



Avaya CallPilot® 201i Server Hardware Installation

5.0
NN44200-301, 01.03
December 2010

Notice

While reasonable efforts have been made to ensure that the information in this document is complete and accurate at the time of printing, Avaya assumes no liability for any errors. Avaya reserves the right to make changes and corrections to the information in this document without the obligation to notify any person or organization of such changes.

Documentation disclaimer

"Documentation" means information published by Avaya in varying mediums which may include product information, operating instructions and performance specifications that Avaya generally makes available to users of its products. Documentation does not include marketing materials. Avaya shall not be responsible for any modifications, additions, or deletions to the original published version of documentation unless such modifications, additions, or deletions were performed by Avaya. End User agrees to indemnify and hold harmless Avaya, Avaya's agents, servants and employees against all claims, lawsuits, demands and judgments arising out of, or in connection with, subsequent modifications, additions or deletions to this documentation, to the extent made by End User.

Link disclaimer

Avaya is not responsible for the contents or reliability of any linked Web sites referenced within this site or documentation provided by Avaya. Avaya is not responsible for the accuracy of any information, statement or content provided on these sites and does not necessarily endorse the products, services, or information described or offered within them. Avaya does not guarantee that these links will work all the time and has no control over the availability of the linked pages.

Warranty

Avaya provides a limited warranty on its Hardware and Software ("Product(s)"). Refer to your sales agreement to establish the terms of the limited warranty. In addition, Avaya's standard warranty language, as well as information regarding support for this Product while under warranty is available to Avaya customers and other parties through the Avaya Support Web site: <http://support.avaya.com>. Please note that if you acquired the Product(s) from an authorized Avaya reseller outside of the United States and Canada, the warranty is provided to you by said Avaya reseller and not by Avaya.

Licenses

THE SOFTWARE LICENSE TERMS AVAILABLE ON THE AVAYA WEBSITE, [HTTP://SUPPORT.AVAYA.COM/LICENSEINFO/](http://support.avaya.com/licenseinfo/) ARE APPLICABLE TO ANYONE WHO DOWNLOADS, USES AND/OR INSTALLS AVAYA SOFTWARE, PURCHASED FROM AVAYA INC., ANY AVAYA AFFILIATE, OR AN AUTHORIZED AVAYA RESELLER (AS APPLICABLE) UNDER A COMMERCIAL AGREEMENT WITH AVAYA OR AN AUTHORIZED AVAYA RESELLER. UNLESS OTHERWISE AGREED TO BY AVAYA IN WRITING, AVAYA DOES NOT EXTEND THIS LICENSE IF THE SOFTWARE WAS OBTAINED FROM ANYONE OTHER THAN AVAYA, AN AVAYA AFFILIATE OR AN AVAYA AUTHORIZED RESELLER; AVAYA RESERVES THE RIGHT TO TAKE LEGAL ACTION AGAINST YOU AND ANYONE ELSE USING OR SELLING THE SOFTWARE WITHOUT A LICENSE. BY INSTALLING, DOWNLOADING OR USING THE SOFTWARE, OR AUTHORIZING OTHERS TO DO SO, YOU, ON BEHALF OF YOURSELF AND THE ENTITY FOR WHOM YOU ARE INSTALLING, DOWNLOADING OR USING THE SOFTWARE (HEREINAFTER REFERRED TO INTERCHANGEABLY AS "YOU" AND "END USER"), AGREE TO THESE TERMS AND CONDITIONS AND CREATE A BINDING CONTRACT BETWEEN YOU AND AVAYA INC. OR THE APPLICABLE AVAYA AFFILIATE ("AVAYA").

Copyright

Except where expressly stated otherwise, no use should be made of materials on this site, the Documentation, Software, or Hardware provided by Avaya. All content on this site, the documentation and the Product provided by Avaya including the selection, arrangement and design of the content is owned either by Avaya or its licensors and is protected by copyright and other intellectual property laws including the sui generis rights relating to the protection of databases. You may not modify, copy, reproduce, republish, upload, post, transmit or distribute in any way any content, in whole or in part, including any code and software unless expressly authorized by Avaya. Unauthorized reproduction, transmission, dissemination, storage, and or use without the express written consent of Avaya can be a criminal, as well as a civil offense under the applicable law.

Third-party components

Certain software programs or portions thereof included in the Product may contain software distributed under third party agreements ("Third Party Components"), which may contain terms that expand or limit rights to use certain portions of the Product ("Third Party Terms"). Information regarding distributed Linux OS source code (for those Products that have distributed the Linux OS source code), and identifying the copyright holders of the Third Party Components and the Third Party Terms that apply to them is available on the Avaya Support Web site: <http://support.avaya.com/Copyright>.

Trademarks

The trademarks, logos and service marks ("Marks") displayed in this site, the Documentation and Product(s) provided by Avaya are the registered or unregistered Marks of Avaya, its affiliates, or other third parties. Users are not permitted to use such Marks without prior written consent from Avaya or such third party which may own the Mark. Nothing contained in this site, the Documentation and Product(s) should be construed as granting, by implication, estoppel, or otherwise, any license or right in and to the Marks without the express written permission of Avaya or the applicable third party.

Avaya is a registered trademark of Avaya Inc.

All non-Avaya trademarks are the property of their respective owners, and "Linux" is a registered trademark of Linus Torvalds.

Downloading Documentation

For the most current versions of Documentation, see the Avaya Support Web site: <http://support.avaya.com>.

Contact Avaya Support

Avaya provides a telephone number for you to use to report problems or to ask questions about your Product. The support telephone number is 1-800-242-2121 in the United States. For additional support telephone numbers, see the Avaya Web site: <http://support.avaya.com>.

Japan VCCI statement

The following applies to server models 1006r, 1005r, 703t, 201i, and 1002rp:

この装置は、情報処理装置等電波障害自主規制協議会 (VCCI) の規定に基づくクラスA装置です。この装置を家庭環境で使用すると電波障害を引き起こすことがあります。この場合には使用者が適切な対策を取るようにより要求されることがあります。

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

Contents

Chapter 1: Customer service.....	9
Getting technical documentation.....	9
Getting product training.....	9
Getting help from a distributor or reseller.....	9
Getting technical support from the Avaya Web site.....	10
Chapter 2: About the 201i server.....	11
In this chapter.....	11
201i server description.....	11
Introduction.....	11
Customer Documentation Map.....	11
Primary components.....	14
Faceplate.....	15
Environmental specifications.....	18
Network connectivity.....	19
Introduction.....	19
Sample network setup: Meridian 1 switch.....	19
Sample network setup: Communication Server 1000.....	20
CallPilot Avaya server subnet and ELAN subnet setup.....	21
Network requirements.....	22
Multi I/O cable description.....	22
Peripheral connectivity.....	24
Introduction.....	24
Faceplate connections.....	24
Monitor, keyboard, and mouse.....	25
MPC-8 card.....	25
SCSI connections.....	25
Supported peripheral devices.....	26
CD-ROM drive (NTRH9037).....	26
Tape drive (NTRH9038).....	26
Modem.....	26
10Base-T Ethernet hub or switch.....	27
Monitor, keyboard, and mouse.....	27
Chapter 3: Preparing for installation.....	29
In this chapter.....	29
Installation overview.....	29
Introduction.....	29
Before you begin.....	29
Installation checklist.....	30
Unpacking and inspecting the 201i server.....	32
Introduction.....	32
To inspect the 201i server for shipping damage.....	33
What to do if components are missing or damaged.....	34
What is next?.....	34
Switch and network requirements.....	34
Introduction.....	34
Meridian 1 or Communication Server 1000 slot requirements.....	34

Meridian 1 I/O panel connections.....	35
Avaya server subnet and ELAN subnet requirements.....	36
What is next?.....	36

Chapter 4: Installing the 201i server in a large Meridian 1 system.....37

in this chapter.....	37
Overview.....	37
Introduction.....	37
Meridian 1 I/O panel connections.....	38
Secondary backplane connector.....	38
Backplane (tip and ring) cable.....	38
SCSI cables.....	39
Repositioning the secondary backplane connector.....	39
Introduction.....	39
Why you must move the connector.....	39
Secondary backplane connector description.....	40
Required equipment.....	41
What is next?.....	43
Installing the 201i server in the large Meridian 1 switch.....	43
Introduction.....	43
What is next?.....	44
Removing the backplane (tip and ring) cables.....	44
Introduction.....	44
Before you begin.....	45
What is next?.....	47
Installing the NTRH3501 backplane cable.....	48
Introduction.....	48
Backplane (tip and ring) cable.....	48
Before you begin.....	49
What is next?.....	50
Installing the SCSI cables for Meridian 1.....	51
Introduction.....	51
Cables you need.....	51
What the completed installation looks like.....	52
Before you begin.....	53
What is next?.....	55

Chapter 5: Installing the 201i server in an Option 11C or Option 11C Mini.....57

In this chapter.....	57
Installing the 201i server in the Option 11C or Option 11C Mini switch.....	57
Introduction.....	57
What is next?.....	60
Section A: Installing Option 11C cables.....	60
In this section.....	60
Installing the intermediate SCSI cable for Option 11C.....	60
Introduction.....	60
Cable description.....	60
What the completed installation looks like.....	61
Before you begin.....	62
What is next?.....	64
Section B: Installing Option 11C Mini cables.....	65
In this section.....	65

Installing the NTRH3502 SCSI cable for Option 11C Mini.....	65
Introduction.....	65
What the completed installation looks like.....	65
Before you begin.....	66
What is next?.....	70
Installing cables on the back of the Option 11C Mini cabinet.....	71
Introduction.....	71
What is next?.....	73

Chapter 6: Installing the 201i server in the Avaya Communication Server 1000 system.....75

In this chapter.....	75
Communication Server 1000 description.....	75
Introduction.....	75
Call Server.....	76
Media Gateway and Media Gateway Expansion.....	77
Card slots.....	77
Back panel connectors.....	77
Communication Server 1000 software.....	79
Administration software.....	79
Communication Server 1000 documentation.....	80
Removing the Media Gateway or Media Gateway Expansion cover.....	80
Introduction.....	80
What is next?.....	82
Installing the 201i server.....	82
Introduction.....	82
Before you begin.....	83
What is next?.....	84
Installing the NTRH3502 SCSI cable for Communication Server 1000.....	85
Introduction.....	85
CD-ROM and tape drive cabling diagram.....	85
Before you begin.....	86
What is next?.....	88
Replacing the Media Gateway or Media Gateway Expansion cover.....	88
Introduction.....	88
To replace the inside front cover plate.....	88
What is next?.....	90
Connecting cables to the Communication Server 1000 system.....	91
Introduction.....	91
What is next?.....	93

Chapter 7: Preparing peripheral devices.....95

In this chapter.....	95
Overview.....	95
Introduction.....	95
Supported SCSI devices.....	95
DIP switches, SCSI ID, and SCSI device termination settings.....	96
Setting the modem DIP switches.....	96
Introduction.....	96
To set the modem DIP switches.....	97
Setting the CD-ROM drive SCSI ID and DIP switches.....	98
Introduction.....	98

To set the CD-ROM drive SCSI ID.....	98
To set the CD-ROM drive DIP switches.....	99
What is next?.....	100
Setting the tape drive SCSI ID.....	100
Introduction.....	100
To set the tape drive SCSI ID.....	100
Setting SCSI device termination.....	101
Introduction.....	101
Supported daisy chain connection scenarios.....	101
Meridian 1.....	102
Option 11C, Option 11C Mini.....	102
Communication Server 1000.....	103
To set device termination.....	104
What is next?.....	105

Chapter 8: Connecting peripheral devices to the 201i server.....107

In this chapter.....	107
Overview.....	107
Introduction.....	107
Connecting the 201i server to the network.....	107
Connecting peripheral devices.....	108
MPC cards.....	108
CD-ROM and tape drives.....	108
Monitor, keyboard, and mouse.....	108
Modem.....	109
201i server faceplate and peripheral device connectors.....	109
Starting the 201i server.....	110
Before you begin.....	110
Installing the MPCs.....	110
Introduction.....	110
Correct card insertion.....	111
What is next?.....	112
Installing the monitor, keyboard, and mouse.....	113
Introduction.....	113
Hardware requirement.....	113
PS/2 extension cable.....	113
What is next?.....	114
Connecting the CD-ROM and tape drives.....	114
Introduction.....	114
Before you begin.....	115
Selecting the procedure for your switch.....	115
To connect the CD-ROM and tape drives to the 201i server (Meridian 1).....	116
What is next?.....	121
Connecting the 201i server to the switch, ELAN subnet , and Avaya server subnet.....	121
Introduction.....	121
What is next?.....	123
Connecting the modem.....	124
Introduction.....	124
Required equipment.....	124
What is next?.....	126
Completing the installation.....	126

Introduction.....	126
To complete the installation and start the 201i server.....	126
What is next?.....	127

Index.....	129
-------------------	------------

Chapter 1: Customer service

Visit the Avaya Web site to access the complete range of services and support that Avaya provides. Go to www.avaya.com or go to one of the pages listed in the following sections.

Navigation

- [Getting technical documentation](#) on page 9
- [Getting product training](#) on page 9
- [Getting help from a distributor or reseller](#) on page 9
- [Getting technical support from the Avaya Web site](#) on page 10

Getting technical documentation

To download and print selected technical publications and release notes directly from the Internet, go to www.avaya.com/support.

Getting product training

Ongoing product training is available. For more information or to register, you can access the Web site at www.avaya.com/support. From this Web site, you can locate the Training contacts link on the left-hand navigation pane.

Getting help from a distributor or reseller

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

Getting technical support from the Avaya Web site

The easiest and most effective way to get technical support for Avaya products is from the Avaya Technical Support Web site at www.avaya.com/support.

Chapter 2: About the 201i server

In this chapter

[201i server description](#) on page 11

[Network connectivity](#) on page 19

[Peripheral connectivity](#) on page 24

201i server description

Introduction

The 201i server is a flexible multimedia telephony server designed to integrate with Avaya Meridian 1* and Communication Server* 1000 products.

The 201i server occupies two slots of a Meridian 1 shelf or Communication Server 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.

Customer Documentation Map

The following diagram shows the overall organization and content of the CallPilot documentation suite.

Table 1: CallPilot Customer Documentation Map

Fundamentals
Avaya CallPilot® Fundamentals Guide (NN44200-100)
Avaya CallPilot® Library Listing (NN44200-117)

Planning and Engineering

Avaya CallPilot® Planning and Engineering Guide (NN44200-200)

Avaya CallPilot® Network Planning Guide (NN44200-201)

Avaya Communication Server 1000 Converging the Data Network with VoIP Fundamentals (NN43001-260)

Solution Integration Guide for Avaya Communication Server 1000/CallPilot®/NES Contact Center/Telephony Manager (NN49000-300)

Installation and Configuration

Avaya CallPilot® Upgrade and Platform Migration Guide (NN44200-400)

Avaya CallPilot® High Availability: Installation and Configuration (NN44200-311)

Avaya CallPilot® Geographic Redundancy Application Guide (NN44200-322)

Avaya CallPilot® Installation and Configuration Task List Guide (NN44200-306)

Avaya CallPilot® Quickstart Guide (NN44200-313)

Avaya CallPilot® Installer Roadmap (NN44200-314)

Server Installation Guides

Avaya CallPilot® 201i Server Hardware Installation Guide (NN44200-301)

Avaya CallPilot® 202i Server Hardware Installation Guide (NN44200-317)

Avaya CallPilot® 202i Installer Roadmap (NN44200-319)

Avaya CallPilot® 703t Server Hardware Installation Guide (NN44200-304)

Avaya CallPilot® 1002rp Server Hardware Installation Guide (NN44200-300)

Avaya CallPilot® 1002rp System Evaluation (NN44200-318)

Avaya CallPilot® 1005r Server Hardware Installation Guide (NN44200-308)

Avaya CallPilot® 1005r System Evaluation (NN44200-316)

Avaya CallPilot® 1006r Server Hardware Installation Guide (NN44200-320)

Avaya CallPilot® 600r Server Hardware Installation Guide (NN44200-307)

Avaya CallPilot® 600r System Evaluation (NN44200-315)

Configuration and Testing Guides

Avaya Meridian 1 and Avaya CallPilot® Server Configuration Guide (NN44200-302)

Avaya T1/SMDI and Avaya CallPilot® Server Configuration Guide (NN44200-303)

Avaya Communication Server 1000 System and Avaya CallPilot® Server Configuration Guide (NN44200-312)

Unified Messaging Software Installation

Avaya CallPilot® Desktop Messaging and My CallPilot Installation and Administration Guide (NN44200-305)

Administration

Avaya CallPilot® Administrator Guide (NN44200-601)

Avaya CallPilot® Software Administration and Maintenance Guide (NN44200-600)

Avaya Meridian Mail to Avaya CallPilot® Migration Utility Guide (NN44200-502)

Avaya CallPilot® Application Builder Guide (NN44200-102)

Avaya CallPilot® Reporter Guide (NN44200-603)

Maintenance

Avaya CallPilot® Troubleshooting Reference Guide (NN44200-700)

Avaya CallPilot® Preventative Maintenance Guide (NN44200-505)

Server Maintenance and Diagnostics

Avaya CallPilot® 201i Server Maintenance and Diagnostics Guide (NN44200-705)

Avaya CallPilot® 202i Server Maintenance and Diagnostics Guide (NN44200-708)

Avaya CallPilot® 703t Server Maintenance and Diagnostics Guide (NN44200-702)

Avaya CallPilot® 1002rp Server Maintenance and Diagnostics Guide (NN44200-701)

Avaya CallPilot® 1005r Server Maintenance and Diagnostics Guide (NN44200-704)

Avaya CallPilot® 1006r Server Maintenance and Diagnostics Guide (NN44200-709)

Avaya CallPilot® 600r Server Maintenance and Diagnostics Guide (NN44200-703)

Avaya NES Contact Center Manager Communication Server 1000/ Meridian 1 & Voice Processing Guide (297-2183-931)

End User Information

End User Cards

Avaya CallPilot® Unified Messaging Quick Reference Card (NN44200-111)

Avaya CallPilot® Unified Messaging Wallet Card (NN44200-112)

Avaya CallPilot® A-Style Command Comparison Card (NN44200-113)
Avaya CallPilot® S-Style Command Comparison Card (NN44200-114)
Avaya CallPilot® Menu Interface Quick Reference Card (NN44200-115)
Avaya CallPilot® Alternate Command Interface Quick Reference Card (NN44200-116)
Avaya CallPilot® Multimedia Messaging User Guide (NN44200-106)
Avaya CallPilot® Speech Activated Messaging User Guide (NN44200-107)
Avaya CallPilot® Desktop Messaging User Guide for Microsoft Outlook (NN44200-103)
Avaya CallPilot® Desktop Messaging User Guide for Lotus Notes (NN44200-104)
Avaya CallPilot® Desktop Messaging User Guide for Novell Groupwise (NN44200-105)
Avaya CallPilot® Desktop Messaging User Guide for Internet Clients (NN44200-108)
Avaya CallPilot® Desktop Messaging User Guide for My CallPilot (NN44200-109)
Avaya CallPilot® Voice Forms Transcriber User Guide (NN44200-110)

The Map was created to facilitate navigation through the suite by showing the main task groups and the documents contained in each category. It appears near the beginning of each guide, showing that guide's location within the suite.

Primary components

The 201i server motherboard houses the interfaces needed:

- to communicate with the Meridian 1 switch or Communication Server 1000 system.
- to facilitate data communications on Ethernet networks.

Two Ethernet controllers on the 201i server motherboard provide Ethernet capability. These controllers provide the network interfaces for both the ELAN subnet and the Avaya server subnet. The connections to these subnets are established by using the multi I/O cable described on [Multi I/O cable description](#) on page 22.

