

**555-7101-220**

# **CallPilot**

Installation and Configuration

Part 2: 201i Server Hardware Installation

Product release 2.02

Standard 1.0

May 2003

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**NORTEL**  
**NETWORKS™**

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# CallPilot

## Installation and Configuration

### Part 2: 201i Server Hardware Installation

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Publication number:	555-7101-220
Product release:	2.02
Document release:	Standard 1.0
Date:	May 2003

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# Publication history

**May 2003**

Standard 1.0 of *CallPilot Installation and Configuration*, Part 2: 201i Server Hardware Installation is released for CallPilot 2.02 general availability. Information on single-point grounding has been added to Chapter 2, “Preparing for installation”.

**September 2002**

Standard 1.0 of *CallPilot Installation and Configuration*, Part 2: 201i Server Hardware Installation is released for CallPilot 2.0 general availability.



# Contents

<b>1</b>	<b>About the 201i server</b>	<b>9</b>
	201i server description . . . . .	10
	Network connectivity . . . . .	18
	Peripheral connectivity . . . . .	25
<b>2</b>	<b>Preparing for installation</b>	<b>29</b>
	Installation overview. . . . .	30
	Unpacking and inspecting the 201i server . . . . .	35
	Switch and network requirements. . . . .	38
<b>3</b>	<b>Installing the 201i server in a large Meridian 1 system</b>	<b>41</b>
	Overview. . . . .	42
	Repositioning the secondary backplane connector. . . . .	44
	Installing the 201i server in the large Meridian 1 switch . . . . .	49
	Removing the backplane (tip and ring) cables . . . . .	51
	Installing the NTRH3501 backplane cable. . . . .	55
	Installing the SCSI cables for Meridian 1. . . . .	58
<b>4</b>	<b>Installing the 201i server in an Option 11C or Option 11C Mini</b>	<b>63</b>
	Installing the 201i server in the Option 11C or Option 11C Mini switch . . . . .	64
	<b>Section A: Installing Option 11C cables</b>	<b>69</b>
	Installing the intermediate SCSI cable for Option 11C . . . . .	70
	<b>Section B: Installing Option 11C Mini cables</b>	<b>77</b>
	Installing the NTRH3502 SCSI cable for Option 11C Mini . . . . .	78
	Installing cables on the back of the Option 11C Mini cabinet . . . . .	86

<b>5</b>	<b>Installing the 201i server in the Succession CSE 1000 system</b>	<b>91</b>
	Succession Communication Server for Enterprise 1000 description . . . . .	92
	Removing the Media Gateway or Media Gateway Expansion cover . . . . .	100
	Installing the 201i server . . . . .	103
	Installing the NTRH3502 SCSI cable for Succession CSE 1000 . . . . .	106
	Replacing the Media Gateway or Media Gateway Expansion cover . . . . .	111
	Connecting cables to the Succession CSE 1000 system . . . . .	114
<b>6</b>	<b>Preparing peripheral devices</b>	<b>119</b>
	Overview . . . . .	120
	Setting the modem DIP switches . . . . .	122
	Setting the CD-ROM drive's SCSI ID and DIP switches . . . . .	124
	Setting the tape drive's SCSI ID . . . . .	126
	Setting SCSI device termination . . . . .	128
<b>7</b>	<b>Connecting peripheral devices to the 201i server</b>	<b>133</b>
	Overview . . . . .	134
	Installing the MPCs . . . . .	138
	Installing the monitor, keyboard, and mouse . . . . .	140
	Connecting the CD-ROM and tape drives . . . . .	142
	Connecting the 201i server to the switch, ELAN, and CLAN . . . . .	152
	Connecting the modem . . . . .	155
	Completing the installation . . . . .	158
	<b>Index</b>	<b>161</b>

# Chapter 1

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## About the 201i server

### In this chapter

201i server description	10
Network connectivity	18
Peripheral connectivity	25

# 201i server description

## Introduction

The 201i server is a flexible multimedia telephony server designed to integrate with Nortel Networks Meridian 1 and Succession Communication Server for Enterprise 1000 (CSE 1000) products.

The 201i server occupies two slots of a Meridian 1 IPE shelf or Succession CSE 1000 Media Gateway or Media Gateway Expansion. When the server is locked into position, its connectors attach to the backplane, which provides power and communications links.

## Primary components

The 201i server's motherboard houses the interfaces needed

- to communicate with the Meridian 1 switch or Succession CSE 1000 system
- to facilitate data communications on Ethernet networks

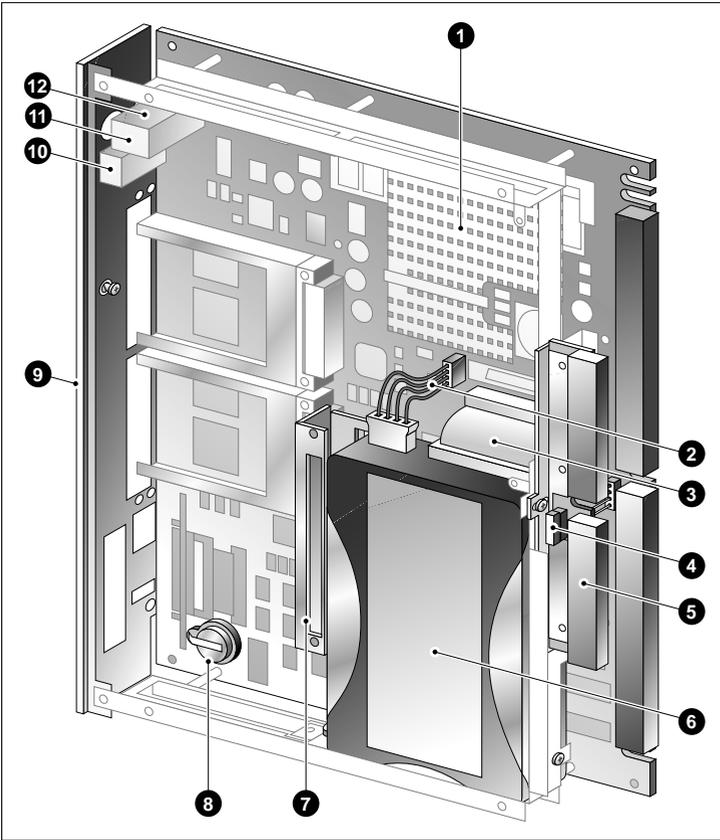
Two Ethernet controllers on the 201i server's motherboard provide Ethernet capability. These controllers provide the network interfaces for both the embedded LAN (ELAN) and customer LAN (CLAN). The connections to the ELAN and CLAN are established by using the multi I/O cable described on page 22.

The following legend and the diagram on page 12 identify the 201i server components:

### Legend

Item	Description
1	Heat sink

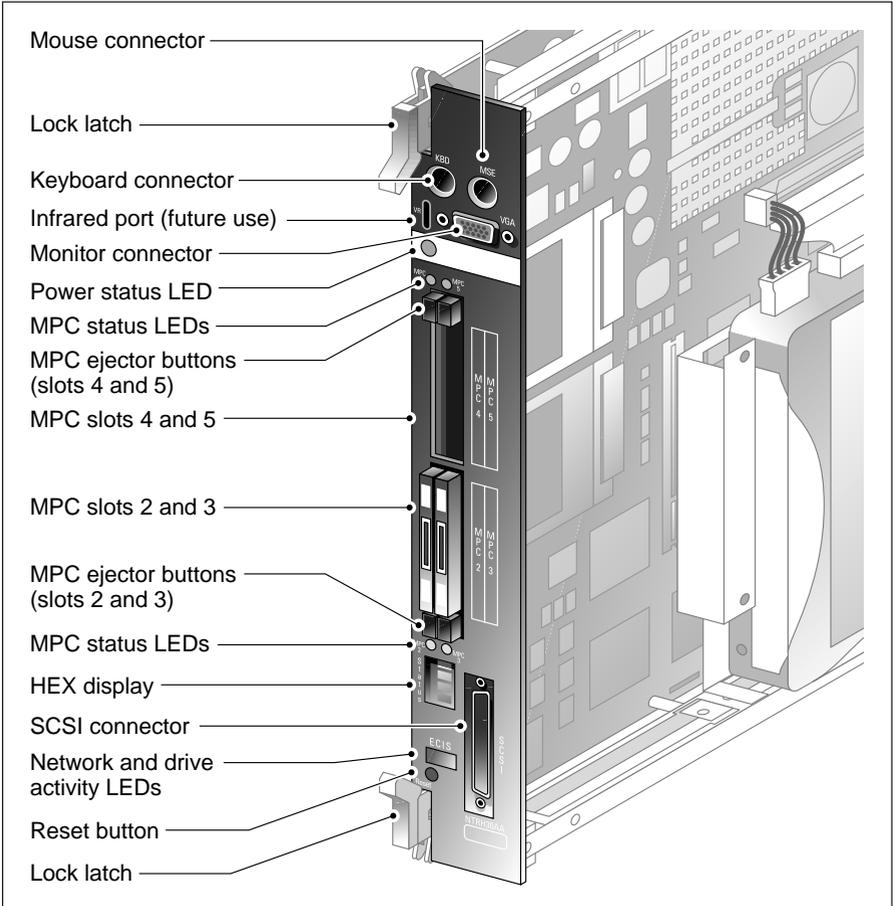
Item	Description
2	Hard drive power cable
3	Hard drive data cable
4	Secondary backplane connector pin
5	<p>Secondary backplane connector</p> <p>This connector connects the 201i server to the second slot on the IPE shelf, thereby providing access to the voice channels provided by that slot.</p>
	<p><b>ATTENTION</b></p> <p>The 201i server is shipped ready for installation into an Option 11C or Option 11C Mini switch or Succession CSE 1000 system. Before you install the 201i server in a larger Meridian 1 switch (for example, Option 51C), you must move the secondary backplane (DS30X) connector to the correct position. This is described in “Repositioning the secondary backplane connector” on page 44.</p>
6	3.5" IDE hard drive
7	Hard drive mounting bracket
8	Software feature key
9	Faceplate
10	Monitor connector
11	Mouse connector
12	Keyboard connector



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## Faceplate

The following diagram shows the 201i server's faceplate. The faceplate provides LEDs, MPC card slots, and connectors for peripheral devices:



G101438

The following table describes each faceplate feature:

Faceplate feature	Description
Mouse connector	The mouse connector is a standard PS/2 connector and is hot-pluggable.
Lock latches	Lock latches at the top and bottom of the faceplate secure the server to the backplane of the Meridian 1 switch or the backplane of the Succession CSE 1000 Media Gateway or Media Gateway Expansion.
Keyboard connector	The keyboard connector is a standard PS/2 connector and is hot-pluggable.
Infrared port	For future use.
Monitor connector	The monitor connector is a standard, high-density, 15-pin female connector.
Power status LED	<p>The LED indicates two server states:</p> <ul style="list-style-type: none"> <li>■ the completion of self-test diagnostics</li> <li>■ when it is safe to remove the server from the Meridian 1 switch or Succession CSE 1000 Media Gateway or Media Gateway Expansion</li> </ul>
MPC card status LEDs	<p>There is an LED for each MPC card slot. The following list describes each LED status:</p> <ul style="list-style-type: none"> <li>■ Off: The MPC card is not receiving power. It is safe to remove the card.</li> <li>■ On: The MPC card is in use. It is <i>not</i> safe to remove the card.</li> <li>■ Off, then on: The MPC card has been recognized by the 201i server software and has been powered up.</li> </ul>

Faceplate feature	Description
MPC card status LEDs (continued)	<ul style="list-style-type: none"> <li>■ On, then off: The MPC card has been successfully powered down. It is safe to remove the card.</li> </ul> <p><b>Note:</b> For instructions on powering up or powering down the MPC card, see “Starting and stopping components” in Part 5 of the <i>CallPilot Installation and Configuration</i> binder.</p>
MPC card ejector buttons	<p>There is one ejector button for each MPC card slot. When you insert the card, the associated ejector button pops out.</p> <p>Press the button to eject the card from its slot.</p>
MPC card slots	<p>MPCs house DSP units and are used for multimedia telephony processing. You can install up to four MPCs on the 201i server. The 201i is shipped with two MPC-8 cards installed. All slots are faceplate-accessible.</p> <p>The MPCs are numbered as follows:</p> <ul style="list-style-type: none"> <li>■ top row of slots: MPC cards 4 and 5</li> <li>■ bottom row of slots: MPC cards 2 and 3</li> </ul> <p><b>Note:</b> MPC 1 is embedded on the motherboard.</p>
Hexadecimal (HEX) display	<p>The four-digit LED-based display provides feedback on the current status of the server, including fault conditions.</p>
SCSI connector	<p>This connector connects SCSI devices to the 201i server (for example, a CD-ROM or tape drive).</p> <p>Press the button latches to lock or unlock a cable from the connector.</p>

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Faceplate feature	Description
Network and drive activity LEDs (labeled as E, C, I, and S)	<p>The E and C LEDs indicate the presence of network activity for both the ELAN and CLAN interfaces (respectively). When they are lit, they indicate that the interfaces are properly attached to their respective hubs. When the LEDs are blinking, there is network activity.</p> <p>When the I and S LEDs are lit, it means that the IDE hard drive and SCSI device are being accessed.</p>
Reset button	<p>The reset button allows you to manually restart the 201i server without disconnecting it from the backplane.</p> <p><b>ATTENTION</b></p> <p>Before you press the reset button, you must shut down Windows NT. Press the reset button while Windows NT is running <i>only</i> when you cannot shut down Windows NT normally.</p>

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## Environmental specifications

### Temperatures

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Recommended temperature	15°C (59°F) to 30°C (86°F)
Absolute temperature	10°C (50°F) to 45°C (113°F)
Long-term storage temperature	-20°C (-4°F) to 60°C (140°F)
Short-term storage temperature	-40°C (-40°F) to 70°C (158°F) (less than 72 hours)
Change rate temperature	Less than 1°C (34°F) per 3 minutes

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### Relative humidity

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Recommended relative humidity (RH)	20% to 55% RH (noncondensing)
Absolute RH	20% to 80% RH (noncondensing)
Long-term storage RH	5% to 95% RH (at -40°C to 70°C respectively) (noncondensing)

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# Network connectivity

## Introduction

This section shows how CallPilot and the Meridian 1 or Succession CSE 1000 system are integrated into your network. It also describes what is required in the network for correct CallPilot operation.

**ATTENTION** 

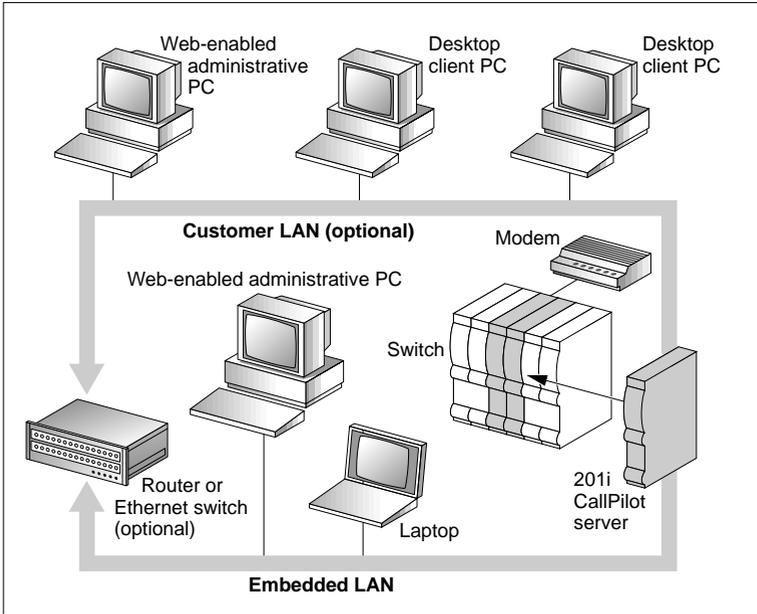
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To secure the CallPilot server from unauthorized access, ensure that the CallPilot network is inside your organization's firewall.

## Sample network setup: Meridian 1 switch

The following diagram shows how the 201i server is integrated into your network with the following Meridian 1 switches:

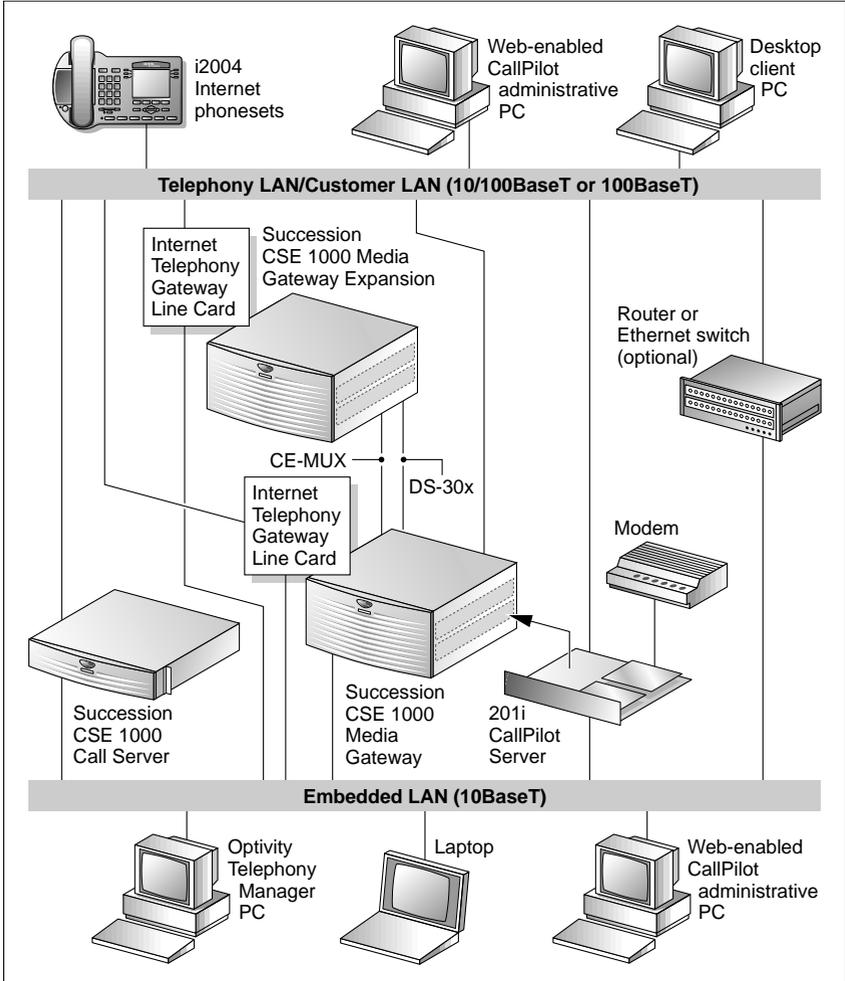
- large systems, such as Option 51C
- Option 11C
- Option 11C Mini



G101631

## Sample network setup: Succession CSE 1000

The following diagram shows an example of how the 201i server can be integrated with the Succession CSE 1000 system in your network:



G101630

In the illustration on page 20, the telephony LAN (TLAN) provides IP connectivity between the Succession CSE 1000 system and the i2004 Internet phonesets. 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 Succession CSE 1000 system and i2004 Internet phoneset bandwidth and network requirements, refer to the *Succession Communication Server for Enterprise 1000 Planning and Installation Guide* (NTP 553-3023-210).

For a description of each Succession CSE 1000 system component, see “Succession Communication Server for Enterprise 1000 description” on page 92.

## CallPilot CLAN and ELAN network setup

The 201i server supports the following network protocols:

- **CLAN:** 10/100Base-T Ethernet

A built-in Ethernet controller on the 201i server’s motherboard provides Ethernet CLAN capability. The CLAN provides data connectivity between desktop and web messaging clients, administrative PCs, and the CallPilot server.

- **ELAN:** 10Base-T Ethernet

A built-in Ethernet controller on the 201i server’s motherboard provides Ethernet ELAN capability. The ELAN carries call processing traffic between the CallPilot server and the Meridian 1 switch or Succession CSE 1000 system.

**Note:** For more information about the ELAN, see “About the ELAN” in Part 1 of the *CallPilot Installation and Configuration* binder.

You use the 201i server’s multi I/O cable to establish the CLAN and ELAN connections. For more information, see page 22.

## Network requirements

Appropriate networking equipment must be available for both the CLAN and ELAN.

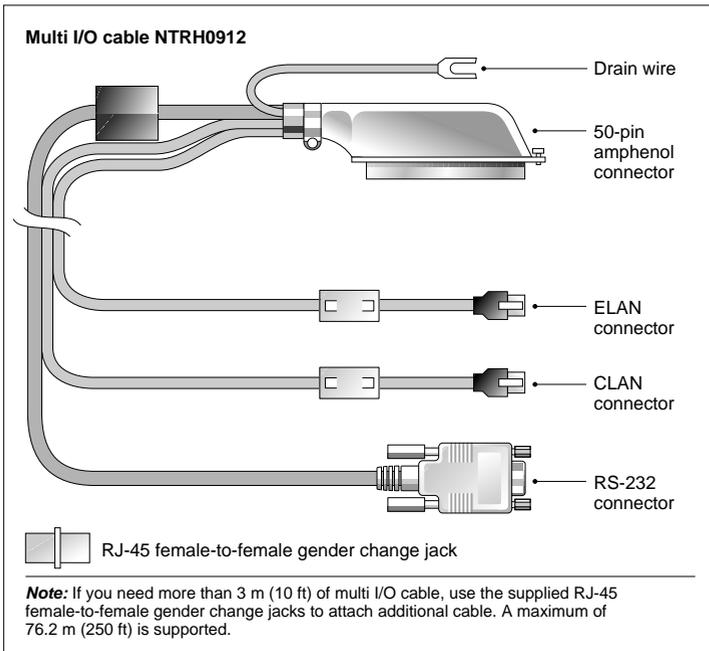
The CLAN and ELAN must be properly configured for correct CallPilot operation. To ensure correct configuration, Nortel Networks recommends that you consult a network specialist.

### ATTENTION

For important considerations about using the ELAN in your network, see “About the ELAN” in Part 1 of the *CallPilot Installation and Configuration* binder.

## Multi I/O cable description

The multi I/O cable contains four connectors, and is approximately 3 m (10 ft) in length. See the following diagram:



G101441

The following table identifies the purpose of each connector on the NTRH0912 multi I/O cable.

**Note:** Labels on the RJ-45 cables distinguish the CLAN and ELAN connectors.

Connector type	Purpose
50-pin amphenol	This connector establishes the connection between the Meridian 1 or Succession CSE 1000 Media Gateway or Media Gateway Expansion backplane, ELAN and CLAN hubs, and modem.
10Base-T (RJ-45)	<p>This connector provides a 10 Mbit/s Ethernet connection between the 201i server and the Meridian 1 switch or Succession CSE 1000 system. This connection allows the exchange of call control information between the server and the Meridian 1 switch or Succession CSE 1000 system.</p> <p>For more information about the ELAN, see “About the ELAN” in Part 1 of the <i>CallPilot Installation and Configuration</i> binder.</p>
10/100Base-T (RJ-45)	<p>This connector provides a network connection for</p> <ul style="list-style-type: none"> <li>■ users’ desktop computers, to enable them to use the unified messaging and fax messaging features</li> <li>■ LAN-based server administration</li> </ul> <p><b>ATTENTION</b></p> <p>If you need Ethernet 100Base-T operation at 100 Mbit/s on large Meridian 1 systems (such as Option 51), you must install the NTRH3501 backplane (tip and ring) cable. For more information, see Chapter 3, “Installing the 201i server in a large Meridian 1 system.”</p>

<b>Connector type</b>	<b>Purpose</b>
RS-232 COM1 (male DB-9)	This connector provides the connection to an external modem. The modem allows administrators and technical support personnel to administer the 201i server from a remote location.

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# Peripheral connectivity

## Introduction

Peripheral equipment is attached to the 201i server on the server faceplate.

## Faceplate connections

### **ATTENTION**

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Connections made to the faceplate (with the exceptions noted below) are temporary only, since you must remove the cabinet cover to make these connections. The system does not meet specifications for radiated EMI if you remove the cabinet cover.

The following peripheral devices connect to the 201i server's faceplate:

- monitor (SVGA)
- keyboard
- mouse
- MPC card (permanent connection)
- SCSI cable (permanent connection)

### **Monitor, keyboard, and mouse**

You must connect a monitor, keyboard, and mouse to run the Configuration Wizard or to install the operating system on the 201i server as part of a recovery process.

All three peripheral components are hot-pluggable.

## MPC-8 card

The MPC-8 card looks like a Type II PC card, and supports the multimedia telephony services on the 201i server. Four specially designed card slots are available for the MPC-8. All of them are located on the 201i server faceplate.

