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Meridian 1

# Option 11C and 11C Mini

## Expansion Guide

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## Revision history

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# About this guide

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## Who should read this guide

The *Option 11C and 11C Mini Expansion Guide* contains information for persons responsible for expanding an existing Option 11C or Option 11C Mini system. The guide covers the installation of a new Option 11C Mini with Expansion chassis.

## How this guide is organized

The information in this guide is organized in the following order:

- “Chapter 1—Overview” on page 9: provides an overview of the available fiber-optic expansion options for Option 11C and Option 11C Mini systems.
- “Chapter 2—Hardware required for fiber expansion” on page 21: describes the main components required for expanding an Option 11C or Option 11C Mini system using Option 11C Mini chassis and fiber-optic connectivity.
- “Chapter 3—Add Expansion cabinets/chassis using fiber-optic connectivity” on page 31: describes how to connect Option 11C Mini Expansion chassis to an Option 11C Mini Primary Main Chassis or an Option 11C Main cabinet using fiber-optic cables.
- “Chapter 4—Install Software” on page 55: This chapter describes installing, modifying, or upgrading system software on a Mini Small System Controller card.

## Related documents

Refer to the following documents for additional information:

- *Option 11C Planning and Installation Guide (553-3021-210)*
- *Option 11C Mini Planning and Installation Guide (553-3201-209)*
- *Option 11C and 11C Mini Upgrade Procedures Guide (553-3021-250)*
- *Option 11C and 11C Mini Technical Reference Guide (553-3011-100)*
- *Option 11C and 11C Mini Fault Clearing Guide (553-3011-500)*
- *Option 11C and 11C Mini Customer Configuration Backup and Restore (553-3011-330)*

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# Chapter 1—Overview

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This chapter provides an overview of the available fiber-optic expansion options for Option 11C and Option 11C Mini systems.

## Option 11C and Option 11C Mini fiber expansion

Both the Option 11C and Option 11C Mini systems support fiber-optic expansion. To expand your system, you require the following three basic components in addition to other hardware:

- Small System Controller (SSC) card
- Fiber Expansion daughterboard
- Fiber Receiver card

*Note:* For a complete list of required hardware, refer to “Chapter 2—Hardware required for fiber expansion” on page 21.

### Small System Controller card

You must install an SSC card, containing Fiber Expansion daughterboards, in slot 0 of the Option 11C Main cabinet or the Option 11C Mini Primary Main Chassis.

### Fiber Expansion daughterboards

You must install Fiber Expansion daughterboards on the SSC card. The SSC (NTDK20CA or later) card supports two daughterboards. The daughterboard configurations supported are as follows:

- two single-port daughterboards
- two dual-port daughterboards
- one dual-port daughterboard in the top connector and one single-port in the bottom connector.

Each single-port daughterboard supports one Expansion cabinet/chassis.  
Each dual-port daughterboard supports up to two Expansion cabinets/chassis.

The Fiber Expansion daughterboards support the following fiber-optic cable solutions:

- 10-meter solution
- 3-kilometer single-mode glass fiber solution
- 3 -kilometer multi-mode glass fiber solution

### **Fiber Receiver card**

You must install a Fiber Receiver card in slot 0 of each Option 11C Expansion cabinet or Option 11C Mini Expansion chassis. Match the correct Fiber Receiver card with the Fiber Expansion daughterboards installed on the SSC card in the Option 11C Main cabinet or the Option 11C Mini Primary Main chassis.

Like the Fiber Expansion daughterboards, the Fiber Receiver cards support the following fiber-optic cable solutions:

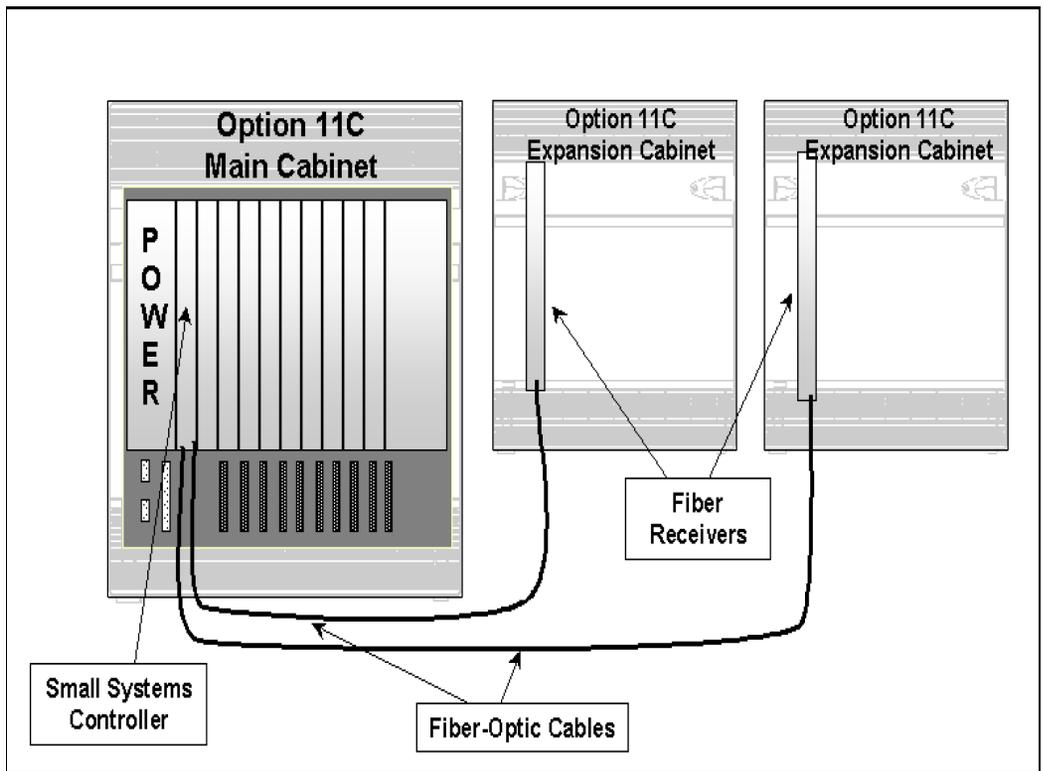
- 10-meter solution
- 3-kilometer single-mode glass fiber solution
- 3 -kilometer multi-mode glass fiber solution

## Option 11C expansion

The Option 11C system can be expanded using fiber-optic connectivity. Figure 1 shows an Option 11C Main cabinet connected to an Option 11C Expansion cabinet. Up to five Option 11C cabinets (one Main cabinet and four Expansion cabinets) can be interconnected in this type of configuration.

*Note:* In Figure 1, the new vintages of the Small System Controller card and the new vintages of Fiber Receiver boards support this fiber-optic configuration. Slots 1 to 10 are available in the Main cabinet. Slots 11 to 20 and 21 to 30 are available in the Expansion cabinets.

**Figure 1**  
Option 11C Main cabinet connected to an Option 11C Expansion cabinet with fiber-optic cable



## Option 11C Mini expander/expansion options

The Option 11C Mini system can be expanded using fiber-optic connectivity. For existing systems, the Mini System Controller (MSC) card must be upgraded to a SSC card (NTDK20EA or later) in the Primary Main Chassis.

Figure 2 shows an Option 11C Mini Main Chassis connected to an Option 11C Mini Chassis Expander with two copper cables. The Chassis Expander expands the number of slots that are available in the Option 11C Mini system. All vintages of the MSC card and vintages NTDK20EA or later of the SSC card support the Chassis Expander off the Main Chassis.

**Note:** In Figure 2, slots 0 to 4 are available in the Main Chassis. Slot 4 is designed to contain the NTDK16 48-port Digital Line card. This card is equivalent to three NT8D02 Digital Line Cards (slots 4 to 6). Slots 7 to 10 are available in the Chassis Expander.

**Figure 2**  
Option 11C Mini Main Chassis connected to a Chassis Expander

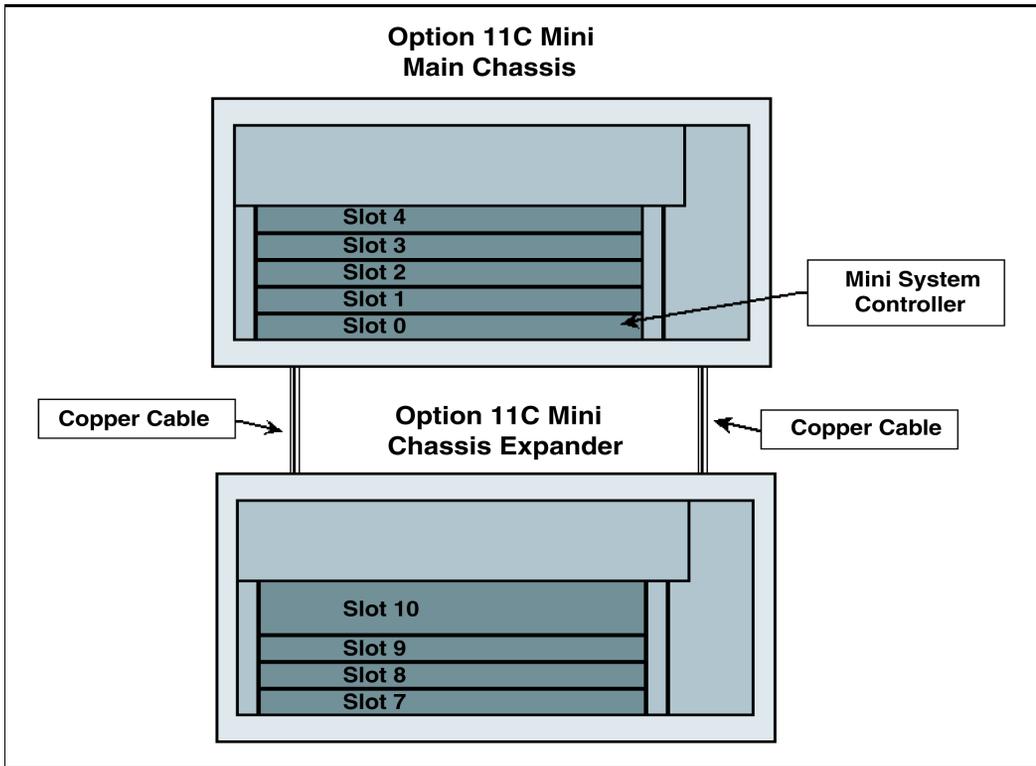


Figure 3 shows an Option 11C Mini Primary Main Chassis connected to an Option 11C Mini Expansion Chassis. The SSC card (NTDK20BA or later) is required for fiber-optic connectivity for up to two Expansion Chassis. The SSC card (NTDK20CA or later) is required for up to four Expansion Chassis. The addition of a Chassis Expander off of the Main Chassis requires a NTDK20EA or later SSC card. The addition of a Chassis Expander off the Expansion Chassis requires Fiber Receiver card: NTDK23BA, NTDK25BB, NTDK80BA or later versions.

**Note:** In Figure 3, slots 0 to 4 are available in the Primary Main Chassis. Slots 4 and 14 contain the NTDK16 48-port Digital Line card. Slots 11 to 14 are available in the Expansion chassis. Slot 0 in the Expansion chassis contains the Fiber Receiver card.