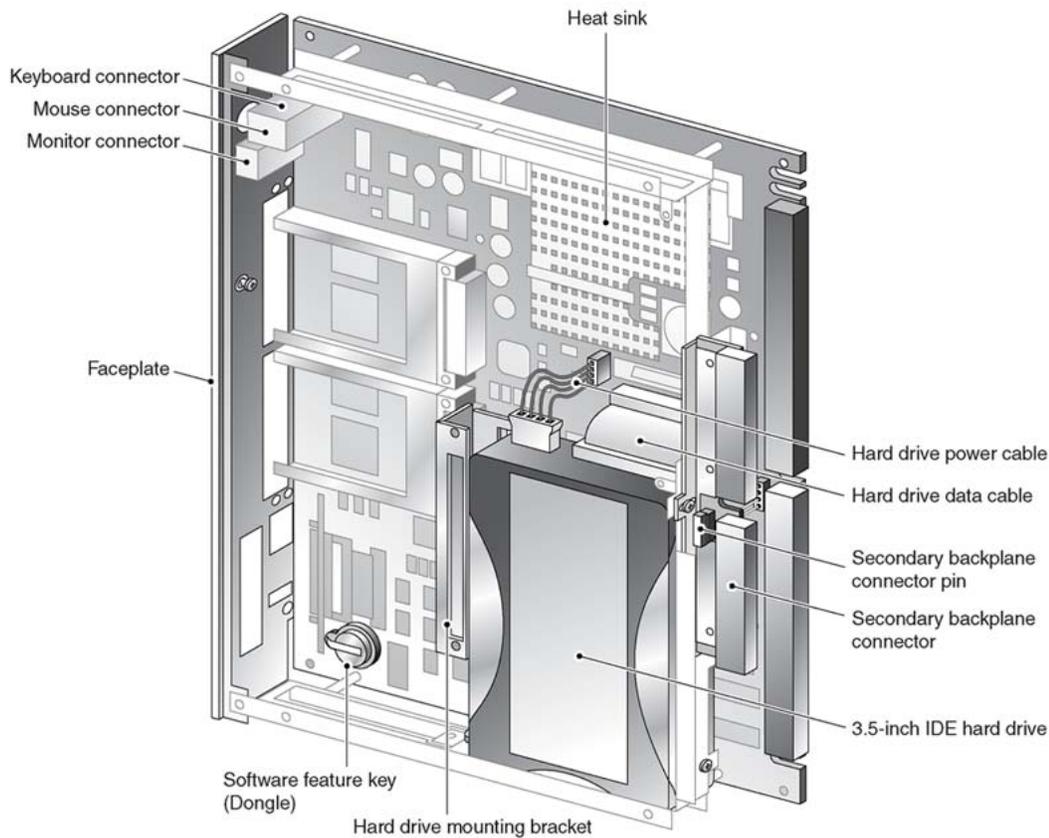
 **Note:**

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

! **Important:**

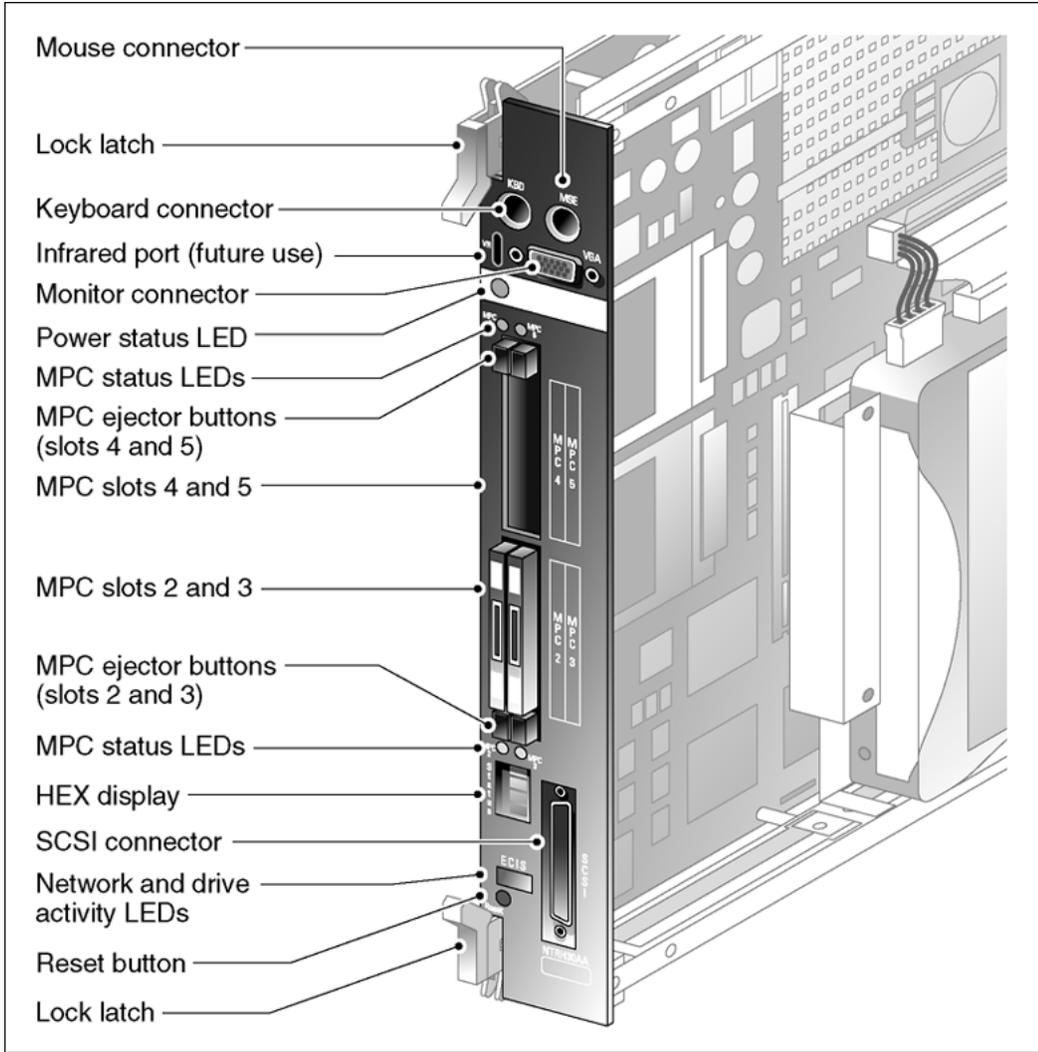
The 201i server is shipped ready for installation into an Option 11C or Option 11C Mini switch or Communication Server 1000 system. Before you install the 201i server in a larger Meridian 1 switch (for example, Option 51C), you must move the secondary backplane (DS30X) connector to the correct position. For more information, see [Repositioning the secondary backplane connector](#) on page 39.

The following diagram shows the 201i server components:



Faceplate

The following diagram shows the 201i server 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 Communication Server 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.

Faceplate feature	Description
Power status LED	<p>The LED indicates two server states:</p> <ul style="list-style-type: none"> • the completion of self-test diagnostics • when it is safe to remove the server from the Meridian 1 switch or Communication Server 1000 Media Gateway or Media Gateway Expansion
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"> • Off: The MPC card is not receiving power. It is safe to remove the card. • On: The MPC card is in use. It is not safe to remove the card. • Off, then on: The MPC card has been recognized by the 201i server software and has been powered up. • On, then off: The MPC card has been successfully powered down. It is safe to remove the card. <p> Note: For instructions on powering up or powering down the MPC card, see "Starting and stopping components" in the CallPilot* <server model> Server Maintenance and Diagnostics guide for your server.</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. 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. The MPCs are numbered as follows:</p> <ul style="list-style-type: none"> • top row of slots: MPC cards 4 and 5 • bottom row of slots: MPC cards 2 and 3 <p> Note: 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). Press the button latches to lock or unlock a cable from the connector.</p>

Faceplate feature	Description
Network and drive activity LEDs (labeled as E, C, I, and S)	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. When the I and S LEDs are lit, it means that the IDE hard drive and SCSI device are being accessed.
Reset button	The reset button allows you to manually restart the 201i server without disconnecting it from the backplane.  Important: Before you press the reset button, you must shut down the operating system. Press the reset button while the operating system is running only when you cannot shut down the operating system normally.

Environmental specifications

Temperatures	
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
Relative humidity	
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 (-40°F) to 70°C (158°F) respectively] (noncondensing)

Network connectivity

Introduction

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



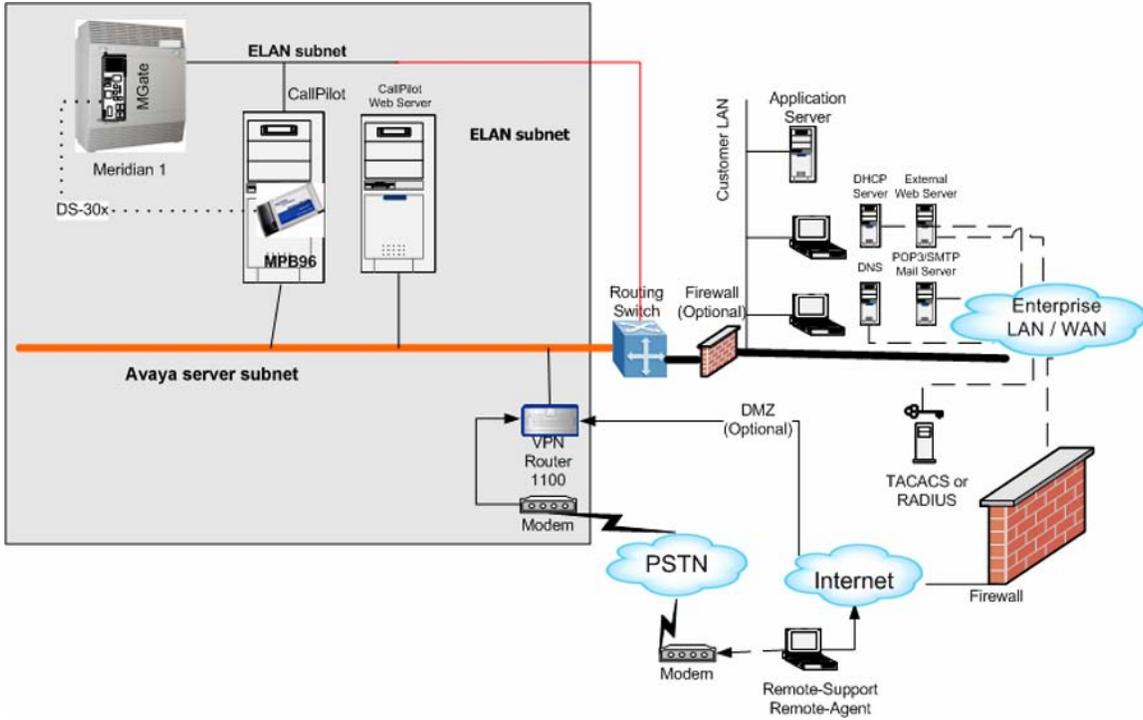
Important:

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



Sample network setup: Communication Server 1000

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

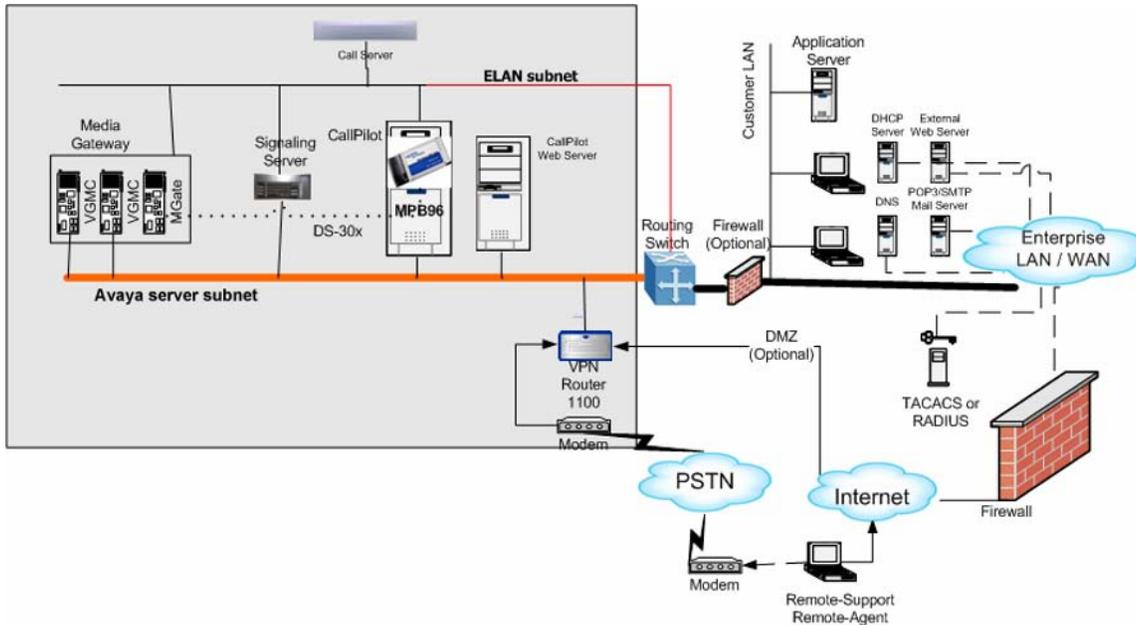


Figure 1: Communication Server 1000 system network integration example

In the illustration on [Figure 1: Communication Server 1000 system network integration example](#) on page 21, the telephony LAN (TLAN) provides IP connectivity between the Communication Server 1000 system and the i2004 Internet telephones. 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 Communication Server 1000 system and i2004 Internet telephone bandwidth and network requirements, refer to the Communication Server 1000 Planning and Installation Guide

For a description of each Communication Server 1000 system component, see [Communication Server 1000 description](#) on page 75.

CallPilot Avaya server subnet and ELAN subnet setup

The 201i server supports the following network protocols:

- CLAN: 10/100Base-T Ethernet

A built-in Ethernet controller on the 201i server motherboard provides Ethernet connectivity to the Avaya server subnet. The Avaya server subnet 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 motherboard provides Ethernet connectivity to the ELAN subnet. The ELAN subnet carries call processing traffic between the CallPilot server and the Meridian 1 switch or Communication Server 1000 system.



Note:

For more information about the ELAN subnet, see the CallPilot Installation and Configuration Task List.

You use the 201i server multi I/O cable to establish the connections to the ELAN subnet and the Avaya server subnet. For more information, see [Multi I/O cable description](#) on page 22.

Network requirements

Appropriate networking equipment must be available for both the Avaya server subnet and ELAN subnet.

The Avaya server subnet and ELAN subnet must be properly configured for correct CallPilot operation. To ensure correct configuration, Avaya recommends that you consult a network specialist.

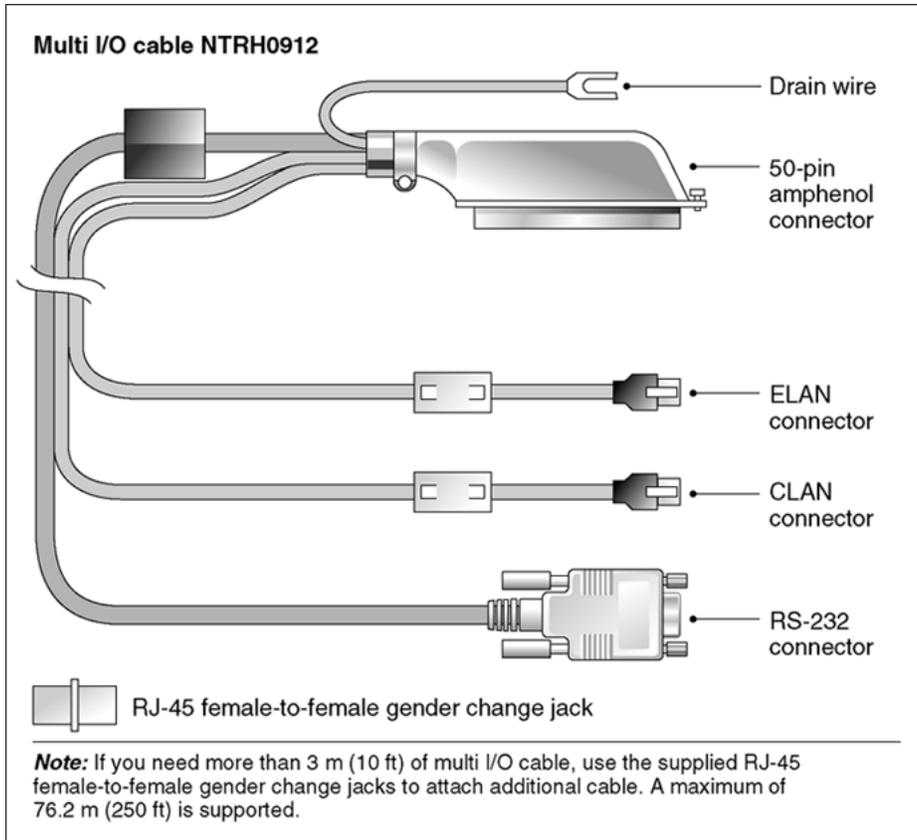


Important:

For important considerations about using the ELAN subnet in your network, see the CallPilot Installation and Configuration Task List.

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:



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 Communication Server 1000 Media Gateway or Media Gateway Expansion backplane, ELAN and CLAN Ethernet hubs or switches, and modem.
10Base-T (RJ-45)	This connector provides a 10 Mbit/s Ethernet connection between the 201i server and the Meridian 1 switch or Communication Server 1000 system. This connection allows the exchange of call control information between the server and the Meridian 1 switch or Communication Server 1000 system. For more information about the ELAN subnet, see the CallPilot Installation and Configuration Task List.
10/100Base-T (RJ-45)	This connector provides a network connection for

Connector type	Purpose
	<ul style="list-style-type: none">• user desktop computers, to enable use of the unified messaging and fax messaging features• LAN-based server administration <p> Important: 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 Installing the 201i server in a large Meridian 1 system on page 37.</p>
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.

Peripheral connectivity

Introduction

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

Faceplate connections

 **Important:**

Connections made to the faceplate (with the exceptions noted below) are temporary only, because 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 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 are located on the 201i server faceplate.

 **Important:**

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 51.
- Option 11C or Option 11C Mini: [Installing the NTRH3502 SCSI cable for Option 11C Mini](#) on page 65.
- Communication Server 1000: [Installing the NTRH3502 SCSI cable for Communication Server 1000](#) on page 85.

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.

Because 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.

The supported modem is the 56 Kbps modem (NTRH9078).

10Base-T Ethernet hub or switch

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

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

Monitor, keyboard, and mouse

- 15 in. monitor: NTRH9011 or N0038380 LCD monitor

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 Avaya-supplied 101 mm (4-in) PS/2 extension cable (A0855616). Without the extension cable, the monitor connector partially blocks the mouse connector.

About the 201i server

Chapter 3: Preparing for installation

In this chapter

[Installation overview](#) on page 29

[Unpacking and inspecting the 201i server](#) on page 32

[Switch and network requirements](#) on page 34

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 Avaya 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 Avaya 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 [Connecting peripheral devices to the 201i server](#) on page 107.



Warning:

Risk of personal injury and hardware failure

The power outlets 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 Communication Server 1000 system with MGate cards (NTRB18CA) 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 the CallPilot Installation and Configuration Task List and completed stage 1 of the "Installation checklist." This includes the following tasks:</p> <ul style="list-style-type: none"> Unpack the server, and ensure you have all the items you need (see Unpacking and inspecting the 201i server on page 32). Complete the following checklists that are provided in the CallPilot Installation and Configuration Task List: <ul style="list-style-type: none"> - "CallPilot software media and documentation checklist" - "CallPilot server hardware checklist" Inspect the server for any damage that might have occurred during shipping (see Unpacking and inspecting the 201i server on page 32). 	<input type="checkbox"/>
2	<p>Familiarize yourself with the Switch and network requirements on page 34 of this guide.</p>	<input type="checkbox"/>
3	<p>If you are installing the 201i server into a Meridian 1 tiered system, do the following:</p> <ul style="list-style-type: none"> • Change the location of the secondary backplane (DS30X) connector on the 201i server (see Repositioning the secondary backplane connector on page 39). • Replace the existing backplane (tip and ring) cable on the Meridian 1 with the one supplied with the 201i server (NTRH3501) (see pages Removing the backplane (tip and ring) cables on page 44-What is next? on page 50). 	<input type="checkbox"/>
4	<p>Install the intermediate SCSI cable. This cable connects the external CD-ROM or tape drive.</p> <ul style="list-style-type: none"> • For Meridian 1, you require two cables to complete the connection between the 201i server and the SCSI device: 	<input type="checkbox"/>

Step	Description	Check
	<p>NTRH1408 and NTRH1410. See Installing the SCSI cables for Meridian 1 on page 51.</p> <ul style="list-style-type: none"> • For Option 11C, you require two cables to complete the connection between the 201i server and the SCSI device: NTRH1407 and NTRH3502. See Installing the intermediate SCSI cable for Option 11C on page 60. • For Option 11C Mini or Communication Server 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"> - Option 11C Mini: Installing the NTRH3502 SCSI cable for Option 11C Mini on page 65 - Communication Server 1000: Installing the NTRH3502 SCSI cable for Communication Server 1000 on page 85 	
5	Set the DIP switches on the modem (see Setting the modem DIP switches on page 96).	<input type="checkbox"/>
6	Set the following: <ul style="list-style-type: none"> • SCSI IDs on the CD-ROM and tape drives (see pages Setting the CD-ROM drive SCSI ID and DIP switches on page 98 and Setting the tape drive SCSI ID on page 100) • DIP switches on the CD-ROM drive (see Setting the CD-ROM drive SCSI ID and DIP switches on page 98) • device termination on the CD-ROM and tape drives (see Setting SCSI device termination on page 101) 	<input type="checkbox"/>
7	Insert the 201i server into two consecutive slots inside the switch. For instructions, see: <ul style="list-style-type: none"> • large Meridian 1 systems, such as Option 51C (see Installing the 201i server in the large Meridian 1 switch on page 43) • Option 11C or Option 11C Mini (see Installing the 201i server in the Option 11C or Option 11C Mini switch on page 57) • Communication Server 1000 (see Installing the 201i server on page 82) 	<input type="checkbox"/>
8	Install the MPC cards, if required (see Installing the MPCs on page 110).	<input type="checkbox"/>
9	Connect the 201i server and devices as follows: <p>Connect the monitor, keyboard, and mouse to the 201i server faceplate (see Installing the monitor, keyboard, and mouse on page 113).</p>	<input type="checkbox"/>

Step	Description	Check
	<p>Connect the CD-ROM and tape drives to the intermediate SCSI cable (see Connecting the CD-ROM and tape drives on page 114).</p> <p>Connect the multi I/O cable to the ELAN and CLAN Ethernet hubs or switches (see Connecting the 201i server to the switch, ELAN subnet , and Avaya server subnet on page 121).</p> <p> Note:</p> <p>If more than 3 m (10 ft) of multi I/O cable is required, use the supplied RJ-45 female-to-female gender change jacks to attach additional cable. Up to 76.2 m (250 ft) of cable length is supported.</p> <p>Connect the modem to the multi I/O cable (maximum length 15 m (50 ft) (see Connecting the modem on page 124).</p> <p>Connect the power cords for all devices, and then power them up.</p>	
10	<p>Complete the installation of the 201i server as follows:</p> <ul style="list-style-type: none"> • Connect the intermediate SCSI cable to the 201i server faceplate. • Close the lock latches on the 201i server. • Boot the 201i server to the operating system. <p>See Completing the installation on page 126.</p>	<input type="checkbox"/>
11	<p>Continue with the CallPilot <switch model> and CallPilot Server Configuration guide for your switch and server.</p>	<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

Important:

As you unpack each item, check it off against the packing list, as well as the following checklists provided in the CallPilot Installation and Configuration Task List:

- "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 11, and perform a visual inspection as described in [To inspect the 201i server for shipping damage](#) on page 33.

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?		
hard drive power cable	<input type="checkbox"/>	<input type="checkbox"/>
hard drive data cable	<input type="checkbox"/>	<input type="checkbox"/>
See items 2 and 3 in the diagram in section Primary components on page 14.	<input type="checkbox"/>	<input type="checkbox"/>
Is the hard drive and bracket interface secure? See items 6 and 7 in the diagram in section Primary components on page 14.	<input type="checkbox"/>	<input type="checkbox"/>
Is the software feature key (dongle) securely seated in its bracket? See 201i server components diagram in section Primary components on page 14.	<input type="checkbox"/>	<input type="checkbox"/>

What to do if components are missing or damaged

IF	THEN
you observe any damage	contact your Avaya technical support representative.
components have become loose	secure them. If necessary, refer to the procedures in the CallPilot <server model> Server Maintenance and Diagnostics guide for your server.
you are satisfied that the 201i server has arrived at your site undamaged	you are ready to proceed with installation.

What is next?

Review the [Switch and network requirements](#) on page 34.

Switch and network requirements

Introduction

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

Meridian 1 or Communication Server 1000 slot requirements

The 201i server occupies two physical and electrical slots.

 **Note:**

You can place the unit in Slot 9 of an Option11C as the unit can function from slots 9 and 10. Do not place the unit in slot 10. Even though the unit can physically fit, there is no electrical connection on the backplane to slot 11.

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
	<p> Note: 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.</p>
Communication Server 1000	A pair of consecutive slots in any Media Gateway or Media Gateway Expansion.
	<p> Note: 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 Communication Server 1000 Planning and Installation Guide</p>

Meridian 1 I/O panel connections

On large Meridian 1 systems (such as Option 51C), the 201i server requires two connections from the 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

Avaya server subnet and ELAN subnet requirements

The ELAN subnet and the Avaya server subnet must be configured and the appropriate networking equipment must be available.

