about how to inspect the interior of the server, see "[Inspecting the interior of server](#)" (page 24).

**Inspecting the interior of server****Introduction**

To inspect the interior of your 600r server, you must remove the server cover.

**Note:** If the server is powered down, proceed with the next step. If the server is powered up, see the chapter, "Starting up and shutting down the CallPilot server", in *Installation and Configuration Task List* (NN44200-306) for proper shutdown procedures before you remove the server cover.

**To remove the server cover**

Step	Action
1	Attach the ESD strap to your wrist.
2	While holding in the blue button at the top of the chassis, slide the top cover back until it stops.
3	Lift the cover straight up to remove it from the platform.
4	Ensure the CallPilot PCI riser card is secure.
5	Inspect the interior for any cables that are not seated properly.
6	Take note of any physical signs of damage. For example, check for loose piece parts and screws in the corners of the chassis.
7	If you notice damage to any of the parts in your server, contact your Nortel representative immediately.

—End—

**To replace the server cover**

When you finish inspecting the interior of your server, replace the server cover.

Step	Action
1	Attach the ESD strap to your wrist and attach the other end to a known grounded connection.

- 2 Place the cover on the server and align the cover with the chassis tab guides.
- 3 Slide the top cover back until it stops.

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—End—

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### **What is next?**

Continue with the hardware installation, [Chapter 4 "Installing the server and peripheral devices" \(page 27\)](#). Or, for more information, see ["Installation overview" \(page 21\)](#).



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## Chapter 4

# Installing the server and peripheral devices

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### In this chapter

"Installing the server" (page 27)

"Connecting peripherals to the server" (page 28)

"Connecting the server to the ELAN subnet" (page 32)

"Connecting the server to the Nortel server subnet (optional)" (page 33)

"Installing the Nortel software feature dongle" (page 34)

### Installing the server

Before you install the 600r server, ensure that the chosen location meets the requirements identified in the Site inspection checklist provided in the *Installation and Configuration Task List* (NN44200-306).

**Note:** The 600r server is supplied with industry standard 48.3 cm (19 in.) rack rails that can accommodate racks with a maximum depth of 61 cm (24 in.) between the mounting posts. Check the rack you are using and ensure that the Nortel supplied server rack rails are suitable for your specific installation requirements. For depths greater than 61 cm (24 in.), Nortel recommends that you purchase a third-party rack shelf that can safely hold up to 23 kg (50 lb.)

## To install the server

Step	Action
1	<p>Place the 600r server in its chosen location. If you are installing the server in a rack cabinet, follow the instructions provided with the slide rails.</p> <p><b>Note:</b> The DS30X cable that connects the MPB96 board to the MGate cards is 20 m (60 feet) long. With this cable, you can place the server in a different room from the Meridian 1 switch or CS 1000 system.</p>
2	<p>Locate the external SCSI terminator (included loose within the server shipping carton). Connect the terminator to the rear SCSI port labeled C in <a href="#">Figure 7 "Rear panel" (page 29)</a>. For an illustration of the SCSI terminator, see the item labeled Server terminator in <a href="#">Figure 8 "SCSI tape drive with terminator" (page 31)</a>.</p>



### CAUTION

It is imperative that you install the terminator to ensure reliable server operation. Failure to do so will result in an inability to load the operating system.

- 3 Connect peripheral devices as described in this chapter.

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—End—

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## What is next?

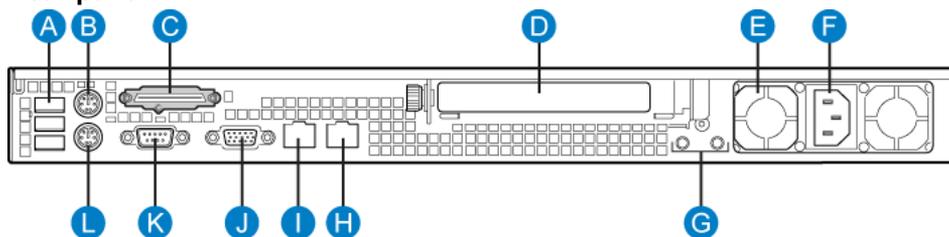
Connect peripheral devices as described in this chapter.