**Figure 3**  
Option 11C Mini Primary Main cabinet connected to an Option 11C Mini Expansion chassis

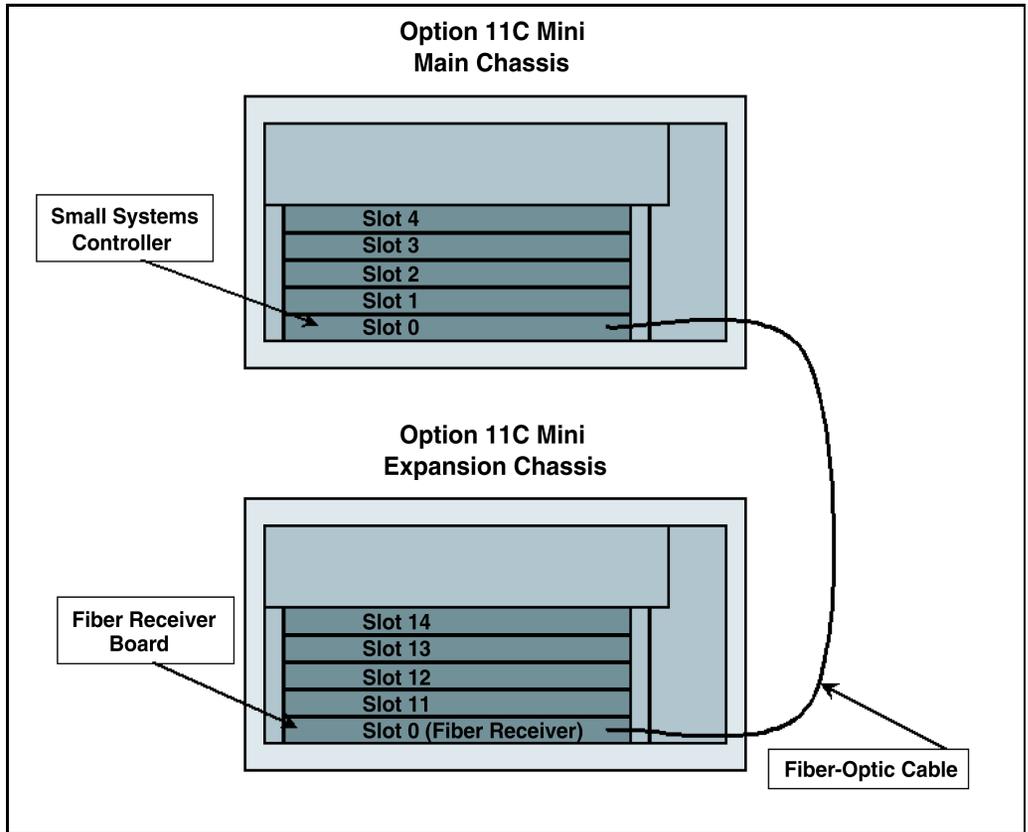


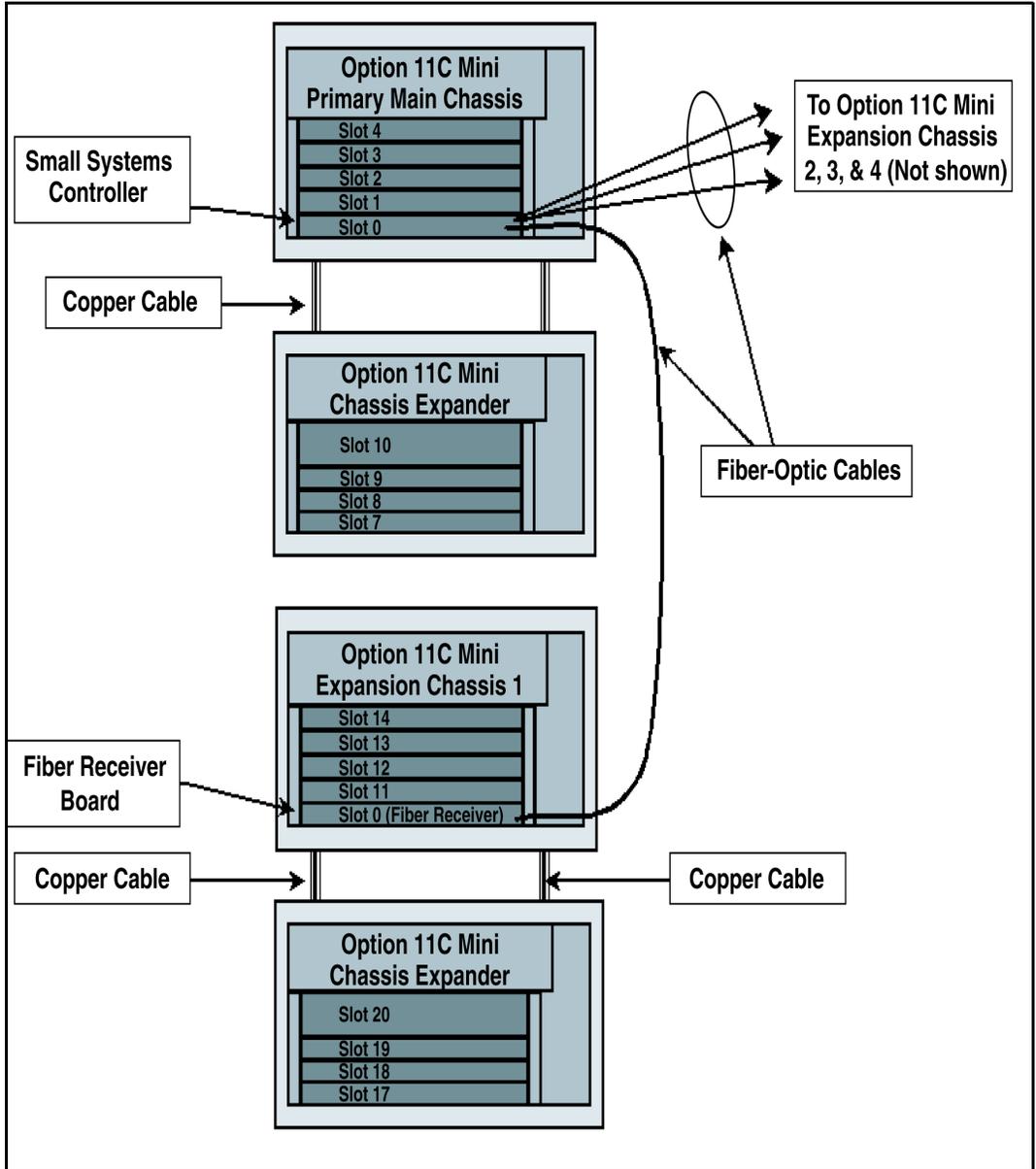
Figure 4 on page 15 shows an Option 11C Mini configuration in which the Primary Main Chassis is connected to the Expansion Chassis with fiber-optic cable. The Primary Main Chassis in this configuration is equipped with a Chassis Expander. Therefore, the SSC card (NTDK20EA or later) is required to support the Chassis Expander connected to the Primary Main Chassis.

Expansion Chassis 1 in this configuration is equipped with a Chassis Expander. Therefore, the Fiber Receiver card must be one of the following:

- NTDK23BA or later
- NTDK25BB or later
- NTDK80BA or later

*Note:* In Figure 4, slots 0 to 4 are available in the Primary Main Chassis. Slot 4 contains the NTDK16 48-port Digital Line card. Slots 7 to 10 are available in the Chassis Expander. Slots 11 to 14 are available in Expansion chassis 1. Slot 0 in Expansion chassis 1 contains the Fiber Receiver card and slot 14 contains the NTDK16 48-port Digital Line card. Slots 17 to 20 are available in the Chassis Expander 1.

Figure 4  
Option 11C Mini fiber-optic expansion configuration including Chassis Expander.



## Option 11C and Option 11C Mini mix-and-match expansion

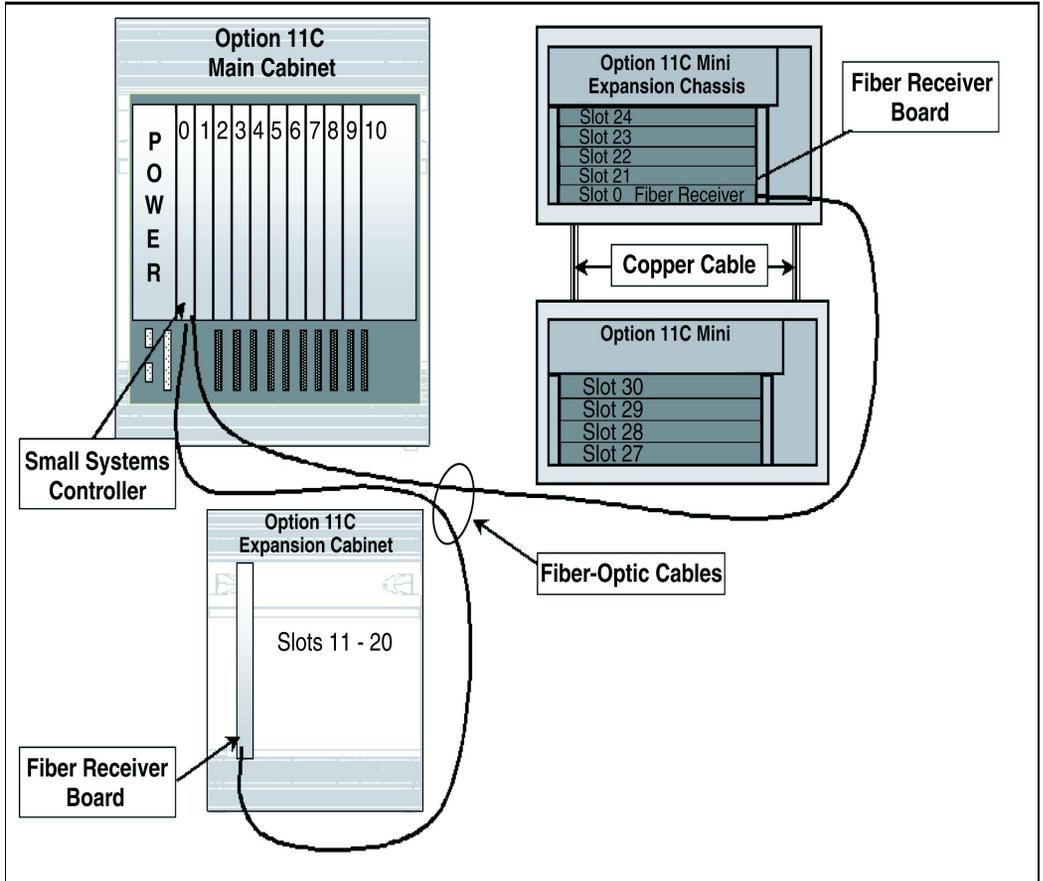
Figure 5 on page 17 shows a “mix-and-match” configuration in which an Option 11C Main cabinet is connected to Option 11C Mini Expansion chassis and Option 11C Expansion cabinets. The SSC card used in the Option 11C Main Cabinet can be NTDK20BA or later. The Option 11C Expansion Chassis is equipped with a Chassis Expander. The addition of a Chassis Expander to Expansion Chassis requires one of the following Fiber Receiver cards:

- NTDK23BA or later
- NTDK25BB or later
- NTDK80BA or later

**Note 1:** In the “mix-and-match” configuration, the recommendation is to have the Option 11C configured as the main cabinet. The Option 11C main cabinet provides nine card slots for cards requiring CE-MUX whereas the Option 11C Primary Main Mini Chassis provides three slots.

**Note 2:** In Figure 5, slots 0 to 10 are available in the Main cabinet and slots 11 to 20 are available in the Expansion cabinet. Slots 21 to 24 are available in the Expansion chassis. Slot 0 in the Expansion chassis contains the Fiber Receiver card and in slot 24 the NTDK16 48-port Digital Line card. Slots 27 to 30 are available in the Chassis expander.

**Figure 5**  
**Option 11C and Option 11C Mini mix-and-match expansion configuration**



## Terminology used in this guide

The following sections describe the various chassis and cabinets that are used in a fiber-optic expansion configuration:

### Option 11C Mini Main Chassis

The main chassis for the Option 11C Mini System is the NTDK91. The NTDK91 is referred to as the Option 11C Mini Main Chassis. In a fiber-optic configuration, the NTDK91 can be used as the Option 11C Primary Main Chassis (See “Option 11C Mini Primary Main Chassis” on page 18) or as an Option 11C Mini Expansion chassis (See “Option 11C Mini Expansion chassis” on page 19).

Whether the Option 11C Mini Main Chassis is used as a Primary Main Chassis or as an Expansion Chassis, it can be connected to an Option 11C Mini Chassis Expander with two NTDK95 copper cables. Figure 2 on page 12 contains a Option 11C Mini Main Chassis.

### Option 11C Mini Chassis Expander

To increase the line capacity of your system, the Option 11C Mini Main Chassis can be connected to an NTDK92 Option 11C Mini Chassis Expander.

In a fiber-optic expansion configuration, the Chassis Expander does not require an SSC card with fiber daughterboards or a Fiber Receiver card. The slots in the Chassis Expander are for IPE cards. In slot 10, you can also install the double-width Meridian Mail card. Figure 2 on page 12 contains a Option 11C Mini Chassis Expander.