If the Avaya server subnet is to be part of the customer LAN, you need a network specialist to ensure proper configuration.

 **Important:**

For important considerations about using the ELAN in your network, see the CallPilot Installation and Configuration Task List.

What is next?

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

To install the 201i server in	See
a large Meridian 1 switch (for example, Option 51C)	Installing the 201i server in a large Meridian 1 system on page 37
an Option 11C or Option 11C Mini switch	Installing the 201i server in an Option 11C or Option 11C Mini on page 57
the Communication Server 1000 system	Installing the 201i server in the Avaya Communication Server 1000 system on page 75

Chapter 4: Installing the 201i server in a large Meridian 1 system

in this chapter

[Overview](#) on page 37

[Repositioning the secondary backplane connector](#) on page 39

[Installing the 201i server in the large Meridian 1 switch](#) on page 43

[Removing the backplane \(tip and ring\) cables](#) on page 44

[Installing the NTRH3501 backplane cable](#) on page 48

[Installing the SCSI cables for Meridian 1](#) on page 51

Overview

Introduction

This section describes how to install the 201i server in a Meridian 1 switch.



Important:

To install the 201i server in an Option 11C, go to [Installing the 201i server in the large Meridian 1 switch](#) on page 43. For Option 11C Mini, go to [Section B: Installing Option 11C Mini cables](#) on page 65. For Communication Server 1000, go to [Installing the 201i server in the Avaya Communication Server 1000 system](#) on page 75.

Meridian 1 I/O panel connections

On the Meridian 1, the 201i server requires two connections from the 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

Secondary backplane connector

The secondary backplane (DS30X) connector on the 201i server connects the server to the second slot on the 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.

 **Important:**

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 operation for the Avaya server subnet. 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 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 (0.08 in) 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.



Important:

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.

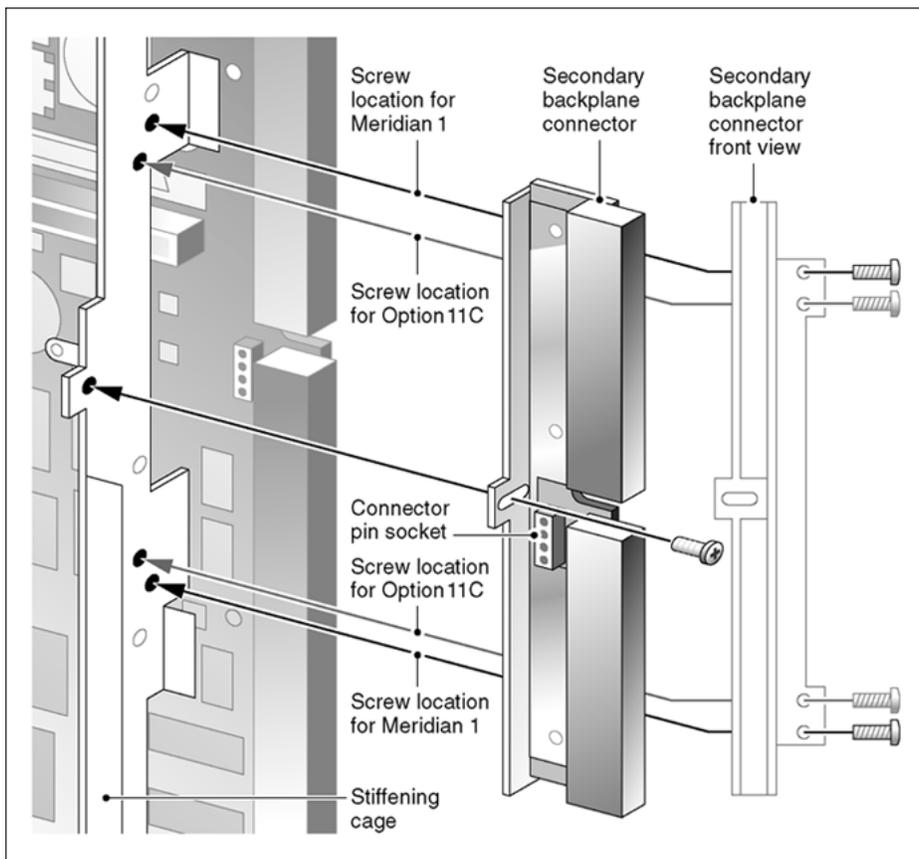
Secondary backplane connector description

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 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.

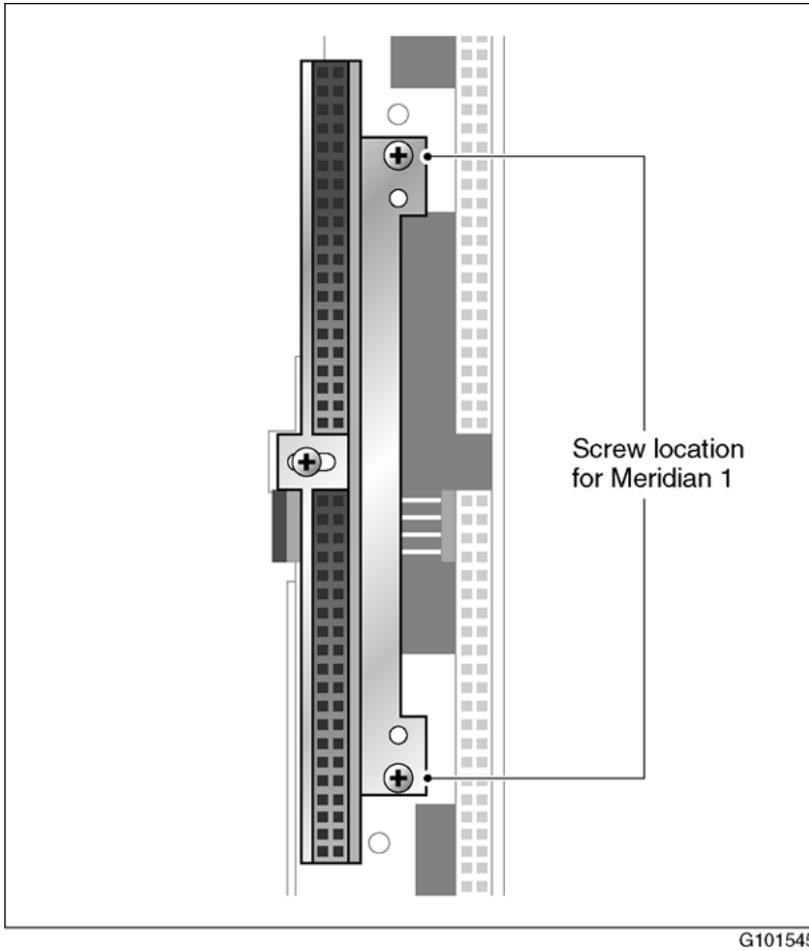
To prepare the 201i server for installation in a Meridian 1 switch

1. Remove the secondary backplane pin connector.

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

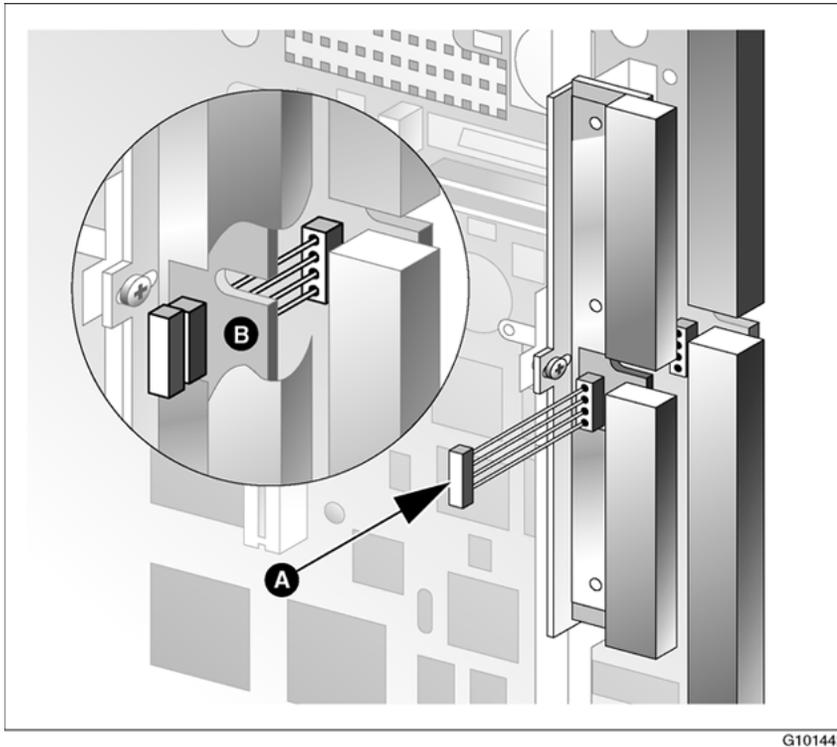
2. Remove the top and bottom screws that hold the secondary backplane connector in place on the stiffening cage.
3. Loosen the middle screw, and then align the outside pair of screw holes on the bracket with the matching pair on the stiffening cage.
4. Replace and alternately tighten all screws until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



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 is next?

Continue with [Installing the 201i server in the large Meridian 1 switch](#) on page 43.

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 39.

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

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

 **Important:**

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 faceplate.

What is next?

Continue with [Removing the backplane \(tip and ring\) cables](#) on page 44.

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



Voltage:

Risk of electrical shock

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

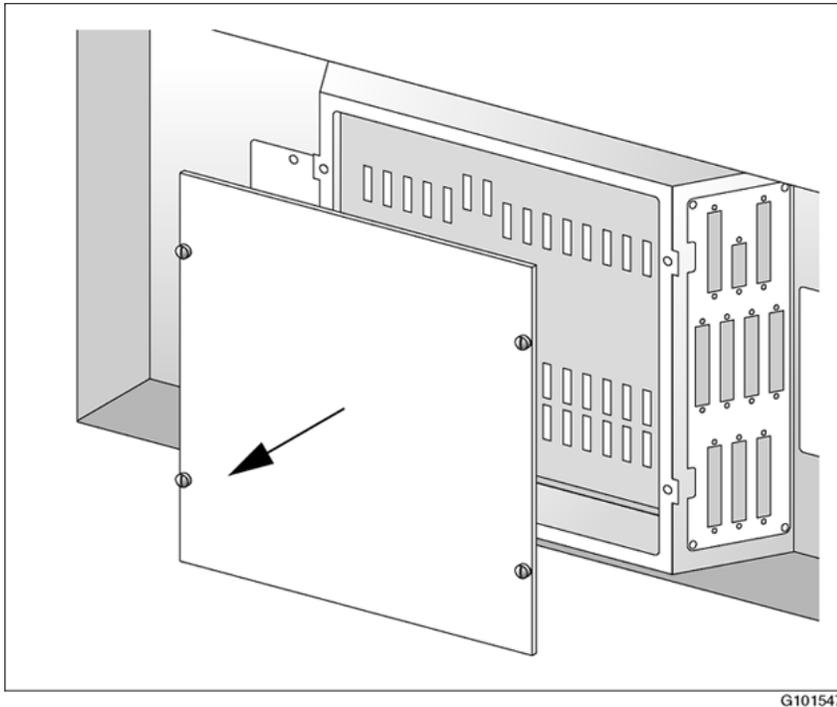


Note:

For information about slot and rear bulkhead wiring and powering off the shelf, refer to the Meridian 1 System Installation and Maintenance Guide

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.



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.

! **Important:**

If you attempt to pull the connector off without pressing the lock tab, you can 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.

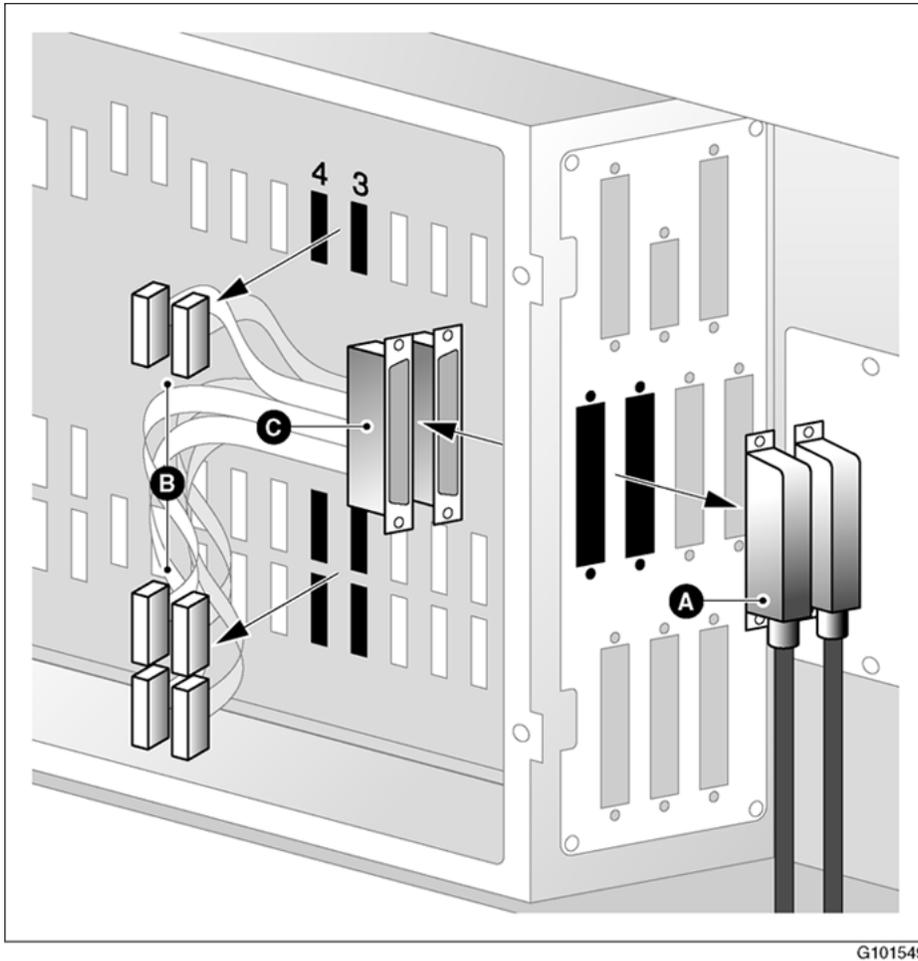
- c. Remove the connector, I/O filter assembly, and all mounting hardware from the inside of the I/O panel so the slot is completely vacated.

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](#) on page 46 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 is next?

Continue with [Installing the NTRH3501 backplane cable](#) on page 48.

Installing the NTRH3501 backplane cable

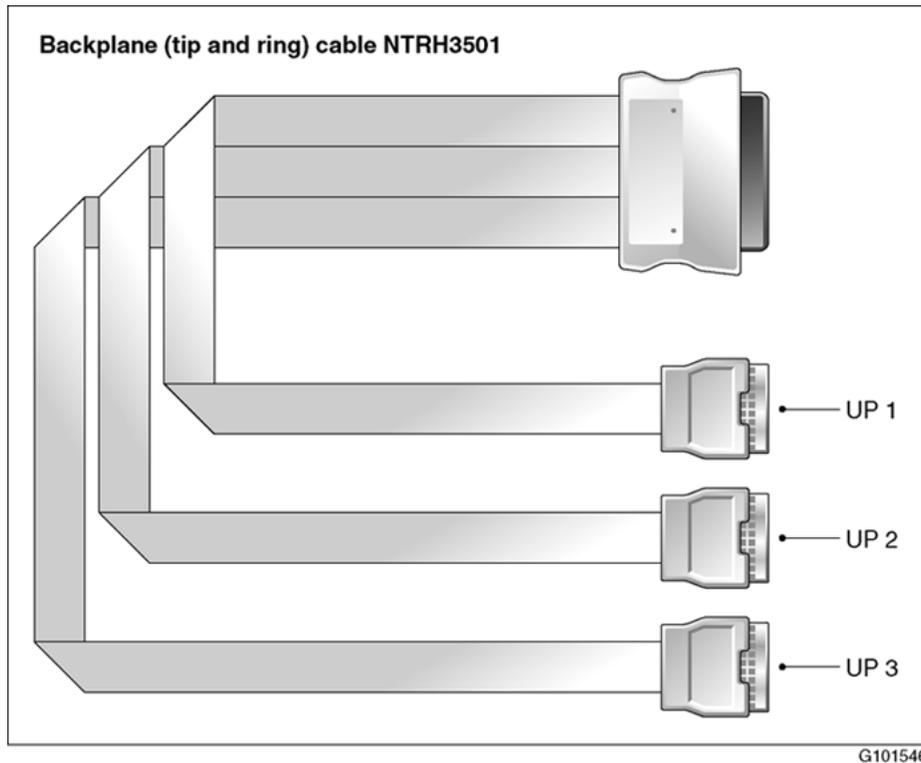
Introduction

You must connect the backplane (tip and ring) cable supplied with the 201i server (NTRH3501) for 100Base-T Ethernet operation to the Avaya server subnet. 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 44.

To install the NTRH3501 backplane cable

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 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

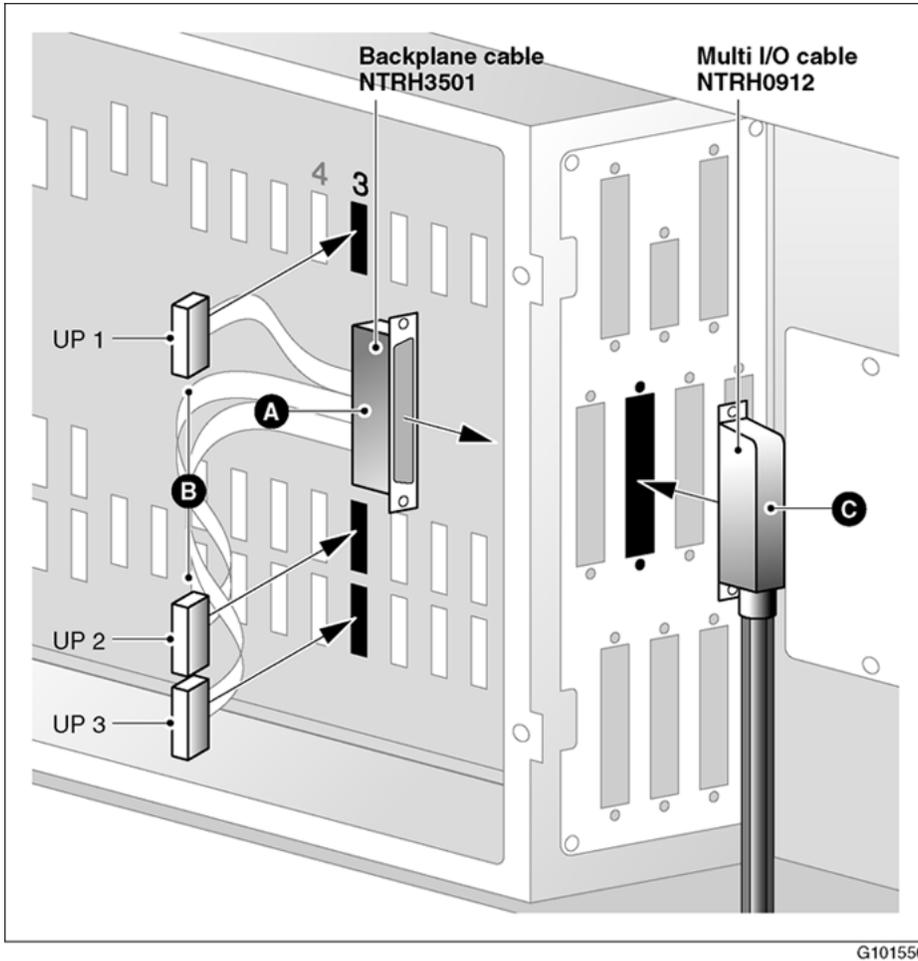
 **Important:**

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 is next?

Continue with [Installing the SCSI cables for Meridian 1](#) on page 51.

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.

**Caution:****Risk of equipment damage**

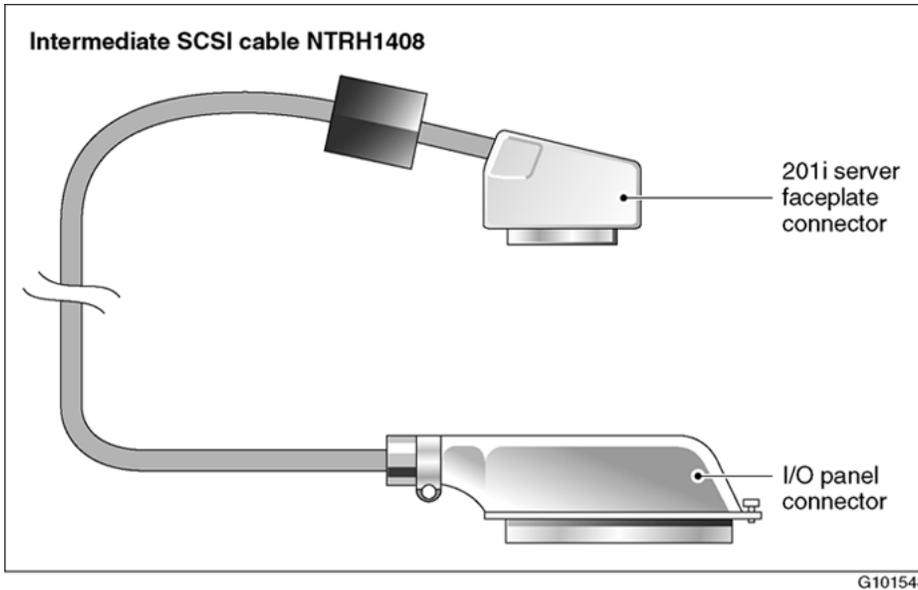
You must power off the 201i server before connecting or disconnecting SCSI cables.

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.