## Connecting peripherals to the server

### Rear panel connectors

The following diagram shows the connectors on the rear panel of the 600r.

**Figure 7**  
Rear panel



**Table 4**  
Rear panel connectors

Label	Description	Label	Description
A	USB 0, USB 1, USB 2 (labelled 0, 1, 2 on server)	G	Ground studs (used with system with DC input power supply)
B	PS/2 Mouse	H	RJ45 NIC 2 ELAN connector (labelled 2 on server)
C	SCSI port	I	RJ45 NIC 1 CLAN connector (labelled 1 on server)
D	PCI card bracket (full-height) for MPB96	J	Video connector
E	Power supply	K	COM1 DB-9 serial port
F	AC power input	L	PS/2 Keyboard connector

### To connect the mouse, keyboard, and monitor to the server

Step	Action
1	Place the monitor, keyboard, and mouse in the same location as the server.
2	Plug the keyboard and mouse into the appropriate PS/2 connectors on the chassis rear panel. See labels L and B, respectively, on the diagram.
3	Plug in the monitor connector (see diagram, label J). Tighten the screws on the connector.
4	Connect the power cord to the monitor and plug the other end into a wall receptacle or power bar.
5	Turn on the monitor.

—End—

### To connect the modem to the server

You require a modem to support remote dial-up access to the CallPilot server. With a modem, Nortel technical support can connect to your CallPilot server for troubleshooting purposes. Nortel connects to your server only when you request technical assistance.

Windows automatically recognizes your modem after you connect it and power it on. The power light (PWR LED) does not illuminate until the Windows device driver successfully loads and recognizes the hardware.

To install the modem, you need the following equipment:

- USB modem
- RJ-11 analog phone cord
- USB cable (supplied with the modem)
- an analog line jack

Serial port modems with RS-232 connections are not supported on the 600r.

Step	Action
1	Connect one end of the USB cable into the modem.
2	Connect the other end of the USB cable into USB 2 on the rear panel.
3	Connect one end of the telephone cable to the modem RJ-11 jack labeled LINE.
4	Connect the other end of the telephone cable to the RJ-11 jack in the wall.

—End—

### To connect the external SCSI tape drive

When you connect an external SCSI tape drive, the device must be terminated. Your tape drive comes with a terminator. (See Tape drive terminator in [Figure 8 "SCSI tape drive with terminator" \(page 31\)](#).) The 600r server also comes with a server terminator, a VHDCI (Very High Density Connection Interface) Ultra320 SCSI terminator. (See Server terminator in [Figure 8 "SCSI tape drive with terminator" \(page 31\)](#).) In a previous procedure, you are instructed to connect the server terminator to the SCSI port. Before you connect an external tape drive to the 600r, you must remove the server terminator.