### Option 11C Mini Primary Main Chassis

In a fiber-optic expansion configuration, the NTDK91 Option 11C Mini Main Chassis can be used as the Option 11C Mini Primary Main Chassis. The Primary Main Chassis requires an NTDK20EA or later SSC card with Fiber Expansion daughterboards. Install the SSC card in slot 0. Figure 3 on page 13 contains an Option 11C Mini Primary Main Chassis.

Fiber-optic cable connects the SSC card in the Primary Main Chassis to the Fiber Receiver card in each Option 11C Mini Expansion chassis.

The Option 11C Mini Primary Main Chassis can connect to an NTDK92 Chassis Expander with two NTDK95 copper cables.

## **Option 11C Mini Expansion chassis**

In a fiber-optic expansion configuration, the NTDK91 Option 11C Mini Main Chassis can function as an Expansion chassis. You must install a Fiber Receiver card in slot 0 of the Expansion chassis. Fiber-optic cable connects the Fiber Receiver card to the SSC card in the Primary Main Chassis. Figure 3 on page 13 contains a Option 11C Mini Expansion chassis.

## **Option 11C Main cabinet**

The NTAK11 Option 11C Main cabinet requires an NTDK20AB or later SSC card with Fiber Expansion daughterboards. Install the SSC card in slot 0. The NTAK11 cabinet can be used as the Main cabinet when it contains the SSC card. The NTAK11 can also be used as an Expansion cabinet. Figure 1 on page 11 contains a Option 11C Main Cabinet.

## **Option 11C Expansion cabinet**

In a fiber-optic expansion configuration, the NTAK11 Option 11C cabinet can function as an Expansion cabinet. You must install a Fiber Receiver card in slot 0 of the Expansion cabinet. Fiber-optic cable connects the Fiber Receiver card to the SSC card in the Option 11C Main cabinet. Figure 1 on page 11 contains a Option 11C Expansion cabinet.



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## Chapter 2—Hardware required for fiber expansion

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This chapter describes the main components required for expanding an Option 11C or Option 11C Mini system using Option 11C Mini chassis and fiber-optic connectivity.

For information about Option 11C Mini equipment not described in this guide, refer to the *Option 11C Mini Planning and Installation Guide (553-3021-209)*. For information about Option 11C equipment not described in this chapter, refer to the *Option 11C Planning and Installation Guide (553-3021-210)*.

Table 1 summarizes the hardware required to expand your system using Option 11C Mini chassis.

**Table 1**  
**Hardware required for expanding your system using Option 11C Mini chassis and fiber-optic connectivity**

Code	Item	Description
NTDK20EA (A0789511)	Small System Controller (SSC) card	NTDK20EA is the minimum version of SSC card required for Option 11C Mini fiber expansion. See Note 1 on page 24.
A0632902	10 m plastic fiber-optic cable (multi-mode)	This cable connects the Primary Main and Expansion chassis/cabinets by interfacing with an expansion daughterboard and a Fiber Receiver card. Length: 10 m (33 ft)
	Glass fiber-optic cable (multi-mode or single-mode)	This cable connects the Primary Main and Expansion chassis/cabinets by interfacing with an expansion daughterboard and a Fiber Receiver card. See Note 3 on page 24. Length: up to 3 km (1.8 mi)
NTDK22AA	10 m single-port Fiber Expansion Daughterboard	Install this daughterboard on the SSC card to connect one Expansion cabinet/chassis. The SSC card will support two NTDK22AA daughterboards.  Use this daughterboard with the A0632902 multi-mode fiber-cable and the NTDK23 Fiber Receiver card.
NTDK24AB	3 km single-port Fiber Expansion Daughterboard (multi-mode)	When you install this daughterboard on the SSC card, it supports one Expansion cabinet/chassis. The SSC card will support two NTDK24AB daughterboards.  This daughterboard is used with multi-mode, glass fiber-optic cable and the NTDK25 Fiber Receiver card.

**Table 1**  
**Hardware required for expanding your system using Option 11C Mini chassis and fiber-optic connectivity (Continued)**

Code	Item	Description
NTDK79AA	3 km single-port Fiber Expansion Daughterboard (single-mode)	<p>When you install this daughterboard on the SSC card, it supports one Expansion cabinets/chassis. The SSC card will support two NTDK79AA daughterboards.</p> <p>This daughterboard is used with single-mode, glass fiber-optic cable and the NTDK25 Fiber Receiver card.</p>
NTDK84AA	10 m dual-port Fiber Expansion Daughterboard	<p>When you install this daughterboard on the SSC card, it supports up to two Expansion cabinets/chassis. The SSC card will support two NTDK84AA daughterboards.</p> <p>This daughterboard is used with the A0632902 multi-mode fiber-optic cable and the NTDK23 Fiber Receiver card.</p>
NTDK85AA	3 km dual-port Fiber Expansion Daughterboard	<p>When you install this daughterboard on the SSC card, it supports up to two Expansion cabinets/chassis. The SSC card will support two NTDK85AA daughterboards.</p> <p>This daughterboard is used with multi-mode, glass fiber-optic cable and the NTDK25 Fiber Receiver card.</p>
NTDK23BA	10 m Fiber Receiver card	This Fiber Receiver card supports 10 m (33 ft) plastic fiber-optic cable. See Note 2 on page 24.
NTDK25BB	3 km multi-mode Fiber Receiver card	This Fiber Receiver card supports 3 km (1.8 mi) multi-mode glass fiber-optic cable. See Notes 2 and 3 on page 24.
NTDK80BA	3 km single-mode Fiber Receiver card	This Fiber Receiver card supports 3 km (1.8 mi) single-mode fiber-optic cable. See Notes 2 and 3 on page 24.
NTTK24	Option 11C Mini Fiber Management Guide	This routing guide supports cables for up to four Expansion cabinets/chassis.

**Table 1****Hardware required for expanding your system using Option 11C Mini chassis and fiber-optic connectivity (Continued)**

Code	Item	Description
P0888475	Option 11C Cable Routing Guide	This routing guide supports up to four Expansion cabinets.
P0816832	Option 11C Fiber Management Guide	This routing guide supports up to two Expansion cabinets.
<p><b>Note 1:</b> If you use an earlier version of the SSC card (NTDK20DA or earlier) in the Option 11C Mini Main Chassis, the Chassis Expander does not function. This NTDK20EA version of the SSC card is not required in the Option 11C Main cabinet.</p> <p><b>Note 2:</b> If you use an earlier version of the Fiber Receiver card in the Option 11C Mini Expansion Chassis, the Chassis Expander does not function.</p> <p><b>Note 3:</b> Glass fiber-optic cable must be supplied by a local facilities provider.</p>		

## Small System Controller card

To expand your system using Option 11C Mini chassis and fiber-optic connectivity, you require an NTDK20 Small System Controller (SSC) card in slot 0 of the Primary Main Chassis/cabinet.

**Note:** The Option 11C Mini Primary Main Chassis requires the NTDK20EA or later SSC card.

The SSC card handles call processing for the system. It includes an Ethernet controller, storage for system and customer data, and system memory. The SSC card also provides the following features and functions:

- MC68040 main processor
- Software Daughterboard interface
- two connectors for fiber expansion daughterboards
- Security Device socket
- two PCMCIA interface slots
- three SDI ports
- conferencing
- Digitone Receiver, tone generation, and tone detection functions

## Software Daughterboard

You must install the Software Daughterboard in its assigned connector on the SSC card. The system and customer data is stored on the Software Daughterboard. The Software Daughterboard is also used as a software delivery card for new installations. Additional memory on the SSC card temporarily stores and processes automated routines and user-programmed commands. The SSC card also retains a copy of customer files, in the event of data loss, in the Backup flash drive.

For Option 11C Mini fiber expansion, you must use an NTTK13 Software Daughterboard with Release 24.24 or later software. The NTTK13 provides 48 Mb of memory.

## Security Device

The NTDK20 SSC card has a socket where you install the Security Device. A Security Device is shipped with each new system.

*Note:* You can use the Security Device that was on the Mini System Controller (MSC) card.

## Fiber Expansion Daughterboards

You can connect the Option 11C Mini Primary Main Chassis to the following:

- up to two expansion cabinets/chassis using single-port Fiber Expansion Daughterboards
- up to four expansion cabinets/chassis using dual-port Fiber Expansion Daughterboards

You install the Fiber Expansion Daughterboards on the SSC card. Each port on the daughterboard provides an additional 16 channels of conferencing capabilities and ten additional card slots. There are two types of Fiber Expansion Daughterboards: single-port and dual-port.

### Single-port Fiber Expansion Daughterboards

Each Single-port Fiber Expansion Daughterboard can interface with one expansion cabinet/chassis. Each daughterboard port provides ten additional card slots. The daughterboard port in connector one on the SSC card provides card slots 11 to 20. The daughterboard port in connector two on the SSC card provides slots 21 to 30. You must match each type of daughterboard with the appropriate Fiber Receiver card. For information on Fiber Receiver cards, refer to “Fiber Receiver cards” on page 28. The following are three types of Single-port Fiber Expansion Daughterboards:

- **NTDK22 single-port Fiber Expansion Daughterboard:** used with the A0632902 fiber-optic cable (multi-mode) and the NTDK23 Fiber Receiver card
- **NTDK24 single-port Fiber Expansion Daughterboard:** used with glass fiber-optic cable (multi-mode) up to 3 km (1.8 mi) in length and the NTDK25 Fiber Receiver card
- **NTDK79 single-port Fiber Expansion Daughterboard:** has the same capabilities as the NTDK24 except that it interfaces with single-mode fiber-optic cable. It is used with the NTDK80 Fiber Receiver card.

### Dual-port Fiber Expansion Daughterboards

Each dual-port Fiber Expansion Daughterboards can interface with up to two expansion cabinets/chassis. Each daughterboard port provides ten additional card slots. The daughterboard ports in connector one on the SSC card provides card slots 11 to 20, port two provides card slots 31 to 40. The daughterboard ports in connector two on the SSC card provides slots 21 to 30, port 2 provides card slots 41 to 50. You must match each type of daughterboard with the appropriate Fiber Receiver card. Refer to “Fiber Receiver cards” on page 28 for information about Fiber Receiver cards. The following are two types of Dual-port Fiber Expansion Daughterboards:

- **NTDK84 dual-port Fiber Expansion Daughterboard:** used with the A0632902 fiber-optic multi-mode cable and the NTDK23 Fiber Receiver card
- **NTDK85 dual-port Fiber Expansion Daughterboard:** used with glass fiber-optic cable (multi-mode) up to 3 km (1.8 mi) in length and the NTDK25 Fiber Receiver card

*Note:* Glass fiber-optic cable (multi-mode or single-mode) must be supplied by a local facilities provider.

## SDI ports

The SSC card has three Serial Data Interface (SDI) ports used to connect on-site terminals or remote terminals through a modem. The SDI ports are available using the NTBK48BA three-port cable. Table 2 lists the default settings on the ports.

**Table 2**  
**SDI port default settings**

TTY Port	Baud rate	Data bits	Stop bits	Parity
0	Set by a DIP switch	8	1	None
1	1200 (See Note below)	8	1	None
2	1200 (See Note below)	8	1	None
<b>Note:</b> The baud rate shown for ports 1 and 2 is the default rate. You can configure ports 1 and 2 in software to a maximum baud rate of 19200 bps.				

## Ethernet interface

The SSC card has a 10 Mbps Ethernet port. A 50-pin connector located in the 11C Main cabinet provides external connection to the Ethernet port. The 11C Mini provides external Ethernet connection via a standard Ethernet Media Access Unit (MAU) connector located on the rear of the Main chassis.

## Conferencing

The SSC card provides 30 conference channels. When you add Fiber Expansion daughterboards to the SSC card, conference capability increases. Each port on the Fiber Expansion daughterboard increases the total number of conference channels by 16.

## Digitone Receiver, tone generation, tone detection functions

The SSC card provides the following Digitone and other tone-related functions:

- 30 channels of Tone and Digit Switch (TDS) and a combination of eight Digitone Receivers (DTR) or Dial Tone Detectors (XTD)
- Tone service ports which can be configured as either four units of MFC/MFE/MFK5/MFK6/MFR or eight DTR/XTD units

You can install an NTAK03 card in the Main cabinet/chassis if additional tone and receiver transmission resources are required.