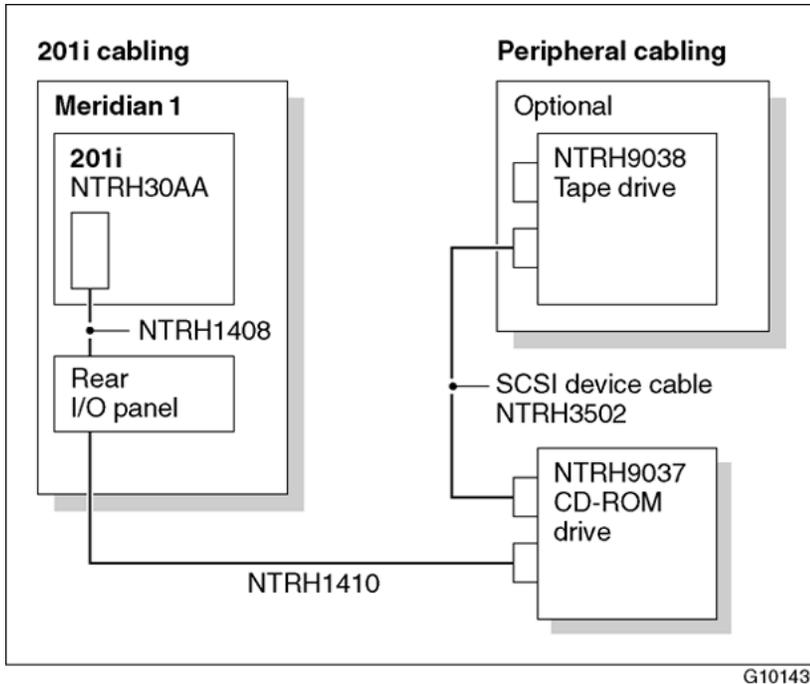
- NTRH1410 (for connecting an external SCSI device to the NTRH1408 connector on the Meridian 1 I/O panel)

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.



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 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 [Preparing peripheral devices](#) on page 95.

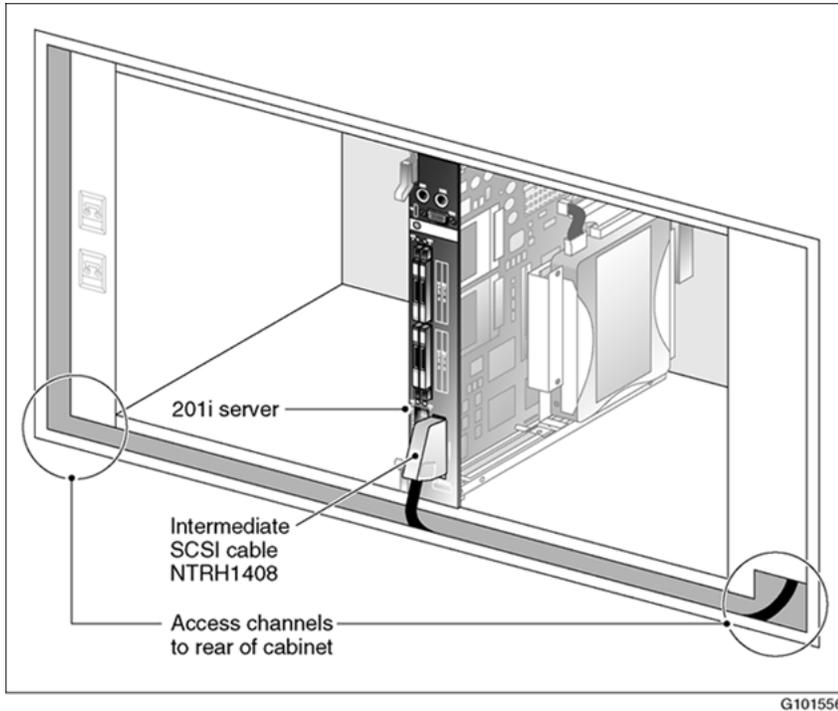
To install the SCSI cables for Meridian 1

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:**

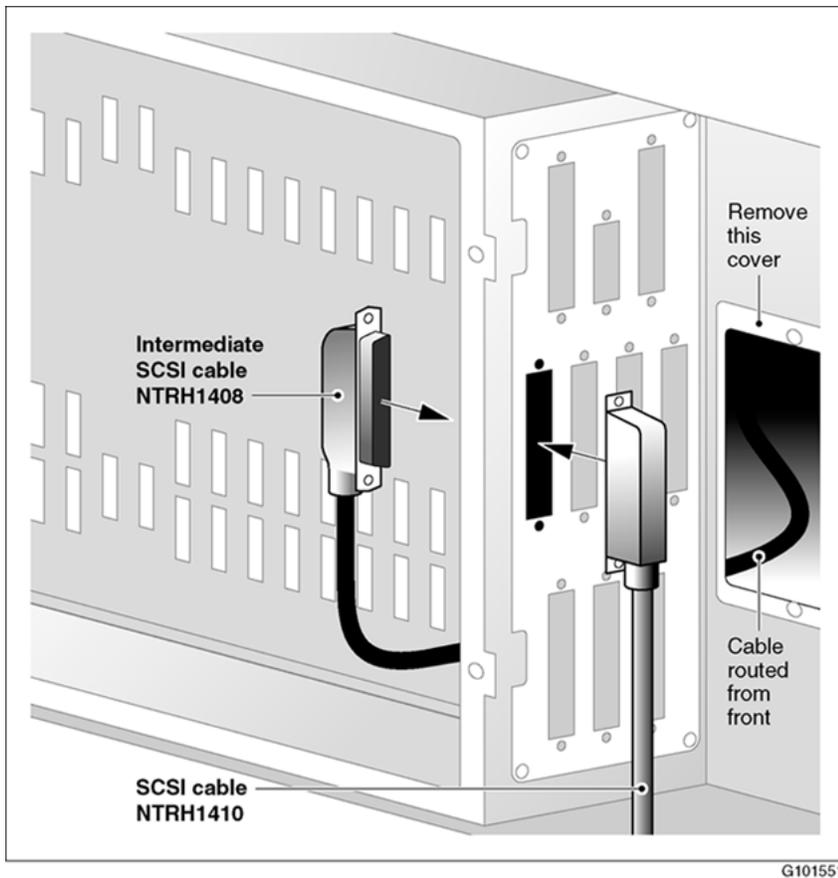
The following diagram shows what the connection looks like after the cable is connected:

Installing the 201i server in a large Meridian 1 system



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 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 is next?

Prepare the modem, CD-ROM drive, and tape drive for connection to the 201i server. For instructions, see [Preparing peripheral devices](#) on page 95.

Installing the 201i server in a large Meridian 1 system

Chapter 5: 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](#) on page 57

[Section A: Installing Option 11C cables](#) on page 60

[Installing the intermediate SCSI cable for Option 11C](#) on page 60

[Section B: Installing Option 11C Mini cables](#) on page 65

[Installing the NTRH3502 SCSI cable for Option 11C Mini](#) on page 65

[Installing cables on the back of the Option 11C Mini cabinet](#) on page 71

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



Note:

You cannot install the 201i server in slots 0 or 4, because these slots are dedicated to other cards.

Switch	Eligible slots
For more information about cards and slots, refer to the Option 11C Mini documentation.	

To position the 201i server on the switch shelf

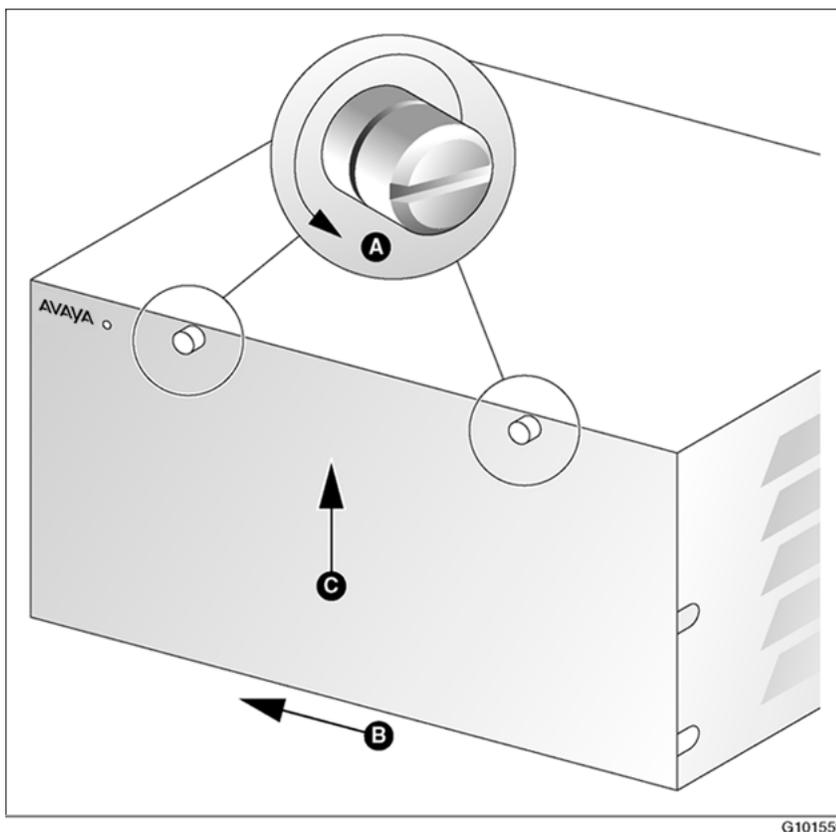
1. Remove the front panel of the switch.

*** 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:



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:**

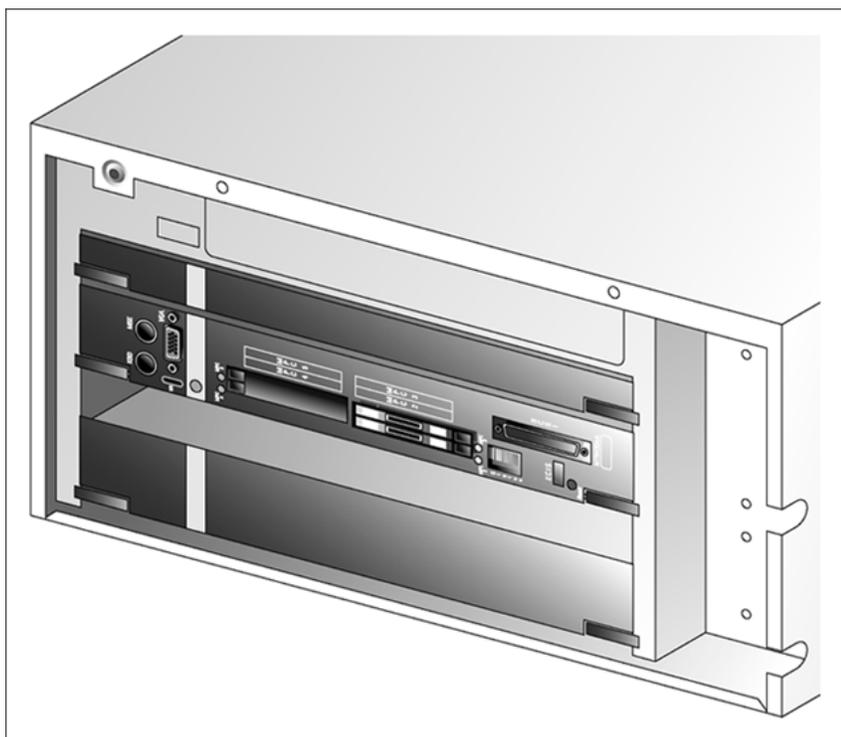
When you open the top lock latch, it breaks the yellow backplane warning label, if the label has not been removed. The label is not relevant for Option 11C or Option 11C Mini. Remove the label and continue with this procedure.

4. 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:

**! Important:**

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 is next?

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

- [Section A: Installing Option 11C cables](#) on page 60
 - [Section B: Installing Option 11C Mini cables](#) on page 65
-

Section A: Installing Option 11C cables

In this section

[Installing the intermediate SCSI cable for Option 11C](#) on page 60

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).

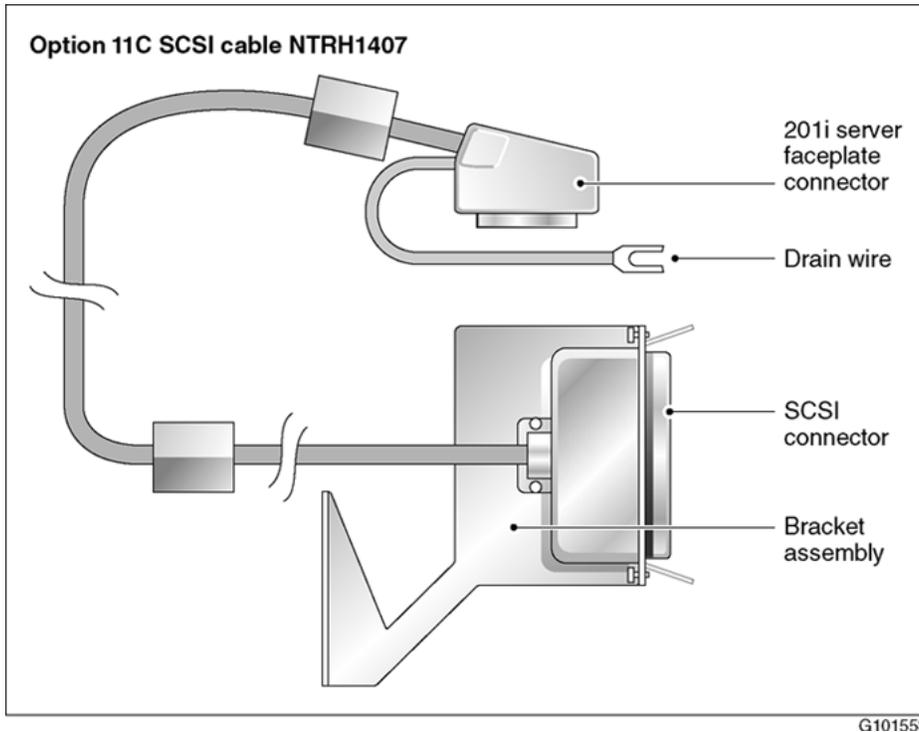
 **Note:**

If you are installing the 201i server in an Option 11C Mini, go to [Installing the NTRH3502 SCSI cable for Option 11C Mini](#) on page 65.

Cable description

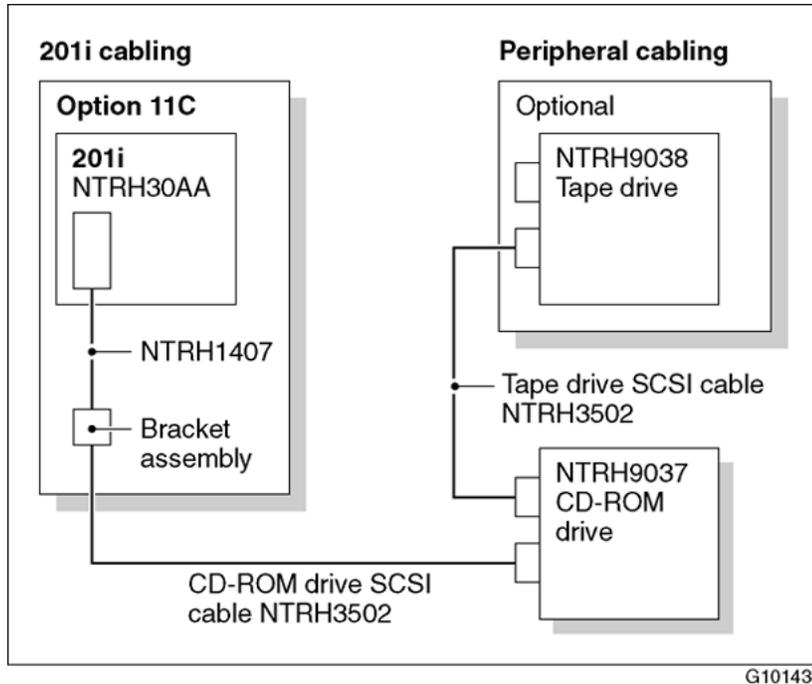
The connector on the NTRH1407 cable that attaches to the 201i server faceplate is a low-profile right-angle connector. This allows the SCSI device to be permanently connected to the 201i server with the Option 11C cabinet cover on.

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 [Preparing peripheral devices](#) on page 95.

To install the cable

1.



Caution:

Risk of equipment damage

You must power off the 201i server before connecting or disconnecting SCSI cables.

Attach the bracket assembly and cable as follows:

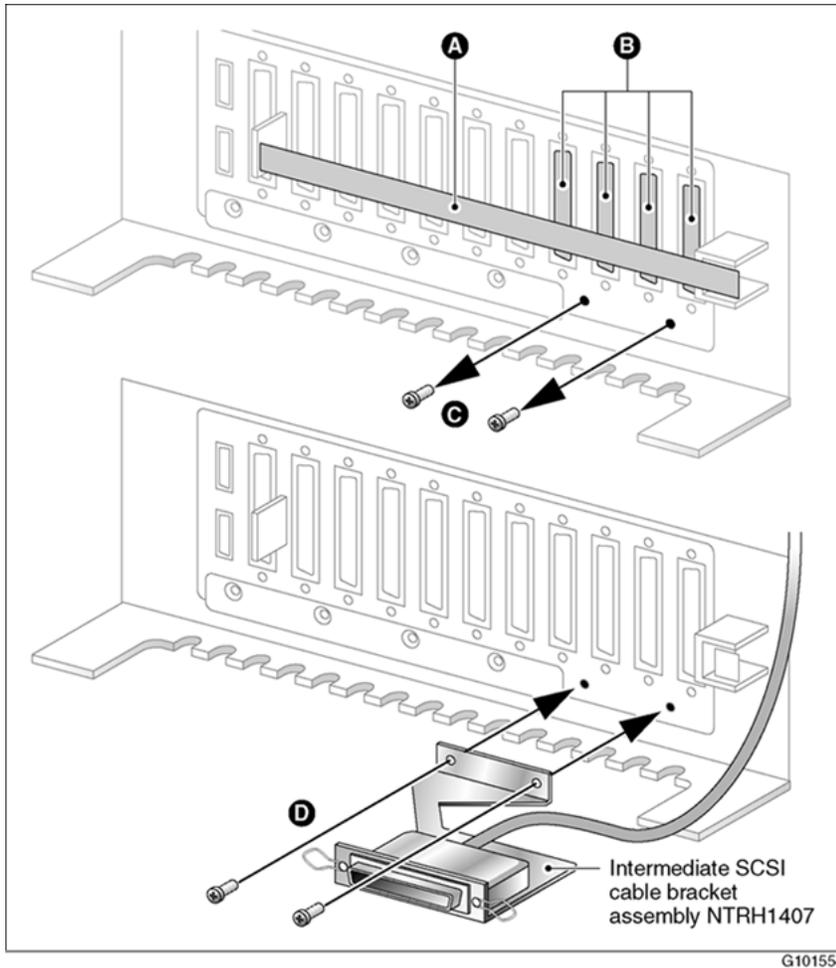
- a. Below the card cage, temporarily remove the hardware that secures cable connections to the Option 11C.
- b. Temporarily remove any cabling that may interfere with the installation of the intermediate SCSI cable bracket assembly.

! Important:

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.

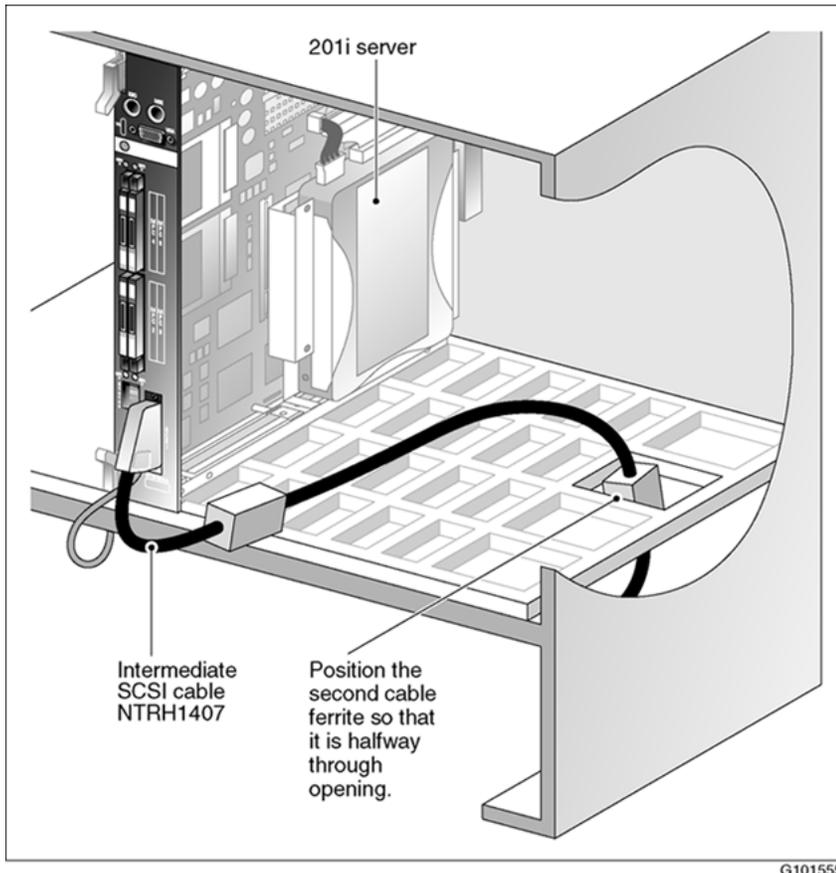
3. Connect the grounding braid on the intermediate SCSI cable to the card cage, and tighten the screw.

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:



5. Replace all cabling and hardware that you removed in step [1](#) on page 62.
6. Restore any services that you took out of service in step [1](#) on page 62.

What is next?

Prepare the modem, CD-ROM drive, and tape drive for connection to the 201i server. For instructions, see [Preparing peripheral devices](#) on page 95.

Section B: Installing Option 11C Mini cables

In this section

[Installing the NTRH3502 SCSI cable for Option 11C Mini](#) on page 65

[Installing cables on the back of the Option 11C Mini cabinet](#) on page 71

Installing the NTRH3502 SCSI cable for Option 11C Mini

Introduction

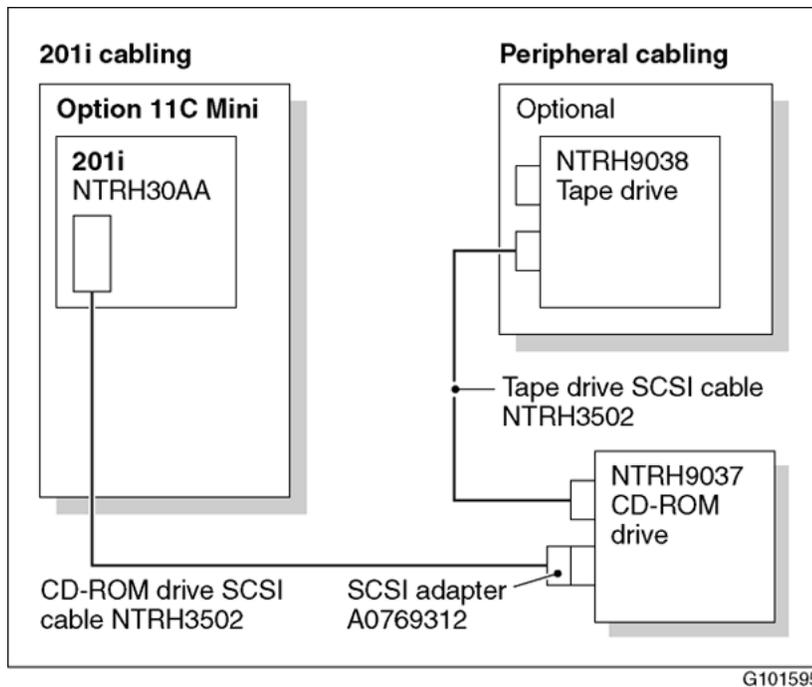
Before you can connect a CD-ROM or tape drive to the 201i server, you must install the NTRH3502 SCSI cable. The NTRH3502 SCSI cable routes the SCSI connection away from the 201i server faceplate so that an external SCSI device can remain permanently connected.