**Note:** If you do not connect a SCSI device to the server, do not remove the server terminator from the SCSI port.

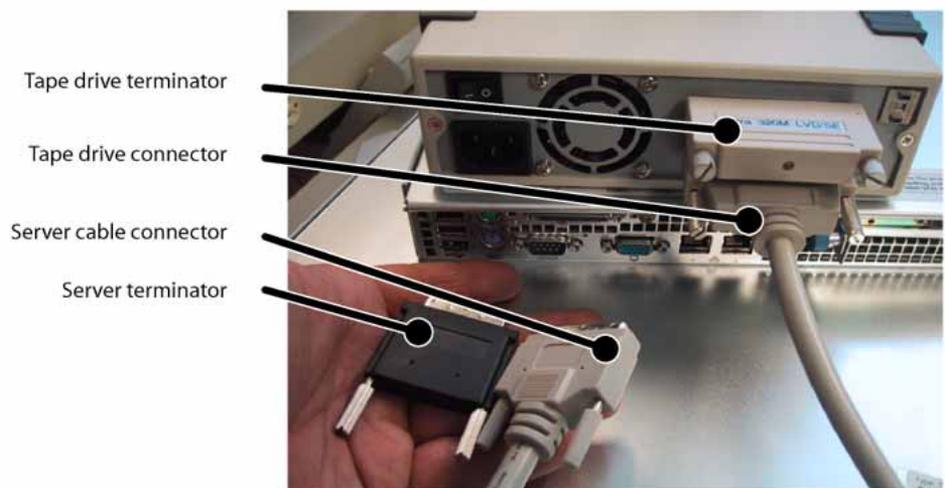
**WARNING**

The terminator is not a hot-plug device. If you replace the terminator, or if you add an external SCSI peripheral, the server must be powered off. If you replace the terminator or add a SCSI peripheral when the system is on, the system can crash.

Step	Action
------	--------

- |   |   |
|---|---|
| 1 | Power off the server and the tape drive.<br><br><b>Note:</b> For the proper shutdown procedure, see the chapter, "Starting up and shutting down the CallPilot server" in <i>Installation and Configuration Task List</i> (NN44200-306).   |
| 2 | Set the SCSI ID push button switch, located on the back of the tape drive, to 6.  |
| 3 | Connect the external SCSI tape drive to the SCSI port in the rear panel, Label C on the rear panel diagram, as shown in <a href="#">Figure 7 "Rear panel"</a> (page 29).<br><br><b>Note:</b> You must remove the server terminator before you connect the tape drive to the server. Keep the server terminator in a safe place, as you may need the server terminator when you want to use the server, and the tape drive is not available to terminate the SCSI bus. |

**Figure 8**  
**SCSI tape drive with terminator**



- 4 Install the SCSI tape drive terminator to the back of the SCSI tape drive, as shown in Figure 8, under the label Tape drive terminator.  
**Note:** Nortel does not recommend connecting older SCSI protocol terminators, as this can affect server performance.
- 5 Plug the tape drive into the same single point ground and A/C power as the rest of the system.
- 6 Power on the tape drive.  
**Note:** Your 600r comes with the tape drive drivers preinstalled. During the loading of Windows, the system automatically detects the tape drive and loads the drivers that are necessary to operate the tape drive. When system startup is complete, the tape drive is ready for use.

---

—End—

---

### What is next?

Connect the server to the ELAN subnet and Nortel server subnet (if applicable).

**Note:** Before you connect to the network, ensure that CallPilot has the latest antivirus software. Do not install third-party antivirus software unless approved by Nortel. For information about the antivirus software packages that are approved by Nortel for CallPilot, see *Product Bulletin P-2007-0101-Global : CallPilot Support for Anti-Virus Applications*. Also, ensure your CallPilot application resides behind your network firewall.

### Connecting the server to the ELAN subnet

Connect the CallPilot server to the Meridian 1 switch or CS 1000 system using the ELAN subnet.

#### ATTENTION

For important considerations about using the ELAN subnet in your network, see the *Planning and Engineering Guide* (NN44200-200).

### To connect the server to the ELAN subnet (Meridian 1 or CS 1000 only)

Step	Action
1	On the back of the server, locate the ELAN Ethernet connector.

**Note:** The ELAN connector is labeled 2 on the rear panel of the server. For the connector location, refer to diagram [Figure 12 "Rear panel"](#) (page 40), label H on the diagram.

- 2 Connect an RJ-45 network cable from the ELAN Ethernet switch or hub to the server's ELAN connector.

**Note:** The ELAN Ethernet switch or hub is optional if you use a crossover network cable to make a direct point-to-point connection from the server to the switch. However, if you choose to establish a direct point-to-point ELAN connection, no other device can connect to the ELAN subnet. For specific connection details, see the CS 1000 network documentation.

---

—End—

---

### What is next?

If the server	Then
is connected to a Nortel server subnet	continue with " <a href="#">Connecting the server to the Nortel server subnet (optional)</a> " (page 33).
is not connected to a Nortel server subnet	continue with installing the software feature dongle. See " <a href="#">Installing the Nortel software feature dongle</a> " (page 34).