## Fiber Receiver cards

Multi-cabinet/chassis Option 11C Mini systems require a Fiber Receiver card in each Expansion cabinet/chassis. The following are the three types of Fiber Receiver card:

- **NTDK23 Fiber Receiver card:** supports a 10 m (33 ft) plastic fiber-optic cable
- **NTDK25 Fiber Receiver card:** supports a glass fiber-optic cable up to 3 km (1.8 mi) in length
- **NTDK80 Fiber Receiver card:** supports a glass fiber-optic cable up to 3 km (1.8 mi) in length

Each Fiber Receiver card has one Serial Data Interface (SDI) port. The SDI port is used to connect an on-site terminal or remote terminal through a modem. The SDI ports is available using the NTAK1118 cable. Table 3 lists the default settings of the port.

**Table 3**  
**SDI port default setting**

TTY Port	Baud rate	Data bits	Stop bits	Parity
0	Set by a DIP switch	8	1	None

## Routing guides

Each cabinet/chassis in a multi-cabinet/chassis system requires a routing guide to route and manage the fiber-optic cable. You must install one routing guide in each cabinet/chassis.

The following routing guides are used:

- **NTTK24 Fiber Management Guide:** installed on the inside front panel of the Option 11C Mini Main chassis. This routing guide supports cabling for up to four Expansion chassis.

- **P0888475 Cable Routing Guide:** installed in the Option 11C Main cabinet. This routing guide supports cabling for up to four Expansion cabinets/chassis. The P0888475 is automatically supplied with new systems using X11 Release 24 or later software. This routing guide can also be installed in Expansion cabinets.
- **P0816832 Fiber Management Guide:** installed in the Option 11C Main cabinet. This routing guide supports up to two Expansion cabinets/chassis. The P0816832 can also be installed in Expansion cabinets.



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## Chapter 3—Add Expansion cabinets/chassis using fiber-optic connectivity

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This chapter describes how to connect Option 11C Mini Expansion chassis to an Option 11C Mini Main Chassis or an Option 11C Main cabinet using fiber-optic cables. This chapter also includes Equipment layout plan information.

For information on connecting Option 11C Expansion cabinets to an Option 11C Main cabinet using fiber-optic cables, refer to the *Option 11C Planning and Installation Guide (553-3021-210)*.

### Equipment Layout plan

Develop a layout plan for the equipment to determine where you will position each system component. Give consideration to the lengths of different cables, so that you make the best use of space.

If you are expanding using Option 11C Mini Chassis only, refer to the *Option 11C Planning and Installation Guide (553-3021-209)* for information on creating a equipment layout plan.

If you are expanding using Option 11C cabinet only, refer to the *Option 11C Planning and Installation Guide (553-3021-210)* for information on creating a equipment layout plan.

If you are combining Option 11C and Option 11C Mini systems, the following minimum standards must be followed:

- A horizontal installation of Option 11C Mini chassis requires 10 inches of free space on either side of the chassis.

- A vertical installation of Option 11C Mini chassis requires 12 inches of free space on the card side and 6 inches of free space on the cable side of the chassis.

## Procedure outline

This chapter contains the following procedures:

- Procedure 1: “Prepare the Option 11C Primary Main Cabinet or the Option 11C Mini Primary Main Chassis to support fiber-optic connectivity” on page 33.
- Procedure 2: “Connect the Primary Main Cabinet/Chassis to the Expansion Cabinets/Chassis” on page 42.
- Procedure 3: “Start-up procedures for a first-time system installation of the Option 11C Mini, using the SSC card” on page 51.
- Procedure 4: “Start-up procedure for a Option 11C Mini system upgraded from an MSC card to an SSC card” on page 53.

## Expansion procedures

### Procedure 1

#### Prepare the Option 11C Primary Main Cabinet or the Option 11C Mini Primary Main Chassis to support fiber-optic connectivity

**1 Do one of the following:**

- If you are using an Option 11C cabinet as the Main Cabinet, refer to the *Option 11C Planning and Installation Guide (553-3021-210)* for information on installation and fiber-optic connectivity.
- If you are using an Option 11C Mini chassis as the Primary Main Chassis, go to Step 2 on page 33.

**2 Install the Option 11C Mini chassis, as described in the *Option 11C Mini Planning and Installation Guide (553-3021-209)*.**

- a** Install the Primary Main Chassis and Chassis Expander (if a Chassis Expander is to be used).

**Note 1:** Connect the Main Chassis and Chassis Expander with two NTDK95 copper cables.

- b** Install the system ground.
- c** If required, install an Uninterruptible Power Supply (UPS).

**3 Do one of the following:**

- If you are installing a new system with a SSC card, go to Step 10.
- If you have a MSC card in your existing system, you must upgrade to the SSC card. Go to Step 4.

**4 Log onto the Option 11C Mini System and perform a data dump in LD 43.**

**5 Backup customer data from the MSC to a PCMCIA card or with the Customer Configuration and Backup Restore feature. Refer to the *Customer Configuration and Backup Guide (553-3001-330)*.**

**Note:** You will use the customer data file created with the *Customer Configuration and Backup Guide (553-3001-330)* to restore the original system data to the SSC card.

**6 Attach an antistatic wrist strap to your wrist.**

**CAUTION**

Static electricity can damage circuit cards. Wear an antistatic wrist strap when handling circuit cards or any of their components. When handling the cards, be careful not to damage any of their components.

**7 Log off of the system and unseat the MSC card.**

**8 Remove the security device from the MSC card.**

*Note 1:* Your security device can be used on the SSC card.

**9 Proceed to Step 10 and prepare the SSC card for installation.**

**10 Take an NTDK20EA or later SSC card and place it on a clean, flat surface.**

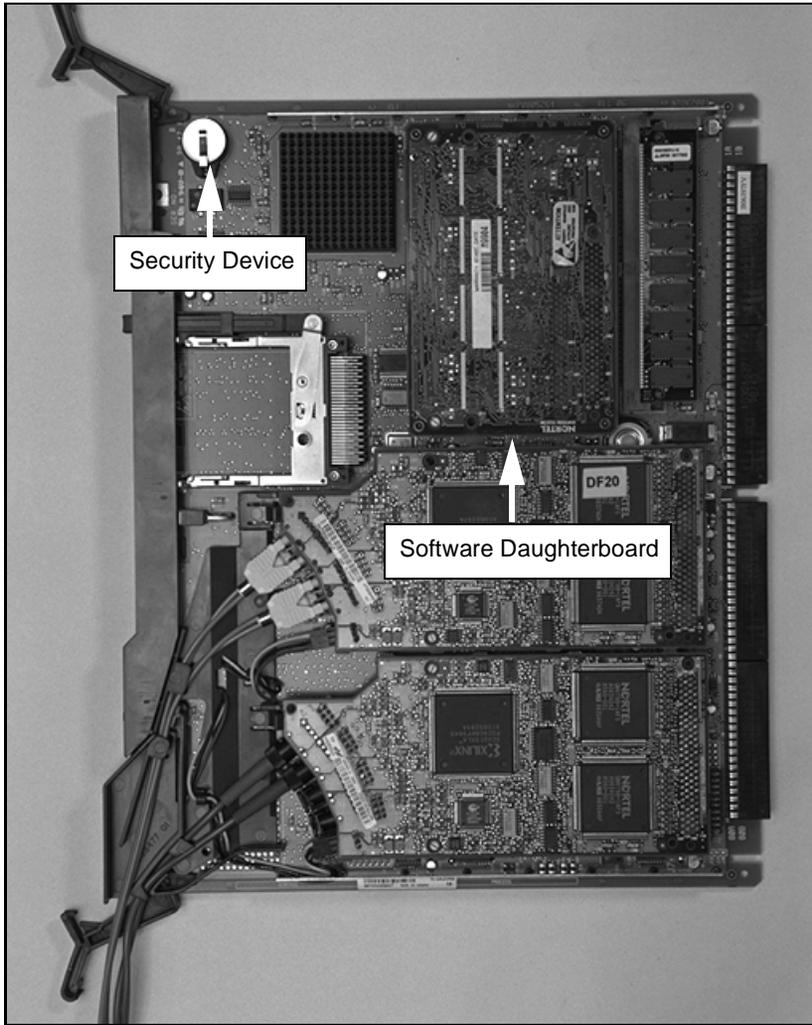
*Note:* For fiber-optic connectivity, you must install an SSC card in the Primary Main chassis.

**11 Install the Software Daughterboard (NTTK13) in the appropriate connector on the SSC card. See Figure 6.**

**12 Install the Security Device in the appropriate socket on the SSC card. See Figure 6.**

*Note:* If you have an MSC card, you can use its security device.

**Figure 6**  
**Security Device and Software Daughterboard on the SSC card**



**13 Do one of the following:**

- If you are using A0632902 plastic fiber-optic cable to connect the Primary Main chassis to the Expansion chassis, go to Step 14 on page 36.
- If you are using glass fiber-optic cable to connect the Primary Main chassis to the Expansion chassis, go to Step 15 on page 37.

The SSC card in the Primary Main Chassis must contain at least one Fiber Expansion Daughterboard.

Each single-port Fiber Expansion Daughterboard (NTDK22AA, NTDK24AB, and NTDK79AA) supports one Expansion chassis. Each dual-port Fiber Expansion Daughterboard (NTDK84AA and NTDK85AA) supports up to two Expansion chassis.

**WARNING**

The fiber-optic interface product used in the Option 11C is considered safe. However, as a precaution do not look directly at the optical port or the end of the fiber-optic cable. Under some conditions (such as during cable testing or under light magnification), looking directly at the cable or port can expose the eye beyond the limits of Maximum Permissible Exposure recommended in some jurisdictions. Do not remove protective caps or plugs until you are ready to connect the cable.

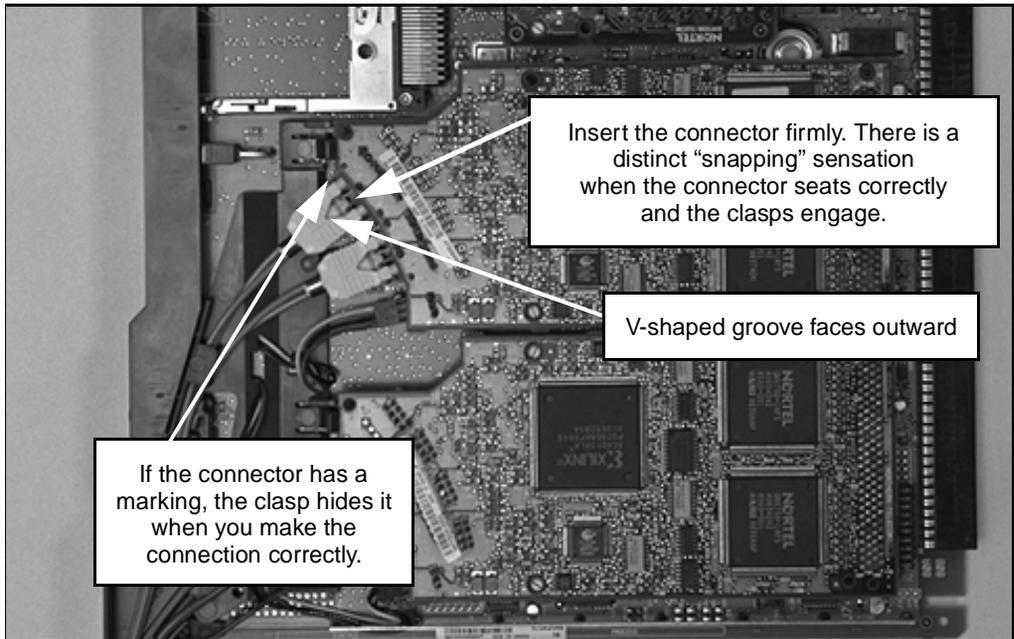
**14 Connect the A0632902 plastic fiber-optic cable to the single-port or dual-port Fiber Expansion daughterboard. See Figure 7 on page 37.**

- a** Remove the protective plugs from the ports on the Fiber Expansion Daughterboard.
- b** Insert the cable connectors firmly into the ports on the daughterboard.

Make sure that the V-shaped groove on the cable connector faces out and that the connector is inserted completely. When the connector is inserted correctly, the black mark on the connector is not visible.

- c** Go to Step 16 on page 38.