### ATTENTION

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You cannot insert MPC-8 cards in Type II PC card slots, or Type II PC cards into MPC-8 card slots. They are not compatible.

## SCSI connections

The SCSI connection is the only permanent faceplate connection. A low-profile right-angle connector on the SCSI cable allows the cable to be attached with the cabinet covers on. For more information about how the 201i server and SCSI device connections are achieved, see

- large Meridian 1 systems (for example, Option 51C): “Installing the SCSI cables for Meridian 1” on page 58
- Option 11C or Option 11C Mini: “Installing the NTRH3502 SCSI cable for Option 11C Mini” on page 78
- Succession CSE 1000: “Installing the NTRH3502 SCSI cable for Succession CSE 1000” on page 106

## Supported peripheral devices

### CD-ROM drive (NTRH9037)

An external CD-ROM drive is used to install and upgrade the server. The drive connects to the server with an intermediate SCSI cable that connects to the SCSI connector on the faceplate.

Since the CD-ROM drive is an external device, it requires an AC power source.

Set the SCSI ID for the CD-ROM drive to 3. If you are connecting more than one SCSI device to the server (such as a tape drive), you must daisy chain those devices.

**Note:** The CD-ROM drive is not hot-pluggable. You must power off the server to connect or disconnect the drive.

### **Tape drive (NTRH9038)**

An external SCSI tape drive is used to back up and restore data. The device connects to the server by an intermediate SCSI cable that connects to the SCSI connector on the faceplate.

Since the tape drive is an external device, it requires an AC power source.

Set the SCSI ID for the tape drive to 5. If you are connecting more than one SCSI device to the server (such as a CD-ROM drive), you must daisy chain those devices.

**Note:** The tape drive is not hot-pluggable. You must power off the server to connect or disconnect the drive.

### **Modem**

An external modem provides remote access to the 201i server. The modem connects to the RS-232 COM1 connector on the multi I/O cable.

Since the modem is an external device, it requires its own AC power source.

Two modems are supported:

- 33.6 Kbps modem: (NTRH9016)
- 56 Kbps modem: (NTRH9078)

### **10Base-T Ethernet hub**

The 10Base-T Ethernet hub provides the ELAN connection between the 201i server and the Meridian 1 switch or Succession CSE 1000 system.

Since the hub is an external device, it requires an AC power source.

## Monitor, keyboard, and mouse

- 14" monitor: NTRH9011

Since the monitor is an external device, it requires an AC power source.

- Keyboard: NTRH9013
- Mouse: NTRH9014

**Note:** The mouse connector on the 201i faceplate is a PS/2 connector. If you plan to use a USB mouse with USB-to-PS/2 converter, you must also use the Nortel Networks-supplied 4-inch PS/2 extension cable (A0855616). Without the extension cable, the monitor connector partially blocks the mouse connector.

# Chapter 2

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## Preparing for installation

### In this chapter

Installation overview	30
Unpacking and inspecting the 201i server	35
Switch and network requirements	38

# Installation overview

## Introduction

This section provides a high-level overview of the requirements and procedure for installing the 201i server.

## 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 between the power outlets of the CallPilot server and the power outlets of the switch.

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

For more information, refer to Chapter 2, “Grounding and power requirements”, in the *CallPilot Planning and Engineering Guide*.

## Installation checklist

The following checklist identifies the steps required to install the 201i server and peripheral devices. For more details, see Chapter 7, “Connecting peripheral devices to the 201i server.”



### WARNING

#### Risk of personal injury and hardware failure

The power outlets that are used by the CallPilot server and its peripheral devices must be connected to the same ground reference as the one used by the Meridian 1 switch or Succession CSE 1000 system with MGate cards connected to the CallPilot server. If this requirement is not met, power transients can cause personal injury and hardware failure.

Step	Description	Check
1	<p>Ensure that you have reviewed the “Installing CallPilot” section in Part 1 of the <i>CallPilot Installation and Configuration</i> binder and completed stage 1 of the “Installation checklist.”</p> <p>This includes the following tasks:</p> <ul style="list-style-type: none"> <li> <p>■ Unpack the server, and ensure you have all the items you need (see page 35).</p> <p>Complete the following checklists that are provided in Part 1 of the <i>CallPilot Installation and Configuration</i> binder:</p> <ul style="list-style-type: none"> <li>— “CallPilot software media and documentation checklist”</li> <li>— “CallPilot server hardware checklist”</li> </ul> </li> <li> <p>■ Inspect the server for any damage that might have occurred during shipping (see page 35).</p> </li> </ul>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>

Step	Description	Check
2	Familiarize yourself with the “Switch and network requirements” on page 38 of this guide.	<input type="checkbox"/>
3	If you are installing the 201i server into a Meridian 1 tiered system, do the following: <ul style="list-style-type: none"><li data-bbox="236 405 882 467">■ Change the location of the secondary backplane (DS30X) connector on the 201i server (see page 44).</li><li data-bbox="236 485 925 580">■ Replace the existing backplane (tip and ring) cable on the Meridian 1 with the one supplied with the 201i server (NTRH3501) (see pages 51–57).</li></ul>	<input type="checkbox"/>
4	Install the intermediate SCSI cable. This cable connects the external CD-ROM or tape drive. <ul style="list-style-type: none"><li data-bbox="236 694 925 788">■ For Meridian 1, you require two cables to complete the connection between the 201i server and the SCSI device: NTRH1408 and NTRH1410. See page 58.</li><li data-bbox="236 805 925 900">■ For Option 11C, you require two cables to complete the connection between the 201i server and the SCSI device: NTRH1407 and NTRH3502. See page 70.</li><li data-bbox="236 917 925 1182">■ For Option 11C Mini or Succession CSE 1000, you require one cable to complete the connection between the 201i server and the SCSI device: the NTRH3502 cable that is provided in the CD-ROM and tape drive kits. See the following:<ul style="list-style-type: none"><li data-bbox="262 1107 613 1137">— Option 11C Mini: page 78</li><li data-bbox="262 1155 687 1182">— Succession CSE 1000: page 106</li></ul></li></ul>	<input type="checkbox"/>
5	Set the DIP switches on the modem (see page 122).	<input type="checkbox"/>

Step	Description	Check
6	Set the following: <ul style="list-style-type: none"><li data-bbox="232 276 893 336">■ SCSI IDs on the CD-ROM and tape drives (see pages 124 and 126)</li><li data-bbox="232 355 869 383">■ DIP switches on the CD-ROM drive (see page 124)</li><li data-bbox="232 402 927 464">■ device termination on the CD-ROM and tape drives (see page 128)</li></ul>	<input type="checkbox"/>
7	Insert the 201i server into two consecutive slots inside the switch. For instructions, see <ul style="list-style-type: none"><li data-bbox="232 576 927 603">■ large Meridian 1 systems (such as Option 51C): page 49</li><li data-bbox="232 622 748 649">■ Option 11C or Option 11C Mini: page 64</li><li data-bbox="232 668 642 695">■ Succession CSE 1000: page 103</li></ul>	<input type="checkbox"/>
8	Install the MPC cards, if required (see page 138).	<input type="checkbox"/>



# Unpacking and inspecting the 201i server

## Introduction

This section describes how to

- unpack the 201i server and peripherals
- inspect the 201i server for damage

It also describes what to do if you determine that the 201i server is faulty.

## To unpack the 201i server

### ATTENTION

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As you unpack each item, check it off against the packing list, as well as the following checklists provided in Part 1 of the *CallPilot Installation and Configuration* binder:

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

- 1 Remove the 201i server from the carton and its antistatic bag.
- 2 Place the 201i server on an antistatic surface.
- 3 Carefully open the cartons containing the monitor, keyboard, mouse, modem, and ELAN hub (if supplied), and set the peripherals aside.
- 4 Put all manuals and CD-ROMs in a safe place.
- 5 Save all packing materials and cartons in case you must return any equipment to the carrier.
- 6 Review “201i server description” on page 10, and perform a visual inspection as described in “To inspect the 201i server for shipping damage” on page 36.

## To inspect the 201i server for shipping damage

Before proceeding with the installation, visually inspect the 201i server for any damage that might have occurred during shipping. Ensure also that the items in the following checklists are secure:

Item	Yes	No
Are all cables securely seated?		
<ul style="list-style-type: none"> <li>■ hard drive power cable</li> <li>■ hard drive data cable</li> </ul>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
See items 2 and 3 in the diagram on page 12.		
Is the hard drive and bracket interface secure? See items 6 and 7 in the diagram on page 12.	<input type="checkbox"/>	<input type="checkbox"/>
Is the software feature key securely seated in its bracket? See item 8 in the diagram on page 12.	<input type="checkbox"/>	<input type="checkbox"/>

## What to do if components are missing or damaged

IF	THEN
you observe any damage	contact your Nortel Networks technical support representative.
components have become loose	secure them. If necessary, refer to the procedures in Part 5 of the <i>CallPilot Installation and Configuration</i> binder.
you are satisfied that the 201i server has arrived at your site undamaged	you are ready to proceed with installation.

## **What's next?**

Review the “Switch and network requirements” on page 38.

# Switch and network requirements

## Introduction

The information in this section will help you plan your 201i server installation.

## Meridian 1 or Succession CSE 1000 slot requirements

The 201i server occupies physical and electrical slots. You must install the 201i server in two peripheral equipment slots as follows:

Switch	Slots
Meridian 1 tiered systems	0 through 14 Ensure that both slots have electrical backplane connectivity.
Option 11C	1 through 9 in any Option 11C cabinet
Option 11C Mini	A pair of consecutive slots in any cabinet <b>Note:</b> You cannot install the 201i server in slots 0 or 4 because these slots are dedicated to other cards. For more information about cards and slots, refer to the Option 11C Mini documentation.
Succession CSE 1000	A pair of consecutive slots in any Media Gateway or Media Gateway Expansion. <b>Note:</b> The 201i server cannot be installed in slots 0 or 4 because these slots are dedicated to other cards. For more information about cards and slots, refer to the <i>Succession Communication Server for Enterprise 1000 Planning and Installation Guide</i> (NTP 553-3023-210).

## Meridian 1 I/O panel connections

On large Meridian 1 systems (such as Option 51C), the 201i server requires two connections from the IPE slots to the I/O panel on the rear of the switch, as follows:

- One connection is for the multi I/O cable.  
This connection corresponds to the left slot (when viewing the front of the Meridian 1 switch).
- The other connection is for the external SCSI device.  
This connection corresponds to the right slot (when viewing the front of the Meridian 1 switch).

For information about slot and rear bulkhead wiring, refer to the *Meridian 1 System Installation and Maintenance Guide* (NTP 553-3001-210).

## CLAN and ELAN network requirements

If you have a LAN (for example, customer LAN [CLAN] or embedded LAN [ELAN]), the LAN must be configured and the appropriate networking equipment must be available.

If the LAN is to be networked with the 201i server, you need a network specialist to ensure proper configuration.

### ATTENTION

---

For important considerations about using the ELAN in your network, see “About the ELAN” in Part 1 of the *CallPilot Installation and Configuration* binder.

## What's next?

Install the 201i server in the Meridian 1 switch or Succession CSE 1000 system. For instructions, see one of the following:

<b>To install the 201i server in</b>	<b>See</b>
a large Meridian 1 switch (for example, Option 51C)	Chapter 3, "Installing the 201i server in a large Meridian 1 system."
an Option 11C or Option 11C Mini switch	Chapter 4, "Installing the 201i server in an Option 11C or Option 11C Mini."
the Succession CSE 1000 system	Chapter 5, "Installing the 201i server in the Succession CSE 1000 system."

# Chapter 3

---

## Installing the 201i server in a large Meridian 1 system

### In this chapter

Overview	42
Repositioning the secondary backplane connector	44
Installing the 201i server in the large Meridian 1 switch	49
Removing the backplane (tip and ring) cables	51
Installing the NTRH3501 backplane cable	55
Installing the SCSI cables for Meridian 1	58

# Overview

## Introduction

This section describes what you must do if you are installing the 201i server in a Meridian 1 switch.

### ATTENTION

---

To install the 201i server in an Option 11C, go to page 64. For Option 11C Mini, go to page 77. For Succession CSE 1000, go to page 91.

## Meridian 1 I/O panel connections

On the Meridian 1, the 201i server requires two connections from the IPE slots to the I/O panel on the rear of the switch, as follows:

- One connection is for the multi I/O cable.  
This connection corresponds to the left slot (when viewing the front of the Meridian 1 switch).
- The other connection is for the external SCSI device.  
This connection corresponds to the right slot (when viewing the front of the Meridian 1 switch).

For information about slot and rear bulkhead wiring, refer to the *Meridian 1 System Installation and Maintenance Guide* (NTP 553-3001-210).

## Secondary backplane connector

The secondary backplane (DS30X) connector on the 201i server connects the server to the second slot on the IPE shelf, thereby providing access to the voice channels provided by that slot.

**CAUTION**

---

**Risk of equipment damage**

The 201i server is shipped ready for installation into an Option 11C switch. Before you install the 201i server in a larger Meridian 1 switch (for example, Option 51C), you must move the secondary backplane (DS30X) connector to the correct position.

**ATTENTION**

---

A yellow warning label over the top lock latch on the 201i server prevents you from securing the 201i server in a slot. This label serves as a reminder to move the secondary backplane connector to the Meridian 1 position, if required, before installing the 201i server into the slot.

**Backplane (tip and ring) cable**

The backplane (tip and ring) cable supplied with the 201i server (NTRH3501) provides 100Base-T Ethernet CLAN operation. This cable offers more network throughput than the cable that is already installed on the Meridian 1.

When installed, this cable completes the connection between the left slot, the I/O panel on the rear of the switch, and the multi I/O cable on the 201i server.

**SCSI cables**

Before you can connect a CD-ROM or tape drive to the 201i server, you must install the SCSI cables. You require two cables. These cables route the SCSI connection away from the 201i server faceplate so that an external SCSI device can remain permanently connected.

# Repositioning the secondary backplane connector

## Introduction

The secondary backplane (DS30X) connector on the 201i server connects the server to the second slot on the IPE shelf, thereby providing access to the voice channels provided by that slot.



### CAUTION

---

#### Risk of equipment damage

The 201i server ships ready for installation into an Option 11C or Option 11C Mini switch. Before you install the 201i server in a larger Meridian 1 switch (for example, Option 51C), you must move the secondary backplane (DS30X) connector to the correct position.

## Why you must move the connector

There is an approximate difference of 2 mm between slots on a Meridian 1 tiered system and an Option 11C or Option 11C Mini system. As a result, you must install the secondary backplane (DS30X) connector on the 201i server in the correct position before a successful connection with the switch backplane can be established.

### ATTENTION

---

A yellow warning label over the top lock latch on the 201i server prevents you from securing the 201i server in a slot. This label serves as a reminder to move the secondary backplane connector to the Meridian 1 position, if required, before installing the 201i server into the slot.

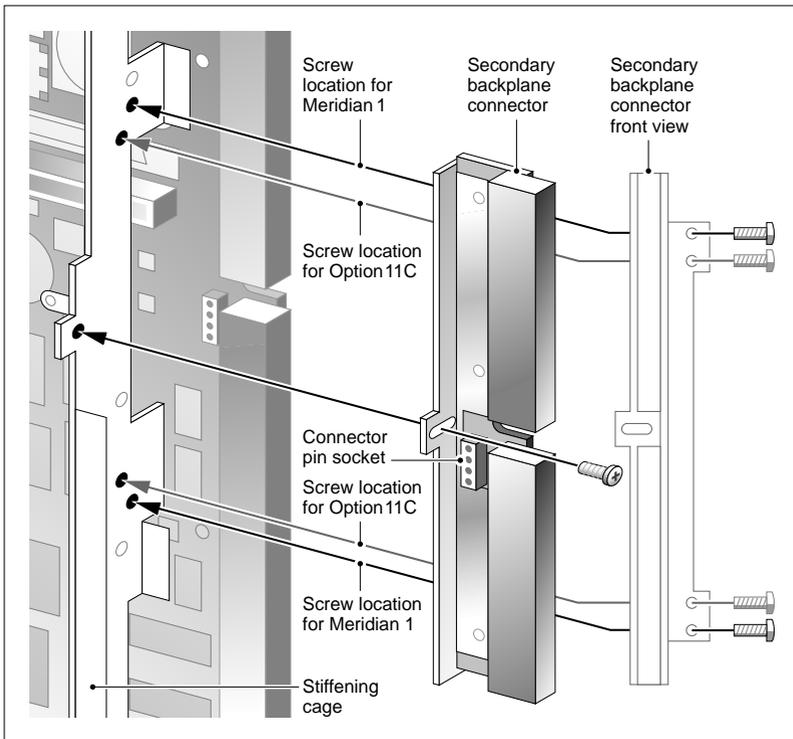
## Secondary backplane connector description

The secondary backplane connector is attached to the backplane edge of the 201i server. It consists of the following items:

- connector
- screws
- pin connector (with four pins)

Two pairs of screw holes are provided for connecting the secondary backplane connector to the 201i server's stiffening cage. The outside pair provides the Meridian 1 spacing. The inside pair provides the Option 11C or Option 11C Mini spacing.

See the following diagram:



## Required equipment

To move the secondary backplane connector, you need a Phillips No. 1 screwdriver. A pair of needle-nosed pliers can also be helpful for removing the pin connector.

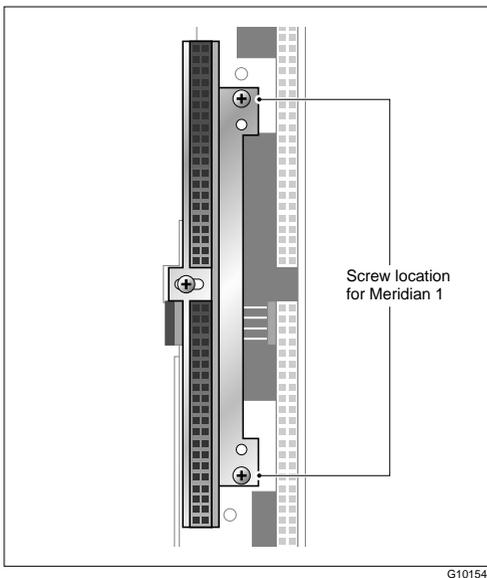
## To prepare the 201i server for installation in a Meridian 1 switch

- 1 Remove the secondary backplane pin connector.

The pin connector has four pins. If necessary, use needle-nosed pliers to remove it.

- 2 Remove the top and bottom screws that hold the secondary backplane connector in place on the stiffening cage.
- 3 Loosen the middle screw, and then align the outside pair of screw holes on the bracket with the matching pair on the stiffening cage.
- 4 Replace and alternately tighten all screws until the connector is evenly and securely fastened.

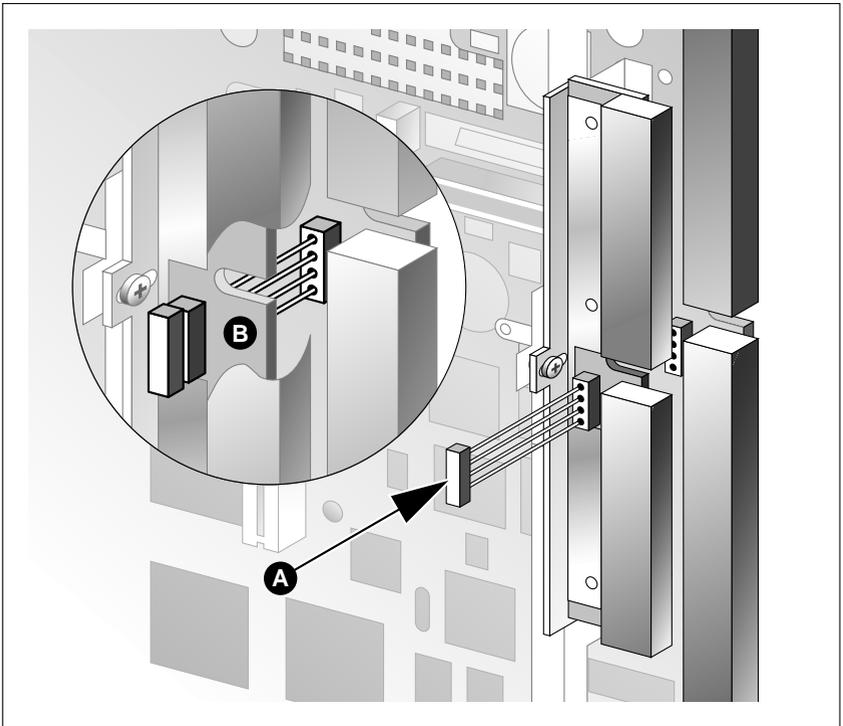
See the following diagram:



- 5 Replace the pin connector so the pins protrude through both connectors. Ensure that the connectors are correctly aligned as shown in the diagram below.

**CAUTION****Risk of equipment damage**

If the connectors are not correctly aligned when the pin connector is pressed into the socket, the pins may bend.



G101442

- 6 Gently press the pin connector into the socket until it is fully seated.
- 7 Remove the yellow backplane warning label from the top lock latch on the 201i server.

## **What's next?**

Continue with “Installing the 201i server in the large Meridian 1 switch” on page 49.

# Installing the 201i server in the large Meridian 1 switch

## Introduction

The 201i server occupies two slots. You can install the 201i server in slots 0 through 14. Ensure that both slots have electrical backplane connectivity.

## To position the 201i server on the switch shelf

- 1 Ensure that no cables are connected to the slots in which you are installing the 201i server.
- 2 Open the lock latches at the top and bottom of the 201i server faceplate.

**Note:** When you open the top lock latch, you break the yellow backplane warning label, if it has not been removed. You must move the secondary backplane connector before you install the 201i server. For details, see “Repositioning the secondary backplane connector” on page 44.

- 3 Slide the 201i server into an unoccupied pair of slots.

Ensure that the 201i server is positioned correctly between the slots.

### ATTENTION

---

Do not push the 201i server into place against the backplane until you are ready to observe the startup cycle.

The 201i server receives power and starts as soon as the 201i server makes contact with the switch backplane.

- 4 Connect the low-profile right-angle SCSI cable connector to the SCSI connector on the 201i server’s faceplate.

## **What's next?**

Continue with “Removing the backplane (tip and ring) cables” on page 51.

# Removing the backplane (tip and ring) cables

## Introduction

You must remove the Meridian 1 backplane (tip and ring) cables that are associated with the slots occupied by the 201i server so that you can install the following cables:

- NTRH3501 backplane (tip and ring) cable  
The NTRH3501 cable offers more network throughput than the cable that is already installed on the Meridian 1. This cable is connected to the backplane connectors and I/O panel slot associated with the left slot.
- NTRH1408 intermediate SCSI cable  
The NTRH1408 intermediate SCSI cable routes the SCSI device connection away from the 201i server faceplate so that an external SCSI device can remain permanently connected. This cable is connected to the I/O panel only. The backplane connectors associated with the right slot are left vacant.

These cables are supplied with the 201i server.

## Before you begin



### DANGER

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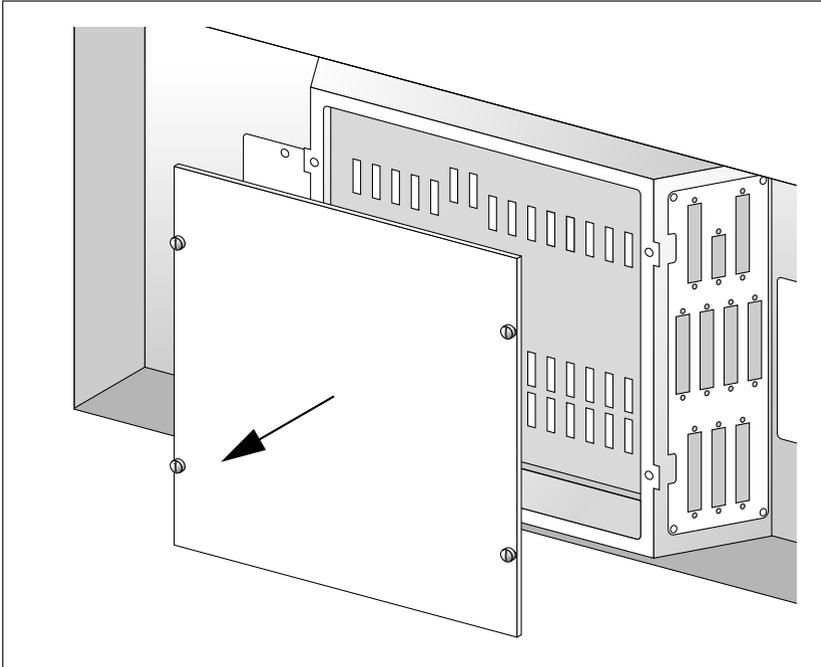
#### Risk of electrical shock

Ensure that the shelf is powered off before you remove the backplane cables.