## Connecting the server to the Nortel server subnet (optional)

This section provides instructions to connect the server to the Nortel server subnet.

**Note:** The CLAN connection is optional. However, connection to a Nortel server subnet is required for support of desktop and Web messaging users, or administration by means of a Web-enabled PC. Ensure that CallPilot has the latest antivirus software. Do not install third-party antivirus software unless approved by Nortel. For information about the antivirus software packages that are approved by Nortel for CallPilot, see *Product Bulletin P-2007-0101-Global : CallPilot Support for Anti-Virus Applications*.

### Media Access Control address

The Media Access Control (MAC) address is a unique number assigned to network cards and controllers. You can find the MAC address bar code label located on top of the chassis, directly above the front main push-button

power switch. Two MAC addresses are shown on the label. The CLAN MAC address is the top MAC address, labeled MAC1, while the ELAN MAC address is labelled MAC2.

### To connect the server to the Nortel server subnet

---

Step	Action
1	<p>On the back of the server, locate the CLAN connector.</p> <p><b>Note:</b> The CLAN connector is labeled 1 on the rear panel of the 600r. For the connector location, see the diagram on <a href="#">Figure 7 "Rear panel" (page 29)</a>, Label I.</p>
2	<p>Connect an RJ-45 network cable from the CLAN Ethernet switch or hub to the CLAN connector.</p> <p><b>Note:</b> When connecting the optional Nortel server subnet, do not connect to the network until you ensure that CallPilot has the latest antivirus software. Do not install third-party antivirus software unless approved by Nortel. For information about the antivirus software packages that are approved by Nortel for CallPilot, see <i>Product Bulletin P-2007-0101-Global : CallPilot Support for Anti-Virus Applications</i>. Also, ensure your CallPilot application resides behind your network firewall.</p>

---

—End—

---

### What is next?

Continue with ["Installing the Nortel software feature dongle" \(page 34\)](#).

### Installing the Nortel software feature dongle

The software feature key is a security device that stores the unique serial number of the server. The feature key is embedded in the Nortel software feature dongle that plugs in to a USB port on the rear panel.

The following diagram shows the dongle plugged in to the back panel of the server:

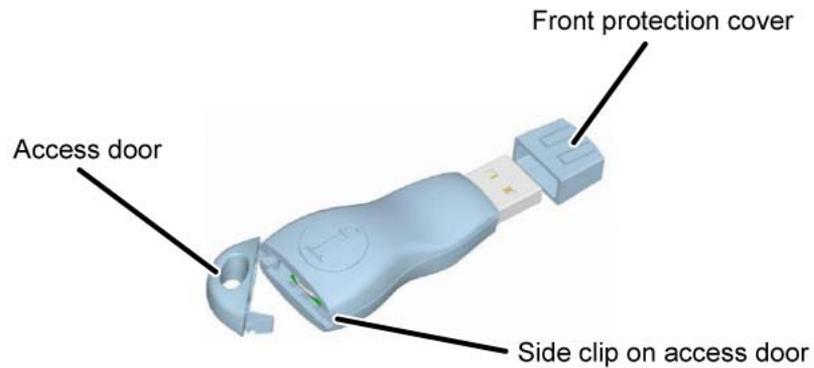
**Figure 9**  
**Dongle plugged in to server**



### To install the software feature dongle

Step	Action
1	On the rear panel, ensure that there is nothing plugged in to USB 0, the bottom USB connector.
2	If the software feature key is not preinstalled in the dongle, insert the key in to the software feature slot in the dongle.

**Figure 10**  
**Dongle without feature key**



- a. To open the dongle to insert the software feature key, gently push back the clip on side of the dongle using a very small screwdriver and pull back on the access door.
- b. Insert the software feature key with the data contact facing down and away from the embossed i. (For more information about installing the software feature key, see [Figure 11 "Installing the software feature key"](#) (page 36).

**Figure 11**  
**Installing the software feature key**



- 3** Remove the front protection cover from the dongle.