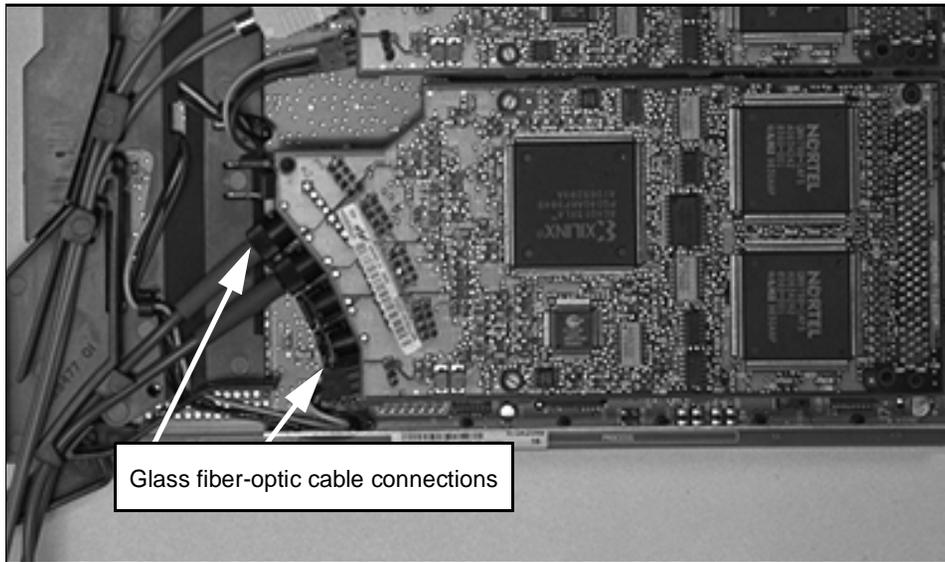
**Figure 7**  
**Plastic fiber-optic cable connection on the SSC card**



**15** **Connect the glass fiber-optic cable to the single-port or dual-port Fiber Expansion daughterboard. See Figure 8.**

- a Remove the protective plug from one of the ports on the Fiber Expansion Daughterboard.
- b Remove the protective cap from the corresponding glass fiber-optic cable connector.
- c Insert the cable connector firmly into the port on the Fiber Expansion daughterboard.
- d Lock the connector in place by turning it a half turn clockwise.
- e Repeat this step (Step 15 on page 37) for the second glass fiber-optic cable connection.
- f Go to Step 16 on page 38.

**Figure 8**  
**Glass fiber-optic cable connection on the SSC card**



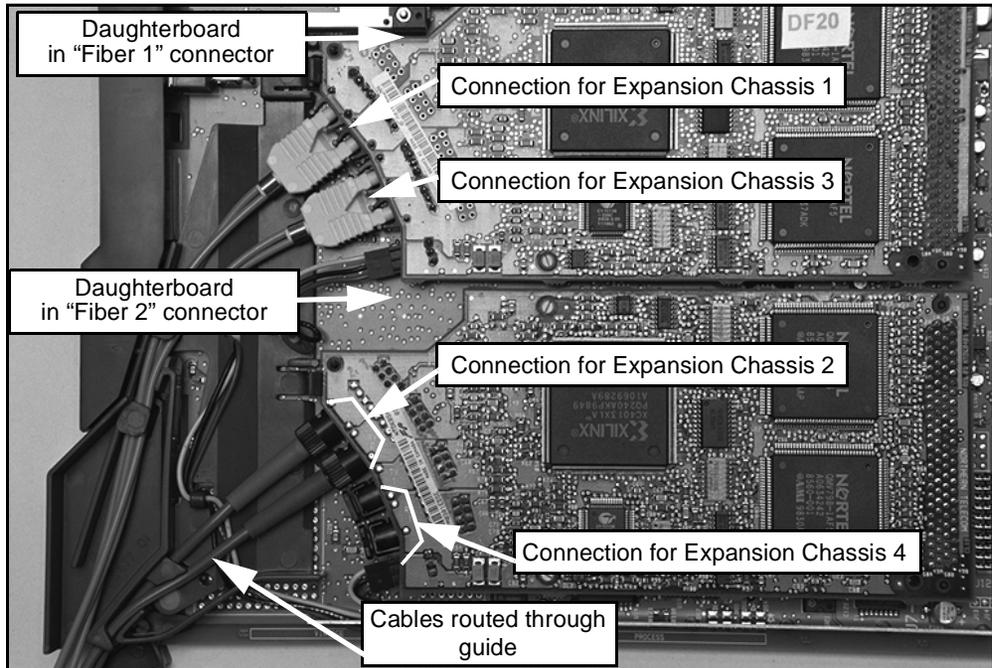
- 16** Insert the LED cable on the SSC card into the LED connector on the daughterboard (if the daughterboard is a dual-port daughterboard). If the daughterboard is a single-port daughterboard, do not use the LED cable.

The LED cable connection provides the second LED on the faceplate.

- 17** Install the daughterboard in the appropriate connector on the SSC card.

**Note:** The connector labelled “Fiber 1” is for Expansion Chassis 1 (card slots 11 to 20) and 3 (card slots 31-40). The connector labelled “Fiber 2” is for Expansion Chassis 2 (card slots 21-30) and 4 (card slots 41 to 50). Glass and plastic fiber-optic connections can be used in either “Fiber 1” or “Fiber 2”. See Figure 9 on page 39.

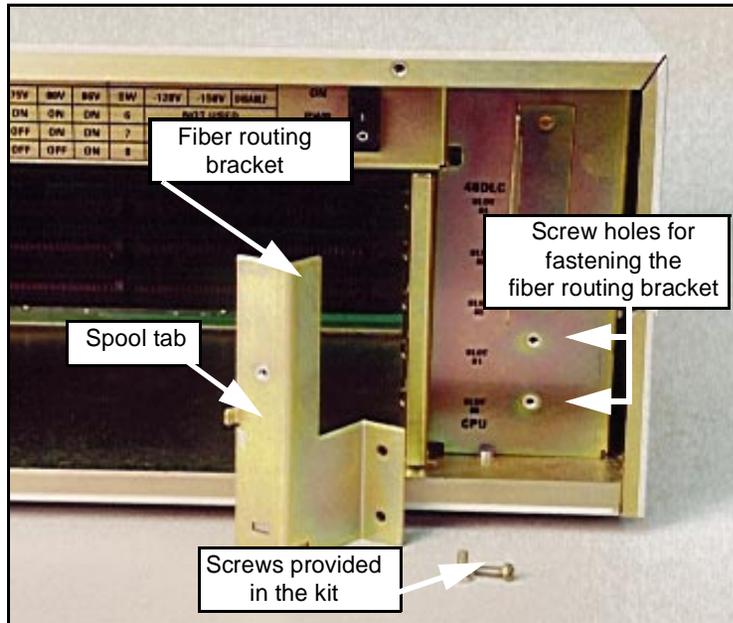
**Figure 9**  
**Daughterboard connectors on the SSC card**



- a Locate the plastic alignment pin on the daughterboard connector.
- b Insert the plastic alignment pin into the appropriate hole on the daughterboard.
- c Press the end of the daughterboard onto the daughterboard connector.
- d Press the daughterboard onto the plastic standoffs to fasten the daughterboard securely to the SSC card.
- e Route the cables through the guide on the SSC card. See Figure 9.

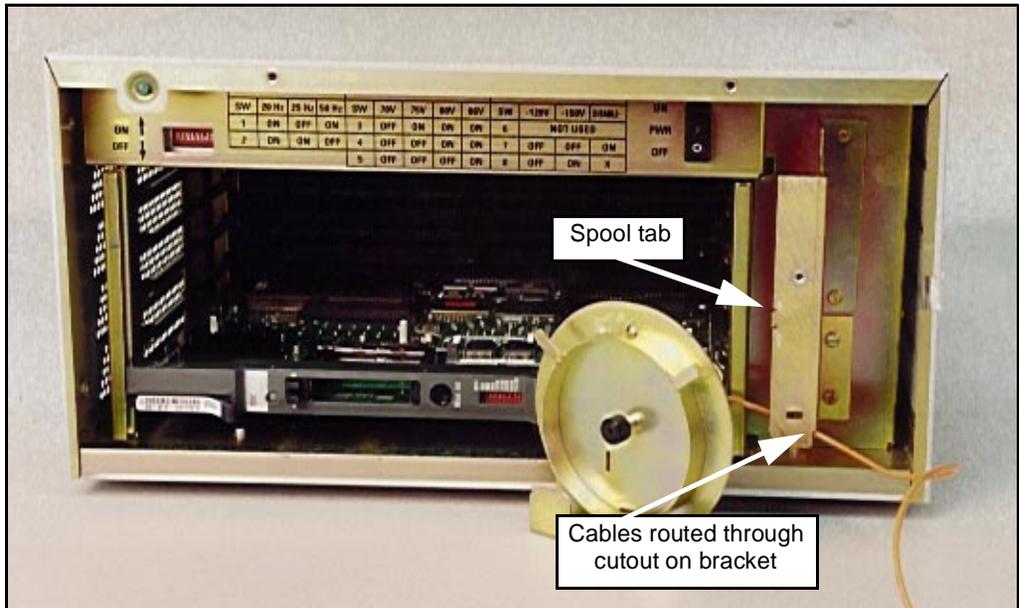
- 18 Install the SSC card in slot 0 of the Primary Main Chassis.
- 19 Install additional circuit cards in their assigned slots in the Primary Main Chassis.
- 20 Install an NTKK24AA Fiber Routing Guide in the chassis.
  - a Detach the spool portion of the guide assembly from the P0903797 fiber routing bracket (if this is not already done). See Figure 10.

**Figure 10**  
**Fiber routing bracket**



- b Install the bracket vertically in the chassis.  
Insert the two screws (supplied in the NTKK24AA kit) through the two holes in the bracket. Fasten the bracket to the fan baffle on the chassis. See Figures 10 and 11.
- c Route the cables coming from the System Controller card through the cutout on the spool bracket. See Figure 11.

**Figure 11**  
**Fiber routing bracket installed on the chassis**



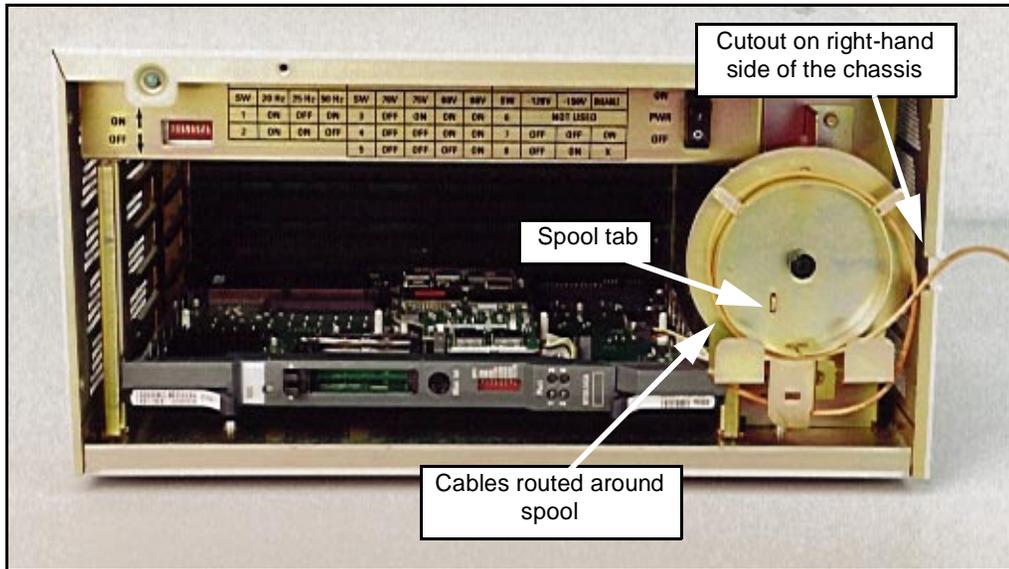
- d Install the spool on the bracket. Use the captive fastener on the spool to fasten the spool to the bracket.

**Note 1:** The captive fastener makes the spool easy to attach and remove to install or replace circuit cards.

**Note 2:** Use the tab on the bracket to orient the spool. Loop the cables around the spool once. See Figure 12.

- e Route the cables through the cutout on the right-hand side of the chassis. See Figure 12.