**Note:** For information about slot and rear bulkhead wiring and powering off the shelf, refer to the *Meridian 1 System Installation and Maintenance Guide* (NTP 553-3001-210).

## To remove the backplane cables

- 1 Remove the I/O panel cover from the rear of the Meridian 1 switch.
- 2 Remove the protective plate from the rear of the Meridian 1 switch.



G101547

- 3 Remove the existing backplane cable, including the I/O filter assembly (NT8D81xx) and mounting hardware for the left slot as follows:
  - a. Remove the external cable attached to the outside of the I/O panel.
  - b. For each of the UP 1, UP 2, and UP 3 cable connectors, push the lock tab outwards to unlock the cable connection, and then pull the connector off.

**ATTENTION**

---

If you attempt to pull the connector off without pressing the lock tab, you may pull the connector shroud off the backplane. If this happens, refer to the adjacent connectors for correct key positioning, and then replace the connector shroud.

Remove the tie wraps where applicable to free the cable.

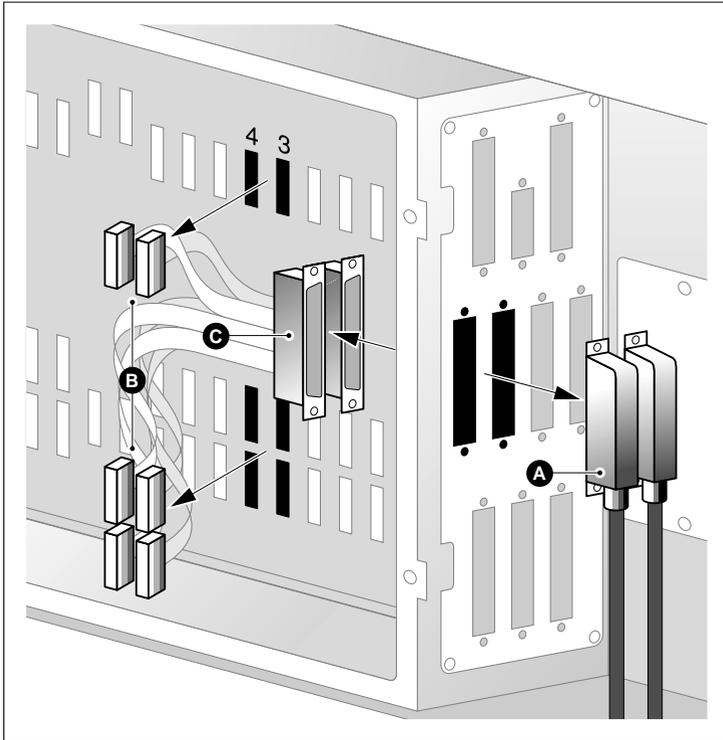
- c. Remove the connector, I/O filter assembly, and all mounting hardware from the inside of the I/O panel so the slot is completely vacated.

Retain the mounting hardware (that is, screws, tie wrap base, standoffs, and so on). You will reuse this hardware to fasten the NTRH3501 cable.

- 4 Repeat step 3 to remove the existing backplane cable for the right slot.

Store the cable, I/O filter assembly, and mounting hardware for this cable with your Meridian 1 spares. You will not use them with the 201i server.

The following diagram shows an example using slots 3 and 4:



## What's next?

Continue with “Installing the NTRH3501 backplane cable” on page 55.

# Installing the NTRH3501 backplane cable

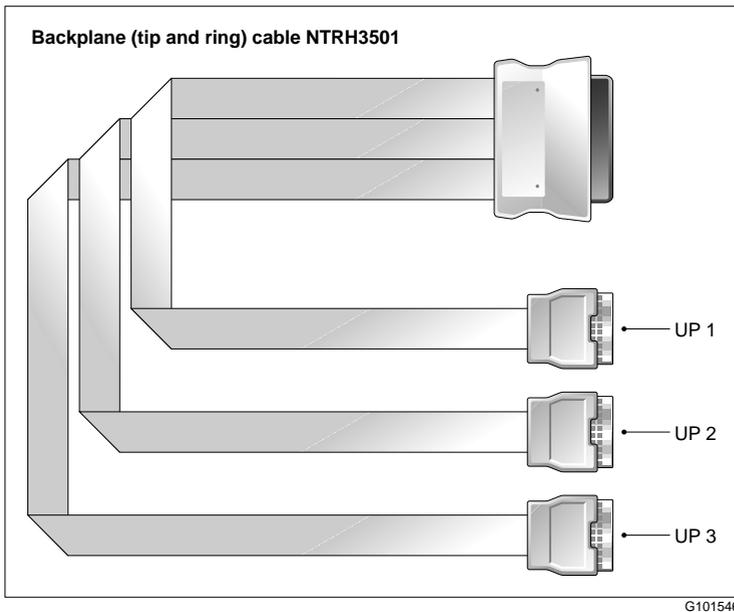
## Introduction

You must connect the backplane (tip and ring) cable supplied with the 201i server (NTRH3501) for 100Base-T Ethernet CLAN operation. This cable offers more network throughput than the cable you just removed from the Meridian 1.

When installed, this cable completes the connection between the left slot, the I/O panel on the rear of the switch, and the multi I/O cable on the 201i server.

## Backplane (tip and ring) cable

The following diagram shows the NTRH3501 backplane (tip and ring) cable:



## Before you begin

Before you can install the NTRH3501 cable, you must remove the existing backplane cable from the back of the switch. See “Removing the backplane (tip and ring) cables” on page 51.

## To install the NTRH3501 backplane cable

- 1 Install and connect the NTRH3501 cable to the multi I/O cable as follows:
  - a. Attach the backplane connector of the NTRH3501 cable to the inside of the I/O panel slot associated with the 201i server’s left slot.

Insert the original screw into the tie wrap base and fasten the screw into the lower position of the I/O panel slot.
  - b. Attach the three inner cables to the backplane connectors associated with the left slot as follows:
    - UP 1 cable: to the top position
    - UP 2 cable: to the middle position
    - UP 3 cable: to the lower position

**ATTENTION**

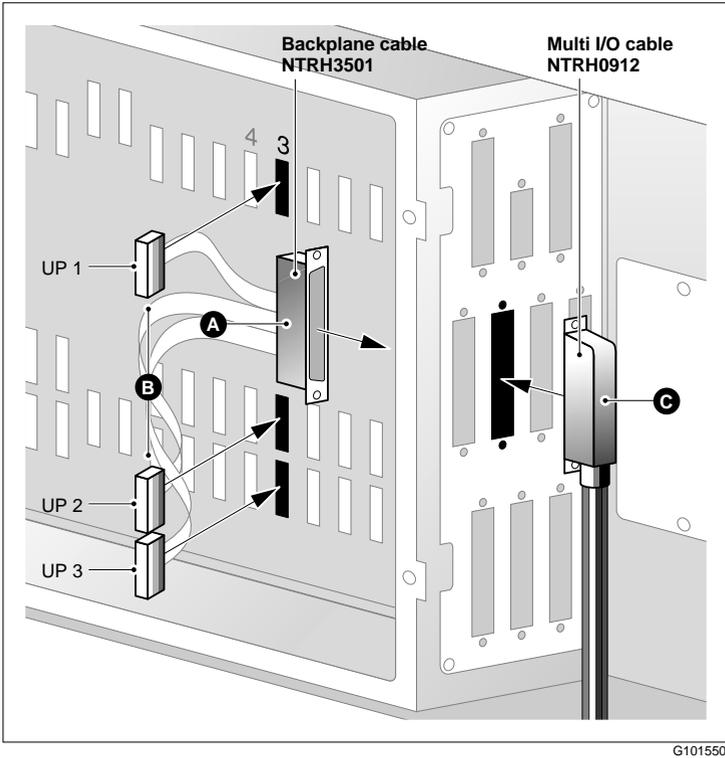
---

The connectors are keyed; you can insert them in one position only.

Use tie wraps to secure the cables in their original positions.

- c. Connect the 50-pin amphenol connector on the multi I/O cable (NTRH0912) to the NTRH3501 backplane cable connector on the I/O panel.

See the following diagram:



## What's next?

Continue with “Installing the SCSI cables for Meridian 1” on page 58.

# Installing the SCSI cables for Meridian 1

## Introduction

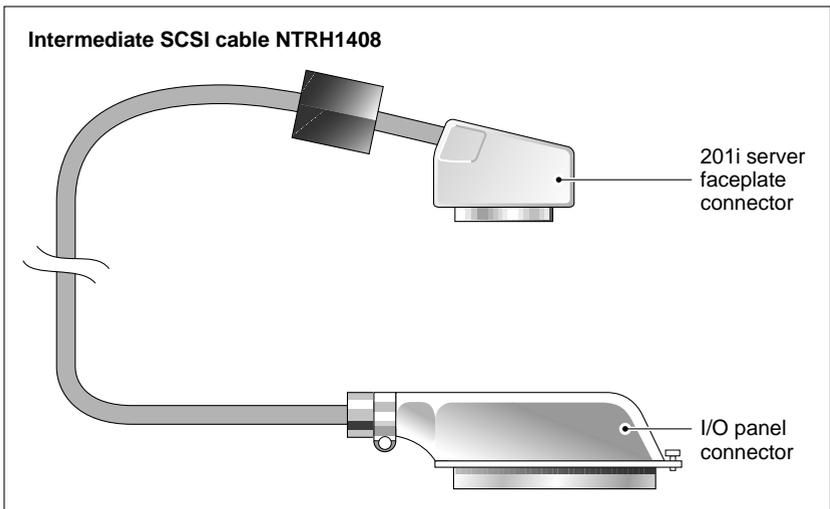
Before you can connect a CD-ROM or tape drive to the 201i server, you must install the SCSI cables. The SCSI cables route the SCSI connection away from the 201i server faceplate so that an external SCSI device can remain permanently connected.

## Cables you need

You require the following cables:

- NTRH1408 (for connecting the 201i server to the Meridian 1 I/O panel)

The connector on the intermediate SCSI cable that attaches to the 201i server faceplate is a low-profile right-angle connector. This allows the cable to be attached with the Meridian 1 cabinet cover on.



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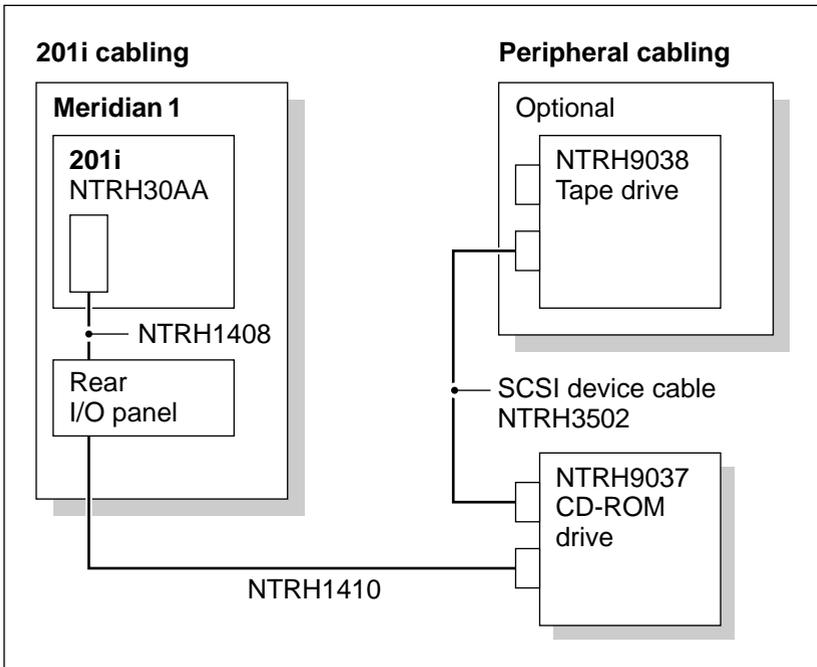
- NTRH1410 (for connecting an external SCSI device to the NTRH1408 connector on the Meridian 1 I/O panel)

The total length of the cable from the I/O panel is 4.1 m (13.3 ft).

## What the completed installation looks like

The following diagram shows how the intermediate SCSI cable, CD-ROM drive, and tape drive are connected to the Meridian 1.

In this diagram, the CD-ROM drive is the first device. The tape drive is the last device.



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**Note:** Alternate SCSI device connection scenarios are supported, but are not depicted in this guide. If you want to use a connection scenario that is not described in this guide, ensure that you use appropriate cabling for each device.

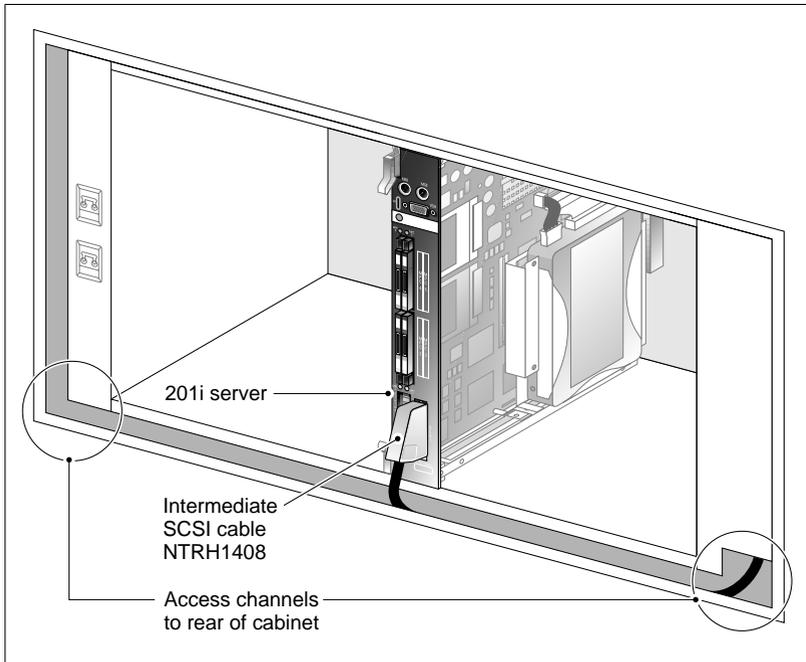
## Before you begin

Before you install the SCSI devices in a daisy chain, you must configure the SCSI device IDs and DIP switches. For instructions, refer to Chapter 6, “Preparing peripheral devices.”

## To install the SCSI cables for Meridian 1

- 1 Thread the SCSI connector end of the NTRH1408 cable from the front of the Meridian 1 along the bottom of the shelf to either the left or the right access channel.
- 2 Leave the low-profile right-angle SCSI connector hanging for now. You will connect it later to the 201i server faceplate.

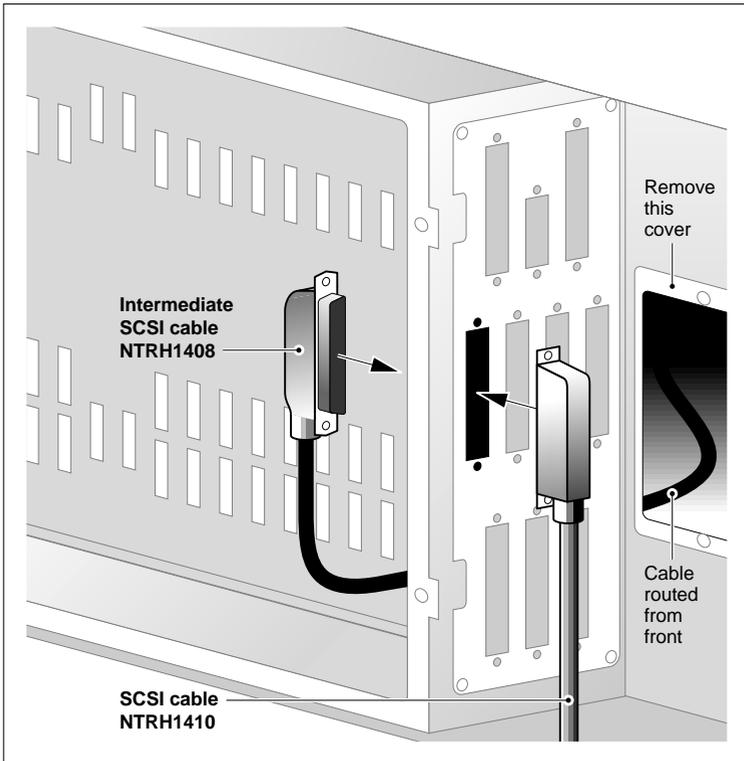
**Note:** The following diagram shows what the connection looks like after the cable is connected:



G101556

- 3 Thread the cable through the access channel to the back of the Meridian 1.
- 4 Attach the NTRH1408 cable to the inside of the I/O panel slot associated with the 201i server's right slot.
- 5 Connect the NTRH1410 cable to the NTRH1408 cable connector on the I/O panel.

See the following diagram:



**Note:** The backplane connectors for the right slot are not required and, therefore, are left vacant.

- 6 Thread the NTRH1410 cable through the shelves below and out through the bottom of the Meridian 1 tower.

- 7 Replace the protective plate.
- 8 Replace the I/O panel cover.
- 9 Power up the shelf.

## **What's next?**

Prepare the modem, CD-ROM drive, and tape drive for connection to the 201i server. For instructions, see Chapter 6, "Preparing peripheral devices."

# Chapter 4

---

## Installing the 201i server in an Option 11C or Option 11C Mini

### In this chapter

Installing the 201i server in the Option 11C or Option 11C Mini switch	64
<b>Section A: Installing Option 11C cables</b>	<b>69</b>
Installing the intermediate SCSI cable for Option 11C	70
<b>Section B: Installing Option 11C Mini cables</b>	<b>77</b>
Installing the NTRH3502 SCSI cable for Option 11C Mini	78
Installing cables on the back of the Option 11C Mini cabinet	86

# Installing the 201i server in the Option 11C or Option 11C Mini switch

## Introduction

The 201i server occupies physical and electrical slots. The 201i server must be installed in two peripheral equipment slots as follows:

Switch	Eligible slots
Option 11C	Slots 1 through 9 in any cabinet
Option 11C Mini	A pair of consecutive slots in any cabinet <b>Note:</b> You cannot install the 201i server in slots 0 or 4 because these slots are dedicated to other cards. For more information about cards and slots, refer to the Option 11C Mini documentation.

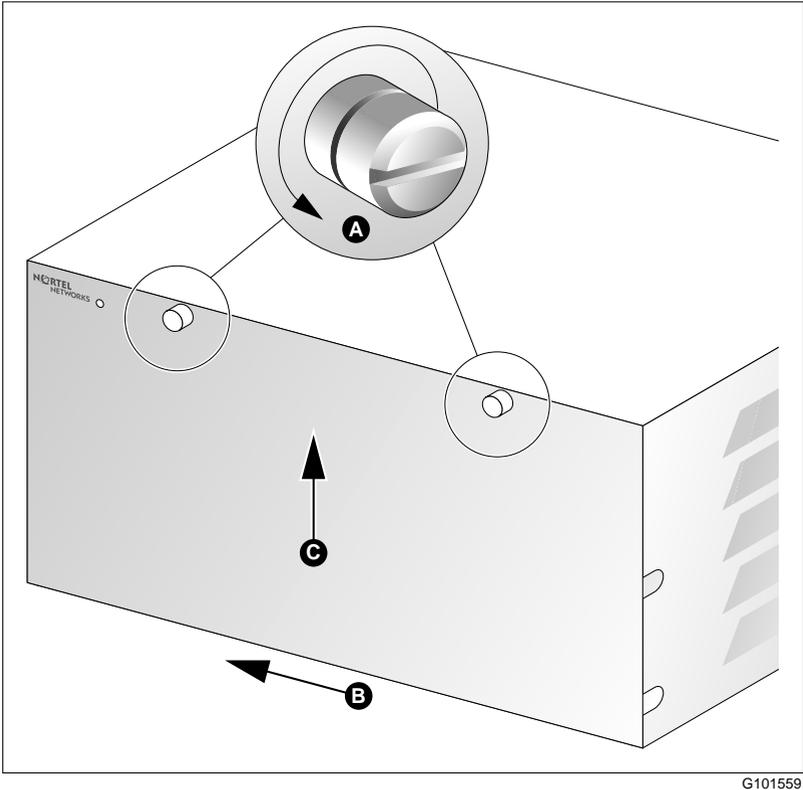
## To position the 201i server on the switch shelf

- 1 Remove the front panel of the switch.

**Note:** On the Option 11C Mini, do the following:

- a. Loosen the spring-loaded clips.
- b. Slide the cover to the left.
- c. Pull the cover up to remove it from the cabinet.

See the following diagram:



G101559

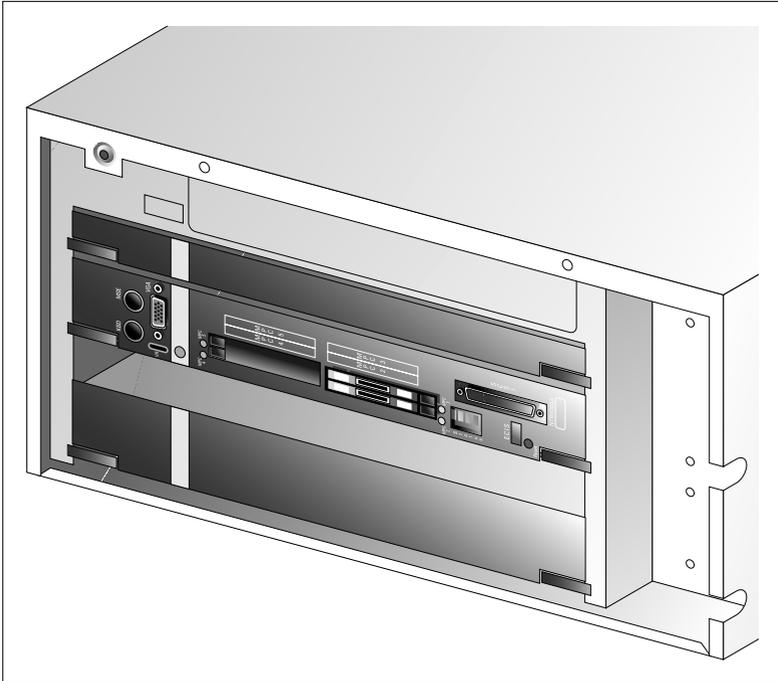
- 2 Ensure that no cables are connected to the slots in which you are installing the 201i server.
- 3 Open the lock latches at the top and bottom of the 201i server faceplate.

**Note:** When you open the top lock latch, it breaks the yellow backplane warning label, if the label has not been removed. The label is not relevant for Option 11C or Option 11C Mini. Remove the label and continue with this procedure.

- Slide the 201i server into an unoccupied pair of slots.

Ensure that the 201i server is positioned correctly between the slots.

**Note:** When correctly inserted in the Option 11C Mini, the top of the 201i server is on the left. See the following diagram:



G101588b

**ATTENTION**

Do not push the 201i server into place against the backplane until you are ready to observe the startup cycle.

The 201i server receives power and starts as soon as the 201i server makes contact with the switch backplane.

## What's next?

Continue with installing the cables. Refer to one of the following:

- Section A: “Installing Option 11C cables,” on page 69
- Section B: “Installing Option 11C Mini cables,” on page 77



# Section A: Installing Option 11C cables

## In this section

Installing the intermediate SCSI cable for Option 11C

70

# Installing the intermediate SCSI cable for Option 11C

## Introduction

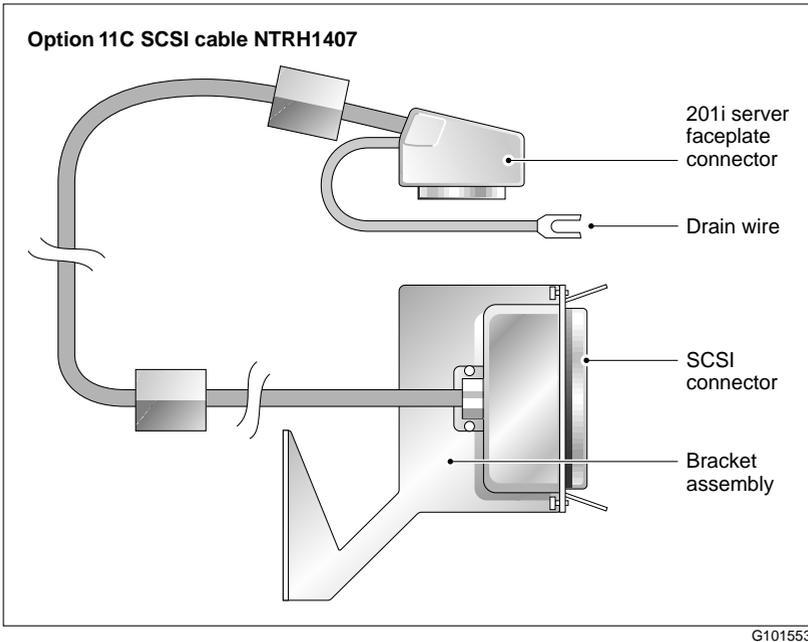
Before you can connect an external CD-ROM or tape drive to the 201i server, Option 11C requires an intermediate SCSI cable (NTRH1407).