- 4 Plug the dongle in to USB port 0, the bottom USB connector, on the rear panel of the server.

**Note:** Due to system driver allocations, the dongle must be installed in USB port 0.

---

—End—

---

### What is next?

Continue with [Chapter 5 "Connecting the server to power"](#) (page 39).



---

# Chapter 5

## Connecting the server to power

---

### In this chapter

"Safety precautions" (page 39)

"Locating the power supply modules" (page 39)

"Connecting the server to power" (page 40)

### Safety precautions

#### Equipment handling guidelines

External power equipment, such as an Uninterruptible Power Supply (UPS), is usually very heavy. This equipment requires special handling procedures and additional personnel for unloading and installation. Be aware of weight distribution, and prevent the equipment room floor from being overly stressed.

#### Safety information



#### **DANGER**

Procedures involving electrical connections must be performed only by qualified personnel. Ensure that you obey all displayed warning notices on power equipment and connections.

### Locating the power supply modules

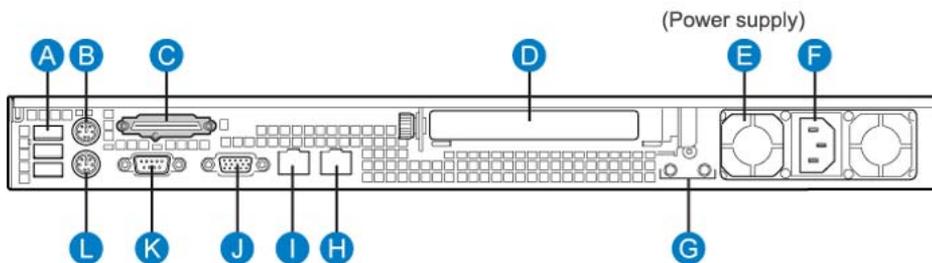
#### Introduction

The AC power supply module is shipped installed. The following diagram shows the location of the power supply module in the back panel (E).

**Note:** Nortel provides only AC power supply. The server works with a DC-to-AC converter, however, you must ensure the converter meets

AC requirements as specified on the label of the power supply cover. To access the power supply cover, remove the server cover. For more information about how to remove the server cover, see "To remove the server cover" (page 24).

**Figure 12**  
Rear panel



### About the power supply module

After the server is powered up, the power supply module LED indicates its status.

A green LED on the power supply module indicates that the module is working properly. If the LED is not lit or red, the module has failed to power up. A problem with a power supply module is also indicated if the PWR or MJR LED light on the front of the server is red.

### Rack power and grounding

To ensure a complete power and grounding installation:

- In rack-mount server installations, ensure the CallPilot server chassis and equipment racks are isolated from other foreign sources of ground. Acceptable isolation methods include: isolation pads, grommets, washers, chassis side-rail strips, and non-conducting washers (not included.)
- In rack-mount server installations where other equipment is also installed in the same rack, ensure that all equipment derives ground from the same service panel as CallPilot and the switch.

## Connecting the server to power

### Before you begin

Ensure that proper power and grounding are available for all the power outlets serving the CallPilot server and its associated peripherals. Power for these devices must be wired and fused independently of all other receptacles and referenced to the same ground as the PBX system.

A qualified electrician must implement the single-point ground reference as required among the power outlets of the CallPilot server, its associated peripherals, and the power outlets of the switch.