**Figure 12**  
Fiber routing guide installed in the chassis



- 21 **Install the rest of the Option 11C Mini system, as described in the *Option 11C Mini Planning and Installation Guide (553-3021-209)*.**
  - a Go to Procedure 2 for information on how to connect the Primary Main Chassis to the Expansion chassis.

**Procedure 2**  
**Connect the Primary Main Cabinet/Chassis to the Expansion Cabinets/Chassis**

- 1 **Do one of the following:**
  - If you are using an Option 11C Expansion cabinet, refer to the Option 11C Planning and Installation Guide (553-3021-210) *for installation instructions and instructions on preparing the system for fiber-optic connectivity.*
  - If you are using an Option 11C Mini Expansion chassis, go to Step 2 on page 43.

**2** Install the Option 11C Mini chassis, as described in the *Option 11C Mini Planning and Installation Guide (553-3021-209)*.

- a** Install the Expansion chassis, including Chassis Expanders (if Chassis Expanders are to be used).

**Note 1:** Connect the Main Chassis and Chassis Expander with two NTDK95 copper cables.

- b** Install the system ground.
- c** If required, install an Uninterruptible Power Supply (UPS).

**3** **Attach an antistatic wrist strap to your wrist.**

**CAUTION**

Static electricity can damage circuit cards. Wear an antistatic wrist strap when handling circuit cards or any of their components. When handling the cards, be careful not to damage any of their components.

**4** **Take a Fiber Receiver card, and place it on a clean, flat surface.**

**Note:** To support fiber-optic connectivity, you must install a Fiber Receiver card in each Expansion chassis. Refer to Table 1 on page 22 to determine the Fiber Receiver card that corresponds to the daughterboards in the Primary Main cabinet/chassis.

**5** **Do one of the following:**

- If you are using A0632902 plastic fiber-optic cable to connect the Primary Main Chassis to the Expansion Chassis, go to Step 6 on page 44.

- If you are using glass fiber-optic cable to connect the Primary Main Chassis and the Expansion Chassis, go to Step 7 on page 47.

**WARNING**

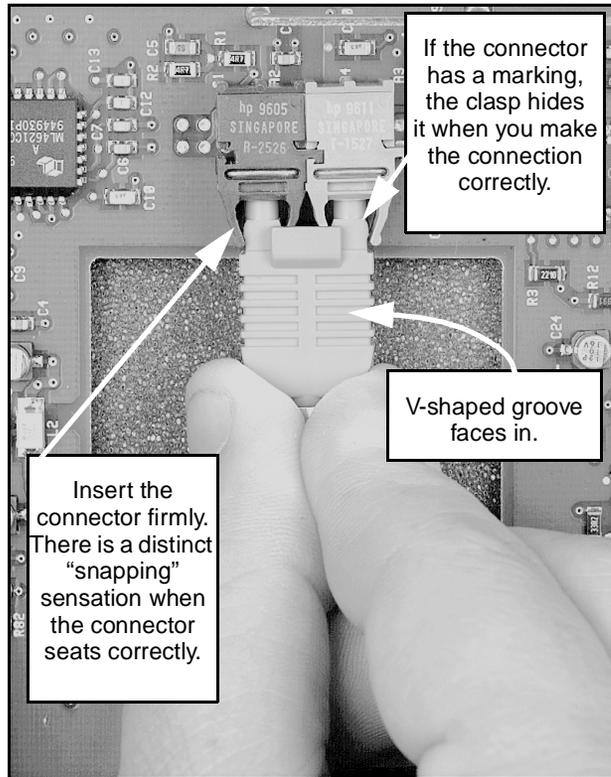
The fiber-optic interface product used in the Option 11C is considered safe. However, as a precaution do not look directly at the optical port or the end of the fiber-optic cable. Under some conditions (such as during cable testing or under light magnification), looking directly at the cable or port can expose the eye beyond the limits of Maximum Permissible Exposure recommended in some jurisdictions. Do not remove protective caps or plugs until you are ready to connect the cable.

- 6 Connect the Primary Main Chassis to the Expansion Chassis using A0632902 plastic fiber-optic cable. Refer to Figure 13 on page 45.**
  - a** Remove the protective plugs from the ports on the Fiber Receiver card.
  - b** Insert the cable connectors from the Main cabinet/chassis into the ports on the Fiber Receiver card.

Make sure that the “V-shaped” groove on the cable connector faces inward and that the connector is completely seated.

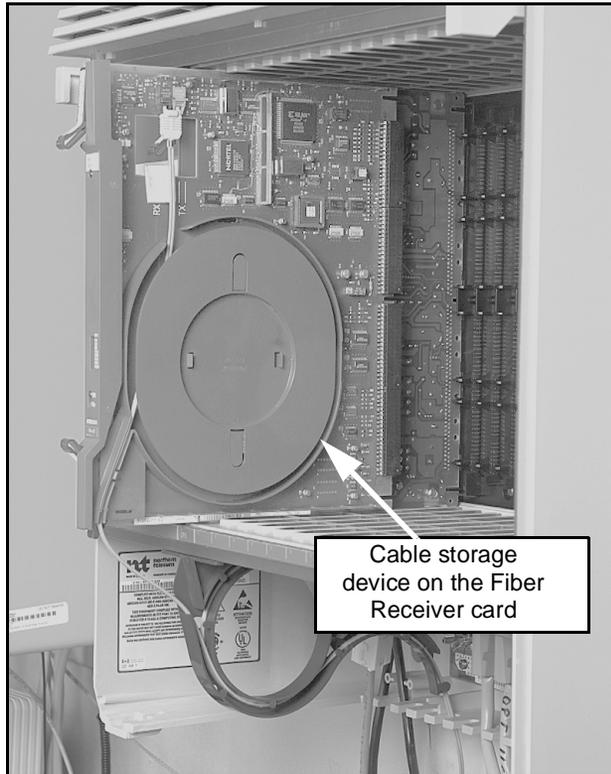
The mark on the connector (if present) is not visible when connected correctly.
  - c** Wind the excess fiber-optic cable around the cable storage device located on the component side of the Fiber Receiver card. See Figure 14 on page 46.
  - d** Go to Step 8 on page 48.

**Figure 13**  
**Plastic fiber-optic cable connections on the Fiber Receiver card**



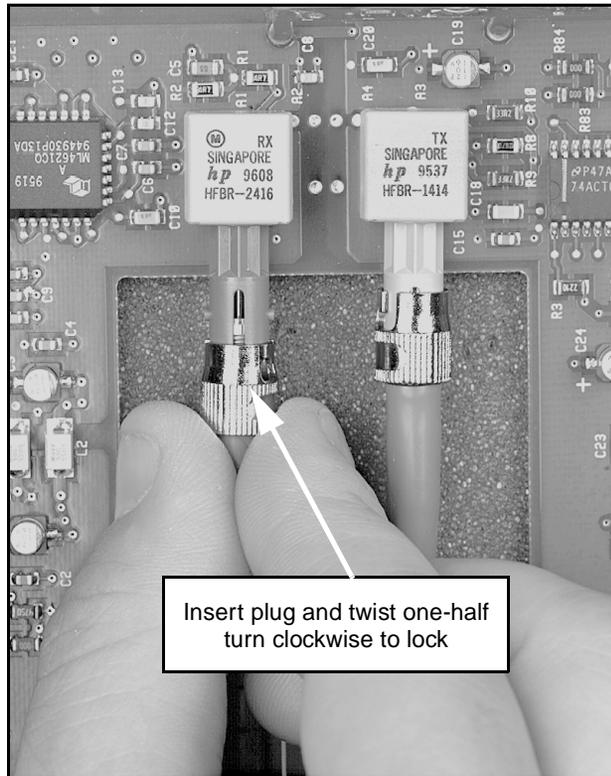
**Figure 14**  
**Cable storage device on the Fiber Receiver card in an Option 11C expansion cabinet.**

*Note:* The same Fiber Receiver cards are used in the Option 11C Mini.



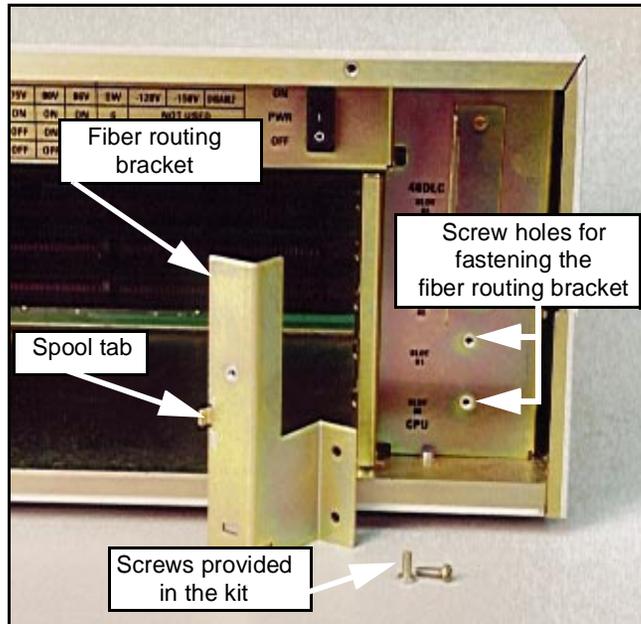
- 7 Connect the Primary Main Chassis and the Expansion Chassis using glass fiber-optic cable. See Figure 15 on page 48.**
- a** Remove the protective plug from one of the ports on the Fiber Receiver card.
  - b** Remove the protective cap from the corresponding glass fiber-optic cable connector.
  - c** Insert the cable connector firmly into the port on the Fiber Receiver card.
  - d** Lock the connector in place by turning it a half turn clockwise.
  - e** Repeat this step (Step 7 on page 47) for the second glass fiber-optic cable connection.
  - f** Wind the excess fiber-optic cable around the cable storage device located on the component side of the Fiber Receiver card. See Figure 14 on page 46.
  - g** Go to Step 8 on page 48.

**Figure 15**  
**Glass fiber-optic cable connections on the Fiber Receiver card**



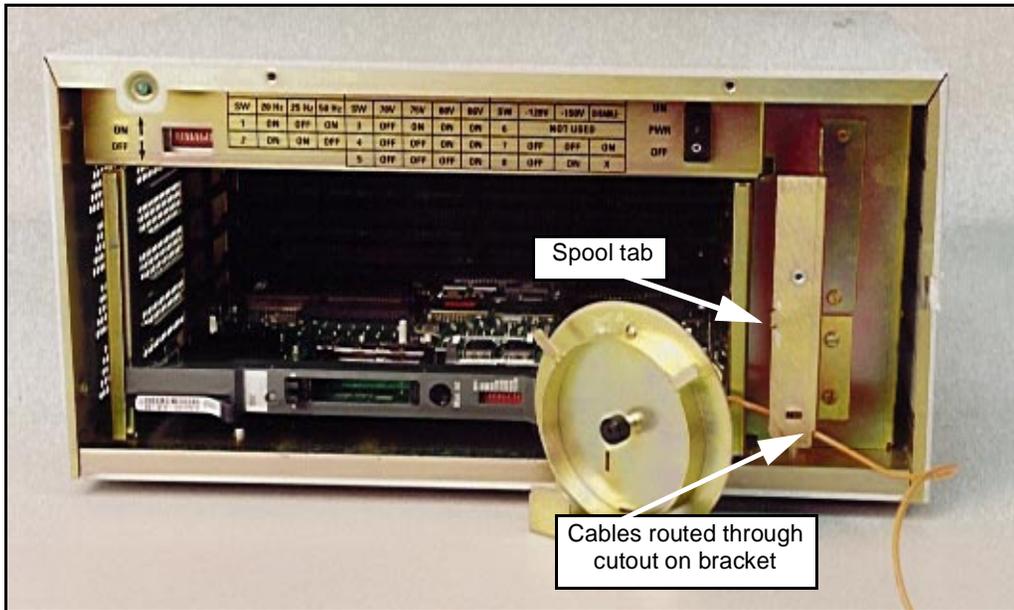
- 8** Insert the Fiber Receiver card in slot 0 of the Expansion chassis.
- 9** Install an NTK24AA Fiber Routing Guide in the chassis.
  - a** Detach the spool portion of the guide assembly from the P0903797 fiber routing bracket (if this is not already done). See Figure 10.