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

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

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 95.

To install the NTRH3502 SCSI cable

1.



Caution:

Risk of equipment damage

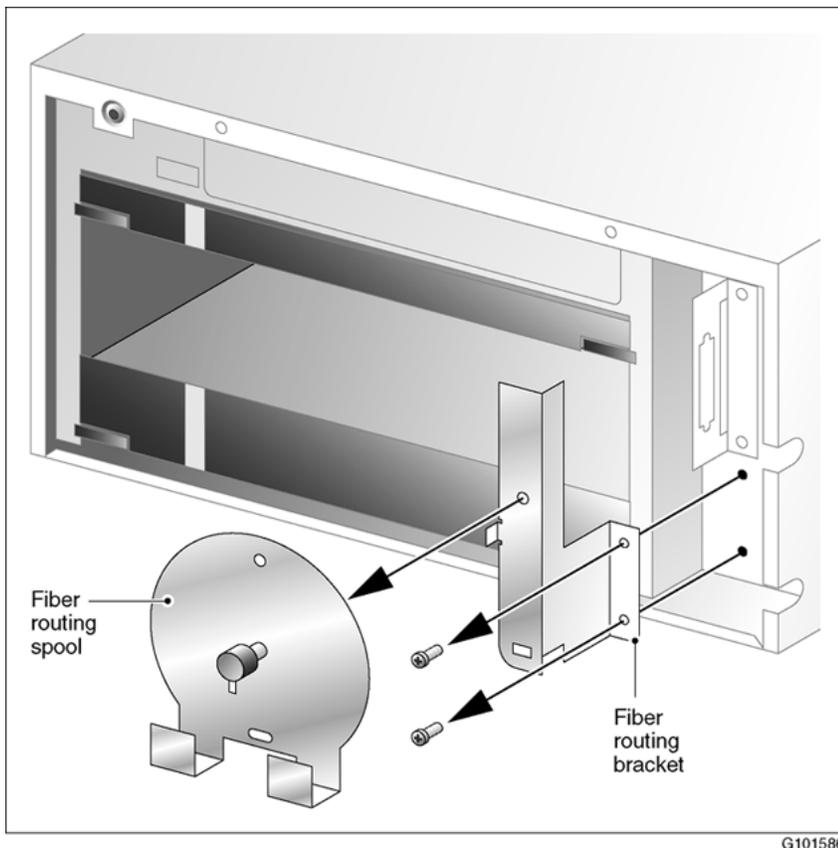
You must power off the 201i server before connecting or disconnecting SCSI cables.

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

*** Note:**

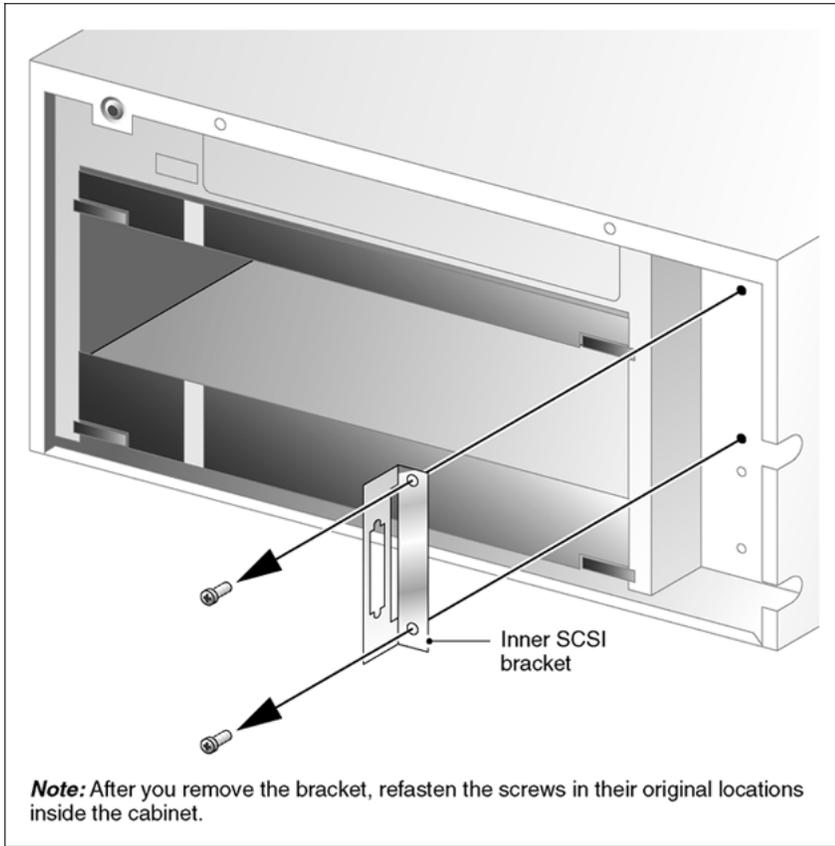
For detailed instructions, refer to the Option 11C and Option 11C Mini Expansion Guide

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 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 drain wire to the top screw that previously held the inner SCSI bracket in place.

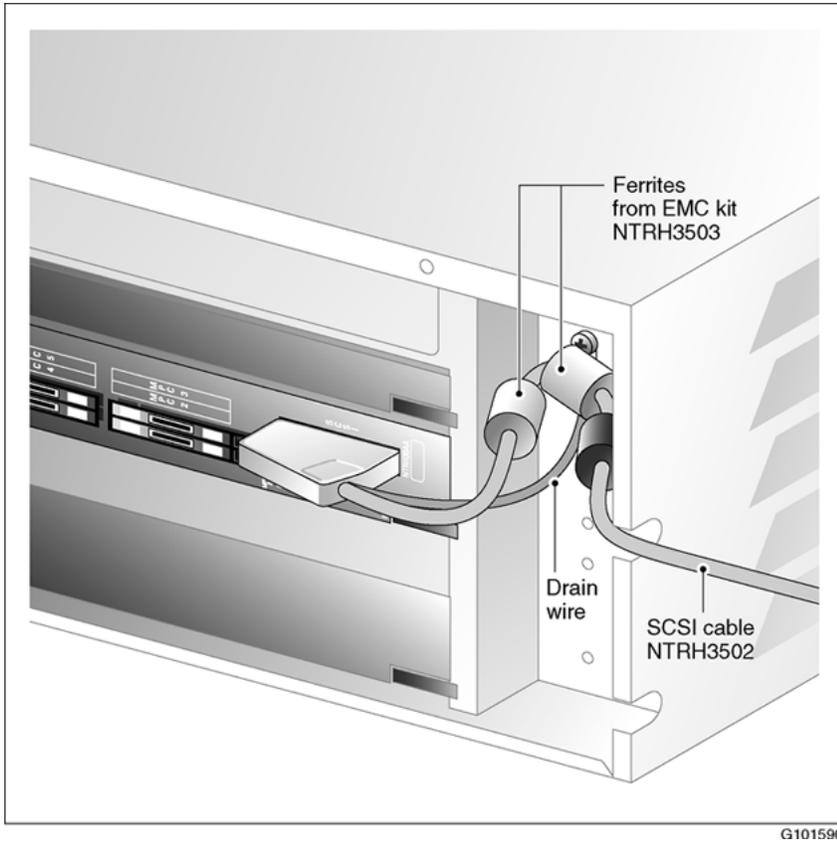


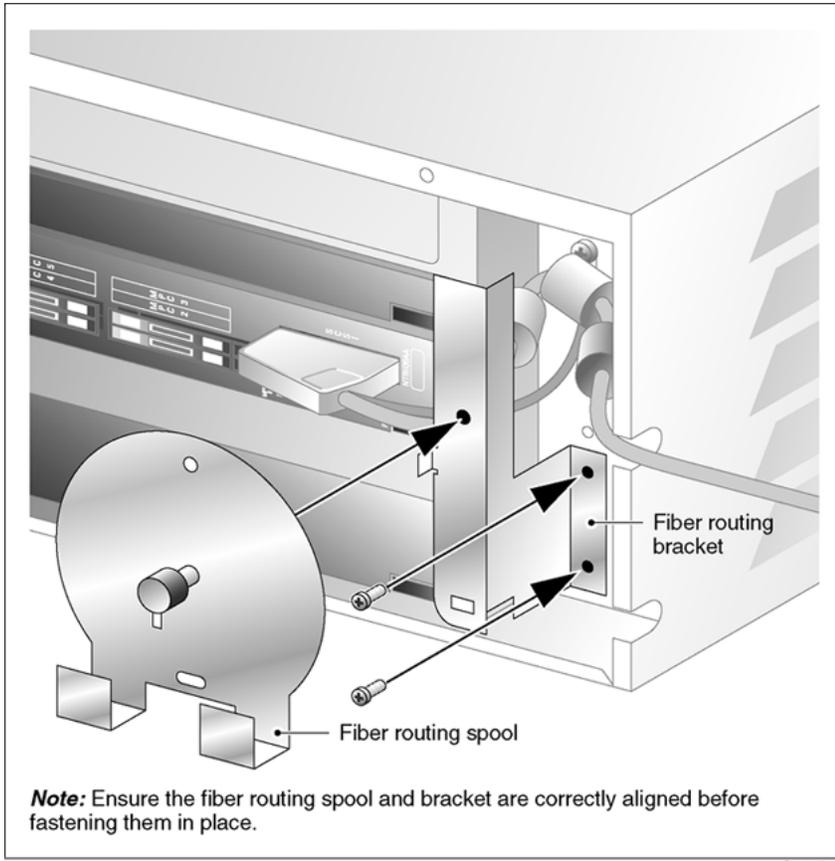
Figure 2: SCSI cable installation to accommodate the Fiber Routing Guide

6. If required, reinstall the Fiber Routing Guide.

*** Note:**

For detailed instructions, refer to the Option 11C and Option 11C Mini Expansion Guide

See the following diagram:



G101591

7. Replace the cabinet cover.

What is next?

Continue with [Installing cables on the back of the Option 11C Mini cabinet](#) on page 71.

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

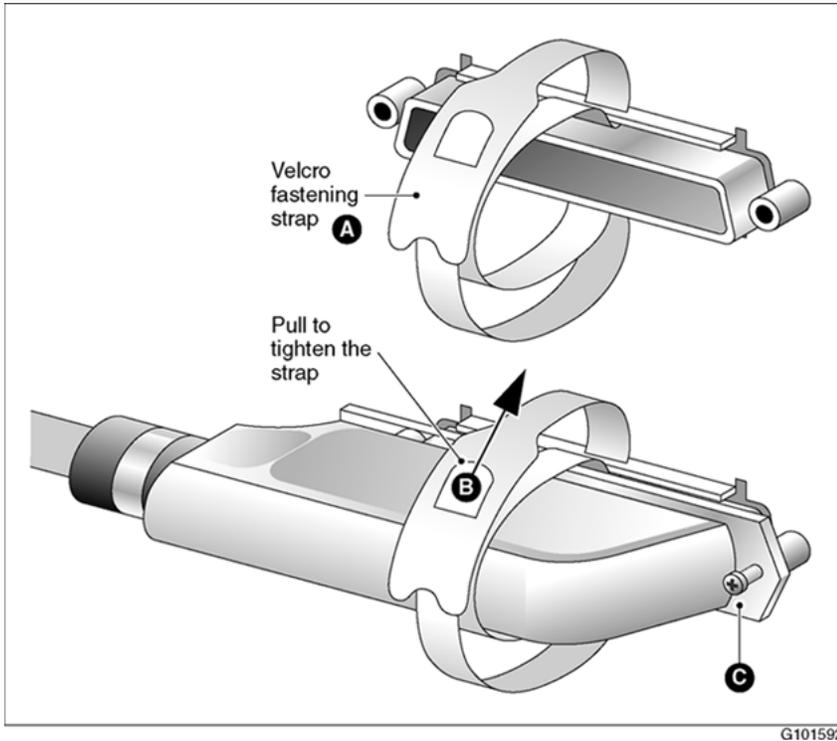
You must connect the multi I/O cable first before connecting the power cord, because the power cord routes over the multi I/O cable connection.

To connect the cables

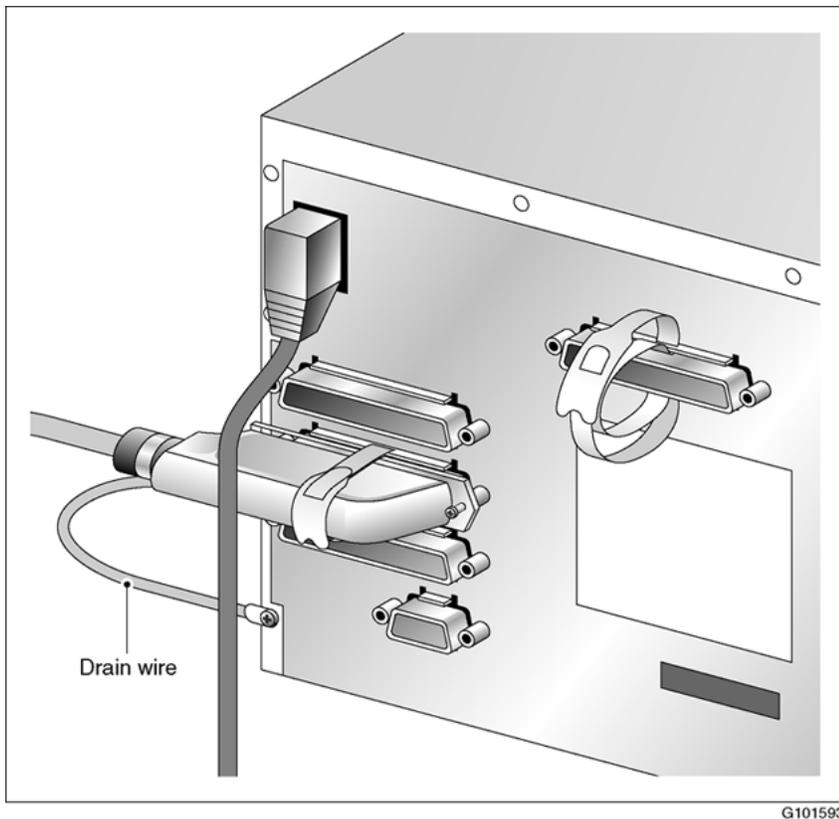
1. On the rear of the Option 11C Mini cabinet, locate the connector associated with the first slot occupied by the 201i server.
2. Connect the NTRH0912 multi I/O cable as follows:
 - a. Loosen the connector's Velcro fastening strap.
 - b. Connect the amphenol connector on the NTRH0912 multi I/O cable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

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

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



3. Attach the multi I/O cable drain wire to a screw on the cabinet.
See the diagram in step [4](#) on page 72.
4. Connect the power cord to the Option 11C Mini cabinet.
See the following diagram:



What is next?

Prepare the modem, CD-ROM drive, and tape drive for connection to the 201i server. For instructions, see [Preparing peripheral devices](#) on page 95.

Chapter 6: Installing the 201i server in the Avaya Communication Server 1000 system

In this chapter

[Communication Server 1000 description](#) on page 75

[Removing the Media Gateway or Media Gateway Expansion cover](#) on page 80

[Installing the 201i server](#) on page 82

[Installing the NTRH3502 SCSI cable for Communication Server 1000](#) on page 85

[Replacing the Media Gateway or Media Gateway Expansion cover](#) on page 88

[Connecting cables to the Communication Server 1000 system](#) on page 91

Communication Server 1000 description

Introduction

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

- Call Server
- Media Gateway
- Media Gateway Expansion

Call Server

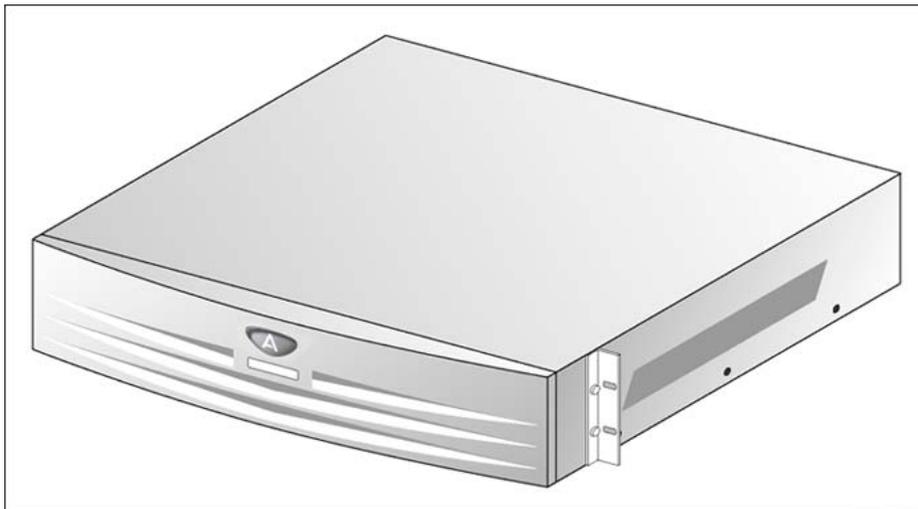
The Call Server provides telephony services and call processing.

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 (Avaya-supplied crossover Ethernet cables)
- one 10Base-T Ethernet connector that
 - provides the ELAN subnet interface to management software applications, such as Optivity Telephony Manager and Avaya 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 telephones, analog telephones, and applications such as Avaya 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:

Unit	The 201i server can be installed in	Ineligible slots
Media Gateway	Slots 1 and 2 Slots 2 and 3 Slots 3 and 4	Slot 0 is dedicated to the SSC card.
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 Communication Server 1000 Planning and Installation Guide

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:

Connector	Media Gateway	Media Gateway Expansion
Four 50-pin amphenol connectors that interface with the cross-connect terminal. The CallPilot 201i server 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 Communication Server 1000 system on page 91.	yes	yes
One auxiliary (AUX) connector	yes	no
One SDI connector	yes	no
One 10Base-T Ethernet connector that <ul style="list-style-type: none"> • provides the ELAN subnet interface to management software applications such as Optivity Telephony Manager and CallPilot • accepts an industry-standard Medium Access Unit (MAU) 	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.

Communication Server 1000 software

For the 201i server, the Communication Server 1000 system must be running Communication Server Release 3.00 (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 Communication Server 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 Communication Server 1000 system. Optivity Telephony Manager operates on a platform that is compatible with a standard Windows PC.

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

Communication Server 1000 documentation

If you need to refer to the following Communication Server 1000 technical documents, they are stored on the Customer Documentation Library CD-ROM (NTLH80BA), provided with your Communication Server 1000 system:

- Communication Server 1000 Planning and Installation Guide



Note:

This guide is also provided in printed format with your Communication Server 1000 system.

- Communication Server 1000 Input/Output X21 Administration
- Communication Server 1000 Input/Output X21 Maintenance

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

1.

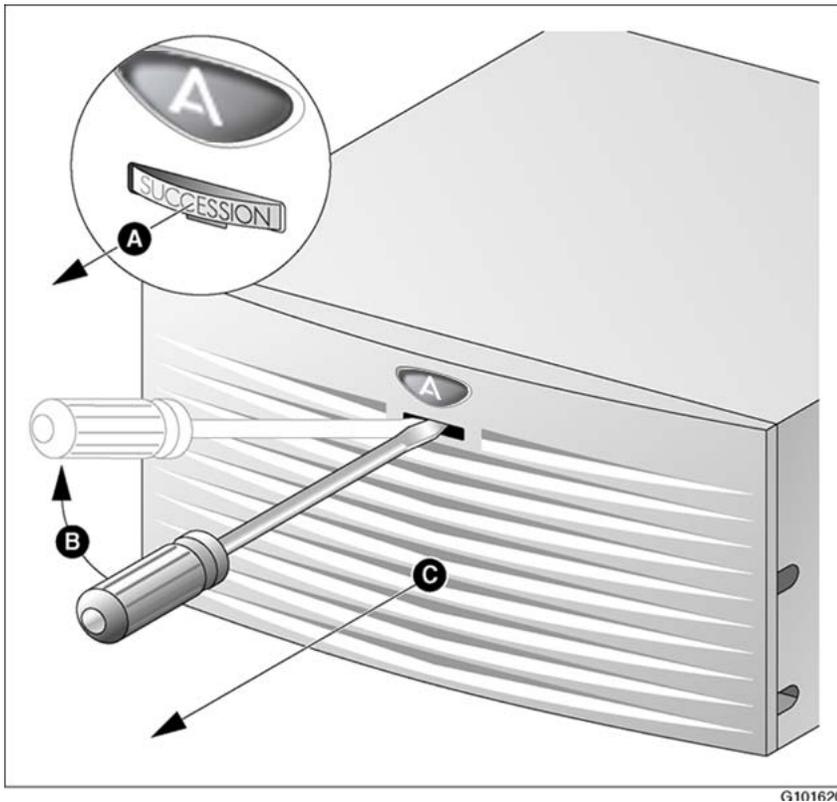


Warning:

Risk of eye injury

Avaya 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.

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

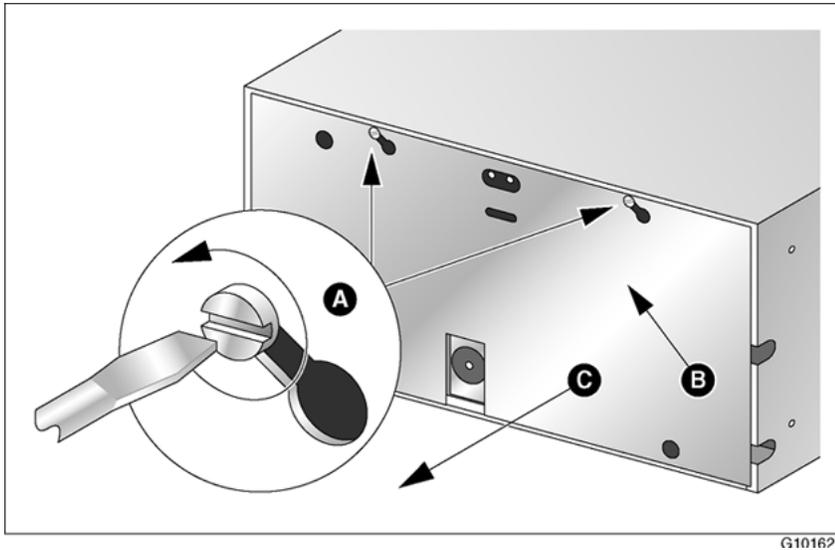


- a. Use a slot screwdriver to gently pry off the label.
- b. Insert the screwdriver approximately 2 cm (0.75 in.) into the open slot, and then gently lift the screwdriver handle, thus applying downward pressure on the tab inside the bezel.