**Note:** If you are installing the 201i server in an Option 11C Mini, go to page 78.

## Cable description

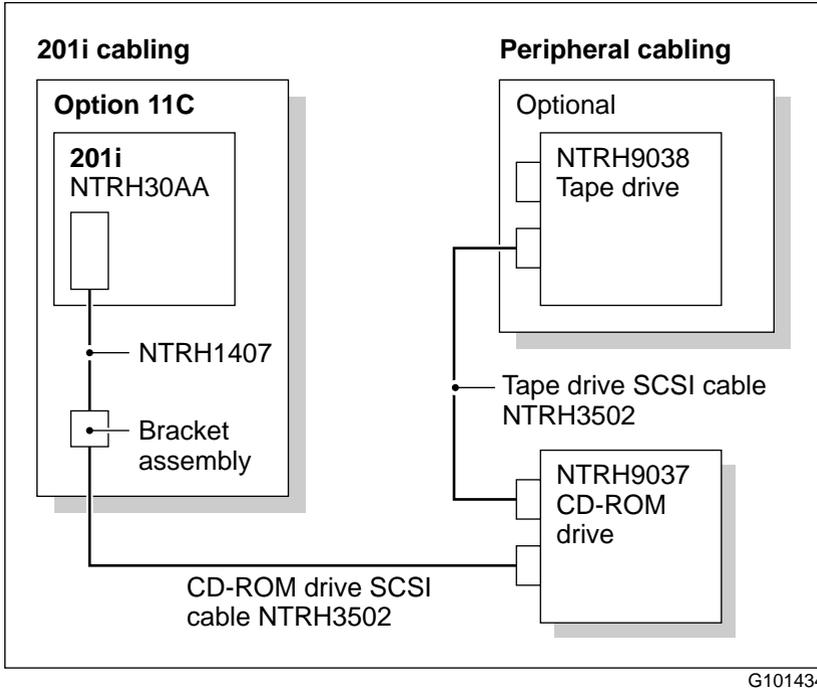
The connector on the NTRH1407 cable that attaches to the 201i server faceplate is a low-profile right-angle connector. This allows the SCSI device to be permanently connected to the 201i server with the Option 11C cabinet cover on.

The SCSI device connector end is equipped with a bracket assembly. This bracket assembly attaches to the Option 11C below the card cage. The CD-ROM or tape drive connects to this bracket assembly with the NTRH3502 cable that is provided with the device.



### What the completed installation looks like

The following diagram shows how the intermediate SCSI cable, CD-ROM drive, and tape drive are connected to the Option 11C. The CD-ROM drive is the first device. The tape drive is the last device.



**Note:** Alternate SCSI device connection scenarios are supported, but are not depicted in this guide. If you want to use a connection scenario that is not described in this guide, ensure that you use appropriate cabling for each device.

## Before you begin

Before you install the SCSI devices in a daisy chain, you must configure the SCSI device IDs and DIP switches. For instructions, see Chapter 6, “Preparing peripheral devices.”

## To install the cable

- 1 Attach the bracket assembly and cable as follows:
  - a. Below the card cage, temporarily remove the hardware that secures cable connections to the Option 11C.
  - b. Temporarily remove any cabling that may interfere with the installation of the intermediate SCSI cable bracket assembly.

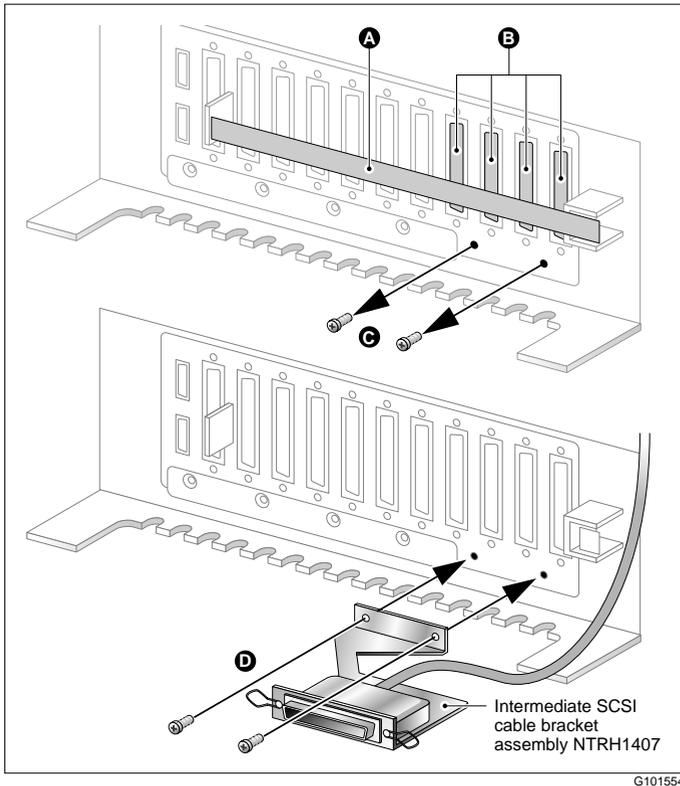
**ATTENTION**

---

Before you disconnect the cabling, take the telephony equipment services associated with the cabling out of service.

- c. Remove the two screws on the right side of the Option 11C I/O panel.
- d. Attach the intermediate SCSI cable bracket assembly, using the screws that were removed previously, so that the SCSI connector appears on the right side of the Option 11C cabinet.

See the following diagram:



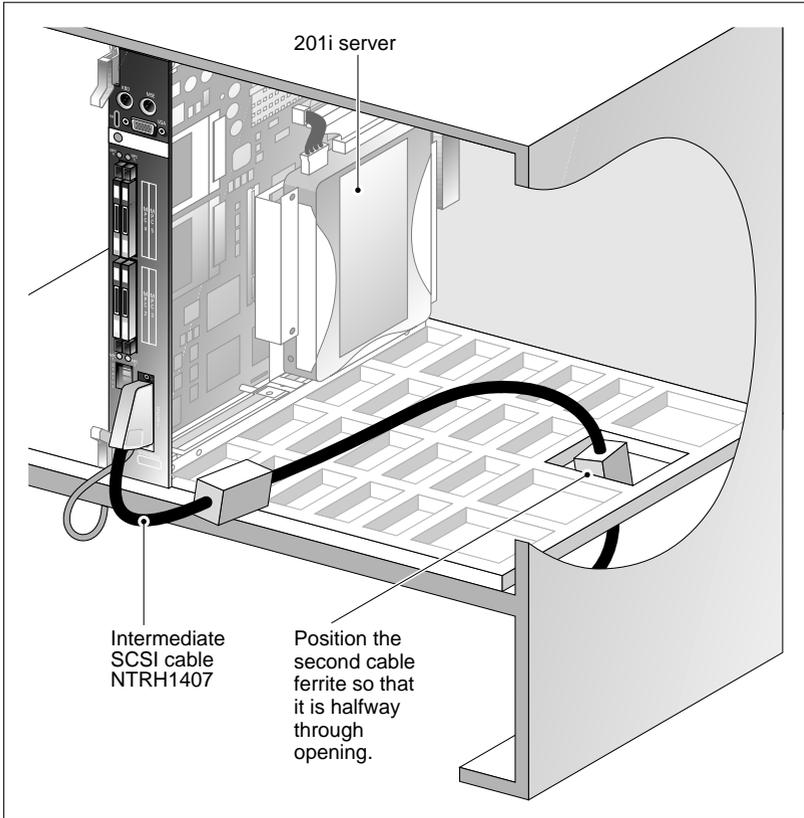
- 2 Thread the cable up through the card cage.

**Note:** When routing the SCSI cable through the card cage, ensure the second cable ferrite is placed halfway through the opening.

- 3 Connect the grounding braid on the intermediate SCSI cable to the card cage, and tighten the screw.

- 4 Leave the low-profile right-angle SCSI connector loose for now. You will connect it later to the 201i server faceplate.

**Note:** The following diagram shows what the connection looks like after the cable is connected:



G101555

- 5 Replace all cabling and hardware that you removed in step 1.
- 6 Restore any services that you took out of service in step 1.

## **What's next?**

Prepare the modem, CD-ROM drive, and tape drive for connection to the 201i server. For instructions, see Chapter 6, "Preparing peripheral devices."

# Section B: Installing Option 11C Mini cables

## In this section

Installing the NTRH3502 SCSI cable for Option 11C Mini	78
Installing cables on the back of the Option 11C Mini cabinet	86

# Installing the NTRH3502 SCSI cable for Option 11C Mini

## Introduction

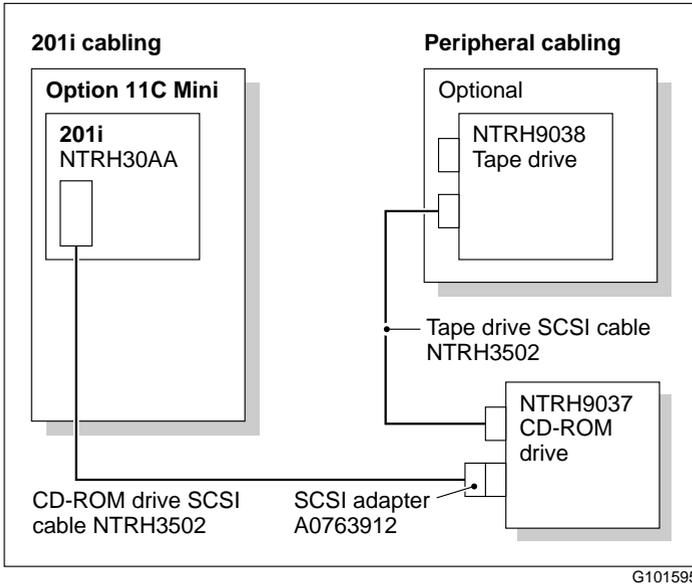
Before you can connect a CD-ROM or tape drive to the 201i server, you must install the NTRH3502 SCSI cable. The NTRH3502 SCSI cable routes the SCSI connection away from the 201i server faceplate so that an external SCSI device can remain permanently connected.

If the Option 11C Mini is equipped with a Fiber Routing Guide (consisting of a spool and mounting bracket), you must remove it before you can install the NTRH3502 SCSI cable, and then reinstall it when you are finished.

For detailed instructions on removing and installing the Fiber Routing Guide, refer to the *Option 11C and Option 11C Mini Expansion Guide* (NTP 553-3021-208).

## What the completed installation looks like

The following diagram shows how the intermediate SCSI cable, CD-ROM drive, and tape drive are connected to the Option 11C Mini. In the diagram, the CD-ROM drive is the first device. The tape drive is the last device.



**Note:** Alternate SCSI device connection scenarios are supported, but are not depicted in this guide. If you want to use a connection scenario that is not described in this guide, ensure that you use appropriate cabling for each SCSI device.

## Before you begin

1. Before you install the SCSI devices in a daisy chain, you must configure the SCSI device IDs and DIP switches.

For instructions, see Chapter 6, "Preparing peripheral devices."

2. Ensure that you have the Option 11C Mini EMC Kit (NTRH3503).

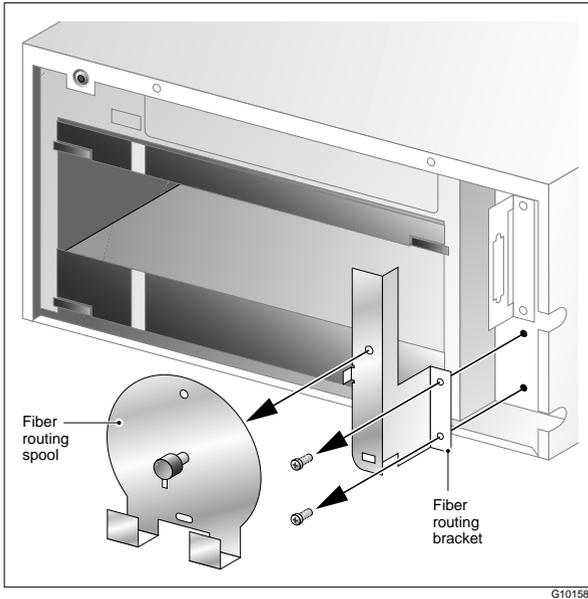
The kit contains ferrites that you must install on the NTRH3502 SCSI cable to maintain Option 11C Mini EMC requirements. If you do not have the kit, contact your Nortel Networks distributor.

## To install the NTRH3502 SCSI cable

- 1 If your Option 11C Mini is equipped with a Fiber Routing Guide, temporarily remove it.

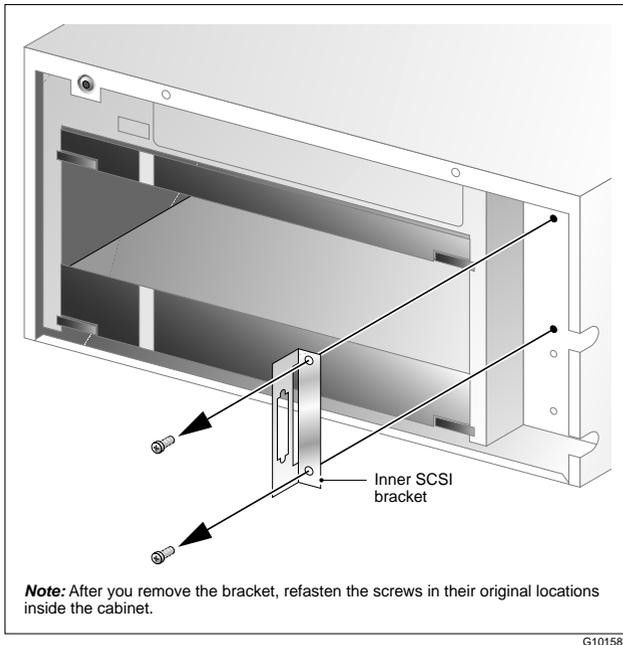
**Note:** For detailed instructions, refer to the *Option 11C and Option 11C Mini Expansion Guide* (NTP 553-3021-208).

See the following diagram:



- 2 Remove the inner SCSI bracket from the inside of the cabinet.

See the following diagram:



- 3 Refasten the inner SCSI bracket screws in their original locations inside the cabinet.

You will use the top screw later to fasten the NTRH3502 SCSI cable's drain wire.

- 4 Connect the low-profile right-angle SCSI connector on the NTRH3502 cable to the SCSI connector on the 201i server faceplate.
- 5 Fasten the SCSI cable's drain wire to the top screw that previously held the inner SCSI bracket in place.

- 6 Attach and then position two ferrites from the NTRH3503 EMC kit to the SCSI cable as described in the following table:

**IF the Fiber  
Routing Guide**

**THEN**

is required

do the following:

- Position the ferrites so that the SCSI cable and ferrites can be pushed as far up and back as possible inside the Option 11C Mini cabinet.
- There is very little space to work with. Work with the cable and ferrites (including the ferrite that was already installed on the SCSI cable) until you can correctly and securely install the fiber optic spool.
- Route the SCSI cable out through the top cable trough on the Option 11C Mini cabinet.

See “SCSI cable installation to accommodate the Fiber Routing Guide” on page 83.

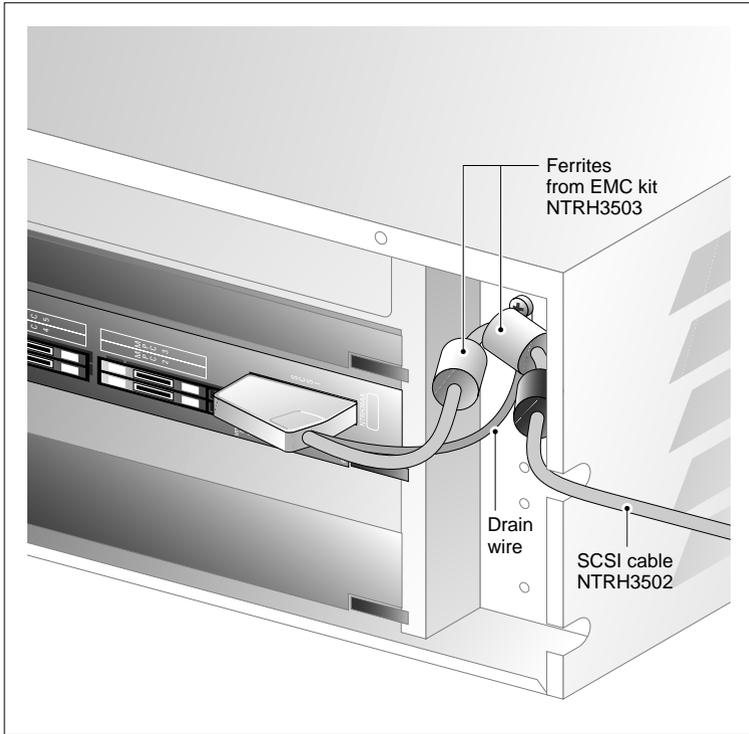
not required

do the following:

- Position the ferrites as close to the SCSI connector as possible.
- Secure the ferrites with a tie wrap.
- Route the SCSI cable across the inside of the Option 11C Mini cabinet and out through the bottom cable trough.

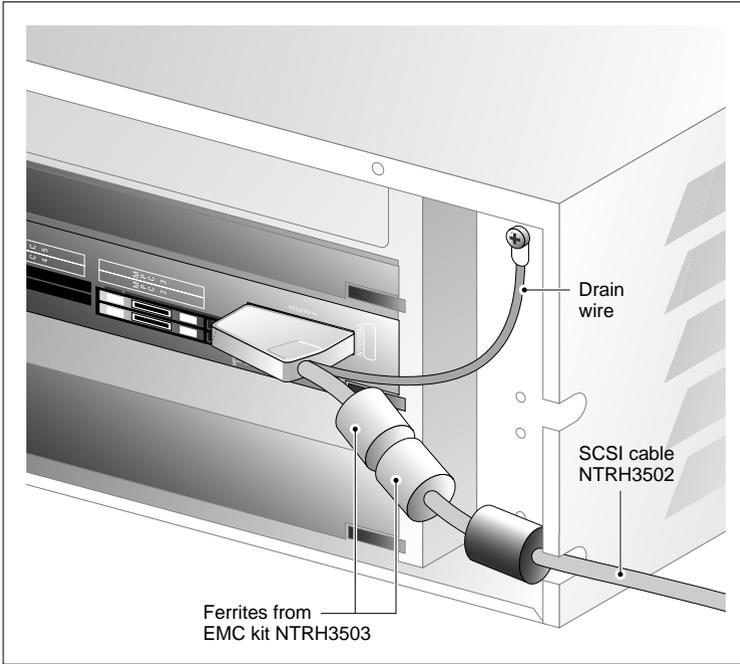
See “SCSI cable installation when the Fiber Routing Guide is not required” on page 84.

## SCSI cable installation to accommodate the Fiber Routing Guide



G101590

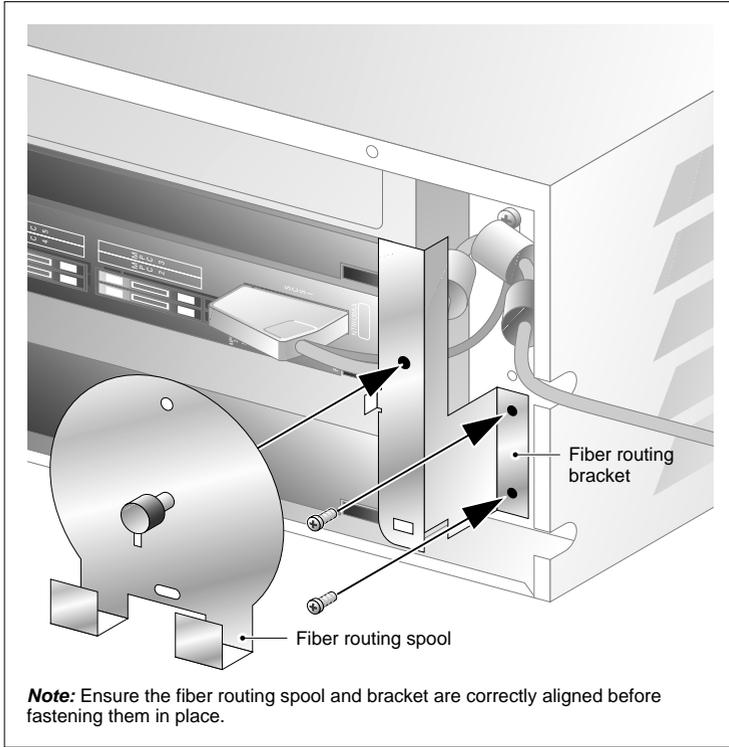
## SCSI cable installation when the Fiber Routing Guide is not required



- 7 If required, reinstall the Fiber Routing Guide.

**Note:** For detailed instructions, refer to the *Option 11C and Option 11C Mini Expansion Guide* (NTP 553-3021-208).

See the following diagram:



G101591

**8** Replace the cabinet cover.

## What's next?

Continue with “Installing cables on the back of the Option 11C Mini cabinet” on page 86.

# Installing cables on the back of the Option 11C Mini cabinet

## Introduction

The following items connect to the back of the Option 11C Mini cabinet:

- multi I/O cable (NTRH0912)
- Option 11C Mini power cord with two ferrites

You must connect the multi I/O cable first before connecting the power cord, because the power cord routes over the multi I/O cable connection.

## Before you begin

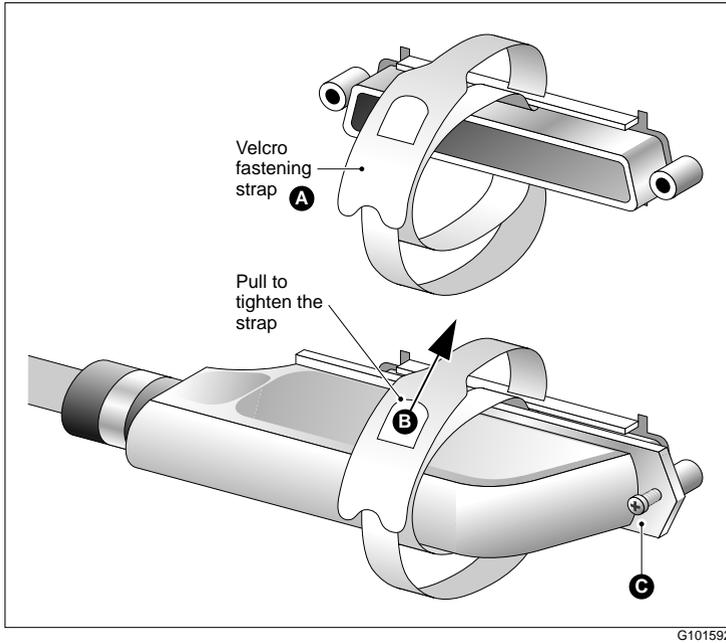
Ensure that you have the Option 11C Mini EMC Kit (NTRH3503). The kit contains ferrites that you must install on the Option 11C Mini's power cord to maintain Option 11C Mini EMC requirements.

If you do not have the kit, contact your Nortel Networks distributor.

## To connect the cables

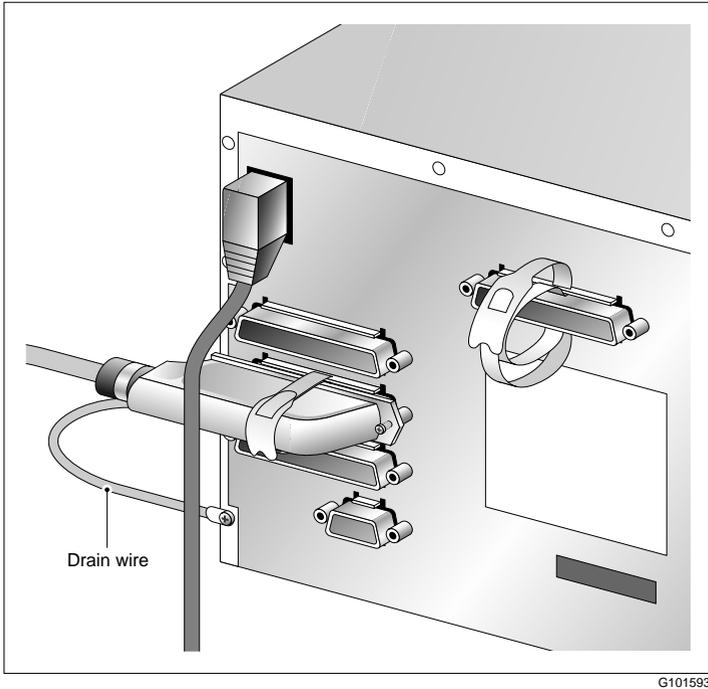
- 1 On the rear of the Option 11C Mini cabinet, locate the connector associated with the first slot occupied by the 201i server.
- 2 Connect the NTRH0912 multi I/O cable as follows:
  - a. Loosen the connector's Velcro fastening strap.
  - b. Connect the amphenol connector on the NTRH0912 multi I/O cable to the connector on the back of the Option 11C Mini cabinet.
  - c. Secure the connection by tightening the connector's retaining screw and Velcro fastening strap.