**Figure 16**  
**Fiber routing bracket**



- b** Install the bracket vertically in the chassis.  
Insert the two screws (supplied in the NTKK24AA kit) through the two holes in the bracket. Fasten the bracket to the fan baffle on the chassis. See Figures 10 and 11.
- c** Route the cables coming from the System Controller card through the cutout on the spool bracket. See Figure 11.

Figure 17  
Fiber routing bracket installed in the primary main chassis.



- d Install the spool on the bracket. Use the captive fastener on the spool to fasten the spool to the bracket.

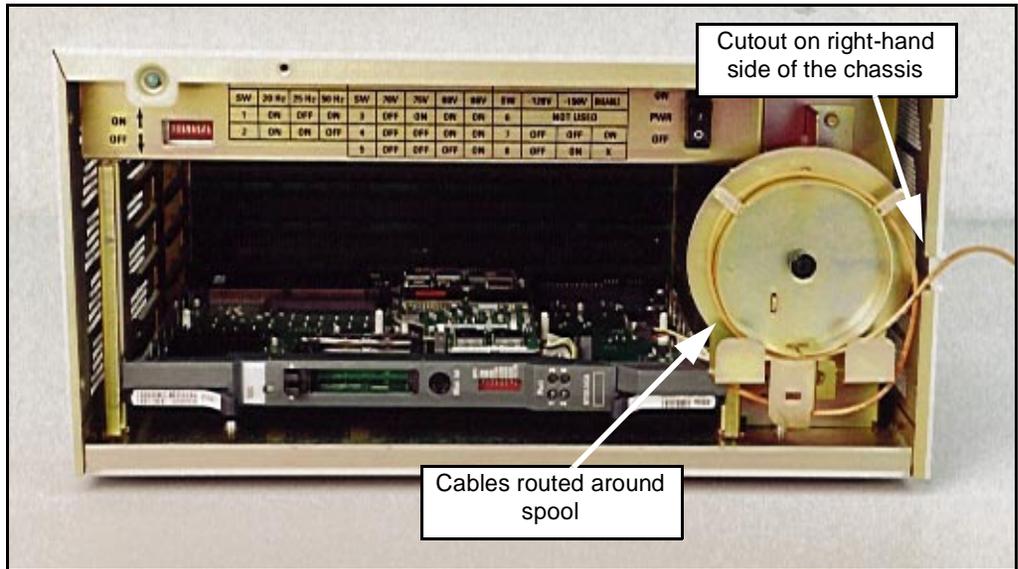
**Note:** Use the tab on the bracket to orient the spool. Loop the cables around the spool once. See Figure 12.

- e Route the cables through the cutout on the right-hand side of the chassis. See Figure 12.

**10** Do one of the following:

- If you are performing start-up procedures for a first-time system installation using the SSC card go to Procedure 3 on page 51.
- If you are performing start-up procedures for a previously installed Mini system go to Procedure 4 on page 53.

**Figure 18**  
**Fiber routing guide installed in the chassis**



### **Procedure 3**

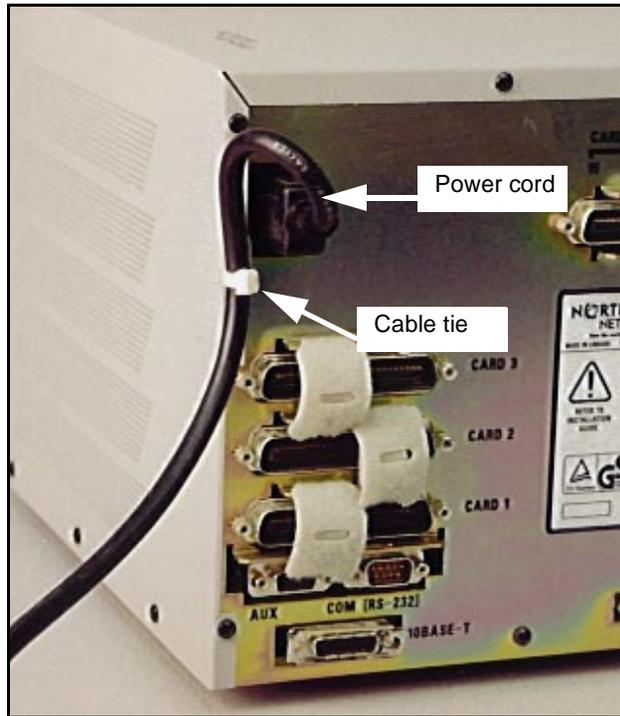
#### **Start-up procedures for a first-time system installation of the Option 11C Mini, using the SSC card**

**1 Test the power outlet.**

Make sure that the correct voltage of power is present before you plug the power cord into the outlet. The source must match the label on the back of the chassis.

**2 Connect the power cord from the power connector on the back of the chassis to an AC power source. See Figure 19. Secure the power cable with a cable tie.**

**Figure 19**  
**Power connector on the back of the chassis**



- 3 Connect a TTY to port 0.
- 4 Turn the power switch to “ON”.
- 5 Observe the TTY screen.

After the system is loaded, a menu-driven program called the “Software Installation Program” is automatically started.

- 6 Go to “Install software in a Option 11C Mini system” on page 59 to install software.

----- *End of Procedure* -----

**Procedure 4****Start-up procedure for a Option 11C Mini system upgraded from an MSC card to an SSC card****1 Test the power outlet.**

Make sure that the correct voltage of power is present before you plug the power cord into the outlet. The source must match the label on the back of the chassis.

**2 Connect the power cord from the power connector on the back of the chassis to an AC power source.** See Figure 19 on page 52.  
Secure the power cable with a cable tie.**3 Connect a TTY to port 0.****4 Turn the power switch to “ON”.****5 Observe the TTY screen.**

After the system is loaded, a menu-driven program called the “Software Installation Program” is automatically started.

**6 Install system software using the default customer database. Go to “Install software in a Option 11C Mini system” on page 59****7 Restore your customer data depending on the process you used to backup your customer data:**

- If you used a PCMCIA card to backup customer data, use the RES command in LD 43 to restore your customer data.
- If you used the CCBR feature to backup customer data, you must use the CCBR feature to restore your customer data. Refer to the *Option 11C and 11C Mini Customer Configuration Backup and Restore (553-3011-330)* for database restoration steps.

**8 If required, set the system time and date using Overlay 2.****9 Perform an EDD using Overlay 43.**

----- *End of Procedure* -----



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## Chapter 4—Install Software

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This chapter describes the Software installation program. The Software installation program is the tool used to install, modify, or upgrading system software on a Small System Controller card.

The chapter includes the procedure to install software on the Option 11C Mini system. See “Installing software” on page 59.

### The software installation program

The Software Installation Program provides a menu-driven method of selecting from the different options of installing, modifying, or upgrading the following:

- software
- customer data
- feature set
- Incremental Software Management (ISM) parameters

The flash ROM stores information about the selections. The information is a list of instructions that the program follows when it runs.

### Start the installation program

The Software Installation Program must run from TTY 0 (port 0 on card 0). The following are the two methods of starting the Software Installation Program:

- Issue the “upgrade” command in Overlay 143.
- Press the <Control> I keys while the terminal screen displays the installation prompt during SYSLOAD.

*Note:* When you turn on a new system before you have installed the software, the Software Installation Program is called up automatically.

## Function selection

The Software Installation Program is menu-driven. The main menu provides the core functionality of the program. The Software Installation Program includes the following key functions:

- installs software in a new system
- upgrades and modifies software in an existing system
- uses utilities to work with archived databases, review data, back up data, undo an installation in progress, and clear unwanted data.

After you have made all installation or upgrade selections, you must enter valid keycodes. The system validates the keycode. If you enter an invalid keycode, the installation function does not continue.

*Note:* If you enter a keycode that is not valid, the software and databases on the present system are not affected.

When the keycode validation passes, the software is installed on the system.

The Software Installation Program has the following additional options:

- **Clear Upgrade Information:** If the installation terminates after you have entered the keycodes, but before the installation is complete, you can abort the installation with the “Clear Upgrade Information” option.
- **Confirm Upgrade Information:** This option allows you to review the selected installation options. You can use the “Confirm Upgrade Information” after the system validates the keycodes, but before the installation is complete.
- **Set system time and date:** The system time and date is usually set before installation. This makes sure that all flash drive files have the correct creation date.

## Keycodes

A security keycode system protects the installation of software, feature set, and ISM parameters. The installation does not continue unless you enter the correct keycodes.

You require keycodes for each new installation, and for existing system upgrades. Keycodes are on a Keycode Data Sheet, which is supplied with the software and security device. There is a different keycode assigned to each site for a particular combination of items, such as software release, feature set, and ISM parameters.

**Note:** Contact your Nortel Networks representative if the Keycode Data Sheet is missing.

The Software Installation Program validates the keycodes. If the keycodes are valid, the installation function continues.

If the system rejects the keycodes that you enter, the installation function stops. Take one of the following actions:

- Check the software and make sure that it is the correct version for this site.
- Check the feature set and make sure you entered the correct data.
- Check the keycodes and make sure you entered the correct keycodes.
- Check the ISM parameters and make sure you entered the correct data.
- Abort the installation.

The system limits the validation of keycodes to three consecutive attempts. After the third unsuccessful attempt, the Software Installation Program returns to the main menu. Any data entered during this session is lost.

## Feature set and ISM parameters

The Software Installation Program allows the selection of a feature set to be installed and enabled on the Option 11C Mini system. A feature set, such as Enhanced Business or Networking Services, has an associated list of software packages and ISM parameters. The Software Delivery Card can include several preconfigured feature sets.

The Software Installation Program also allows the addition of individual packages from the feature set and the changing of ISM system parameters.

Additions and changes are keycode controlled; therefore, the packages and ISM parameters must match those corresponding to the site's keycodes.

**Note:** The Software Installation Program does not check the prerequisites and interactions of added packages.

## Security Device

A Security Device comes with each new Option 11C Mini system. Attach this device to the component side of the NTDK20 SSC card at the time of initial installation. The Security Device remains there for the life of the system.

*Note:* When upgrading a system from an MSC card to an SSC card, the MSC security device is transferred to the SSC.

## AUX ID

Enter the AUX ID using the Software Installation Program. For new Option 11C Mini sites, the AUX ID is the system security ID. When assigned, the AUX ID remains for the life of the system.

## Customer database

The Software Installation Program allows the installation of a customer database from one of the following sources:

### Preconfigured database

The Software Delivery card can include several preconfigured databases and their associated feature sets. In addition, a minimal database is provided which contains basic system configuration information with no customer data.

### Archived database

The Software Installation Program allows the archiving of various databases which can be used later at Option 11C Mini sites. It allows multiple databases to be configured off-site and then installed ready-to-use at customer sites.

*Note:* Off-site programming of databases is subject to all security keycode restrictions. The off-site system must either use the Security Device that will be installed in the Option 11C Mini at the customer site, or must have its own keycodes for the feature set used.

### Remote restored database

A database can be restored remotely using the Overlay 143 CCBR remote restore command.

### Backed up Database

The Backed up Database option allows the copy on the backup flash drive to be installed. It is provided to recover a customer database if the customer database on the primary flash drive becomes corrupted.

## Install software in a Option 11C Mini system

Before beginning the software installation process, you must install the software daughterboard and security device on the SSC card. The Keycode Data Sheet is required.

*Note:* In the menus and screens, there are references to Option 11 and Option 11E. These references do not apply to the Option 11C Mini.

### Summary of steps

The following list summarizes the Software Installation steps:

- Setting the system time and date
- Selecting the New System Installation menu
- Selecting Feature Set and packages
- Selecting a database
- Selecting Incremental Software Management (ISM) parameters
- Validating keycodes
- Loading the software

#### Procedure 5 Installing software

- 1 Make sure the SSC card is in CPU slot (slot 0) of the Main Chassis.**

For first-time installations, software is installed from the software daughterboard. Software is loaded on the software daughterboard before it is sent to the customer site.

- 2 Observe the terminal screen.**

One of two messages appear, and the software installation continues accordingly. If the message is:

INSERT SOFTWARE DELIVERY CARD

Go to Step 3.

OR if the following is displayed:

SOFTWARE INSTALLATION PROGRAM

go to Step 4 on page 61.