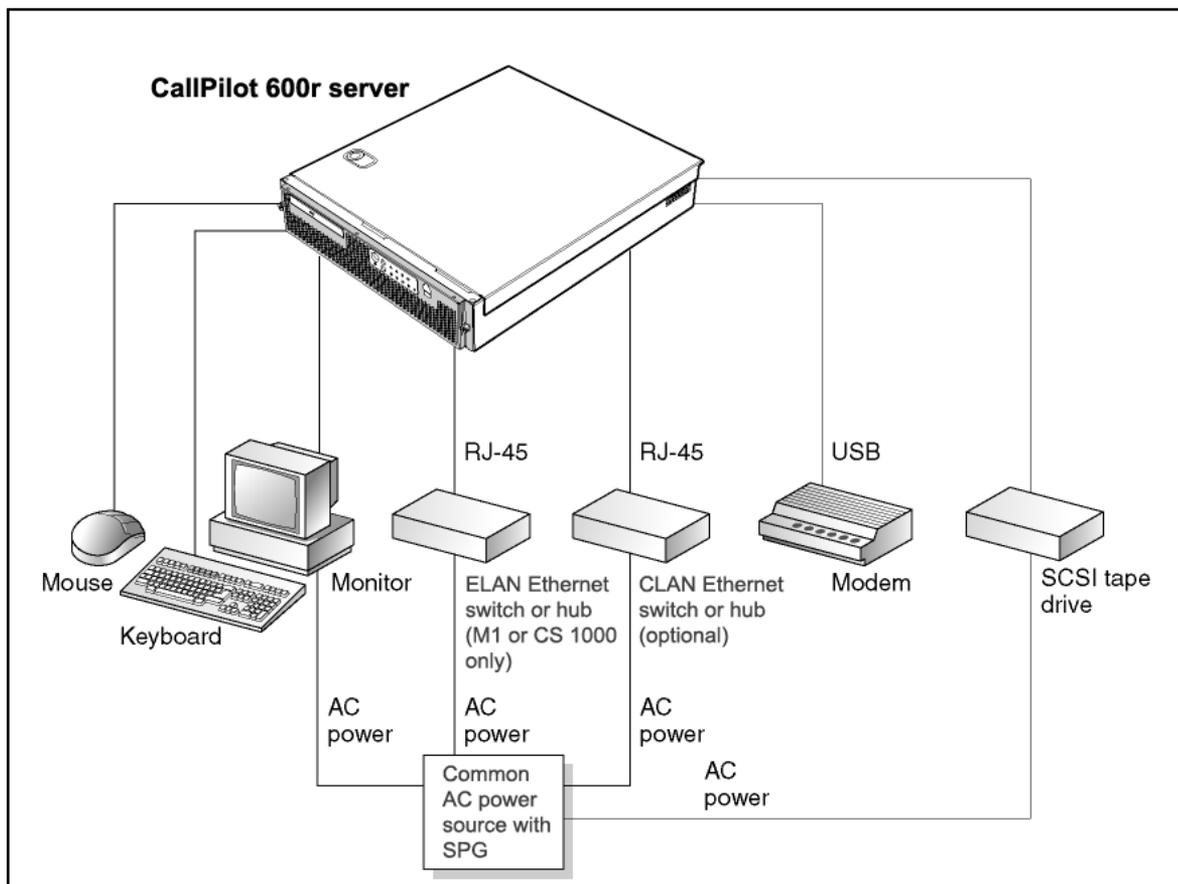
Provide a sufficient number of properly grounded power outlets or power bars for all equipment.

The single-point ground (SPG) required by the system can be an isolated ground (IG) bus or AC equipment ground (ACEG) bus in the service panel or transformer. The system must be connected to safety ground or protective earth in accordance with NEC requirements. For international use, the system must be connected to safety ground or protective earth in accordance with Paragraph 2.5 of EN60950/IEC950.

**Note:** For a complete description of approved ground sources and methods, see *Communication Server 1000M and Meridian 1: Large System Planning and Engineering* (NN43021-220). Insulated ground wire must be used for system grounding.

Before you connect the server to the power source, review the following diagram and the warning that follows to ensure that all peripheral hardware devices are in place.

**Figure 13**  
**Example setup of 600r with peripherals**



**To connect the 600r server to power**



**WARNING**

**Risk of personal injury and risk of hardware failure**

You must connect the power outlets that are used by the CallPilot server and its peripheral devices to the same single-point ground reference as the one used by the switch with MGate cards connected to the CallPilot server.

If this requirement is not met, power transients can cause personal injury, hardware failure, or both. For more information about single-point grounding requirements, see *Installation and Configuration Task List (NN44200-306)*.