The following diagram shows how to secure the multi I/O cable connection:



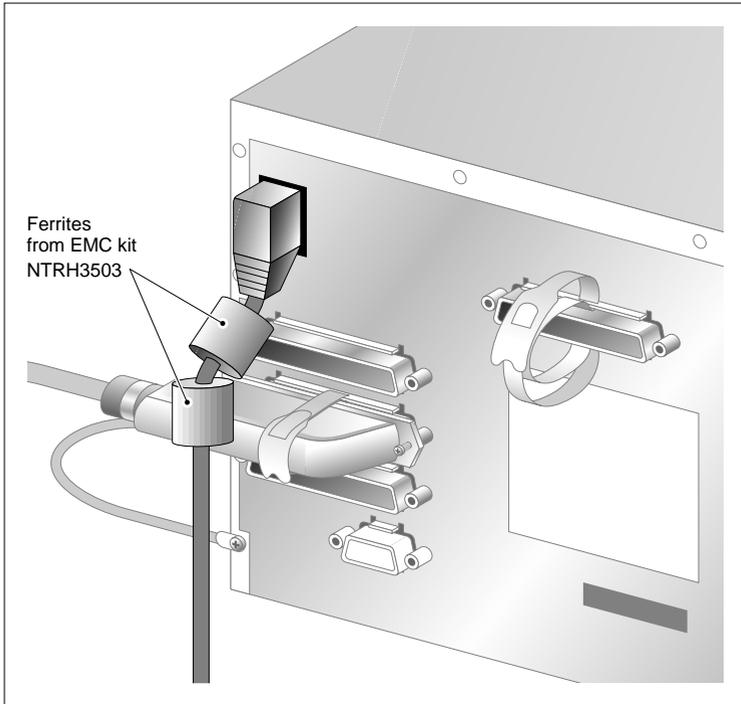
- 3 Attach the multi I/O cable's drain wire to a screw on the cabinet. See the diagram in step 4.
- 4 Connect the power cord to the Option 11C Mini cabinet.

See the following diagram:



- 5 Attach two ferrites from the NTRH3503 EMC kit to the power cord. Position the ferrites as far up the power cord as possible, and then secure them with a tie wrap.

See the following diagram:



G101594

## What's next?

Prepare the modem, CD-ROM drive, and tape drive for connection to the 201i server. For instructions, see Chapter 6, "Preparing peripheral devices."



# Chapter 5

---

## Installing the 201i server in the Succession CSE 1000 system

### In this chapter

Succession Communication Server for Enterprise 1000 description	92
Removing the Media Gateway or Media Gateway Expansion cover	100
Installing the 201i server	103
Installing the NTRH3502 SCSI cable for Succession CSE 1000	106
Replacing the Media Gateway or Media Gateway Expansion cover	111
Connecting cables to the Succession CSE 1000 system	114

# Succession Communication Server for Enterprise 1000 description

## Introduction

The Succession CSE 1000 system is an IP PBX that provides telephony and data capabilities over an IP network. The Succession CSE 1000 system consists of the following major components:

- Call Server
- Media Gateway
- Media Gateway Expansion

## Call Server

The Call Server provides telephony services and call processing.

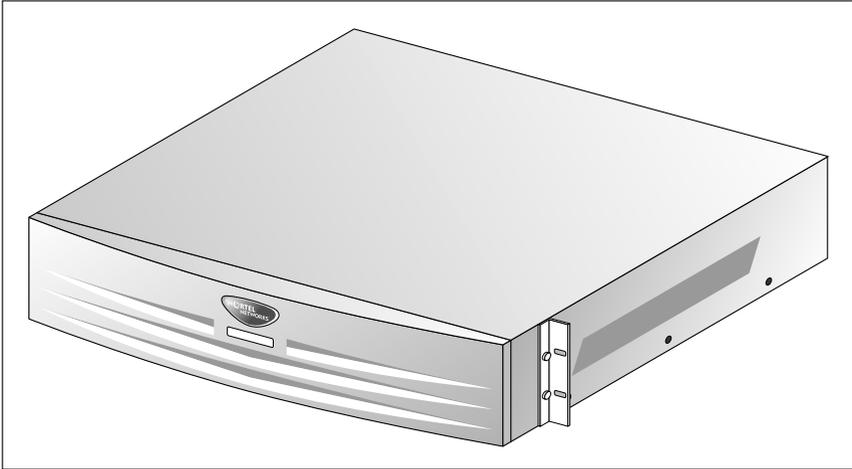
It supports up to four Media Gateways and four Media Gateway Expansions when the Small System Controller (SSC) card inside the unit is fully populated with two dual-port 100BaseT daughterboards.

The following connectors are located on the back of the Call Server:

- four 100Base-T connectors for connecting Media Gateways using one of the following:
  - for connections over the LAN: customer-supplied standard 100Base-T CAT5 Ethernet cables
  - for point-to-point connections: Nortel Networks-supplied crossover Ethernet cables
- one 10Base-T Ethernet connector that
  - provides the ELAN interface to management software applications, such as Optivity Telephony Manager and CallPilot
  - accepts an industry-standard Medium Access Unit (MAU)

- one SDI connector that interfaces with three TTY ports using a three-port SDI cable
- one AC power cord connector and On/Off switch

The following diagram shows the Call Server:



G101623

## Media Gateway and Media Gateway Expansion

The Media Gateway and Media Gateway Expansion provide the interface for analog or digital trunks, i2004 Internet phonesets, analog phonesets, and applications such as CallPilot.

A Media Gateway Expansion can be connected to the Media Gateway to increase system capacity.

### Card slots

The 201i server occupies physical and electrical slots. You must install the 201i server in a pair of consecutive slots in the Media Gateway or Media Gateway Expansion.

The following table identifies the Media Gateway and Media Gateway Expansion slots into which you can install the CallPilot 201i server:

<b>Unit</b>	<b>The 201i server can be installed in</b>	<b>Ineligible slots</b>
Media Gateway	Slots 1 and 2 Slots 2 and 3	Slot 0 is dedicated to the SSC card.  Slot 4 (includes slots 5 and 6) is not used.
Media Gateway Expansion	Slots 7 and 8 Slots 8 and 9 Slots 9 and 10	Slot 10 is a double-wide slot. The second half of this slot does not have a backplane connector.

For more information about cards and slots, refer to the *Succession Communication Server for Enterprise 1000 Planning and Installation Guide* (NTP 553-3023-210).

**Note:** When you configure the Succession CSE 1000 system, use the logical slot numbers shown in the following tables:

<b>Media Gateway and Media Gateway Expansion 1</b>		<b>Media Gateway and Media Gateway Expansion 2</b>	
<b>Physical slot</b>	<b>Logical slot</b>	<b>Physical slot</b>	<b>Logical slot</b>
Media Gateway		Media Gateway	
1	11	1	21
2	12	2	22
3	13	3	23
4	Not supported	4	Not supported
5	Not supported	5	Not supported

<b>Media Gateway and Media Gateway Expansion 1</b>		<b>Media Gateway and Media Gateway Expansion 2</b>	
<b>Physical slot</b>	<b>Logical slot</b>	<b>Physical slot</b>	<b>Logical slot</b>
6	Not supported	6	Not supported
Media Gateway Expansion		Media Gateway Expansion	
7	17	7	27
8	18	8	28
9	19	9	29
10	20	10	30

<b>Media Gateway and Media Gateway Expansion 3</b>		<b>Media Gateway and Media Gateway Expansion 4</b>	
<b>Physical slot</b>	<b>Logical slot</b>	<b>Physical slot</b>	<b>Logical slot</b>
Media Gateway		Media Gateway	
1	31	1	41
2	32	2	42
3	33	3	43
4	Not supported	4	Not supported
5	Not supported	5	Not supported
6	Not supported	6	Not supported

<b>Media Gateway and Media Gateway Expansion 3</b>		<b>Media Gateway and Media Gateway Expansion 4</b>	
<b>Physical slot</b>	<b>Logical slot</b>	<b>Physical slot</b>	<b>Logical slot</b>
Media Gateway Expansion		Media Gateway Expansion	
7	37	7	47
8	38	8	48
9	39	9	49
10	40	10	50

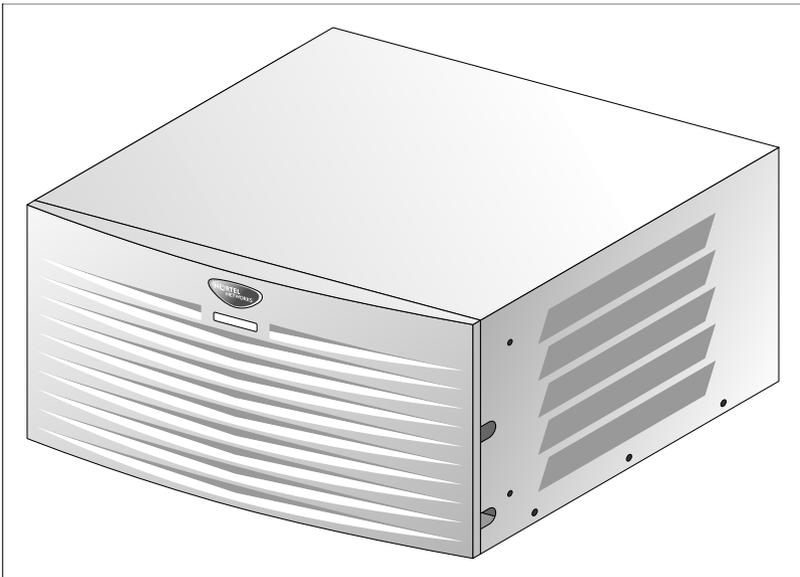
### **Back panel connectors**

The following table describes the connectors that are located on the back of each Media Gateway and Media Gateway Expansion, and how they relate to CallPilot:

<b>Connector</b>	<b>Media Gateway</b>	<b>Media Gateway Expansion</b>
Four 50-pin amphenol connectors that interface with the cross-connect terminal	yes	yes
The CallPilot 201i server's multi I/O cable must be connected to the connector that is associated with the first slot that the 201i server occupies. This is described in "Connecting cables to the Succession CSE 1000 system" on page 114.		
One auxiliary (AUX) connector	yes	no
One SDI connector	yes	no

Connector	Media Gateway	Media Gateway Expansion
One 10Base-T Ethernet connector that <ul style="list-style-type: none"> <li>■ provides the ELAN interface to management software applications such as Optivity Telephony Manager and CallPilot</li> <li>■ accepts an industry-standard Medium Access Unit (MAU)</li> </ul>	yes	no
DS30X and CE-MUX connectors for connecting the Media Gateway and Media Gateway Expansions together	yes	yes
Power connector	yes	yes

The following diagram shows the Media Gateway:



G101624

**Note:** Except for the back panel connectors, the Media Gateway Expansion is similar in external appearance to the Media Gateway.

## **Succession Communication Server for Enterprise 1000 software**

For the 201i server, the Succession CSE 1000 system must be running Succession CSE Release 01.00 (or later) software.

The Media Gateways and Media Gateway Expansions are centrally configured from the Call Server. This allows for a single point of management. Configuration required for correct CallPilot operation is, therefore, performed on the Call Server.

### **Administration software**

The Succession CSE 1000 system interfaces with Optivity Telephony Manager Release 1.1 (or later). Optivity Telephony Manager is an integrated suite of system management tools. You can use Optivity Telephony Manager to configure, control, and manage your Succession CSE 1000 system. Optivity Telephony Manager operates on a platform that is compatible with a standard IBM PC.

Refer to the Optivity Telephony Manager documentation for information about the Optivity Telephony Manager application, its requirements, and how to install it.

## Succession Communication Server for Enterprise 1000 documentation

You may need to refer to the following Succession CSE 1000 technical documents. They are stored on the Customer Documentation Library CD-ROM (NTLH80BA), which is provided with your Succession CSE 1000 system:

- *Succession Communication Server for Enterprise 1000 Planning and Installation Guide* (NTP 553-3023-210)  
**Note:** This guide is also provided in printed format with your Succession CSE 1000 system.
- *Succession Communication Server for Enterprise 1000 Input/Output X21 Administration* (NTP 553-3023-311)
- *Succession Communication Server for Enterprise 1000 Input/Output X21 Maintenance* (NTP 553-3023-511)

You can search the entire suite of documentation online, or you can print part or all of a guide.

# Removing the Media Gateway or Media Gateway Expansion cover

## Introduction

To access the interior of the Media Gateway or Media Gateway Expansion, you must remove the front bezel and inside front cover plate.

## To remove the front bezel and inside front cover plate



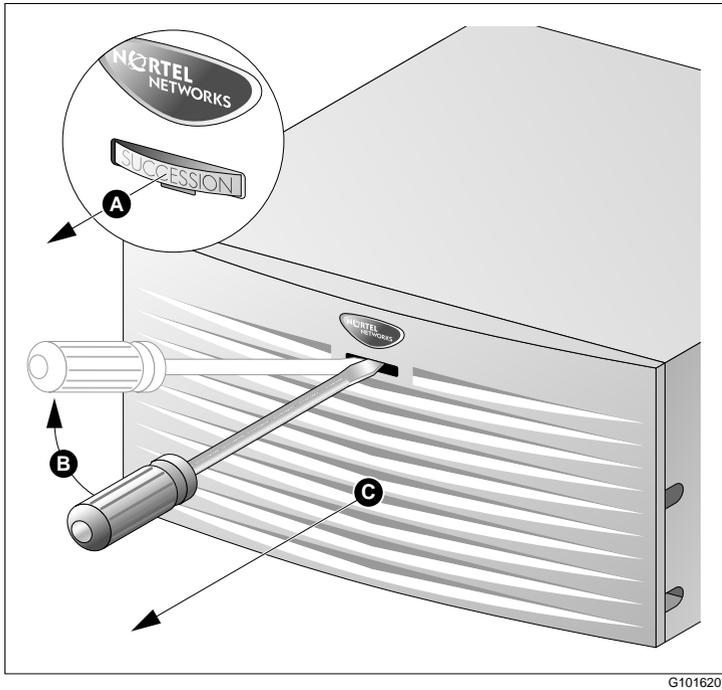
### WARNING

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#### Risk of eye injury

Nortel Networks recommends that you operate the Media Gateway and Media Gateway Expansion with their front bezels installed. When the blue LEDs inside these units are lit, they are very bright. Avoid staring at them.

- 1 Remove the front bezel from the Media Gateway or Media Gateway Expansion as shown in the diagram on the next page.

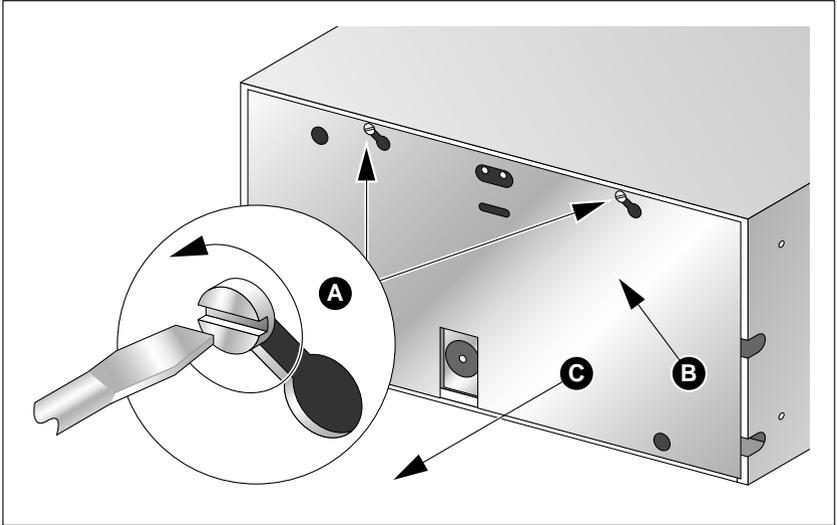


- a. Use a slot screwdriver to gently pry off the SUCCESSION label.
- b. Insert the screwdriver approximately 2 cm (.75 in.) into the open slot, and then gently lift the screwdriver handle, thus applying downward pressure on the tab inside the bezel.

At the same time, gently pull the bezel away from the chassis (approximately 2 cm [.75 in.]) until the inside tab has cleared the catch.

- c. Grasp the bezel by both sides and carefully pull it straight away from the Media Gateway or Media Gateway Expansion.

## 2 Remove the inside front cover plate as follows:



- a. Use a screwdriver to loosen each screw on the top of the inside front cover plate by three turns.

### ATTENTION

Do not remove the screws.

- b. Apply pressure and slide the inside front cover plate upward *to the left* until the screw holes are aligned with the screw heads.
- c. Pull the inside front cover plate away from the Media Gateway or Media Gateway Expansion.

## What's next?

Continue with “Installing the 201i server” on page 103.

# Installing the 201i server

## Introduction

This section describes how to install the 201i server inside the Media Gateway or Media Gateway Expansion.

## Before you begin

Determine which pair of consecutive slots will contain the 201i server. The following table identifies the Media Gateway and Media Gateway Expansion slots into which the CallPilot 201i server can be installed:

Unit	The 201i server can be installed in	Ineligible slots
Media Gateway	Slots 1 and 2 Slots 2 and 3	Slot 0 is dedicated to the SSC card. Slot 4 (includes slots 5 and 6) is not used.
Media Gateway Expansion	Slots 7 and 8 Slots 8 and 9 Slots 9 and 10	Slot 10 is a double-wide slot. The second half of this slot does not have a backplane connector.

**Note:** The 201i server will not function properly if it is installed in slots 3 and 4.

For more information about card slots, refer to the *Succession Communication Server for Enterprise 1000 Planning and Installation Guide* (NTP 553-3023-210).

For the logical slot numbers that you must use when you configure the Succession CSE 1000 system, see “Card slots” on page 93.

## To install the 201i server inside the Media Gateway or Media Gateway Expansion

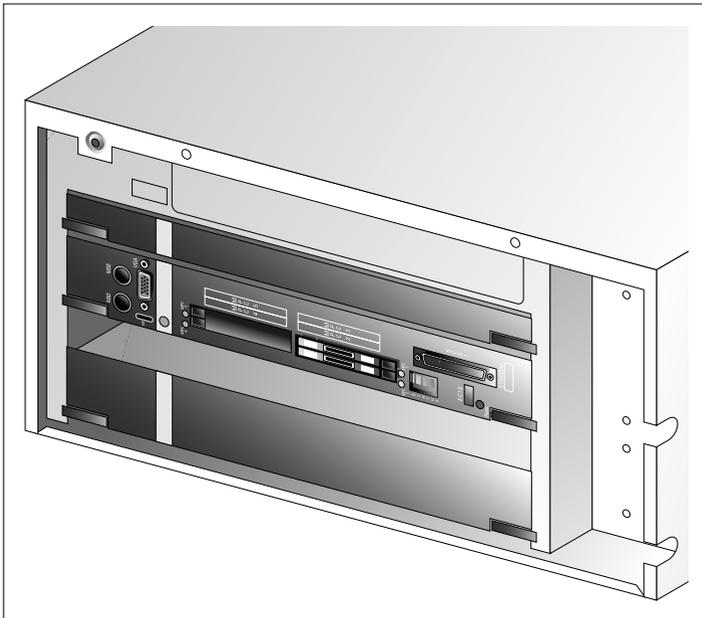
- 1 Ensure that no cables are connected to the slots in which you are installing the 201i server.
- 2 Open the lock latches at the top and bottom of the 201i server faceplate.

**Note:** When you open the top lock latch, it breaks the yellow backplane warning label if it has not been removed. The label is not relevant for Succession CSE 1000. Remove the label and continue with this procedure.

- 3 Slide the 201i server into an unoccupied pair of slots.

Ensure that the 201i server is positioned correctly between the slots.

When correctly inserted, the top of the 201i server is on the left. See the following diagram:



G101588b

**ATTENTION**

---

Do not push the 201i server into place against the backplane until you are ready to observe the startup cycle.

If the Media Gateway or Media Gateway Expansion is connected to a power source, the 201i server receives power as soon as it makes contact with the backplane.

**What's next?**

Continue with “Installing the NTRH3502 SCSI cable for Succession CSE 1000” on page 106.

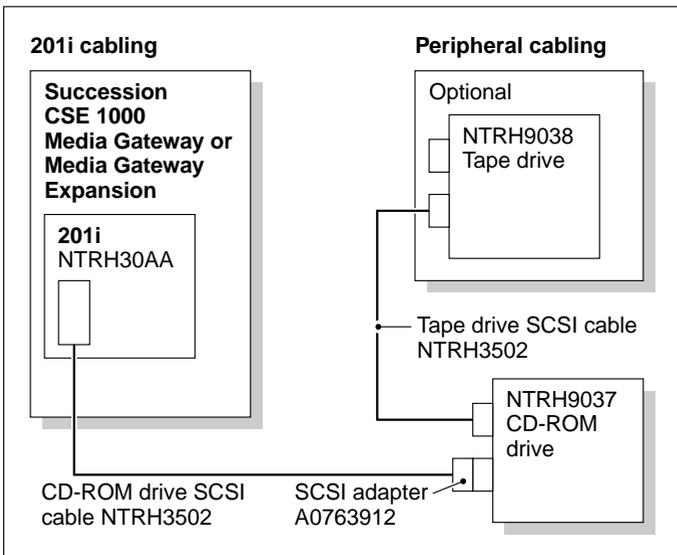
# Installing the NTRH3502 SCSI cable for Succession CSE 1000

## Introduction

Before you can connect a CD-ROM or tape drive to the 201i server, you must install the NTRH3502 SCSI cable. The NTRH3502 SCSI cable has a low profile right-angle connector that allows the cable to be connected to the 201i server's faceplate when the Media Gateway or Media Gateway Expansion cover is installed. This allows the external SCSI device to remain permanently connected to the 201i server.

## CD-ROM and tape drive cabling diagram

The following diagram shows how the intermediate SCSI cable, CD-ROM drive, and tape drive are connected to the 201i server. The CD-ROM drive is the first device. The tape drive is the last device:



G101615

**Note:** Alternate connection scenarios are supported, but are not depicted in this guide. If you want to use a connection scenario that is not described in this guide, ensure that you use appropriate cabling for each device.

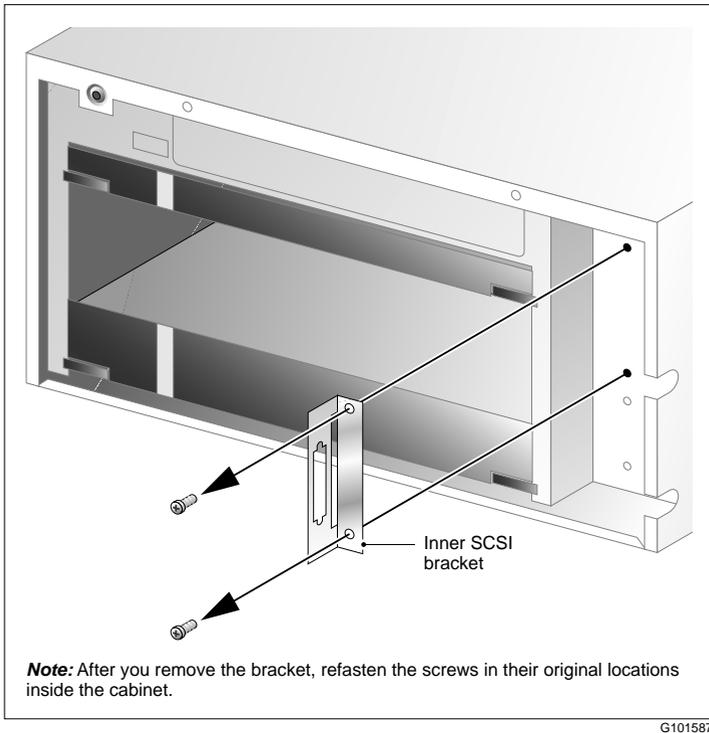
## Before you begin

1. Before you install the SCSI devices in a daisy chain, you must configure the SCSI device IDs and DIP switches. For instructions, see “Preparing peripheral devices,” on page 119.
2. Ensure that you have the EMC Kit (NTRH3503).