At the same time, gently pull the bezel away from the chassis (approximately 2 cm [0.75 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.

! **Important:**

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 is next?

Continue with [Installing the 201i server](#) on page 82.

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 are to 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 when installed in slots 3 and 4.

For more information about card slots, refer to the Communication Server 1000 Planning and Installation Guide

For the logical slot numbers that you must use when you configure the Communication Server 1000 system, see [Card slots](#) on page 77.

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.

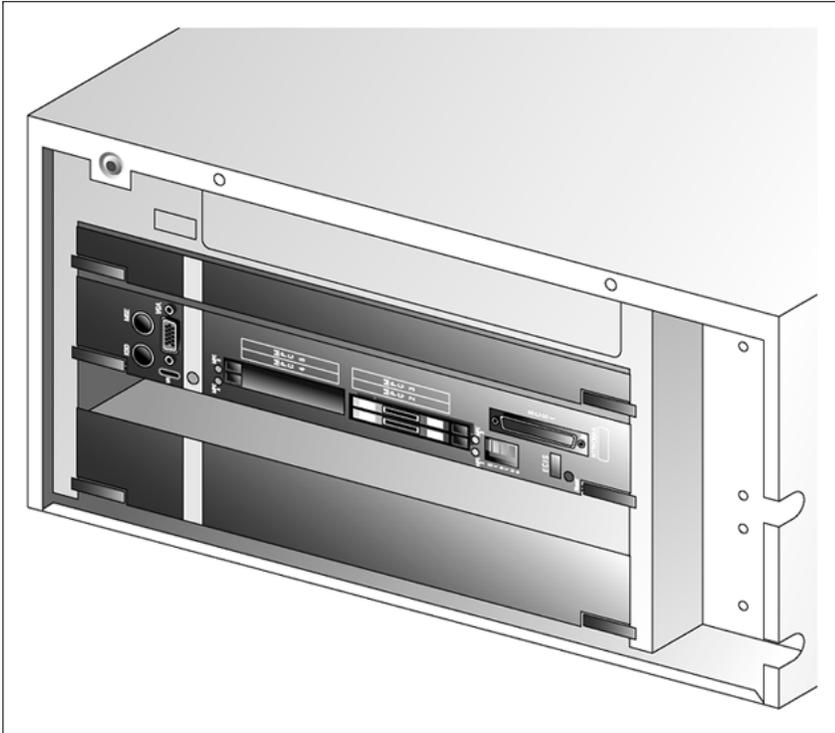
 **Note:**

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 Communication Server 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

! Important:

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 is next?

Continue with [Installing the NTRH3502 SCSI cable for Communication Server 1000](#) on page 85.

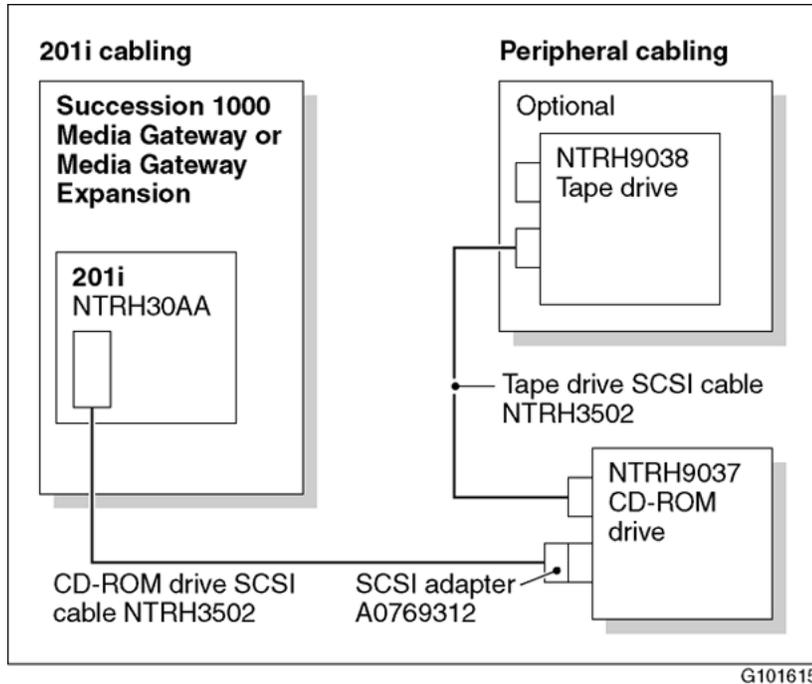
Installing the NTRH3502 SCSI cable for Communication Server 1000

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 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:



*** 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

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 95.

To install the NTRH3502 cable

1.

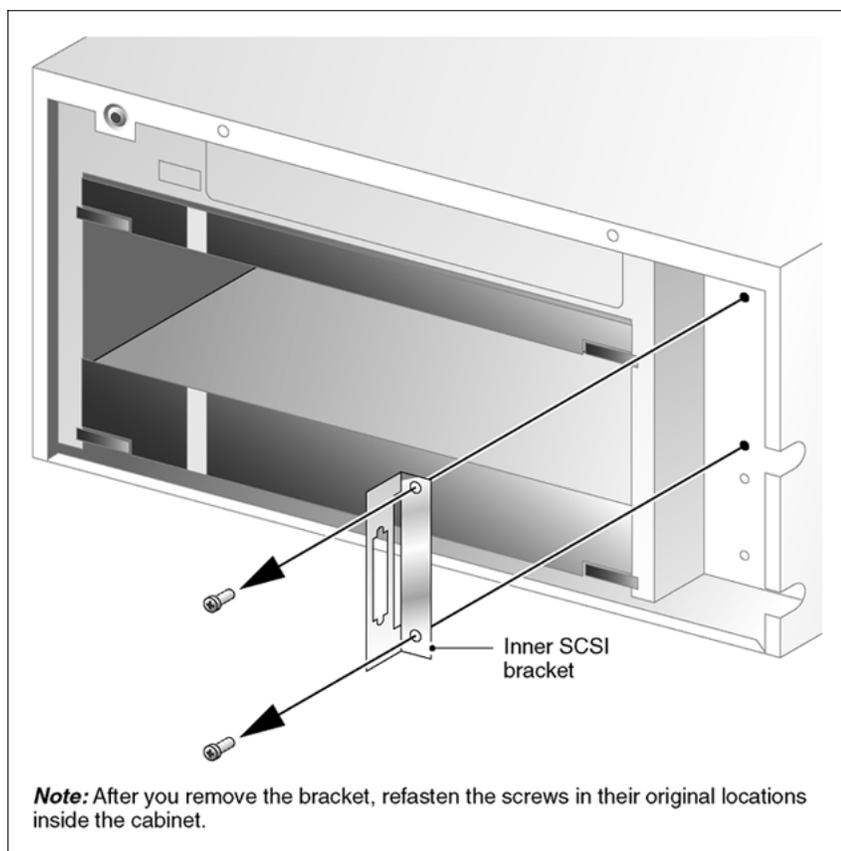
⚠ Caution:

Risk of equipment damage

You must power off the 201i server before connecting or disconnecting SCSI cables.

Remove the inner SCSI bracket from the inside of the Media Gateway or Media Gateway Expansion.

See following diagram.



G101587

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 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 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 Y-connector until it snaps into place around the screw post.

5. Replace the inside front cover plate.

For instructions, see [To replace the inside front cover plate](#) on page 88.

! **Important:**

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.

6. Replace the front bezel.

For instructions, see the appropriate procedure in [Replacing the Media Gateway or Media Gateway Expansion cover](#) on page 88.

What is next?

Continue with [Connecting cables to the Communication Server 1000 system](#) on page 91.

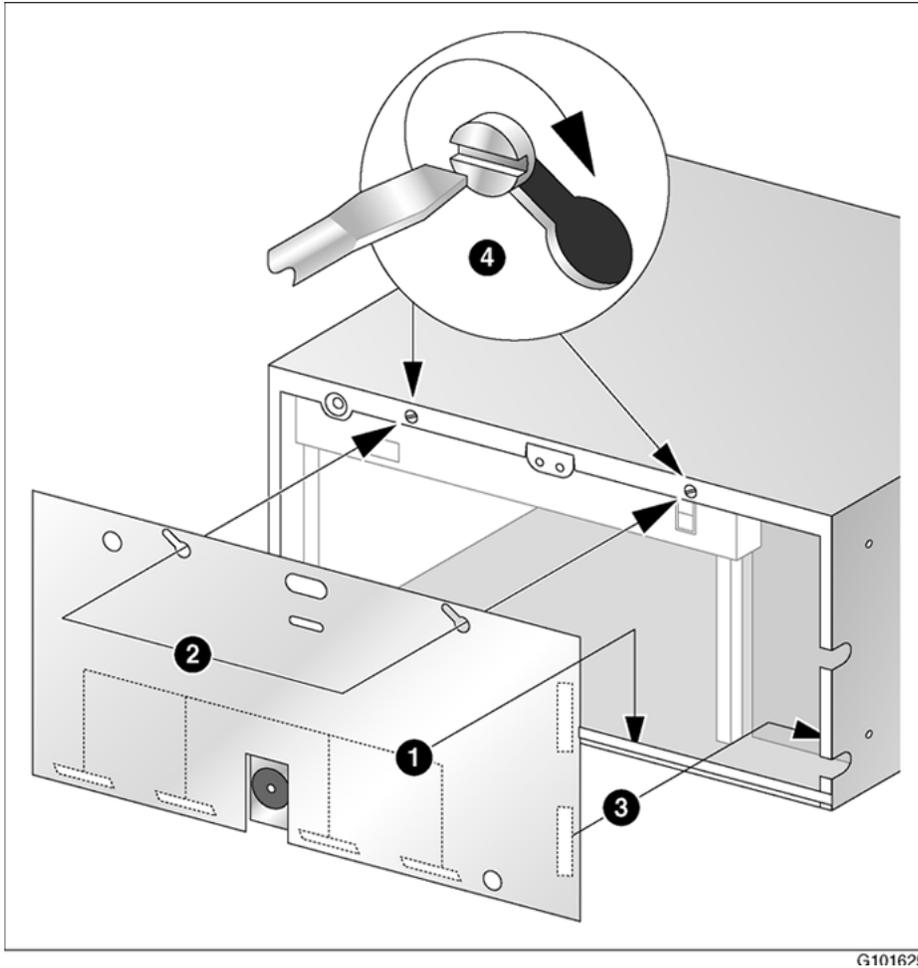
Replacing the Media Gateway or Media Gateway Expansion cover

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:



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](#) on page 89," below.

To replace the front bezel

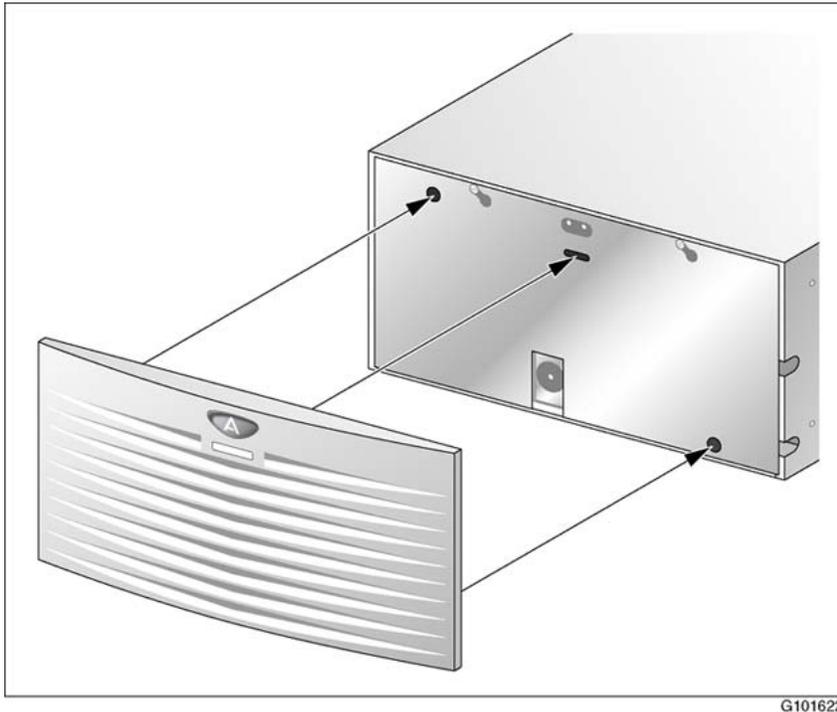
1.

 **Warning:**

Risk of eye injury

Avaya 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.

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



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

What is next?

Continue with [Connecting cables to the Communication Server 1000 system](#) on page 91.

Connecting cables to the Communication Server 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 subnet , and Avaya server subnet.

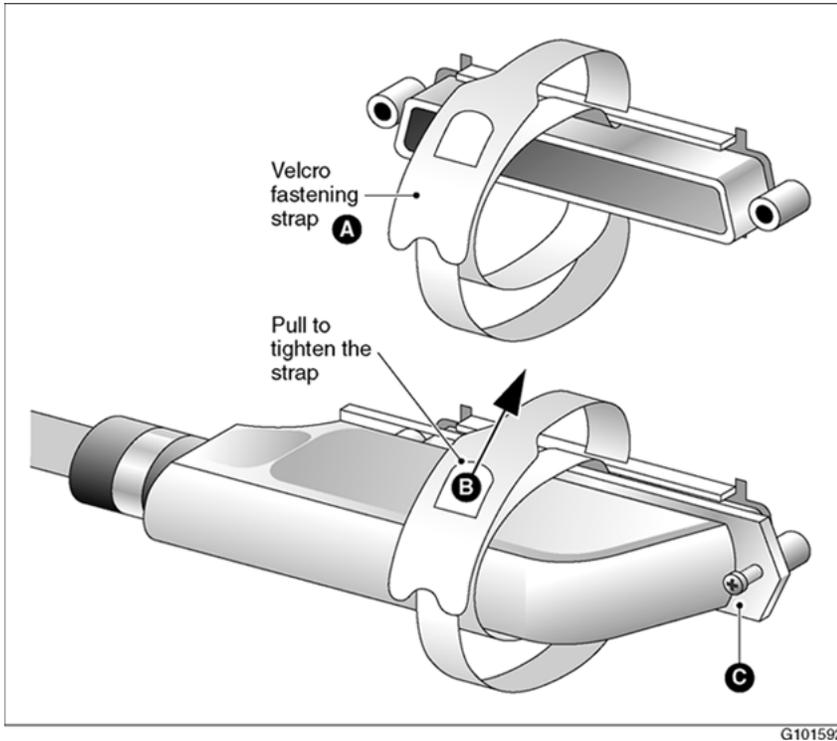
- Media Gateway or Media Gateway Expansion power cord with two ferrites

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.

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 retaining screw and Velcro fastening strap of the conductor.

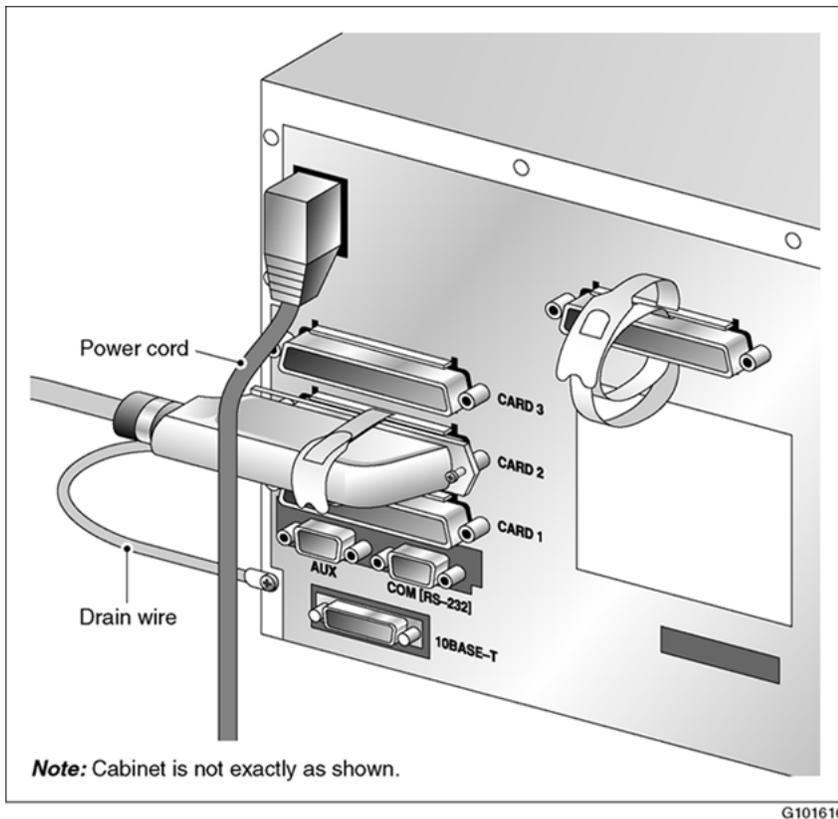
The following diagram shows how to secure the multi I/O cable connection:



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

See the diagram in step [4](#) on page 92.

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



What is next?

Prepare the modem, CD-ROM drive, and tape drive for connection to the 201i server. For instructions, see [Preparing peripheral devices](#) on page 95.

Chapter 7: Preparing peripheral devices

In this chapter

[Overview](#) on page 95

[Setting the modem DIP switches](#) on page 96

[Setting the CD-ROM drive SCSI ID and DIP switches](#) on page 98

[Setting the tape drive SCSI ID](#) on page 100

[Setting SCSI device termination](#) on page 101

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 multi I/O cable.

The SCSI devices are connected to the 201i server 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.



Caution:

Risk of equipment damage

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): 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

Set the modem DIP switches to their default settings. This section describes how to set the modem 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"> • 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.) • ON: Modem ignores DTR (override)
2	OFF	Verbal/numeric result codes <ul style="list-style-type: none"> • OFF: Displays verbal (word) results • ON: Displays numeric results
3	ON	Result code display <ul style="list-style-type: none"> • OFF: Suppresses result codes • ON: Enables result codes
4	OFF	Command mode local echo suppression <ul style="list-style-type: none"> • OFF: Displays keyboard commands • ON: Suppresses echo
5	ON	Auto answer suppression <ul style="list-style-type: none"> • OFF: Modem answers on first ring, or higher if specified in NVRAM • ON: Disables auto answer
6	OFF	Carrier Detect (CD) override <ul style="list-style-type: none"> • OFF: Modem sends CD signal when it connects with another modem; drops CD on disconnect • ON: CD is always ON (override)
7	OFF	Power-on and ATZ reset software defaults

DIP switch	Default setting	Function
		<ul style="list-style-type: none">• OFF: Loads Y or Y1 configuration from user-defined nonvolatile memory (NVRAM)• ON: Loads &F0-Generic template from read-only memory (ROM)
8	ON	AT command set recognition <ul style="list-style-type: none">• OFF: Disables command recognition (dumb mode)• ON: Enables recognition (smart mode)

Setting the CD-ROM drive SCSI ID and DIP switches

Introduction

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



Important:

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 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 arrow to 3.

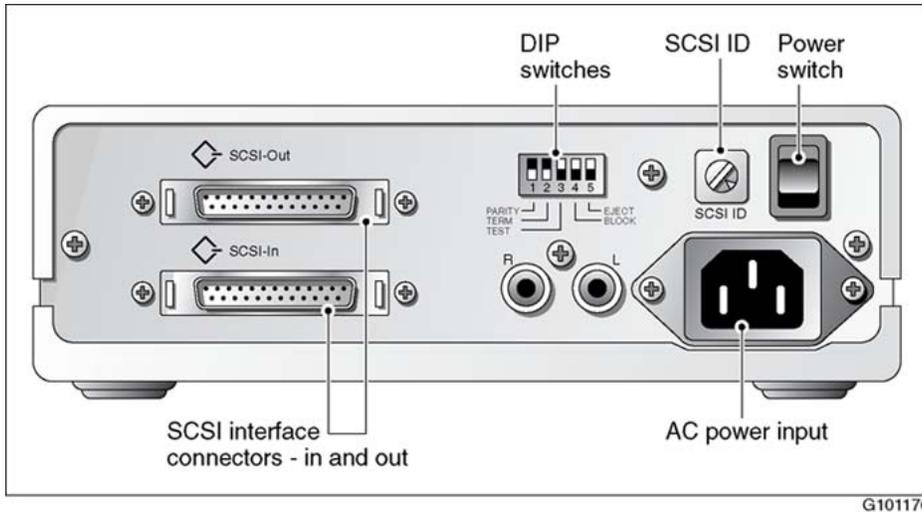


Figure 3:

To set the CD-ROM drive DIP switches

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

DIP switch	Description	Setting
1	Parity	ON
2	Termination	<p>* Note: For more information about daisy chaining SCSI devices, see Setting SCSI device termination on page 101. If the CD-ROM drive is the first and only device, set this switch to ON. 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	OFF
		<p>* Note: 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 is next?

If you are also installing a tape drive, set the tape drive SCSI ID (see [Setting the tape drive SCSI ID](#) on page 100); otherwise, set the CD-ROM drive device termination (see [Setting SCSI device termination](#) on page 101).

Setting the tape drive SCSI ID

Introduction

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

 **Important:**

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.