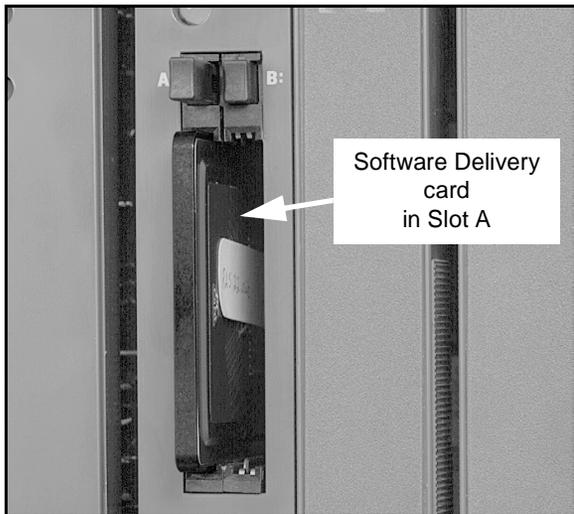
- 3 Skip this step unless you are using the Software Delivery (PCMCIA) to install the software.

**If you have not already done so, install the Software Delivery card in Slot A in the socket in the faceplate of the SSC card.**

**Note:** You do not have to turn off the system power before you install the Software Delivery card in Slot A. See Figure 20.

Insert the card in slot A in the PCMCIA socket located in the faceplate of the NTDK20 SSC card. Carefully press on the Software Delivery card until it is firmly seated. See Figure 20.

**Figure 20**  
**PCMCIA card slot location**



**4 Observe the terminal screen.**

If the screen displays the following:

Current system time and date: 00:00:00 -- 00/00/00

go to Step 5 on page 62.

OR if the screen displays the following:

Software Installation Main Menu

go to Step 6 on page 62.

5 Set the system Time and Date.

**Note:** The Time and Date prompt appears when the Install Setup Program detects a system Year Date that is not in the range of 1995-2095. The responses shown below are examples of how to enter the system Time and Date:

Enter new time (hh/mm/ss)

**08:00:00** <cr>

Enter new date (yy/mm/dd)

**00/05/01** <cr>

08:00:00 -- 00/05/01 is the new system time and date

y <cr>

6 Select item 1 from the Main Menu if you are installing the software from the software daughterboard.

If you are installing from a Software Delivery card, select item 4.

Software Installation Main Menu

1. New System Installation - From Software Daughterboard

2. System Upgrade

3. Utilities

4. New System Installation - From Software Delivery Card

[q]uit, [h]elp or [?], <cr> - redisplay

Enter selection

**1** <cr>

- 7 Select the Feature Set to be enabled.

**Note:** The Feature Set selected must match the one provided with keycodes. The Feature Set names shown below are examples only.

Select Feature Set You Wish to Enable:

1. General Services (NTSKxxxx)
2. Enhanced Services (NTSKxxxx)
3. Call Center Services (NTSKxxxx)
4. Enhanced Call Center Services (NTSKxxxx)

[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> redisplay

**(example only:)**

Enter Selection: **2** <cr> (Enhanced Services)

- 8 Indicate if you want to add packages.

Feature Set Selection: Enhanced Services

Do you wish to add packages?

Select no, yes, or abort:

**n** <cr> (no)

**y** <cr> (yes)

**a** <cr> (abort)

**Note:** Abort returns you to the main menu.

If the response was **NO** go to Step 11 on page 64.

If the response was **YES** go to Step 9.

- 9 Select the Feature packages that you want to add.

Summary of Packages selected is:

0-2 4-5 7-14 16-25 28-29 32-64 67 70-77 79-83 86-93 95 98-104 107-111  
113-116 118-120 122-125 127-129 131-133 135 137-141 167

Enter packages (s) to be added, blank line to end:

**215-235** <cr>

**Note:** A Carriage Return, <CR>, ends selection entry or if no packages are to be added.

**10** Confirm Feature Set and packages.

Your Feature Set Selection is “Enhanced Services”:

Additional Packages selected: 215-235

Summary of Packages selected is:

0-2 4-5 7-14 16-25 28-29 32-64 67 70-77 79-83 86-93 95 100-104 107-111  
113-116 118-120 122-125 127-129 131-133 135 137-141 167

...

...

200-208 215-235

Is this selection correct?

**n** <cr> (no)

**y** <cr> (yes)

**a** <cr> (abort, return to main menu)

If the response was **NO** go to Step 7 on page 63.

If the response was **YES** go to Step 11 on page 64.

**11** Select a Database.

If you are installing from a Software Delivery (PCMCIA) card go to Step 12 on page 65.

**IF** you are installing from an software daughterboard, continue here:

Select database to Install:

1. Pre-Configured database - Enhanced Services

2. Basic Configuration

3. CCBR Restore File

4. Option 11/11E Software Cartridge

[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> redisplay

Enter Selection: 1 or 2 <cr>

**Note:** Use Options 3 and 4 when upgrading an Option 11/11E to an Option 11C. There is no supported upgrade path from Option 11/11E to Option 11C Mini. Therefore, do not use these options for the Option 11C Mini.

If you selected 1 or 2, go to Step 14 on page 66.

**12** Select a Database using the PCMCIA card.

If you are installing from the SSC card, go to Step 11 on page 64.

If you are installing from a Software Delivery (PCMCIA) card continue here:

Select database to Install:

1. Pre-Configured database - Enhanced Services
2. Basic Configuration
3. Archived Database

[q]uit, [p]revious, [m]ain menu, [h]elp or [?], <cr> redisplay

Enter Selection: 3 <cr>

If you selected 3 'Archived Database', go to Step 13. If you selected 1 or 2, go to Step 14 on page 66.

**13** Select an Archived Database.

The terminal screen displays the available archived databases. The following are examples only.

Archived Database available:

1. Company ABC
2. XYZ.Offices
3. Green.Packaging

[q]uit, [m]ain menu, [p]revious menu, <cr> - redisplay

14 Review ISM parameters.

**Note:** On a new installation, the ISM parameters displayed on the terminal screen are the default settings related to the Feature Set selection. You can accept these settings without changes or change the settings to meet the requirements of the new system.

Current ISM Parameters:

TNS (32000) (**maximum number of terminal numbers**)

ACDN (300) (**maximum number of ACD DN**s)

AST (5000) (**maximum number of associate Sets**)

LTID (64) (**maximum number of Logical Terminal IDs**)

RAN\_CON (0) (**default RAN connection**)

RAN\_RTE (128) (**default RAN routes**)

MUS\_CON (0) (**default MUS connection**)

BRAND (0) (**brandline**)

ACD AGENTS (0) (**maximum number of ACD agents**)

ANALOGUE TELEPHONES (0) (**maximum number of analogue sets**)

ATTENDANT CONSOLES (9999) (**maximum number of attendant sets**)

BRI DSL (64) (**maximum number of Digital Subscriber Loops**)

CLASS TELEPHONES (0) (**maximum number of class sets**)

DATA PORTS (9999) (**maximum number of data ports**)

DIGITAL TELEPHONES (0) (**maximum number digital sets**)

PHANTOM PORTS (9999) (**maximum number of phantom ports**)

WIRELESS TELEPHONES (0) (**maximum number Wireless sets**)

ITG ISDN TRUNKS (9999) (**maximum number of ISDN trunks**)

TMDI D-CHANNELS (64) (**maximum number of channels**)

INTERNET TELEPHONES (9999) (**maximum number of internet sets**)

**Note:** The above underscores represent a space.

Do you wish to change ISM parameters?

n <cr> (no change)

y <cr> (change)

**a <cr>** (abort, return to main menu)

If the response was **YES** go to Step 15 on page 67.

If the response was **NO** go to Step 17 on page 69.

**15** Select ISM parameters.

Enter new ISM parameters, <cr> to leave as is:

TNS (32000)

ACDN (300)

AST (5000)

LTID (64)

RAN\_CON (0)

RAN\_RTE (128)

MUS\_CON (0)

BRAND (0)

ACD AGENTS (0)

ANALOGUE TELEPHONES (0)

ATTENDANT CONSOLES (9999)

BRI DSL (64)

CLASS TELEPHONES (0)

DATA PORTS (9999)

DIGITAL TELEPHONES (0)

PHANTOM PORTS (9999)

WIRELESS TELEPHONES (0)

ITG ISDN TRUNKS (9999)

TMDI D-CHANNELS (64)

INTERNET TELEPHONES (9999)

**16** Confirm ISM parameters.

New ISM parameters are:

TNS (32000)

ACDN (300)

AST (5000)

LTID (64)

RAN\_CON (0)

RAN\_RTE (128)

MUS\_CON (0)

BRAND (0)

ACD AGENTS (0)

ANALOGUE TELEPHONES (0)

ATTENDANT CONSOLES (9999)

BRI DSL (64)

CLASS TELEPHONES (0)

DATA PORTS (9999)

DIGITAL TELEPHONES (0)

PHANTOM PORTS (9999)

WIRELESS TELEPHONES (0)

ITG ISDN TRUNKS (9999)

TMDI D-CHANNELS (64)

INTERNET TELEPHONES (9999)

Is this correct?

**n** <cr> (no)

**y** <cr> (yes)

**a** <cr> (abort, return to main menu)

If the response was **NO** go to Step 14 on page 66.

If the response was **YES** go to Step 17 on page 69.

**17** Define the AUX ID.

**Note:** The default AUX ID is the system ID provided with the Option 11C Mini.

Security ID: 10000326

Current AUX ID: 10000326

Do you wish to change the AUX ID?

**y** <cr> (yes)

**n** <cr> (no)

**a** <cr> (abort, return to main menu)

If the response was **NO** go to Step 19 on page 70.

If the response was **YES** go to Step 18 on page 69.

**18** Enter the AUX ID.

Enter the AUX ID, as printed on the Keycode Data Sheet. Enter a <cr> to maintain.

<cr> to maintain

**12121212** <cr>

New AUX ID: 12121212

Is this correct?

**y** <cr> (yes)

**n** <cr> (no)

**a** <cr> (abort, return to main menu)

If the response was **NO** go to Step 17 on page 69.

If the response was **YES** go to Step 19 on page 70.

**19** Review and confirm information entered.

New Installation Information Summary:

Security ID: 10000326

Aux ID: 10000326

Added Pkgs: 215-235

Feature Set: Enhanced Business

Database: Company.ABC

S/W Release: 24.24

ISM Parameters

TNS (32000)

ACDN (300)

AST (5000)

LTID (64)

RAN\_CON (0)

RAN\_RTE (128)

MUS\_CON (0)

BRAND (0)

ACD AGENTS (0)

ANALOGUE TELEPHONES (0)

ATTENDANT CONSOLES (9999)

BRI DSL (64)

CLASS TELEPHONES (0)

DATA PORTS (9999)

DIGITAL TELEPHONES (0)

PHANTOM PORTS (9999)

WIRELESS TELEPHONES (0)

ITG ISDN TRUNKS (9999)

TMDI D-CHANNELS (64)

INTERNET TELEPHONES (9999)

**Note:** The terminal screen displays both the old and the new parameter values.

Is this correct?

**y** <cr> (yes)

**n** <cr> (no)

**a** <cr> (abort, return to main menu)

If the response was **NO** go to Step 7 on page 63.

If the response was **YES** go to Step 20 on page 71.

**20** Enter the keycodes from the Keycode Data Sheet.

Enter new Keycodes:

Key 1:

Key 2:

Key 3:

**xxxxxxx** <cr>

**yyyyyyy** <cr>

**zzzzzzz** <cr>

After you enter the last keycode, the system displays a successful or unsuccessful message. Follow the instructions given below.

‘Keycode validation successful’

\*\*\*WARNING\*\*\* A system restart will occur as part of the software installation process”

If the **successful** message appears go to Step 21 on page 72.

‘Keycode validation unsuccessful’

If the **unsuccessful** message appears, repeat this step (Step 20).

After three unsuccessful keycode validation attempts, the following message appears:

Keycode validation unsuccessful.

Installation aborted...returning to main menu.

- 21** Complete the software installation.

Are you sure you wish to perform the installation?

**y** <cr> (yes)

**n** <cr> (no)

**a** <cr> (abort, return to main menu)

If the response was **YES**, this is the end of the Software Installation program. The system will now start to sysload.

If the response was **NO**, go to Step 6 on page 62.

- 22** If required, set the system time and date using Overlay 2.
- 23** Perform an EDD using Overlay 43.
- 24** If you have customer data to restore, continue with Step 7 on page 53.

----- *End of Procedure* -----



Meridian 1  
**Option 11C and 11C Mini**  
Expansion Guide

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