The kit contains ferrites that must be installed on the NTRH3502 SCSI cable to maintain Media Gateway or Media Gateway Expansion EMC requirements. If you do not have the kit, contact your Nortel Networks distributor.

## To install the NTRH3502 cable

- 1 Remove the inner SCSI bracket from the inside of the Media Gateway or Media Gateway Expansion.  
See the diagram on page 108.



- 2 Refasten the inner SCSI bracket screws in their original locations inside the Media Gateway or Media Gateway Expansion.

You will use one of the screws later to fasten the NTRH3502 SCSI cable's drain wire.

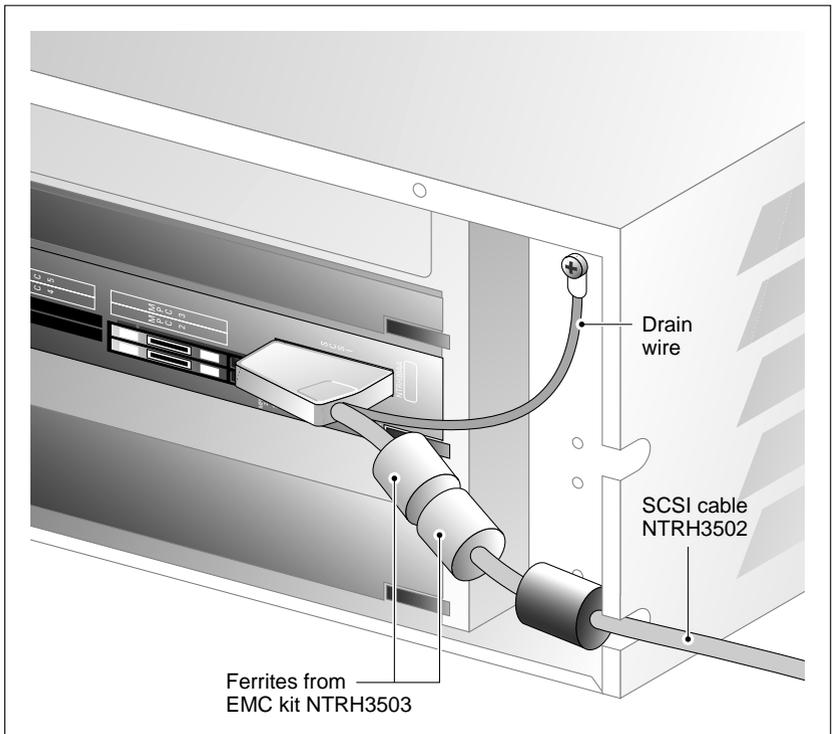
- 3 Connect the low profile right-angle SCSI connector on the NTRH3502 cable to the SCSI connector on the 201i server faceplate.
- 4 Fasten the SCSI cable's drain wire to one of the screws that previously held the inner SCSI bracket in place.

**Notes:**

- Use the screw that is the most convenient.
- Press firmly on the drain wire's Y-connector until it snaps into place around the screw post.

- 5 Attach and then position two ferrites from the NTRH3503 EMC kit to the SCSI cable as follows:
  - a. Position the ferrites as close to the SCSI connector as possible.
  - b. Secure the ferrites with a tie wrap.
  - c. Route the SCSI cable across the inside of the Media Gateway or Media Gateway Expansion and out through one of the cable openings.

See the following diagram:



G101589

**6** Replace the inside front cover plate.

For instructions, see “To replace the inside front cover plate” on page 111.

**ATTENTION**

---

Ensure that the tabs on the bottom and right side of the inside front cover plate are positioned inside the Media Gateway or Media Gateway Expansion.

**7** Replace the front bezel.

For instructions, see “To replace the front bezel” on page 112.

**What's next?**

Continue with “Connecting cables to the Succession CSE 1000 system” on page 114.

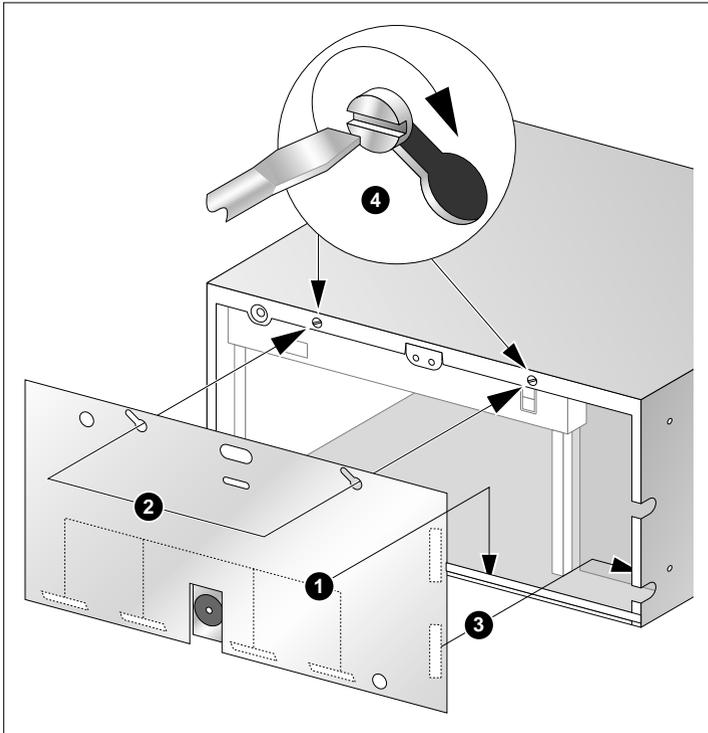
# Replacing the Media Gateway or Media Gateway Expansion cover

## Introduction

This section describes how to replace the front bezel and inside front cover plate on the Media Gateway or Media Gateway Expansion.

## To replace the inside front cover plate

The following diagram provides an overview of how to install the inside front cover plate:



G101625

- 1 Insert the bottom tabs of the front cover plate inside the bottom rail.
- 2 Align the screw holes on the front cover plate over the screw heads on the Media Gateway or Media Gateway Expansion.
- 3 Slide the front cover plate downward to the right, ensuring that the side tabs slide behind the side rail.
- 4 Tighten the screws to secure the front cover plate.
- 5 Continue with “To replace the front bezel,” below.

## To replace the front bezel

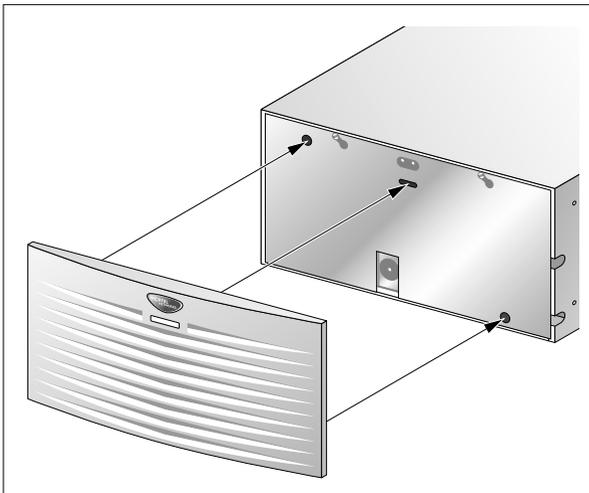


### WARNING

#### Risk of eye injury

Nortel Networks recommends that you operate the Media Gateway and Media Gateway Expansion with their front bezels installed. When the blue LEDs inside these units are lit, they are very bright. Avoid staring at them.

- 1 Align the two posts and the locking tab on the rear of the front bezel with the slots on the inside front cover plate.



G101622

- 2 Push the bezel toward the Media Gateway or Media Gateway Expansion until it snaps into place.
- 3 Replace the SUCCESSION label.

## **What's next?**

Continue with “Connecting cables to the Succession CSE 1000 system” on page 114.

# Connecting cables to the Succession CSE 1000 system

## Introduction

The following items are connected to the back of the Media Gateway or Media Gateway Expansion:

- multi I/O cable (NTRH0912)  
This cable establishes the connection to the modem, ELAN, and CLAN.
- Media Gateway or Media Gateway Expansion power cord with two ferrites

You must connect the multi I/O cable first before connecting the power cord, because the power cord routes above the multi I/O cable connection.

## Before you begin

Ensure that you have the EMC Kit (NTRH3503). The kit contains ferrites that must be installed on the Media Gateway or Media Gateway Expansion's power cord to maintain EMC requirements.

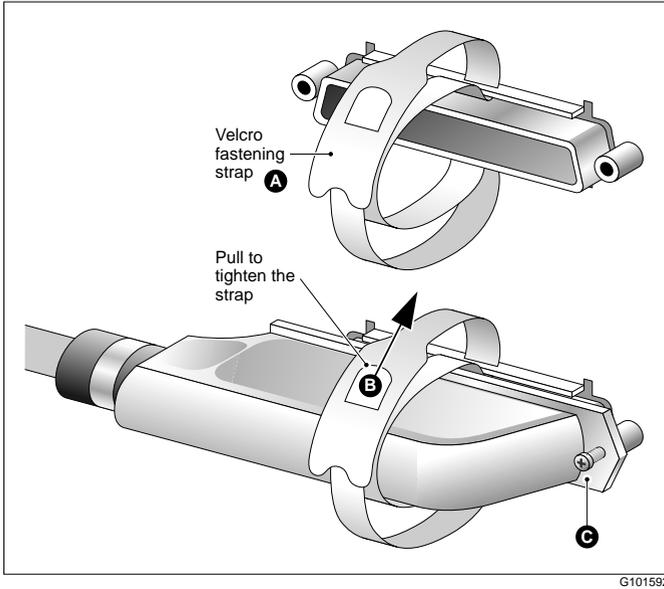
If you do not have the kit, contact your Nortel Networks distributor.

## To connect the cables

- 1 On the rear of the Media Gateway or Media Gateway Expansion, locate the connector associated with the first slot occupied by the 201i server.
- 2 Connect the NTRH0912 multi I/O cable as follows:
  - a. Loosen the connector's Velcro fastening strap.
  - b. Connect the amphenol connector on the NTRH0912 multi I/O cable to the connector on the back of the Media Gateway or Media Gateway Expansion.

- c. Secure the connection by tightening the connector's retaining screw and Velcro fastening strap.

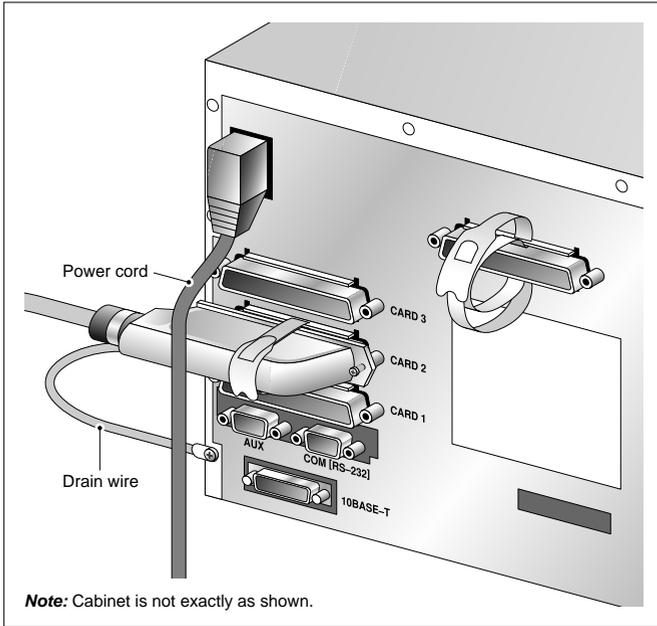
The following diagram shows how to secure the multi I/O cable connection:



- 3 Attach the multi I/O cable's drain wire to a screw on the Media Gateway or Media Gateway Expansion.

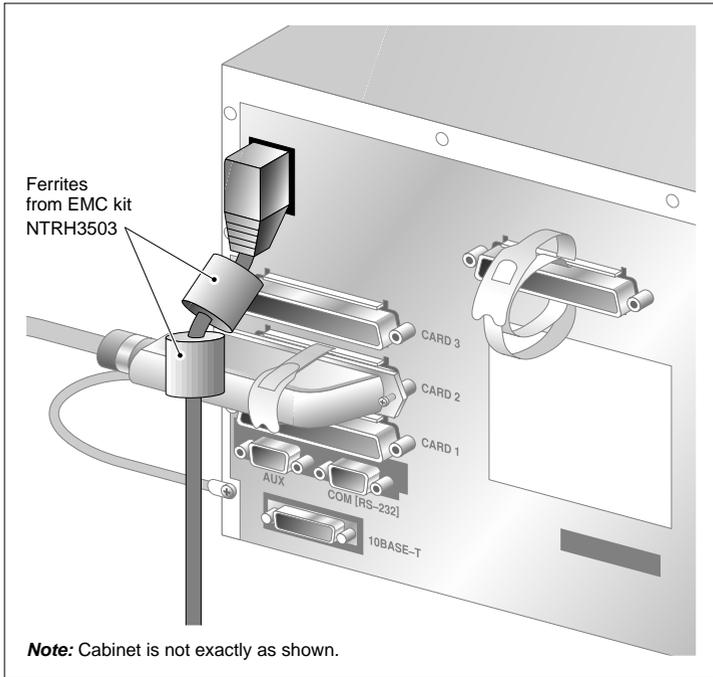
See the diagram in step 4.

- 4 Connect the power cord to the Media Gateway or Media Gateway Expansion.



- 5 Attach two ferrites from the NTRH3503 EMC kit to the power cord.

Position the ferrites as far up the power cord as possible, and then secure them with a tie wrap, as shown in the following diagram:



G101617

## What's next?

Prepare the modem, CD-ROM drive, and tape drive for connection to the 201i server. For instructions, see Chapter 6, "Preparing peripheral devices."



# Chapter 6

---

## Preparing peripheral devices

### In this chapter

Overview	120
Setting the modem DIP switches	122
Setting the CD-ROM drive's SCSI ID and DIP switches	124
Setting the tape drive's SCSI ID	126
Setting SCSI device termination	128

# Overview

## Introduction

You can connect a modem and one or more SCSI devices to the 201i server.

The modem is connected to the 201i server's multi I/O cable.

The SCSI devices are connected to the 201i server's intermediate SCSI cable. If there is more than one SCSI device, the devices are daisy chained together. Each device on the SCSI bus must have a unique SCSI ID, and only the last device in the chain is terminated.

## Supported SCSI devices

You need an external CD-ROM drive to upgrade, reinstall, and configure the 201i server. Since the CD-ROM drive is an external device, it requires its own AC power source.

You can use an external SCSI tape drive to back up and restore data. Since the tape drive is an external device, it also requires its own AC power source.

### ATTENTION

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The CD-ROM and tape drives are not hot-pluggable. You must power off the 201i server before you connect or disconnect either drive.

**Note:** You can optionally use the hard drive on an administration PC instead of a tape drive to perform and store backups.

This section discusses the following drives:

- CD-ROM (NTRH9037): Plextor UltraPlex external SCSI CD-ROM drive
- tape drive (NTRH9038): Tandberg SLR5 tape drive

**Note:** This is currently the only supported tape drive.

## **DIP switches, SCSI ID, and SCSI device termination settings**

For correct operation with the 201i server, you must set the following:

- DIP switches on the modem and CD-ROM drive
- SCSI ID and device termination on the CD-ROM and tape drives

# Setting the modem DIP switches

## Introduction

The modem's DIP switches should be set to their default settings. This section describes how to set the modem's DIP switches if they have been changed from the default settings.

## To set the modem DIP switches

Ensure that the DIP switches are set as described in the following table. Use a pair of tweezers or small screwdriver to set the DIP switches.

**Note:** The DIP switches are located on the back of the modem. ON is down. OFF is up.

DIP switch	Default setting	Function
1	OFF	Data Terminal Ready (DTR) override <ul style="list-style-type: none"> <li>■ OFF: Normal DTR operations (The computer must provide a DTR signal for the modem to accept commands. When DTR is dropped, the call is terminated.)</li> <li>■ ON: Modem ignores DTR (override)</li> </ul>
2	OFF	Verbal/numeric result codes <ul style="list-style-type: none"> <li>■ OFF: Displays verbal (word) results</li> <li>■ ON: Displays numeric results</li> </ul>
3	ON	Result code display <ul style="list-style-type: none"> <li>■ OFF: Suppresses result codes</li> <li>■ ON: Enables result codes</li> </ul>

<b>DIP switch</b>	<b>Default setting</b>	<b>Function</b>
4	OFF	Command mode local echo suppression <ul style="list-style-type: none"> <li>■ OFF: Displays keyboard commands</li> <li>■ ON: Suppresses echo</li> </ul>
5	ON	Auto answer suppression <ul style="list-style-type: none"> <li>■ OFF: Modem answers on first ring, or higher if specified in NVRAM</li> <li>■ ON: Disables auto answer</li> </ul>
6	OFF	Carrier Detect (CD) override <ul style="list-style-type: none"> <li>■ OFF: Modem sends CD signal when it connects with another modem; drops CD on disconnect</li> <li>■ ON: CD is always ON (override)</li> </ul>
7	OFF	Power-on and ATZ reset software defaults <ul style="list-style-type: none"> <li>■ OFF: Loads Y or Y1 configuration from user-defined nonvolatile memory (NVRAM)</li> <li>■ ON: Loads &amp;F0-Generic template from read-only memory (ROM)</li> </ul>
8	ON	AT command set recognition <ul style="list-style-type: none"> <li>■ OFF: Disables command recognition (dumb mode)</li> <li>■ ON: Enables recognition (smart mode)</li> </ul>

# Setting the CD-ROM drive's SCSI ID and DIP switches

## Introduction

This section describes how to set the CD-ROM drive's SCSI ID and DIP switches.

### ATTENTION

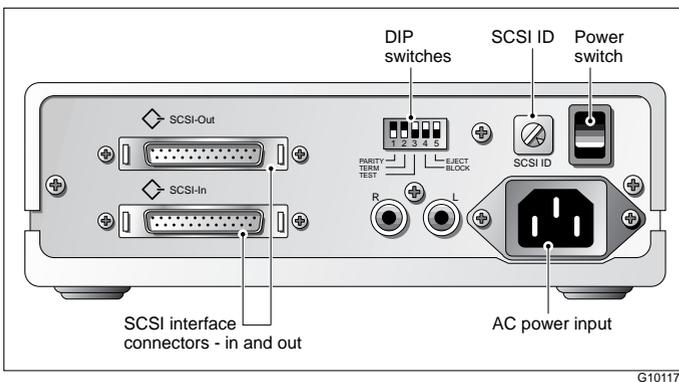
You must power down the CD-ROM drive before changing the SCSI ID and DIP switches.

**Note:** The CD-ROM drive discussed in this section is the Plextor UltraPlex external SCSI CD-ROM drive (NTRH9037).

## To set the CD-ROM drive SCSI ID

The SCSI ID setting is located on the back of the CD-ROM drive. (See the diagram that follows.)

To change the SCSI ID, use the blade of a screwdriver to rotate the SCSI ID dial's arrow to 3.



## To set the CD-ROM drive's DIP switches

Set the CD-ROM drive's DIP switches as described in the following table:

DIP switch	Description	Setting
1	Parity	ON
2	Termination	<p><b>Note:</b> For more information about daisy chaining SCSI devices, see “Setting SCSI device termination” on page 128.</p> <p>If the CD-ROM drive is the first and only device, set this switch to ON.</p> <p>If the CD-ROM drive is the first device and daisy chained with the tape drive, set this switch to OFF.</p>
3	Test	OFF (for factory use only)
4	Block	OFF
5	Eject	<p>OFF</p> <p><b>Note:</b> If this switch is set to ON, the eject button on the CD-ROM drive is disabled. To eject the CD-ROM from the drive, a software eject command must be sent over the SCSI bus.</p>

## What's next?

If you are also installing a tape drive, set the tape drive's SCSI ID (see page 126); otherwise, set the CD-ROM drive's device termination (see page 128).

# Setting the tape drive's SCSI ID

## Introduction

This section describes how to set the tape drive's SCSI ID.

**ATTENTION** \_\_\_\_\_  
You must power down the tape drive before changing the SCSI ID.

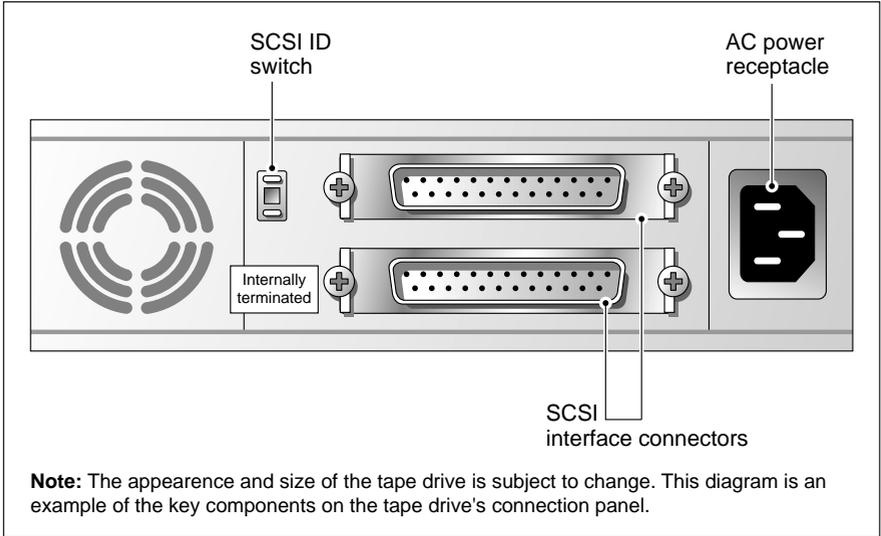
**Note:** The tape drive discussed in this section is the Tandberg SLR5 tape drive (NTRH9038). This is currently the only supported tape drive.

## To set the tape drive SCSI ID

The SCSI ID setting is located on the back of the tape drive. See the diagram on page 127.

**Note:** The appearance and size of the tape drive cabinet is subject to change. The diagram is an example of the key components.

To change the SCSI ID, use the blade of a screwdriver to press either the plus (+) or minus (-) button on the SCSI ID switch. Set the SCSI ID to 5.



G101183

# Setting SCSI device termination

## Introduction

If you will be connecting SCSI devices in a daisy chain, the last device in the daisy chain must be terminated. This section describes how to terminate the SCSI devices.

**ATTENTION**

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Ensure that the CD-ROM and tape drives are powered down before changing the device termination.

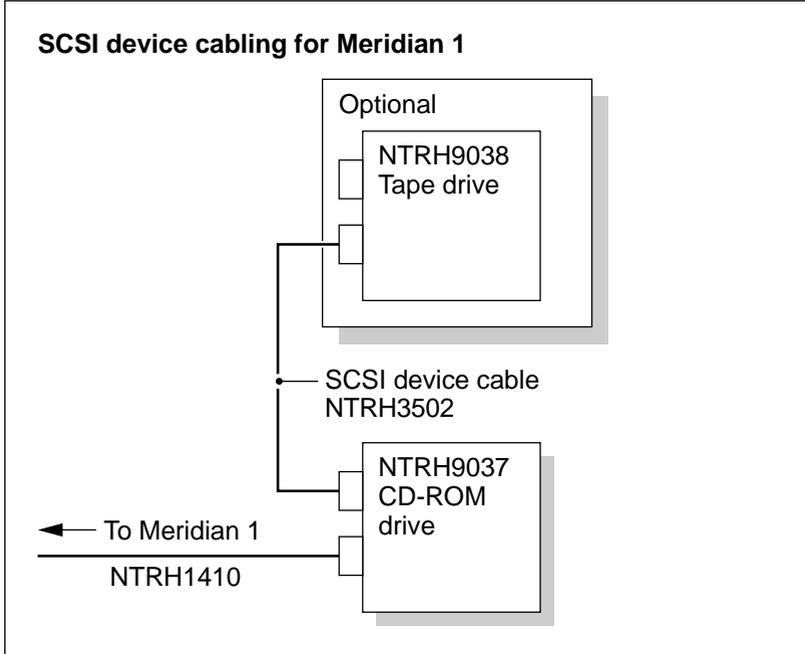
## Supported daisy chain connection scenarios

The first device in a SCSI device daisy chain can be either the tape drive or the CD-ROM drive. However, since the Tandberg SLR5 tape drive is already internally terminated at the factory, Nortel Networks recommends that you connect the tape drive as the last device.

The following diagrams show the supported daisy chain and SCSI cable connections for your switch. The CD-ROM drive is the first device in the daisy chain. The tape drive is the last device.

### Meridian 1

For more information about the cabling requirements, see “Installing the SCSI cables for Meridian 1” on page 58.