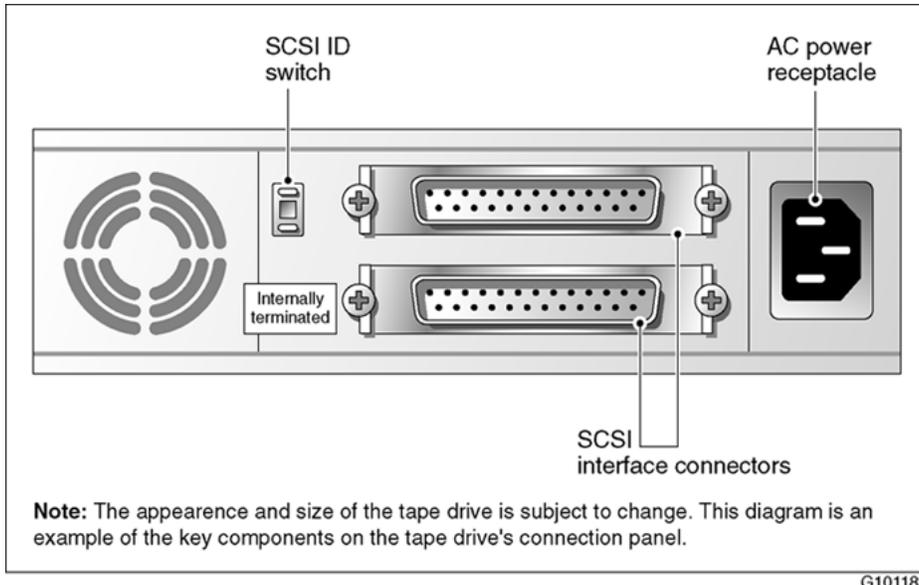
To set the tape drive SCSI ID

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

 **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.



Setting SCSI device termination

Introduction

If you want to connect 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.

! **Important:**

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

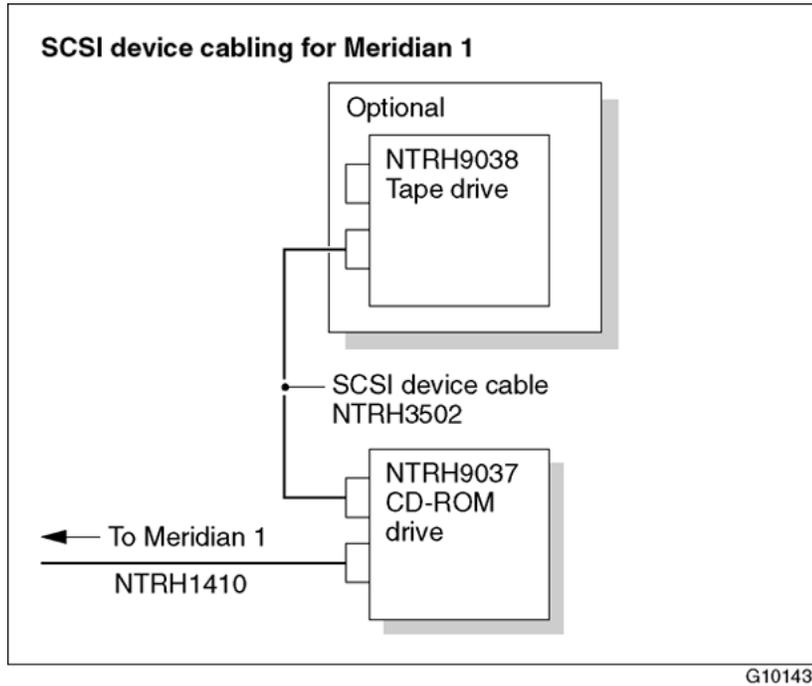
Supported daisy chain connection scenarios

The first device in a SCSI device daisy chain can be either the tape drive or the CD-ROM drive. However, because the Tandberg SLR5 tape drive is already internally terminated at the factory, Avaya 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

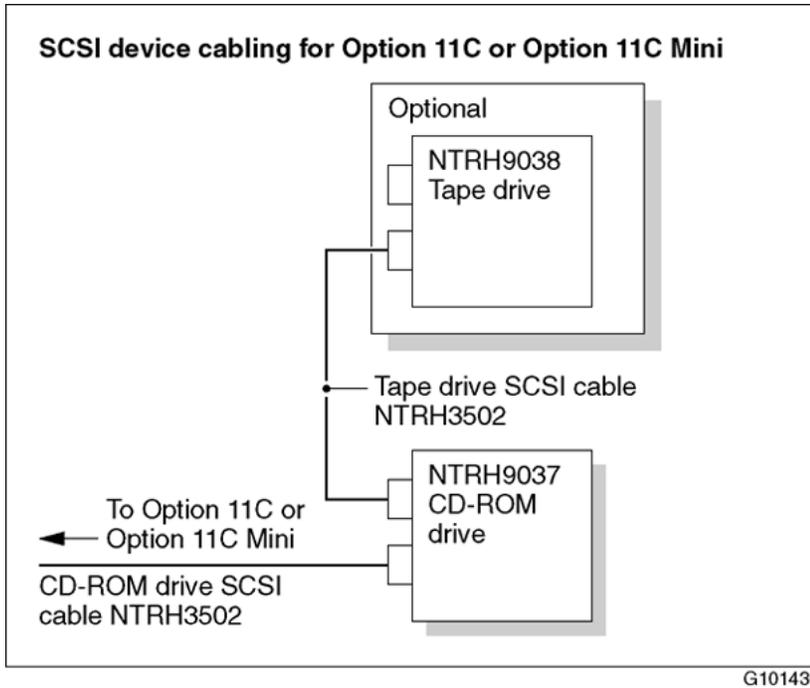
For more information about the cabling requirements, see [Installing the SCSI cables for Meridian 1](#) on page 51.



Option 11C, Option 11C Mini

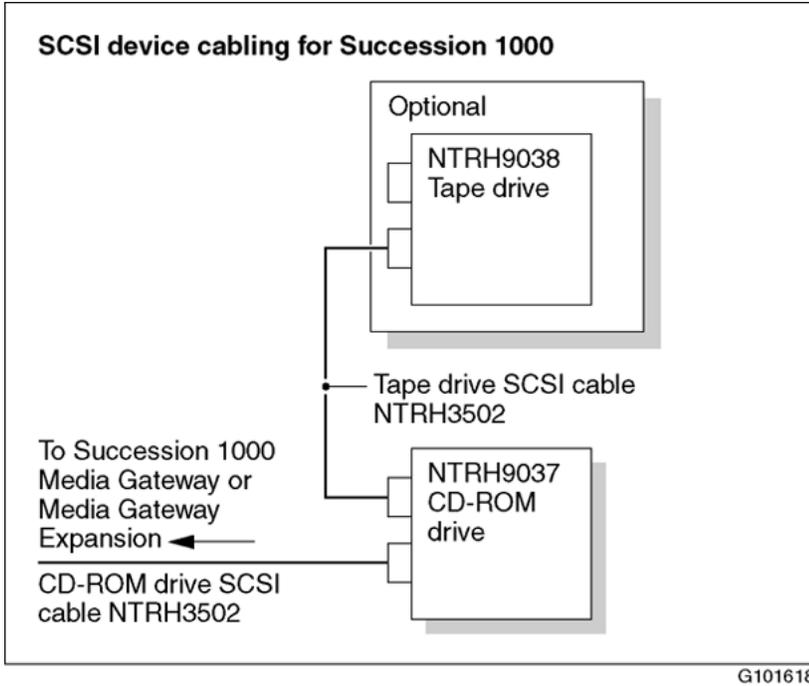
For more information about the cabling requirements, see one of the following:

- [Installing the intermediate SCSI cable for Option 11C](#) on page 60
- [Installing the NTRH3502 SCSI cable for Option 11C Mini](#) on page 65



Communication Server 1000

For more information about the cabling requirements, see [Installing the NTRH3502 SCSI cable for Communication Server 1000](#) on page 85.



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.
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 is next?

Complete the 201i server installation in the switch. See [Connecting peripheral devices to the 201i server](#) on page 107.

Preparing peripheral devices

Chapter 8: Connecting peripheral devices to the 201i server

In this chapter

[Overview](#) on page 107

[Installing the MPCs](#) on page 110

[Installing the monitor, keyboard, and mouse](#) on page 113

[Connecting the CD-ROM and tape drives](#) on page 114

[Connecting the 201i server to the switch, ELAN subnet , and Avaya server subnet](#) on page 121

[Connecting the modem](#) on page 124

[Completing the installation](#) on page 126

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 subnet , Avaya server subnet, and modem connections are established by using the 201i server 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 [Preparing peripheral devices](#) on page 95.

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 subnet or Avaya server subnet.

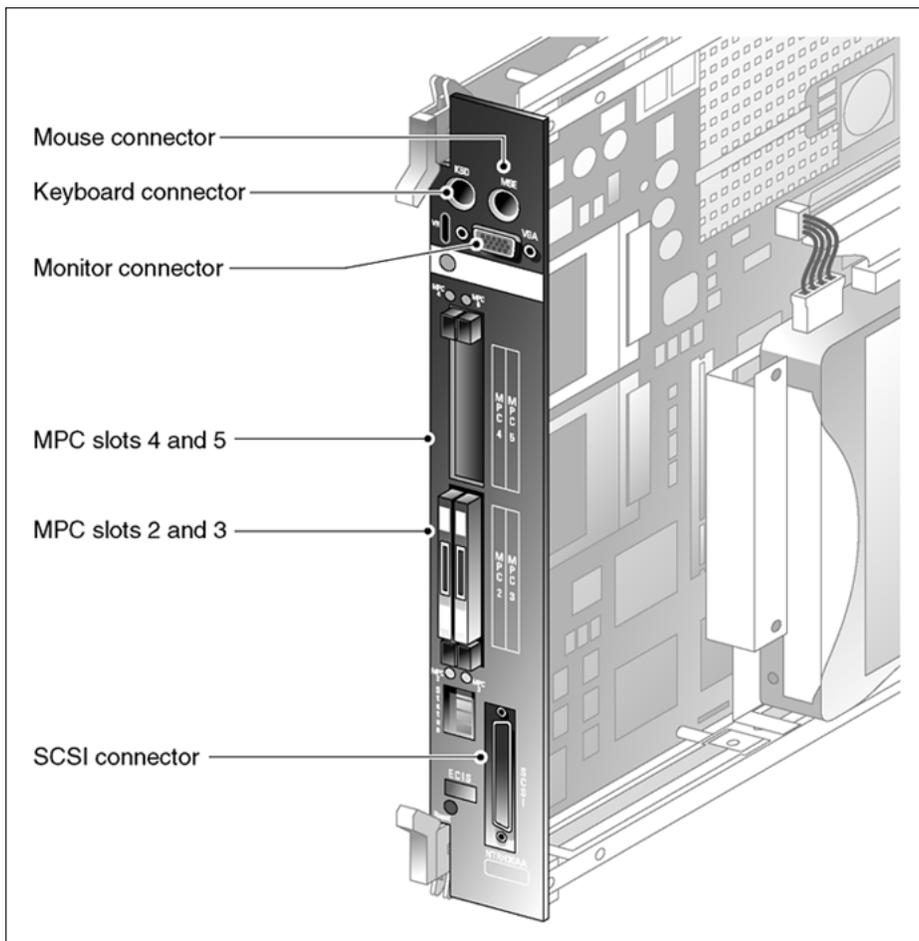
Modem

The modem must be connected to the 201i server if:

- you want to administer the 201i server from a remote location that does not have access to the Avaya server subnet.
- you need assistance from Avaya technical support.

201i server faceplate and peripheral device connectors

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



Starting the 201i server

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

 **Important:**

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 [Setting the modem DIP switches](#) on page 96.
 2. Prepare the SCSI CD-ROM and tape drives. See the following:
 - [Setting the CD-ROM drive SCSI ID and DIP switches](#) on page 98
 - [Setting the tape drive SCSI ID](#) on page 100
 - [Setting SCSI device termination](#) on page 101
-

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

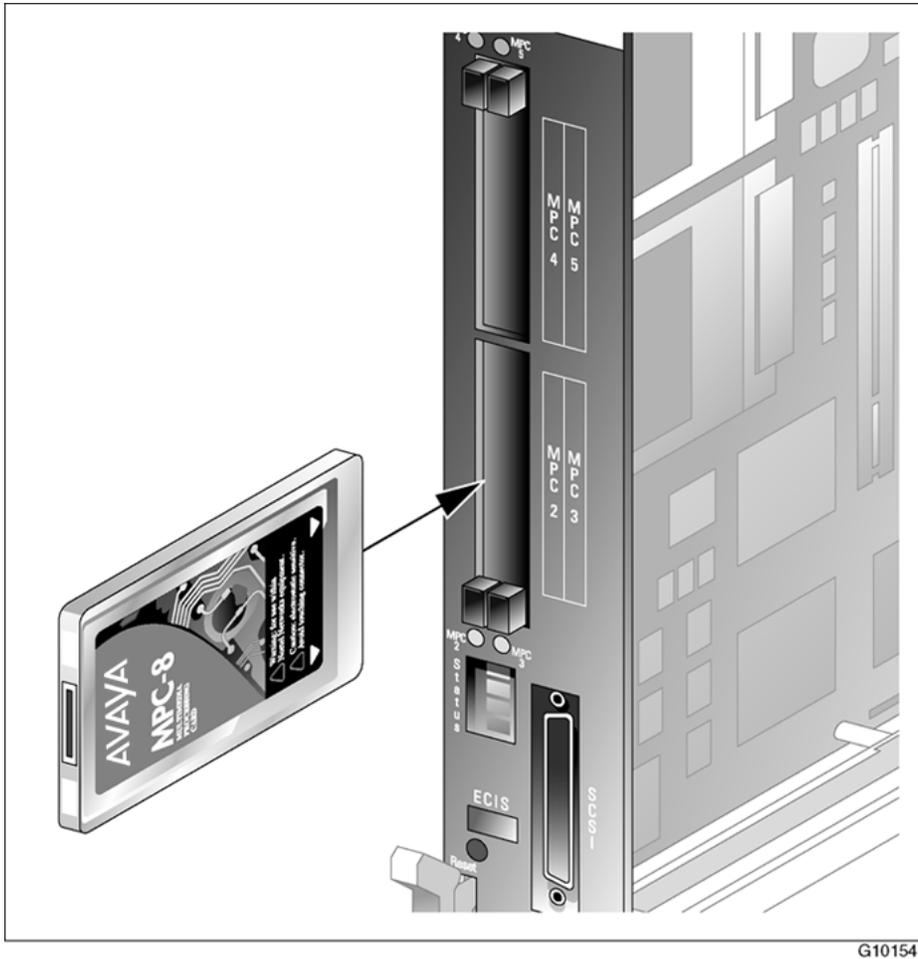
If you force the card into the slot incorrectly, you can damage the MPC-8 card and 201i server.

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 201i shelf (see the following diagram)



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 is next?

Continue with [Installing the monitor, keyboard, and mouse](#) on page 113.

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 subnet or Avaya server subnet.

Hardware requirement



Caution:

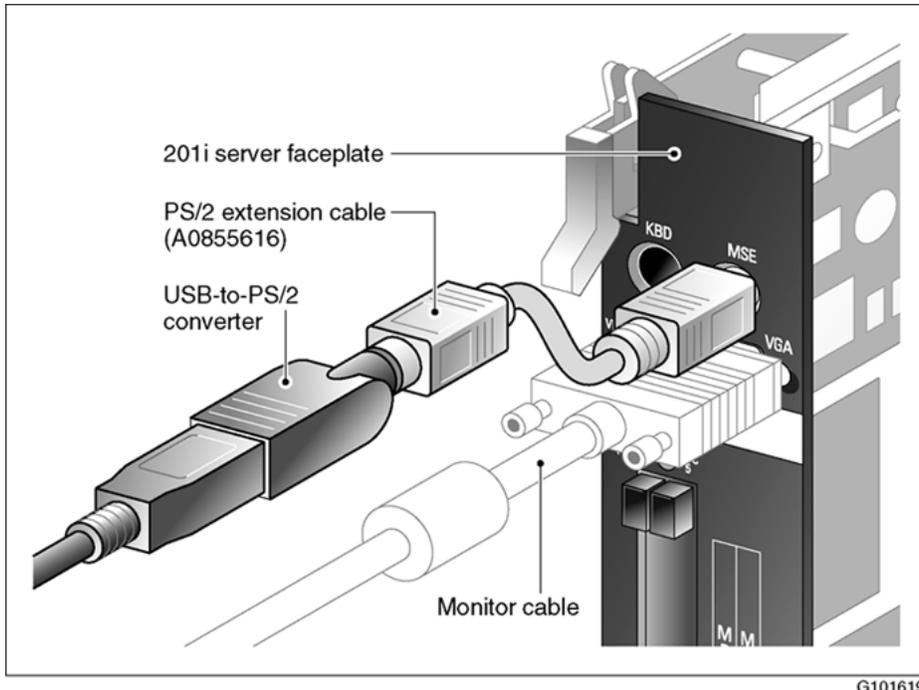
Risk of equipment damage

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

What is next?

Continue with [Connecting the CD-ROM and tape drives](#) on page 114.

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.

For	See
Meridian 1	Installing the SCSI cables for Meridian 1 on page 51.
Option 11C	Installing the intermediate SCSI cable for Option 11C on page 60.
Option 11C Mini	Installing the NTRH3502 SCSI cable for Option 11C Mini on page 65.
Communication Server 1000	Installing the NTRH3502 SCSI cable for Communication Server 1000 on page 85.

2. Set the SCSI ID and device termination settings as described in
 - [Setting the CD-ROM drive SCSI ID and DIP switches](#) on page 98
 - [Setting SCSI device termination](#) on page 101

Selecting the procedure for your switch

IF you are working with	THEN see
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 116.
Option 11C	the corresponding procedure in section To connect the CD-ROM and tape drives to the 201i server (Meridian 1) on page 116.
Option 11C Mini	#unique_195/OptionelevenMini on page 118.
Communication Server 1000	#unique_195/CS1000 on page 120.

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 [To connect the CD-ROM and tape drives to the 201i server \(Option 11C\)](#) on page 117. If you are connecting the SCSI devices to the Option 11C Mini, go to [To connect the CD-ROM and tape drives to the 201i server \(Option 11C Mini\)](#) on page 118.

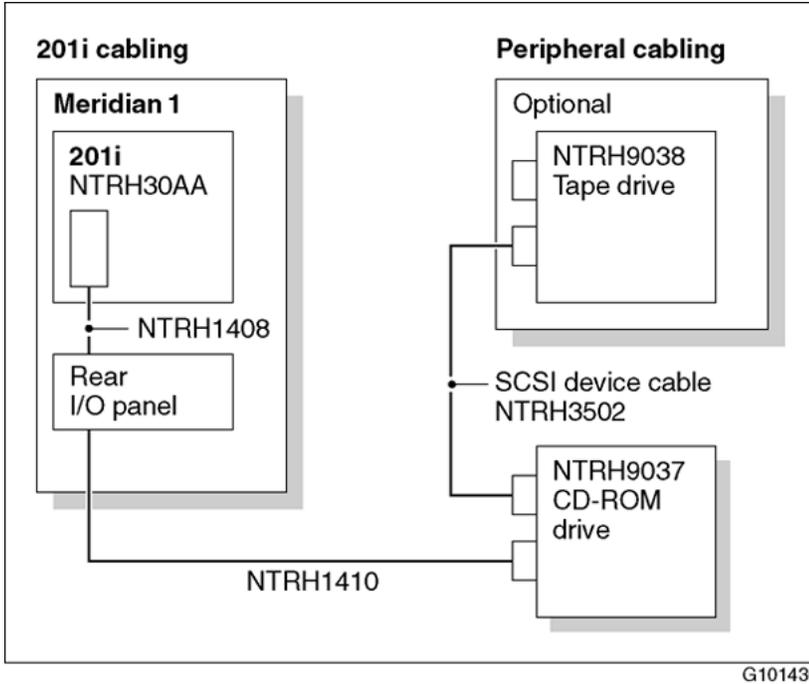
1. Connect the first SCSI device.
2. Follow instructions below:

IF the first device is the	THEN
CD-ROM drive	connect the CD-ROM drive to the NTRH1410 cable that you connected earlier to the Meridian 1 I/O panel.
tape drive	do the following: a. Attach the A0769312 SCSI adapter to the tape drive. b. Connect the SCSI adapter to the NTRH1410 cable that you connected earlier to the Meridian 1 I/O panel.

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

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



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.

5. Connect the power cord for each device.
6. Power up the devices.
7. Continue with [What is next?](#) on page 121.

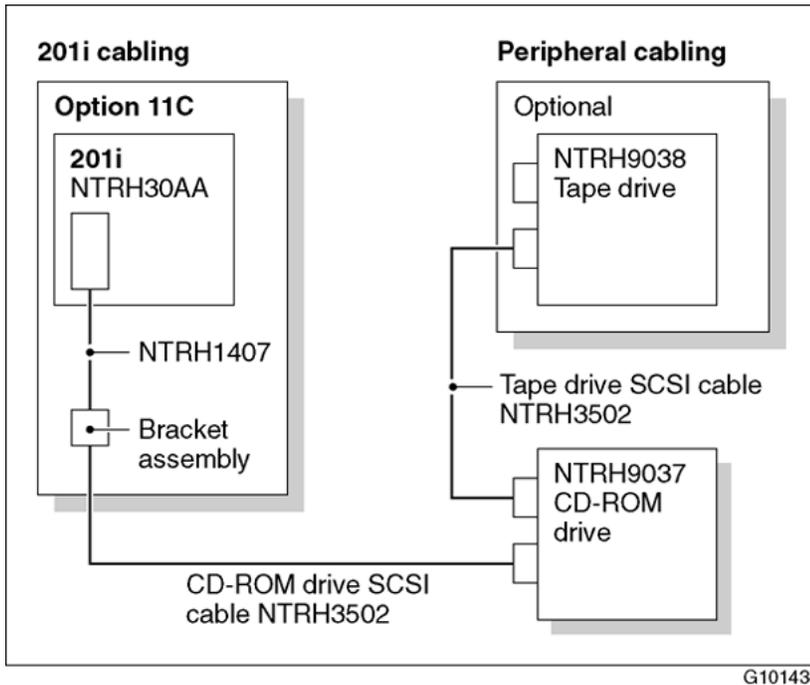
To connect the CD-ROM and tape drives to the 201i server (Option 11C)

1. Connect the first SCSI device.
2. Follow instructions below:

IF the first device is the	THEN
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"> a. Attach the A0769312 SCSI adapter to the tape drive. 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.