**Note:** When the 600r server is plugged into an AC outlet with power, the server automatically powers on. If there is a power outage and the

600r server loses power, the server automatically powers up after power is restored.

---

<b>Step</b>	<b>Action</b>
1	Plug the server AC power cord into the server rear panel.
2	Plug the other end into an approved wall receptacle or power bar.

---

**—End—**

---

**What is next?**

Proceed to the *Installation and Configuration Task List* (NN44200-306) for details.



---

## Chapter 6

# EMC emission level protection for the 600r server

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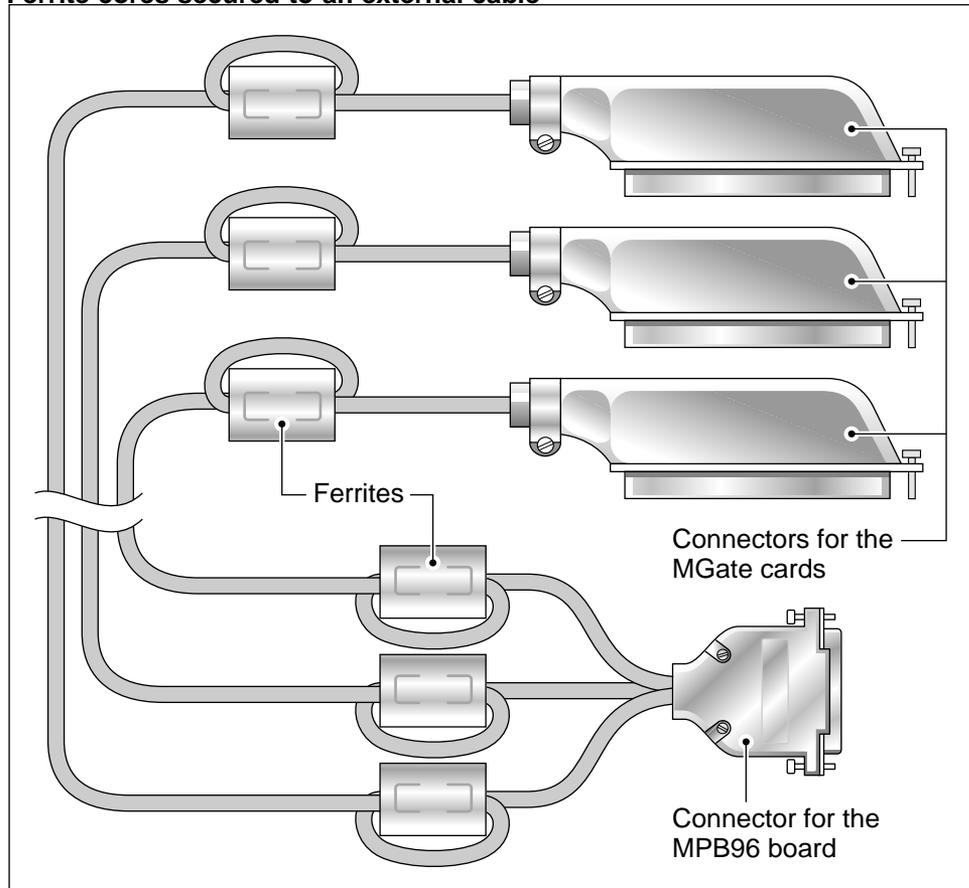
To lower the EMC emission level, ferrite cores are installed with one loop on the following external cables:

- Ferrite Core (TDK and part number ZCAT3035-1330) for the triple DS30X I/O cable (Nortel and part number NTRH2014E6), at each end of the cable.

**CAUTION**

The ferrite cores are preinstalled on the provided cable. It is not your responsibility to attach these ferrite cores to these cables. However, you must ensure that these ferrites are in place to keep the EMC emission levels low.

**Figure 14**  
**Ferrite cores secured to an external cable**



G101786

The ferrite cores are secured to the appropriate cable with plastic enclosure clips. Tie wraps are added to the cable loop.

---

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Nortel CallPilot

## 600r Server Hardware Installation

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