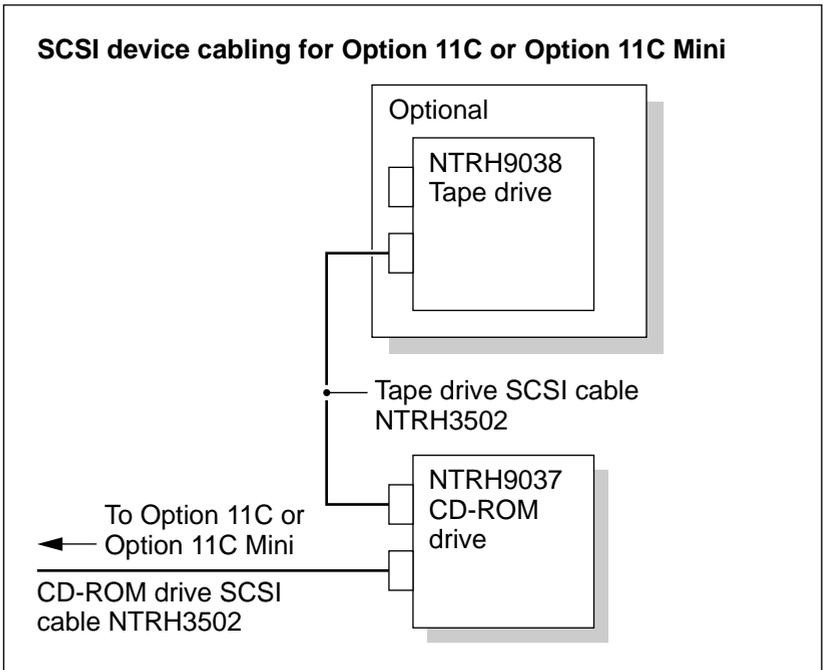


G101431

### Option 11C, Option 11C Mini

For more information about the cabling requirements, see one of the following:

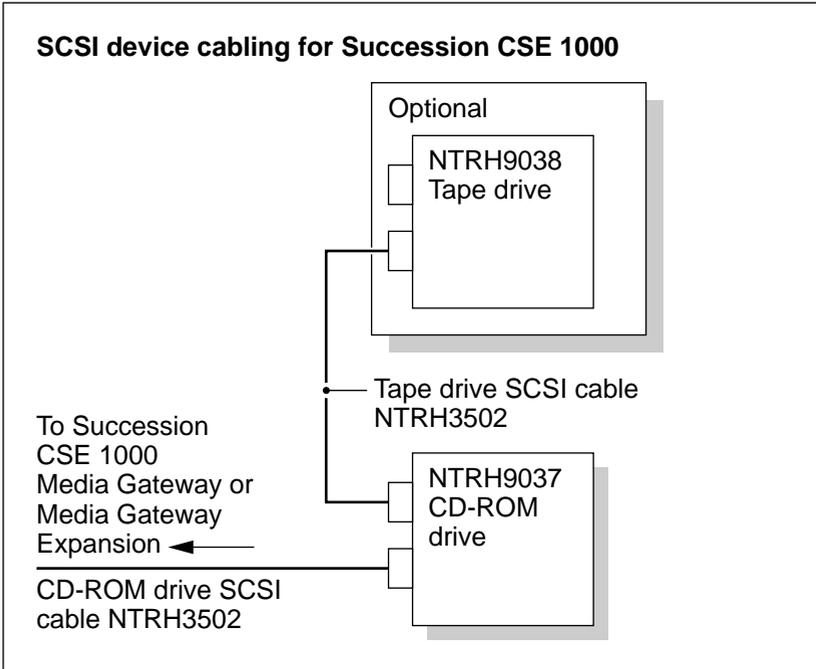
- “Installing the intermediate SCSI cable for Option 11C” on page 70
- “Installing the NTRH3502 SCSI cable for Option 11C Mini” on page 78



G101436

### Succession CSE 1000

For more information about the cabling requirements, see “Installing the NTRH3502 SCSI cable for Succession CSE 1000” on page 106.



G101618

### To set device termination

Terminate the SCSI devices as described in the following table:

IF you are connecting	THEN
a CD-ROM drive only	set DIP switch 2 on the back of the CD-ROM drive to ON. This terminates the drive.

---

<b>IF you are connecting</b>	<b>THEN</b>
a tape drive only	do nothing. External termination is not required because the drive is already internally terminated. This is indicated by a label on the back or front of the tape drive.
both a CD-ROM drive and a tape drive (the tape drive is the last device)	set DIP switch 2 on the back of the CD-ROM drive to OFF. The tape drive is internally terminated. External termination is not required.

---

### What's next?

Complete the 201i server installation in the switch. See Chapter 7, "Connecting peripheral devices to the 201i server."

# Chapter 7

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## Connecting peripheral devices to the 201i server

### In this chapter

Overview	134
Installing the MPCs	138
Installing the monitor, keyboard, and mouse	140
Connecting the CD-ROM and tape drives	142
Connecting the 201i server to the switch, ELAN, and CLAN	152
Connecting the modem	155
Completing the installation	158

# Overview

## Introduction

This section describes installing the 201i server in the switch, connecting peripheral devices, and starting the 201i server.

## Connecting the 201i server to the network

The switch, ELAN, CLAN, and modem connections are established by using the 201i server's multi I/O cable.

The switch connector is a 50-pin amphenol connector.

The RJ-45 CLAN and ELAN connectors support the following network protocols:

- ELAN: 10Base-T Ethernet
- CLAN: 10/100Base-T Ethernet

The modem connector is a 9-pin male RS-232 connector. To connect this cable to the modem, you also need a 25-pin male to 9-pin female shielded serial cable (A0601464, supplied with the modem).

## Connecting peripheral devices

### MPC cards

Two MPC-8 cards are preinstalled at the factory. This section describes how to install additional cards, if required.

### CD-ROM and tape drives

Before you connect CD-ROM and tape drives, ensure that you have set the SCSI ID, termination, and DIP switches as described in Chapter 6, "Preparing peripheral devices."

**Monitor, keyboard, and mouse**

Connect the monitor, keyboard, and mouse to the 201i server faceplate so that you can

- observe the 201i server startup process
- run the Configuration Wizard
- perform initial administration after installation

The 201i server is not intended to operate with permanent monitor, keyboard, and mouse connections. Once you have successfully started and configured the 201i server, remove the monitor, keyboard, and mouse. For day-to-day administration, use a web browser on a PC that is connected to the ELAN or CLAN.

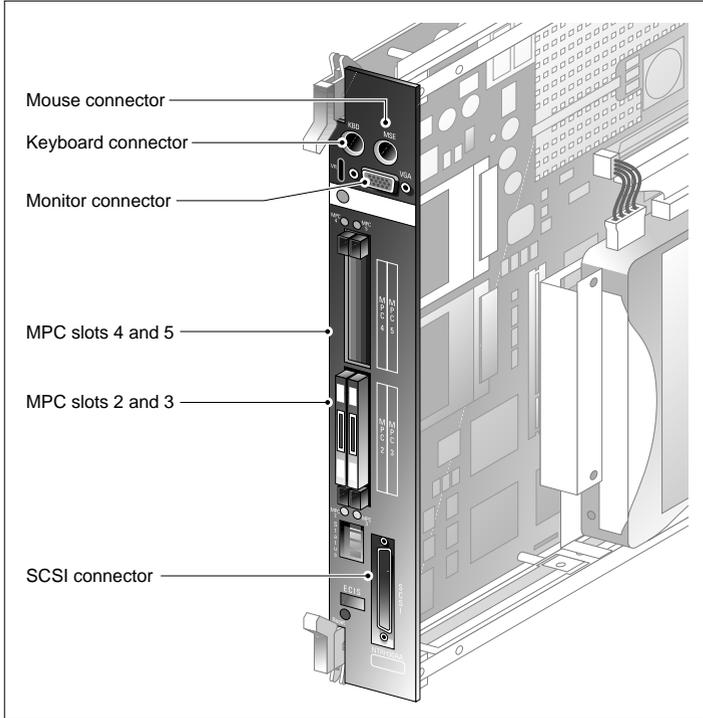
**Modem**

The modem must be connected to the 201i server if

- you want to administer the 201i server from a remote location
- you need assistance from Nortel Networks technical support

## 201i server faceplate and peripheral device connectors

The following diagram identifies the peripheral device connectors and slots on the 201i server faceplate:



G101444

## Starting the 201i server

When you lock the 201i into position against the switch's backplane, the server starts automatically. You can observe the startup process on both the monitor and the 201i server's faceplate.

### **ATTENTION**

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Ensure that all peripheral devices are connected before you lock the 201i server in position against the backplane.

The 201i server receives power and starts when the connection with the backplane is established.

## Before you begin

Before you connect the peripheral devices, ensure that you have completed the following tasks:

1. Set the DIP switches on the external fax modem. See page 122.
2. Prepare the SCSI CD-ROM and tape drives. See the following:
  - “Setting the CD-ROM drive's SCSI ID and DIP switches” on page 124
  - “Setting the tape drive's SCSI ID” on page 126
  - “Setting SCSI device termination” on page 128

# Installing the MPCs

## Introduction

Two MPCs are preinstalled at the factory. This section describes how to install additional cards, if required.

## Correct card insertion

The MPC-8 card is keyed so that it fits only one way into the slot on the 201i server faceplate. If the card is inserted incorrectly, the card does not go all the way into the slot.



### CAUTION

#### Risk of equipment damage

If you force the card into the slot incorrectly, you can damage the MPC-8 card and 201i server.

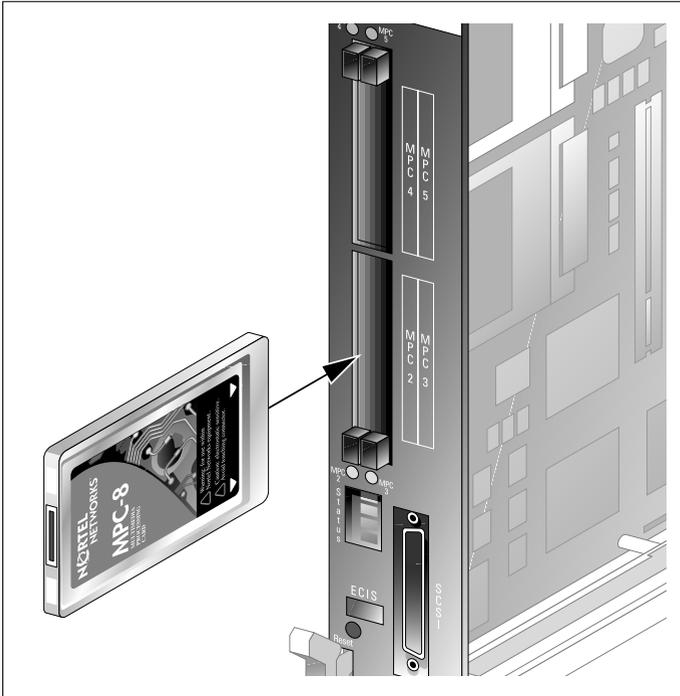
## To install the MPCs

- 1 Do one of the following:

IF	THEN
MPCs are already installed	ensure that they are firmly seated in their slots.
you want to install additional MPCs	continue with the rest of this procedure.

- 2 Ensure that the MPC-8 card label is facing one of the following ways:
  - facing up if the 201i server is lying horizontally on a flat surface, with the top lock latch on the left

- facing to the right if the 201i server is inserted into the IPE shelf (see the following diagram)



G101541

- 3 Insert the card into the slot, and gently push it until it is firmly in place and the ejector button pops back out.

**Note:** Populate MPC slots in numerical order as listed on the 201i server faceplate.

## What's next?

Continue with “Installing the monitor, keyboard, and mouse” on page 140.

# Installing the monitor, keyboard, and mouse

## Introduction

You must connect the monitor, keyboard, and mouse to the 201i server so that you can

- observe the 201i server startup process
- run the Configuration Wizard
- perform initial administration after installation

**Note:** The 201i server is not intended to operate with permanent monitor, keyboard, and mouse connections. Once you have successfully started and configured the 201i server, remove the monitor, keyboard, and mouse. For day-to-day administration, use a web browser on a PC that is connected to the ELAN or CLAN.

## Hardware requirement



### CAUTION

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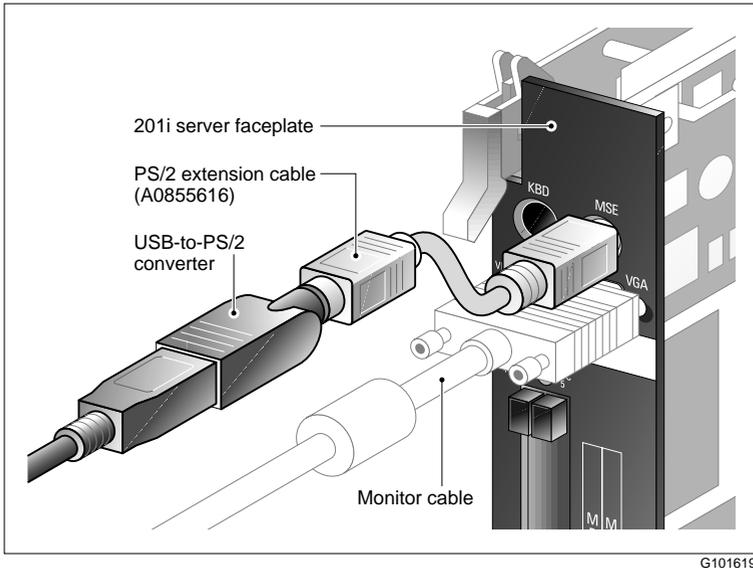
#### Risk of equipment damage

The mouse connector on the 201i faceplate is a PS/2 connector. If you plan to use a USB mouse with USB-to-PS/2 converter, you must also use the Nortel Networks-supplied 4-inch PS/2 extension cable (A0855616).

Without the extension cable, the USB-to-PS/2 mouse connector is partially blocked by the monitor connector.

## PS/2 extension cable

The following diagram shows the PS/2 extension cable connected between the 201i server and the USB mouse with USB-to-PS/2 converter.



## To connect the monitor, keyboard, and mouse

- 1 Connect the monitor to the 201i server's faceplate using a DB-15 cable.
- 2 Connect the monitor's power cord, and then power up the monitor.
- 3 Connect the keyboard and mouse to the 201i server's faceplate using standard PS/2 connectors.

## What's next?

Continue with "Connecting the CD-ROM and tape drives" on page 142.

# Connecting the CD-ROM and tape drives

## Introduction

You can connect the CD-ROM, tape drive, or both to the intermediate SCSI cable that you installed earlier.

## Before you begin

Before you can connect the CD-ROM or tape drive, ensure that you have completed the following tasks:

1. Install the intermediate SCSI cable.

<b>For</b>	<b>See</b>
Meridian 1	“Installing the SCSI cables for Meridian 1” on page 58.
Option 11C	“Installing the intermediate SCSI cable for Option 11C” on page 70.
Option 11C Mini	“Installing the NTRH3502 SCSI cable for Option 11C Mini” on page 78.
Succession CSE 1000	“Installing the NTRH3502 SCSI cable for Succession CSE 1000” on page 106.

2. Set the SCSI ID and device termination settings as described in
  - “Setting the CD-ROM drive’s SCSI ID and DIP switches” on page 124
  - “Setting SCSI device termination” on page 128

## Selecting the procedure for your switch

<b>IF you are working with</b>	<b>THEN see</b>
a large Meridian 1 switch (such as Option 51)	“To connect the CD-ROM and tape drives to the 201i server (Meridian 1)” on page 144.
Option 11C	“To connect the CD-ROM and tape drives to the 201i server (Option 11C)” on page 146.
Option 11C Mini	“To connect the CD-ROM and tape drives to the 201i server (Option 11C Mini)” on page 148.
Succession CSE 1000	“To connect the CD-ROM and tape drives to the 201i server (Succession CSE 1000)” on page 150.

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## To connect the CD-ROM and tape drives to the 201i server (Meridian 1)

**Note:** If you are connecting the SCSI devices to the Option 11C, go to page 146. If you are connecting the SCSI devices to the Option 11C Mini, go to page 148.

- 1 Connect the first SCSI device as follows:

**IF the first device is the THEN**

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CD-ROM drive	connect the CD-ROM drive to the NTRH1410 cable that you connected earlier to the Meridian 1 I/O panel.
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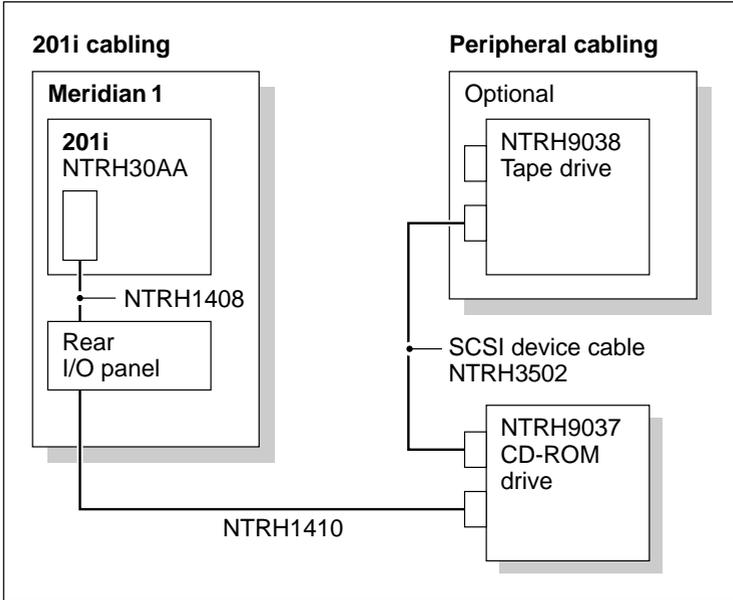
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tape drive	do the following: <ol style="list-style-type: none"> <li>a. Attach the A0769312 SCSI adapter to the tape drive.</li> <li>b. Connect the SCSI adapter to the NTRH1410 cable that you connected earlier to the Meridian 1 I/O panel.</li> </ol>
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- 2 Connect the low-profile right-angle SCSI cable connector to the SCSI connector on the 201i server's faceplate.
- 3 Connect an additional device in a daisy chain, if required, using either the SCSI cable supplied with the device or an NTRH3502 cable.

The following diagram shows cable connections, where the CD-ROM is the first device:



G101430

**Note:** Alternate SCSI device connection scenarios are supported, but are not depicted in this guide. If you want to use a connection scenario that is not described in this guide, ensure that you use appropriate cabling for each SCSI device.

- 4 Connect the power cord for each device.
- 5 Power up the devices.
- 6 Continue with “What’s next?” on page 151.

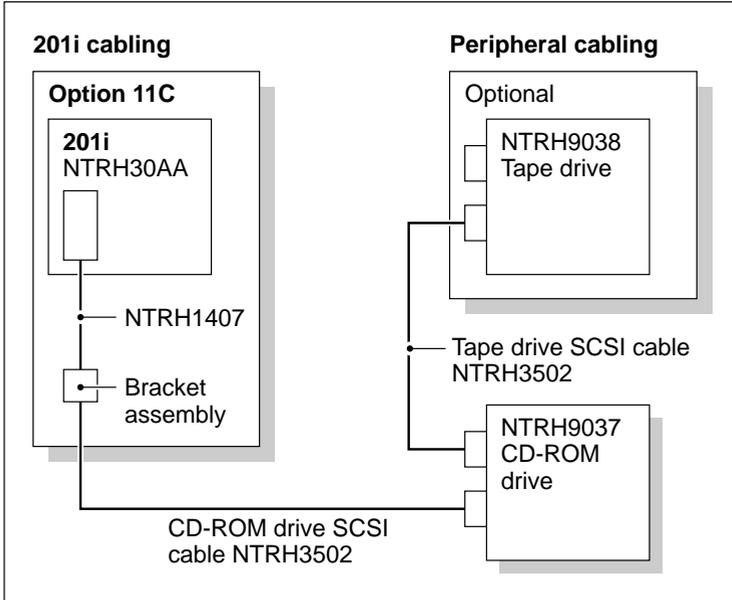
## To connect the CD-ROM and tape drives to the 201i server (Option 11C)

- 1 Connect the first SCSI device as follows:

<b>IF the first device is the</b>	<b>THEN</b>
CD-ROM drive	connect the NTRH3502 SCSI cable from the CD-ROM drive to the SCSI connector that is located on the intermediate SCSI cable bracket assembly (NTRH1407) on the Option 11C.
tape drive	do the following: <ol style="list-style-type: none"> <li>a. Attach the A0769312 SCSI adapter to the tape drive.</li> <li>b. Connect the NTRH3502 SCSI cable from the adapter to the SCSI connector that is located on the intermediate SCSI cable bracket assembly (NTRH1407) on the Option 11C.</li> </ol>

- 2 Connect the low-profile right-angle SCSI cable connector to the SCSI connector on the 201i server's faceplate.
- 3 Connect an additional device in a daisy chain, if required, using either the SCSI cable supplied with the device or an NTRH3502 cable.

The following diagram shows cable connections, where the CD-ROM drive is the first device:



G101434

**Note:** Alternate SCSI device connection scenarios are supported, but are not depicted in this guide. If you want to use a connection scenario that is not described in this guide, ensure that you use appropriate cabling for each SCSI device.

- 4 Connect the power cord for each device.
- 5 Power up the devices.
- 6 Continue with “What’s next?” on page 151.

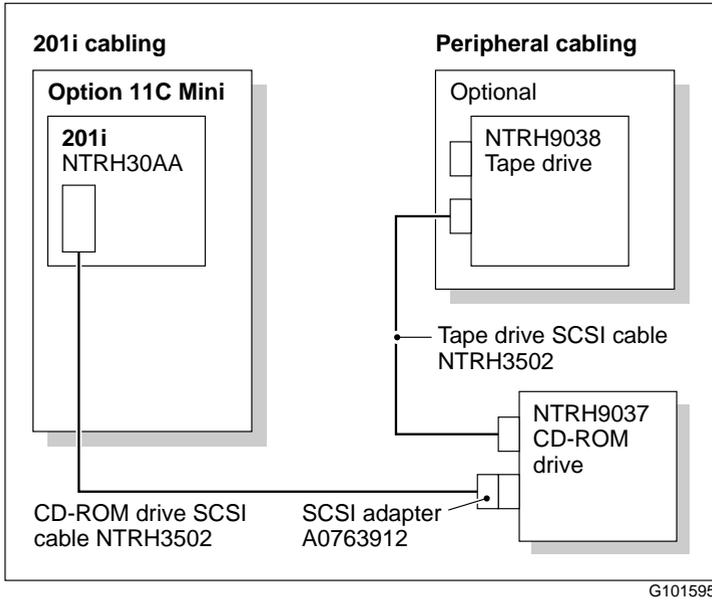
## To connect the CD-ROM and tape drives to the 201i server (Option 11C Mini)

- 1 Connect the first SCSI device as follows:

<b>IF the first device is the</b>	<b>THEN</b>
CD-ROM drive	do the following: <ol style="list-style-type: none"> <li>a. Attach the A0769312 SCSI adapter to the CD-ROM drive.</li> <li>b. Connect the NTRH3502 SCSI cable that you installed earlier on the Option 11C Mini to the SCSI adapter on the CD-ROM drive.</li> </ol>
tape drive	connect the NTRH3502 SCSI cable that you installed earlier on the Option 11C Mini to the tape drive.

- 2 Connect the low-profile right-angle SCSI cable connector to the SCSI connector on the 201i server's faceplate.
- 3 Connect an additional device in a daisy chain, if required, using either the SCSI cable supplied with the device or an NTRH3502 cable.

The following diagram shows cable connections, where the CD-ROM drive is the first device:



**Note:** Alternate SCSI device connection scenarios are supported, but are not depicted in this guide. If you want to use a connection scenario that is not described in this guide, ensure that you use appropriate cabling for each SCSI device.

- 4 Connect the power cord for each device.
- 5 Power up the devices.
- 6 Continue with “What’s next?” on page 151.