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

5. Connect the power cord for each device.
6. Power up the devices.
7. Continue with [What is next?](#) on page 121.

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

1. Connect the first SCSI device.
2. Follow instructions below.

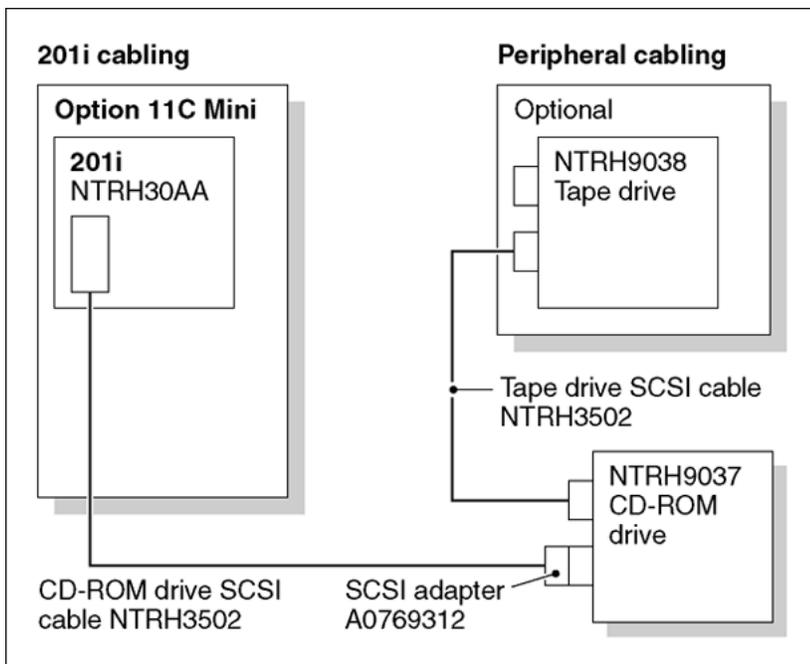
IF the first device is the	THEN
CD-ROM drive	do the following: a. Attach the A0769312 SCSI adapter to the CD-ROM drive.

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

IF the first device is the	THEN
	b. Connect the NTRH3502 SCSI cable that you installed earlier on the Option 11C Mini to the SCSI adapter on the CD-ROM drive.
tape drive	connect the NTRH3502 SCSI cable that you installed earlier on the Option 11C Mini to the tape drive.

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



G101595

*** 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.

5. Connect the power cord for each device.
6. Power up the devices.
7. Continue with [What is next?](#) on page 121.

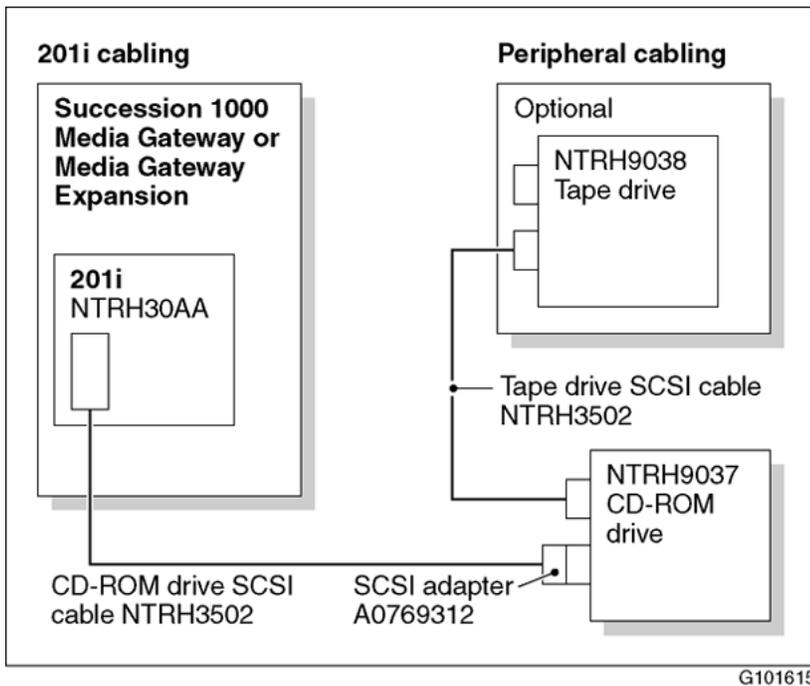
To connect the CD-ROM and tape drives to the 201i server (Communication Server 1000)

1. Connect the first SCSI device.
2. Follow instructions below:

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

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:



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.

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

What is next?

Continue with [Connecting the 201i server to the switch, ELAN subnet , and Avaya server subnet](#) on page 121.

Connecting the 201i server to the switch, ELAN subnet , and Avaya server subnet

Introduction

The Avaya server subnet and ELAN subnet connections are established by using the 201i server multi I/O cable.

 **Important:**

For important considerations about using the ELAN in your network, see the CallPilot Installation and Configuration Task List.

To establish the switch and network connections

1. Do one of the following:

IF you are installing the 201i server in a	THEN
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.
Option 11C Mini or Communication Server 1000	ensure that the 50-pin amphenol connector on the multi I/O cable (NTRH0912) is connected to

IF you are installing the 201i server in a

THEN

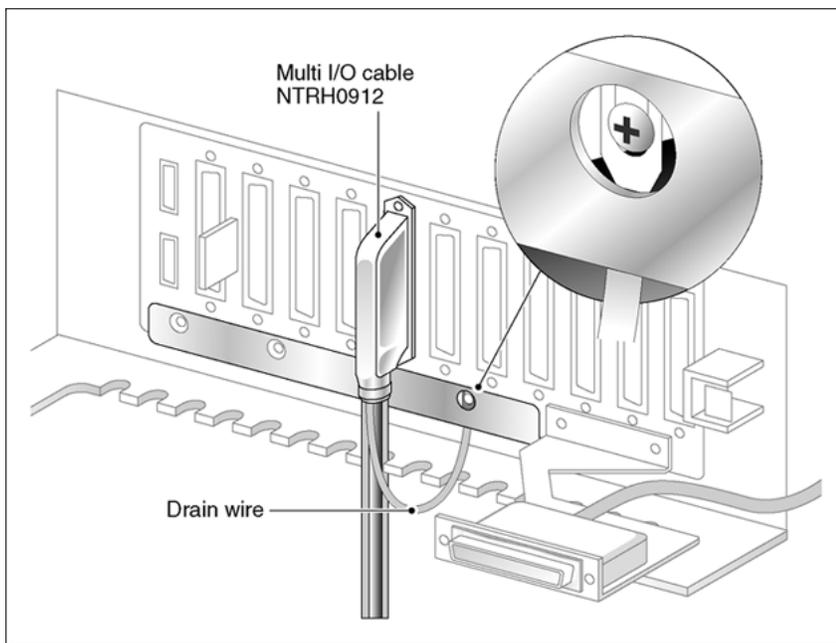
the high-density connector associated with the left slot occupied by the 201i server.

*** Note:**

Ensure that the cable is securely fastened.

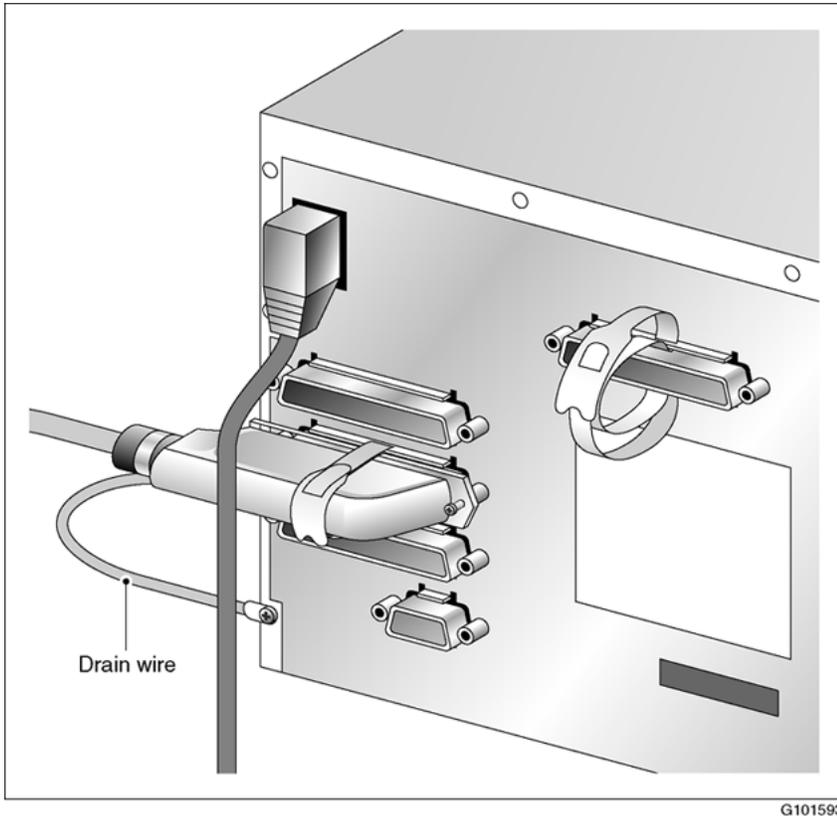
2. If you have not already done so, connect the amphenol connector drain wire as follows:
 - Option 11C or Meridian 1 to the nearest backplane grounding bolt on the switch

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



G101552

- Option 11C Mini or Communication Server 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 network hub or switch.
4. If Avaya server subnet 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 or switch.

What is next?

Continue with [Connecting the modem](#) on page 124.

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 that does not have access to the Avaya server subnet.
- you need assistance from Avaya 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
 - 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; maximum length 15 m (50 ft)
 - 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 96.
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.

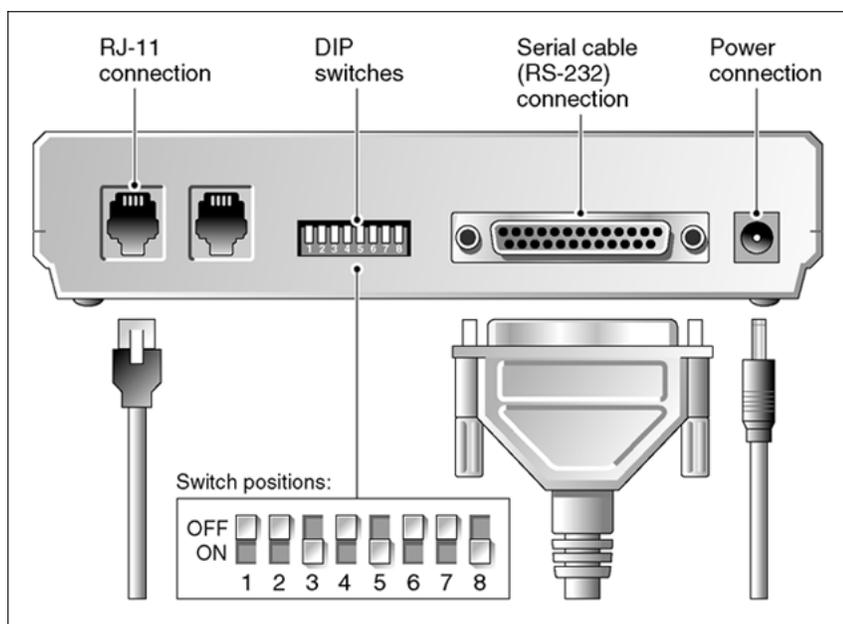
⚠ Caution:

Risk of equipment damage

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

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



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 is next?

Continue with [Completing the installation](#) on page 126.

Completing the installation

Introduction

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



Important:

When connecting the optional Avaya server subnet, do not power up unless your antivirus programs and Avaya security updates are installed first.

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 201i 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.

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

 **Note:**

The system reboots more than once. The HEX display repeats with each reboot.

 **Note:**

Before OK appears, one of the following messages can 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 the CallPilot server maintenance and diagnostics guide for your server for troubleshooting instructions.

6. Ensure that the operating system logon window appears on the monitor.

If the logon window does not appear, refer to the CallPilot <server model> Server Maintenance and Diagnostics guide for your server for troubleshooting instructions.

What is next?

Proceed with the Avaya CallPilot® <switch model> and Avaya CallPilot Server Configuration guide for your switch and server to connect and configure the server and switch.

Connecting peripheral devices to the 201i server

Index

Numerics

201i server

- Communication Server 1000 card slots[77](#), [83](#)
- components, diagram[14](#)
- damaged, what to do[34](#)
- faceplate
 - connections[24](#)
 - description[15](#)
 - diagram[15](#), [109](#)
- inspecting[33](#)
- installation
 - checklist[30](#)
 - prerequisites[34](#)
- installing
 - Communication Server 1000[83](#)
 - large Meridian 1 systems[43](#)
 - Option 11C[57](#)
 - Option 11C Mini[57](#)
- motherboard, description[14](#)
- network setup
 - Communication Server 1000[20](#)
 - Meridian 1[19](#)
- peripheral device connectors, diagram[109](#)
- primary components[14](#)
- relative humidity[18](#)
- reset button[15](#)
- starting[110](#), [126](#), [127](#)
- temperatures[18](#)
- unpacking[32](#)

A

- administration software[79](#)
- attention
 - CD-ROM drive and settings[98](#), [100](#), [101](#)
 - tape drive and settings[98](#), [100](#), [101](#)
 - telephony equipment and their services[62](#)
- Avaya server subnet requirements[22](#), [36](#)

B

- backplane cable (tip and ring)[38](#), [45](#), [48](#), [49](#)
 - establishing connections[49](#)
 - removing from Meridian 1[45](#)

- backplane connector, secondary
 - description[38](#), [40](#)
 - diagram[40](#)
 - installing for Meridian1[41](#), [43](#)
 - reason for moving[39](#)
 - required tools[41](#)
- booting the server[110](#), [126](#), [127](#)

C

- cable, backplane (tip and ring)[38](#), [45](#), [48](#), [49](#)
 - establishing connections[49](#)
 - removing from Meridian 1[45](#)
- cable, multi I/O
 - connections, establishing
 - modem[124](#)
 - network[121](#)
 - switch[121](#)
 - connectors
 - CLAN[22](#)
 - ELAN[22](#)
 - RS-232[22](#)
 - switch[22](#)
 - diagram[22](#)
 - installing
 - Communication Server 1000[121](#)
 - large Meridian 1 system[121](#)
 - Option 11C[121](#)
 - Option 11C Mini[71](#), [121](#)
- cable, SCSI[39](#), [51](#), [53](#), [60](#), [62](#), [65](#), [66](#), [70](#), [85](#), [86](#), [88](#)
 - Communication Server 1000, installing[86](#), [88](#)
 - Meridian 1[39](#), [51](#), [53](#)
 - connections, establishing[53](#)
 - installing[53](#)
 - NTRH1407, diagram[60](#)
 - Option 11C[60](#), [62](#)
 - bracket assembly, installing[62](#)
 - connections, establishing[62](#)
 - installing[62](#)
 - Option 11C Mini[65](#), [66](#), [70](#)
 - installing[66](#), [70](#)
- cabling, SCSI devices
 - Communication Server 1000[103](#)
 - Meridian 1[102](#)
 - Option 11C[102](#)
 - Option 11C Mini[102](#)
- card slots

cabling diagrams			
Communication Server 1000	85, 116		
large Meridian 1 systems	52, 116		
Option 11C	61, 116		
Option 11C Mini	65, 116		
supported	95		
diagrams			
201i server			
components	14		
faceplate	15, 109		
backplane (tip and ring) cable	45, 48, 49		
connections, establishing	49		
removing from Meridian 1	45		
cable installation			
NTRH1408	53		
NTRH1410	53		
NTRH3502			
Communication Server 1000	86		
Option 11C Mini	66		
CD-ROM drive back panel	98		
Communication Server 1000 system			
Call Server	76		
Media Gateway	77		
Media Gateway Expansion	77		
cover removal			
Communication Server 1000	80		
small Meridian 1 systems	57		
cover replacement, Communication Server 1000	88		
drain wire, connecting			
Communication Server 1000	121		
Option 11C	121		
Option 11C Mini	121		
modem connections	124		
mouse, connecting	113		
MPC-8 card, correct installation	111		
multi I/O cable	22		
NTRH3501 cable	48		
power cord installation			
Communication Server 1000	91		
SCSI cable			
Communication Server 1000	86		
large Meridian 1 systems	51, 53		
Option 11C	60, 62		
Option 11C Mini	66		
SCSI device cabling			
Communication Server 1000	85, 116		
large Meridian 1 systems	52, 116		
Option 11C	61, 116		
Option 11C Mini	65, 116		
secondary backplane connector	40		
tape drive, back panel	100		
DIP switches, setting			
CD-ROM drive	99		
modem	97		
distributor	9		
documentation	9, 11		
map	11		
documentation, Communication Server 1000	80		
drain wire, connecting			
Communication Server 1000	121		
Option 11C	121		
Option 11C Mini	121		
<hr/>			
E			
ejector buttons, MPCs	15		
ELAN			
LED	15		
ELAN subnet			
requirements	22, 36		
environmental specifications			
humidity	18		
temperatures	18		
Ethernet hub	27		
<hr/>			
F			
faceplate, 201i server			
connections	24		
description	15		
diagram	15, 109		
peripheral device connectors	109		
fax modem			
connecting	124		
DIP switches, setting	97		
<hr/>			
G			
ground, single point	29		
<hr/>			
H			
hard drive LED	15		
hexadecimal (HEX) display	15		
humidity, 201i server	18		
<hr/>			
I			
IDs, setting SCSI			

CD-ROM drive	98
tape drive	100
infrared port	15
inspecting the 201i server	33
installing	
201i server	
Communication Server 1000 system	83
large Meridian 1 systems	43
overview	30
prerequisites	34
small Meridian 1 systems	57
unpacking	32
MPC cards	111 , 112
NTRH3501 backplane (tip and ring) cable	49
SCSI cable	
Communication Server 1000	86 , 88
Meridian 1	53
Option 11C	62
Option 11C Mini	66 , 70
secondary backplane connector for Meridian 1	41 , 43
intermediate SCSI cable	
diagrams	
Meridian 1 connections, establishing	53
Option 11C	
bracket assembly, installing	62
connections, establishing	62
installing	
on Meridian 1	53
Option 11C	62

K

keyboard	15 , 25 , 27 , 113
connecting	113
connector	15
description	27

L

latches, lock	15
LEDs	
CLAN	15
ELAN	15
hard drive	15
MPC status	15
power status	15
SCSI drive	15
lock latches	15

M

Meridian 1

backplane (tip and ring) cable	
existing cables, removing	45
NTRH3501, installing	49
connection requirements	35
I/O panel connections	38
network setup	19
SCSI cables, installing	53
slot requirements	34
modem	26 , 97 , 124
connecting	124
connections diagram	124
DIP switches, setting	97
monitor	15 , 25 , 27 , 113
connecting	113
connector	15
description	27
motherboard, 201i server	
description	14
mouse	15 , 25 , 27 , 113
connecting	113
connection requirements	113
connector	15
description	27
MPC	
card slots	15
ejector buttons	15
status LEDs	15
MPC-8 card	25 , 111 , 112
caution	111
inserting correctly	111
diagram	111
installing	111 , 112
multi I/O cable	22 , 71 , 91 , 121 , 123 , 124
connections	
modem	124
network	121 , 123
switch	121 , 123
description	
CLAN connector	22
ELAN connector	22
RS-232 connector	22
switch connector	22
installing	
Communication Server 1000	91
large Meridian 1 system	121
Option 11C	121
Option 11C Mini	71

N

network

connections, establishing with multi I/O cable ...	121 , 123
protocols, supported	21
requirements	22 , 34
NTRH0912 cable	22 , 71 , 91 , 121 , 123
connections, establishing	
network	121 , 123
switch	121 , 123
installing	71 , 91 , 121
Communication Server 1000	91
large Meridian 1 system	121
Option 11C	121
NTRH1407 cable	60 , 62
diagram	60
installation diagram	62
installing	62
NTRH1408 cable	44 , 51 , 53
diagram	51
installation diagram	53
installing	53
NTRH1410 cable	51 , 53
installation diagram	53
installing	53
NTRH3501 cable	44 , 48 , 49
diagram	48
installing	49
NTRH3502 cable	65 , 66 , 70 , 85 , 86 , 88
installation diagrams	
Communication Server 1000	86
Option 11C Mini	66
installing	
Communication Server 1000	86 , 88
Option 11C Mini	66 , 70

O

Option 11C Mini	
multi I/O cable, installing	71
power cable	
installing	71
SCSI cable	65
Option 11C, installing intermediate SCSI cable	62

P

part numbers	
CD-ROM drive	26
Ethernet hub	27
keyboard	27
modem	26
monitor	27

mouse	27
tape drive	26
peripheral devices	
CD-ROM drive	26
Ethernet hub	27
keyboard	27
modem	26
monitor	27
mouse	27
tape drive	26
power status LED, description	15
protocols, supported network	21

R

relative humidity, 201i server	18
removing the backplane (tip and ring) cables	45
reseller	9
reset button, description	15
RS-232 connector, multi I/O cable	22

S

SCSI cable	39 , 51 , 53 , 60 , 62 , 65 , 66 , 85 , 86 , 88
Communication Server 1000	86 , 88
Meridian 1	51 , 53
connections, establishing	53
installing	53
NTRH1407, diagram	60
Option 11C	60 , 62
bracket assembly, installing	62
installing	62
Option 11C Mini	65 , 66
installing	66
SCSI connectors	15 , 25
SCSI devices	
cabling diagrams	
Communication Server 1000	85 , 116
large Meridian 1 systems	52 , 116
Option 11C	61 , 116
Option 11C Mini	65 , 116
daisy chain scenarios	
Communication Server 1000	103
Meridian 1	102
Option 11C	102
Option 11C Mini	102
installation, attention	98 , 100 , 101
supported	95
SCSI drive LED	15
SCSI IDs, setting	
CD-ROM drive	98

tape drive	100	slot requirements	34 , 57 , 77 , 83
secondary backplane connector		Communication Server 1000	77 , 83
description	38 , 40	small Meridian 1 systems	57
diagram	40	software	
installing for Meridian 1	41 , 43	administration	79
reason for moving	39	Communication Server 1000 requirements	79
required tools	41	switch	
server, 201i		connection, establishing with multi I/O cable	121 , 123
components, diagram	14	connector, multi I/O cable	22
damaged, what to do	34	requirements	34
faceplate	15 , 109	switches, setting DIP	
inspecting	33	CD-ROM drive	99
installation		modem	97
checklist	30	<hr/>	
prerequisites	34	T	
installing		tape drive	
Communication Server 1000	83	back panel, diagram	100
large Meridian 1 systems	43	connecting	
Option 11C	57	Communication Server 1000	116
Option 11C Mini	57	Meridian 1	116
network setup		Option 11C	116
Communication Server 1000	20	Option 11C Mini	116
Meridian 1	19	description	26
peripheral device connectors, diagram	109	device termination, setting	104
primary components	14	installation, attention	98 , 100 , 101
starting	110 , 126 , 127	setting SCSI ID	100
unpacking	32	temperatures, 201i server	18
setting		tip and ring cable	38 , 45 , 48 , 49
CD-ROM drive DIP switches	99	establishing connections	49
device termination		installing NTRH3501	49
CD-ROM drive	104	removing	45
tape drive	104	removing from Meridian 1	45
modem DIP switches	97	training	9
SCSI IDs		<hr/>	
CD-ROM	98	W	
tape drive	100	warning, working with the switch backplane	45
single-point ground	29		
slot configuration, Communication Server 1000	77		