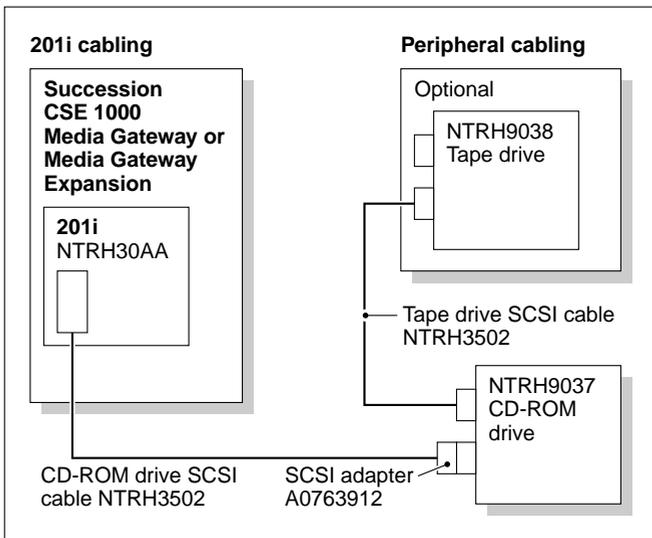
## To connect the CD-ROM and tape drives to the 201i server (Succession CSE 1000)

- 1 Connect the first SCSI device as follows:

<b>IF the first device is the</b>	<b>THEN</b>
CD-ROM drive	do the following: <ol style="list-style-type: none"> <li>a. Attach the A0769312 SCSI adapter to the CD-ROM drive.</li> <li>b. Connect the NTRH3502 SCSI cable that you installed earlier on the Option 11C Mini to the SCSI adapter on the CD-ROM drive.</li> </ol>
tape drive	connect the NTRH3502 SCSI cable that you installed earlier on the Option 11C Mini to the tape drive.

- 2 Connect an additional device in a daisy chain if required, using either the SCSI cable supplied with the device or an NTRH3502 cable.

The following diagram shows cable connections, where the CD-ROM drive is the first device:



G101615

**Note:** Alternate SCSI device connection scenarios are supported, but are not depicted in this guide. If you want to use a connection scenario that is not described in this guide, ensure that you use appropriate cabling for each SCSI device.

- 3 Connect the power cord for each device.
- 4 Power up the devices.

## What's next?

Continue with “Connecting the 201i server to the switch, ELAN, and CLAN” on page 152.

# Connecting the 201i server to the switch, ELAN, and CLAN

## Introduction

The CLAN and ELAN connections are established by using the 201i server's multi I/O cable.

### ATTENTION

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For important considerations about using the Embedded LAN (ELAN) in your network, see “About the ELAN” in Part 1 of the *CallPilot Installation and Configuration* binder.

## To establish the switch and network connections

- 1 Do one of the following:

<b>IF you are installing the 201i server in a</b>	<b>THEN</b>
large Meridian 1 (for example, Option 51C)	ensure that the 50-pin amphenol connector on the multi I/O cable (NTRH0912) is connected to the newly installed backplane cable (NTRH3501) on the I/O panel at the rear of the switch.
Option 11C	connect the 50-pin amphenol connector on the multi I/O cable (NTRH0912) to the high-density connector associated with the left slot occupied by the 201i server.

**IF you are installing the 201i server in a**                      **THEN**

Option 11C Mini or  
Succession CSE 1000

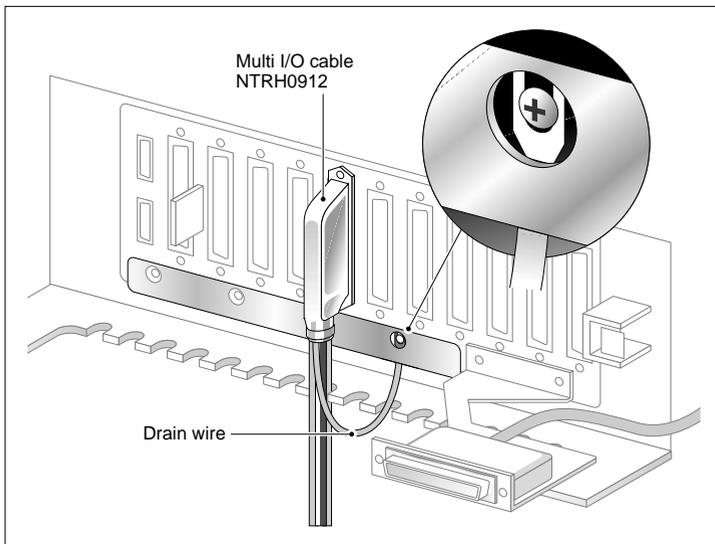
ensure that the 50-pin amphenol connector on the multi I/O cable (NTRH0912) is connected to the high-density connector associated with the left slot occupied by the 201i server.

**Note:** Ensure that the cable is securely fastened.

**2** If you have not already done so, connect the amphenol connector's drain wire as follows:

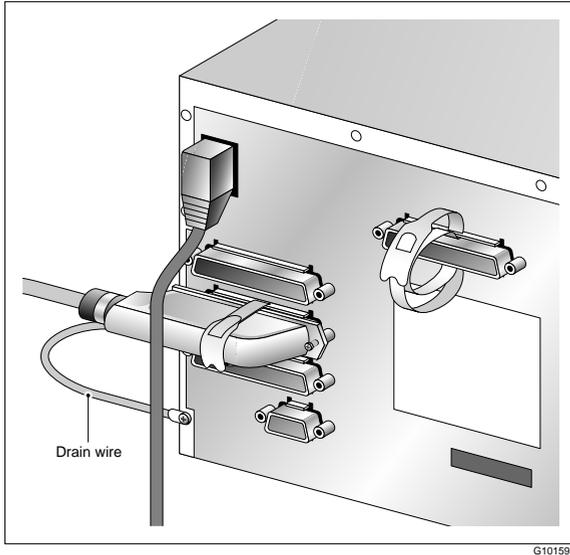
- Option 11C or Meridian 1: to the nearest backplane grounding bolt on the switch

The following diagram shows drain wire connection on the Option 11C.



G101552

- Option 11C Mini or Succession CSE 1000: to a screw on the back of the cabinet



- 3 Connect the connector on the multi I/O cable that is labeled as ELAN to the switch's network hub.
- 4 If CLAN is required, connect the connector on the multi I/O cable that is labeled as CLAN to the CLAN 10 or 100Base-T compliant network hub.

## What's next?

Continue with "Connecting the modem" on page 155.

# Connecting the modem

## Introduction

You must connect the modem to the 201i server if

- you want to administer the 201i server from a remote location
- you need assistance from Nortel Networks technical support

## Required equipment

To install the modem, you need the following items:

- analog external modem that includes
  - RJ-11 analog phone cord
  - power adapter cord
- Note:** Two modems are supported:
  - 33.6 kbps modem (NTRH9016)
  - 56 kbps modem (NTRH9078)
- 25-pin male to 9-pin female shielded serial cable (A0601464)
- two 0.25-inch nuts for installation between the following:
  - RS-232 connector thumbscrews on the multi I/O cable
  - 9-pin connector thumbscrews on the 25-pin male to 9-pin female shielded serial cable
- analog line jack

## To connect the modem

- 1 Ensure that the DIP switches are set as described in “Setting the modem DIP switches” on page 122.

- 2 Attach the serial cable as follows:
  - a. Connect the 25-pin male end of the serial cable to the modem.
  - b. Attach the 0.25-inch nuts to the thumbscrews on the 9-pin female connector on the serial cable.
  - c. Connect the 9-pin female connector to the RS-232 COM1 connector on the multi I/O cable and tighten the nuts.
- 3 Connect one end of the RJ-11 phone cord to the line jack on the modem and the other end to an analog jack.



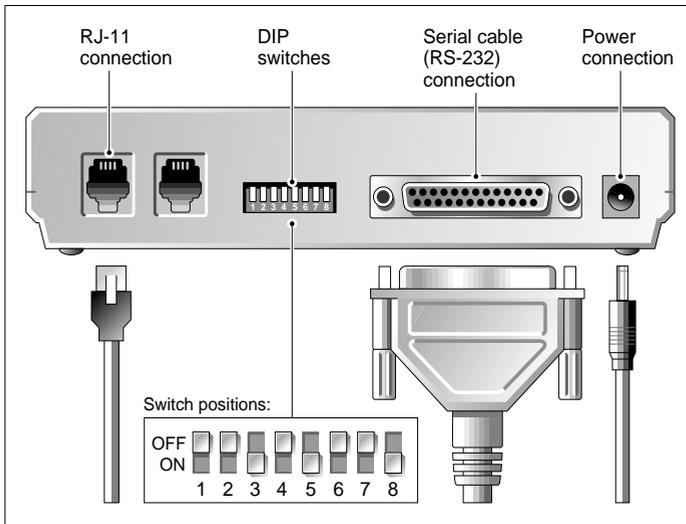
### CAUTION

#### Risk of equipment damage

Connect the modem to an analog line only. The use of a non-analog line (for example, digital or Multiline) will damage the modem.

- 4 Plug the power cord into an electrical outlet with an isolated ground.
- 5 Plug the other end of the power cord into the modem's power connector.

**Result:** The back of the modem appears similar to the following:



G101445

**6** Power on the modem.

**Note:** Ensure that the modem is receiving power by checking that at least one LED on its front panel is lit.

**7** Place the modem in an area where it cannot be accidentally damaged or where people cannot trip over attached cords.**What's next?**

Continue with “Completing the installation” on page 158.

# Completing the installation

## Introduction

To complete the installation of the 201i server, lock the 201i into position. The server starts up automatically.

## To complete the installation and start the 201i server

**Note:** Ensure that the switch in which the 201i is installed is powered on.

- 1 Ensure that all peripheral devices are powered up (including the IPE shelf).
- 2 Push the 201i server gently but firmly until it is flush with the backplane.

**Result:** The 201i server beeps for three seconds to indicate that power is being received.

- 3 Close the lock latches to secure the 201i server to the backplane.
- 4 Ensure that the power status LED is lit.
- 5 Watch the HEX display on the 201i server.

The HEX display shows T:01 through T:08, and then HOST. This takes about 13 seconds.

- 6 When the following menu appears on the monitor, select option 1 to start Windows NT:

```
Please select the operating system to start:
```

```
-----
```

```
Windows NT Server Version 4.00  
Windows NT Server Version 4.00 (VGA mode)  
Previous OS on C  
Choose an option[1,2]?1
```

**Result:** The Windows NT boot sequence begins, and communication with the switch occurs. The HEX display shows NT (for about 30 seconds), followed by OK.

**Note:** Before OK appears, one of the following messages may appear, but not for more than one second: CDLN, C:01, or C:02. This is normal operation.

If OK does not appear, refer to Part 5 of the *CallPilot Installation and Configuration* binder for troubleshooting instructions.

- 7 Ensure that the Windows NT logon window appears on the monitor.

If the Windows NT logon window does not appear, refer to Part 5 of the *CallPilot Installation and Configuration* binder for troubleshooting instructions.

## What's next?

Continue with Part 3 of the *CallPilot Installation and Configuration* binder.



# Index

## Numerics

- 201i server
  - components, diagram 12
  - damaged, what to do 36
  - faceplate
    - connections 25
    - description 14–16
    - diagram 13, 136
  - inspecting 36
  - installation
    - checklist 31–34
    - prerequisites 38
  - installing
    - large Meridian 1 systems 49
    - Option 11C 64
    - Option 11C Mini 64
    - Succession CSE 1000 104
  - motherboard, description 10–11
  - network setup
    - Meridian 1 18
    - Succession CSE 1000 20
  - peripheral device connectors, diagram 136
  - primary components 10
  - relative humidity 17
  - reset button 16
  - starting 137, 158–159
  - Succession CSE 1000 card slots 93–94, 103
  - temperatures 17
  - unpacking 35

## A

- administration software 98
- attention
  - CD-ROM drive and settings 124, 126, 128
  - tape drive and settings 124, 126, 128
  - telephony equipment and their services 73

## B

- backplane cable (tip and ring) 43, 55
  - establishing connections 57
  - removing from Meridian 1 54
- backplane connector, secondary
  - description 42, 45
  - diagram 45
  - installing for Meridian 1 46–48
  - reason for moving 44
  - required tools 46
- booting the server 137, 158–159

## C

- cable, backplane (tip and ring) 43, 55
  - establishing connections 57
  - removing from Meridian 1 54
- cable, multi I/O
  - connections, establishing
    - modem 155
    - network 152
    - switch 152

- connectors
    - CLAN 23
    - ELAN 23
    - RS-232 24
    - switch 23
  - diagram 22
  - installing
    - large Meridian 1 system 152
    - Option 11C 152
    - Option 11C Mini 86–88, 153
    - Succession CSE 1000 153
  - cable, SCSI 106
    - Meridian 1 43, 58
      - connections, establishing 61
      - installing 60
    - NTRH1407, diagram 71
    - Option 11C 70
      - bracket assembly, installing 74
      - connections, establishing 75
      - installing 73
    - Option 11C Mini 78
      - installing 80–85
    - Succession CSE 1000, installing 107–110
  - cabling, SCSI devices
    - Meridian 1 129
    - Option 11C 130
    - Option 11C Mini 130
    - Succession CSE 1000 131
  - card slots
    - MPC 15
    - Succession CSE 1000 93–94
      - configuring 94–96
  - cards, MPC-8
    - inserting correctly 138
    - installing 138–139
  - cautions
    - backplane connector 43
    - modem and telephone line 156
    - MPC card 138
  - CD-ROM drive
    - back panel, diagram 124
  - connecting
    - Meridian 1 144
    - Option 11C 146
    - Option 11C Mini 148
    - Succession CSE 1000 150
  - description 26
  - device termination, setting 131
  - DIP switches, setting 125
  - installation, attention 124, 126, 128
  - SCSI ID, setting 124
- checklist, installation 31–34
  - CLAN
    - LED 16
    - requirements 22, 39
  - COM1 connector, multi I/O cable 24
  - connecting 201i server to
    - CD-ROM drive
      - Meridian 1 144
      - Option 11C 146
      - Option 11C Mini 148
      - Succession CSE 1000 150
    - keyboard 141
    - modem 155
    - monitor 141
    - mouse 141
    - network 152–154
    - switch 152–154
    - tape drive
      - Meridian 1 144
      - Option 11C 146
      - Option 11C Mini 148
      - Succession CSE 1000 150
  - connection requirements, Meridian 1 39, 42
  - connector, secondary backplane
    - description 42, 45
    - diagram 45
    - installing for Meridian 1 46–48
    - reason for moving 44
  - connectors
    - 201i server faceplate 25
    - CLAN, multi I/O cable 23
    - COM1, multi I/O cable 24
    - ELAN, multi I/O cable 23

- keyboard 14, 25
- monitor 14, 25
- mouse 14, 25
- SCSI 26
- SCSI device 15
- switch, multi I/O cable 23
- cover, removing
  - small Meridian 1 systems 65
  - Succession CSE 1000 100–102
- covers, replacing Succession CSE 1000 111–113

## D

- daisy chaining SCSI devices
  - Meridian 1 129
  - Option 11C 130
  - Option 11C Mini 130
  - Succession CSE 1000 131
- damaged server, what to do 36
- device termination, setting
  - CD-ROM drive 131
  - tape drive 132
- devices, peripheral
  - CD-ROM drive 26
  - Ethernet hub 27
  - keyboard 28
  - modem 27
  - monitor 28
  - mouse 28
  - tape drive 27
- devices, SCSI
  - cabling diagrams
    - large Meridian 1 systems 59, 145
    - Option 11C 72, 147
    - Option 11C Mini 79, 149
    - Succession CSE 1000 106, 150
  - supported 120
- diagrams
  - 201i server
    - components 12
    - faceplate 13, 136
  - backplane (tip and ring) cable 55
    - connections, establishing 57
    - removing from Meridian 1 54
  - cable installation
    - NTRH1408 60
    - NTRH1410 61
    - NTRH3502
      - Option 11C Mini 83, 84
      - Succession CSE 1000 109
  - CD-ROM drive back panel 124
  - cover removal
    - small Meridian 1 systems 65
    - Succession CSE 1000 101, 102
  - cover replacement, Succession CSE 1000 111, 112
  - drain wire, connecting
    - Option 11C 153
    - Option 11C Mini 154
    - Succession CSE 1000 154
  - modem connections 156
  - mouse, connecting 141
  - MPC-8 card, correct installation 139
  - multi I/O cable 22
  - NTRH3501 cable 55
  - power cord installation
    - Option 11C Mini 89
    - Succession CSE 1000 116
  - SCSI cable
    - large Meridian 1 systems 58, 61
    - Option 11C 71, 74, 75
    - Option 11C Mini 83, 84
    - Succession CSE 1000 109
  - SCSI device cabling
    - large Meridian 1 systems 59, 145
    - Option 11C 72, 147
    - Option 11C Mini 79, 149
    - Succession CSE 1000 106, 150
  - secondary backplane connector 45
  - Succession CSE 1000 system
    - Call Server 93
    - Media Gateway 97
    - Media Gateway Expansion 97
  - tape drive, back panel 127

- DIP switches, setting
  - CD-ROM drive 125
  - modem 122
- documentation, Succession CSE 1000 99
- drain wire, connecting
  - Option 11C 153
  - Option 11C Mini 154
  - Succession CSE 1000 154

## E

- ejector buttons, MPCs 15
- ELAN
  - LED 16
  - requirements 22, 39
- EMC kit
  - Option 11C Mini 79, 86
  - Succession CSE 1000 107, 114
- environmental specifications
  - humidity 17
  - temperatures 17
- Ethernet hub 27

## F

- faceplate, 201i server
  - connections 25
  - description 14–16
  - diagram 13, 136
  - peripheral device connectors 136
- fax modem
  - connecting 155
  - DIP switches, setting 122

## G

- ground, single point 30

## H

- hard drive LED 16
- hexadecimal (HEX) display 15
- humidity, 201i server 17

## I

- IDs, setting SCSI
  - CD-ROM drive 124
  - tape drive 126
- infrared port 14
- inspecting the 201i server 36
- installing
  - 201i server
    - large Meridian 1 systems 49
    - overview 31–34
    - prerequisites 38
    - small Meridian 1 systems 64
    - Succession CSE 1000 system 104
    - unpacking 35
  - MPC cards 138–139
  - NTRH3501 backplane (tip and ring)
    - cable 56
  - SCSI cable
    - Meridian 1 60
    - Option 11C 73
    - Option 11C Mini 80–85
    - Succession CSE 1000 107–110
  - secondary backplane connector for
    - Meridian 1 46–48
- intermediate SCSI cable
  - diagrams
    - Meridian 1 connections, establishing 61
    - Option 11C
      - bracket assembly, installing 74
      - connections, establishing 75
  - installing
    - on Meridian 1 60
    - Option 11C 73

**K**

- keyboard 25
  - connecting 141
  - connector 14
  - description 28

**L**

- latches, lock 14
- LEDs
  - CLAN 16
  - ELAN 16
  - hard drive 16
  - MPC status 14–15
  - power status 14
  - SCSI drive 16
- lock latches 14

**M**

- Media Gateway and Media Gateway Expansion *See* Succession CSE 1000
- Meridian 1
  - backplane (tip and ring) cable
    - existing cables, removing 52
    - NTRH3501, installing 56
  - connection requirements 39
  - I/O panel connections 42
  - network setup 18
  - SCSI cables, installing 60
  - slot requirements 38
- modem 27
  - connecting 155
  - connections diagram 156
  - DIP switches, setting 122
- monitor 25
  - connecting 141
  - connector 14
  - description 28
- motherboard, 201i server
  - description 10–11
- mouse 25
  - connecting 141
  - connection requirements 140
- connector 14
  - description 28
- MPC
  - card slots 15
  - ejector buttons 15
  - status LEDs 14–15
- MPC-8 card 26
  - caution 138
  - inserting correctly 138
    - diagram 139
  - installing 138–139
- multi I/O cable 22
  - connections
    - modem 155
    - network 152–154
    - switch 152–154
  - description
    - CLAN connector 23
    - ELAN connector 23
    - RS-232 connector 24
    - switch connector 23
  - installing
    - large Meridian 1 system 152
    - Option 11C 152
    - Option 11C Mini 86–88
    - Succession CSE 1000 114–115

**N**

- network
  - connections, establishing with multi I/O
    - cable 152–154
  - protocols, supported 21
  - requirements 22, 38
- NTRH0912 cable 22
  - connections, establishing
    - network 152–154
    - switch 152–154

- installing 86–88
  - large Meridian 1 system 152
  - Option 11C 152
  - Succession CSE 1000 114–115
- NTRH1407 cable 70
  - diagram 71
  - installation diagram 74, 75
  - installing 73
- NTRH1408 cable 51
  - diagram 58
  - installation diagram 60
  - installing 60
- NTRH1410 cable 59
  - installation diagram 61
  - installing 61
- NTRH3501 cable 51
  - diagram 55
  - installing 56
- NTRH3502 cable 78, 106
  - installation diagrams
    - Option 11C Mini 83, 84
    - Succession CSE 1000 109
  - installing
    - Option 11C Mini 80–85
    - Succession CSE 1000 107–110

## O

- Option 11C Mini
  - EMC kit 79, 86
  - multi I/O cable, installing 86–88
  - power cable
    - EMC kit 86
    - installing 87
  - SCSI cable 78
- Option 11C, installing intermediate SCSI cable 73

## P

- part numbers
  - CD-ROM drive 26

- Ethernet hub 27
- keyboard 28
- modem 27
- monitor 28
- mouse 28
- tape drive 27
- peripheral devices
  - CD-ROM drive 26
  - Ethernet hub 27
  - keyboard 28
  - modem 27
  - monitor 28
  - mouse 28
  - tape drive 27
- power status LED, description 14
- protocols, supported network 21

## R

- relative humidity, 201i server 17
- removing the backplane (tip and ring)
  - cables 52
- reset button, description 16
- RS-232 connector, multi I/O cable 24

## S

- SCSI cable 43, 106
  - Meridian 1 58
    - connections, establishing 61
    - installing 60
  - NTRH1407, diagram 71
  - Option 11C 70
    - bracket assembly, installing 74
    - connections, establishing 75
    - installing 73
  - Option 11C Mini 78
    - installing 80–85
    - Succession CSE 1000 107–110
- SCSI connectors 15, 26
- SCSI devices

- cabling diagrams
  - large Meridian 1 systems 59, 145
  - Option 11C 72, 147
  - Option 11C Mini 79, 149
  - Succession CSE 1000 106, 150
- daisy chain scenarios
  - Meridian 1 129
  - Option 11C 130
  - Option 11C Mini 130
  - Succession CSE 1000 131
- installation, attention 124, 126, 128
- supported 120
- SCSI drive LED 16
- SCSI IDs, setting
  - CD-ROM drive 124
  - tape drive 126
- secondary backplane connector
  - description 42, 45
  - diagram 45
  - installing for Meridian 1 46–48
  - reason for moving 44
  - required tools 46
- server, 201i
  - components, diagram 12
  - damaged, what to do 36
  - faceplate 13, 136
  - inspecting 36
  - installation
    - checklist 31–34
    - prerequisites 38
  - installing
    - large Meridian 1 systems 49
    - Option 11C 64
    - Option 11C Mini 64
    - Succession CSE 1000 104
  - network setup
    - Meridian 1 18
    - Succession CSE 1000 20
  - peripheral device connectors, diagram 136
  - primary components 10
  - starting 137, 158–159
  - unpacking 35
- setting
  - CD-ROM drive DIP switches 125
  - device termination
    - CD-ROM drive 131
    - tape drive 132
  - modem DIP switches 122
  - SCSI IDs
    - CD-ROM 124
    - tape drive 126
  - single-point ground 30
  - slot configuration, Succession CSE
    - 1000 94–96
  - slot requirements 38
    - small Meridian 1 systems 64
    - Succession CSE 1000 93–94, 103
  - software
    - administration 98
    - Succession CSE 1000 requirements 98
- Succession CSE 1000
  - card slots 103
    - configuring 94–96
  - covers, replacing 111–113
  - documentation 99
  - EMC kit 107, 114
  - multi I/O cable, installing 114–115
  - network setup 20
  - power cable
    - and EMC kit 114
    - installing 116
  - SCSI cable 106
  - slot requirements 38
  - system description 92
    - Call Server 92
    - Media Gateway 93
    - Media Gateway Expansion 93
    - software requirements 98
- switch
  - connection, establishing with multi I/O
    - cable 152–154
  - connector, multi I/O cable 23
  - requirements 38
- switches, setting DIP
  - CD-ROM drive 125
  - modem 122

**T**

## tape drive

- back panel, diagram 127
  - connecting
    - Meridian 1 144
    - Option 11C 146
    - Option 11C Mini 148
    - Succession CSE 1000 150
  - description 27
  - device termination, setting 132
  - installation, attention 124, 126, 128
  - setting SCSI ID 126
- temperatures, 201i server 17
- tip and ring cable 43, 55
- establishing connections 57
  - installing NTRH3501 56

- removing 52
- removing from Meridian 1 54

**W**

- warning, working with the switch backplane 51



# CallPilot

## Installation and Configuration

### Part 2: 201i Server Hardware Installation

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Publication number: 555-7101-220

Product release: 2.02

Document release: Standard 1.0

Date: May 2003

Printed in Canada

