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DECconcentrator™ 500

Multimode Option Card Installation

March 1993

This manual describes how to install and check the DECconcentrator 500 multimode option cards.

Supersession/Update Information: This is a revised manual.

digital

Order Number: EK-DEFCN-MM. C01

CAUTION

People installing the cabling system described in this manual should know local building codes, fire codes, and any other applicable codes or regulations. The manufacturers or their distributors and agents will not be responsible for damage due to improperly installed cabling, neglect, misuse, or improper connection of devices to the cabling system.

CAUTION

This equipment is in the 1st Class category (information equipment to be used in commercial and/or industrial areas) and conforms to the standards set by the Voluntary Control Council For Interference by Data Processing Equipment and Electronic Office Machines aimed at preventing radio interference in commercial and/or industrial areas. Consequently, when used in a residential area or in an adjacent area thereto, radio interference may be caused in radios and TV receivers, etc. Read the instructions for correct handling.

NOTICE – Class A Computing Device:

This equipment generates, uses, and may emit radio frequency energy. The equipment has been type tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such radio frequency interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference; in which case, measures taken to correct the interference are at the user's expense.

DECconcentrator™ 500



Multimode Option Card Installation

Order Number: EK-DEFCN-MM. C01

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Safety

Warnings and cautions that appear in this manual are defined as follows:

WARNING 

Contains information to prevent personal injury.

CAUTION 

Contains information to prevent damage to equipment.

VORSICHT

Enthält Informationen, die beachtet werden müssen, um den Benutzer vor Schaden zu bewahren.

ACHTUNG

Enthält Informationen, die beachtet werden müssen, um die Geräte vor Schaden zu bewahren.

DANGER

Signale les informations destinées à prévenir les accidents corporels.

ATTENTION

Signale les informations destinées à prévenir la détérioration du matériel.


AVISO


Contiene información para evitar daños personales.

PRECAUCIÓN

Contiene información para evitar daños al equipo.

The warnings and cautions you must observe for the hardware described in this manual appear below in English, German, French, and Spanish. The pages on which these safety messages appear are also listed.

CAUTION 	Use a pointed tool to change switch settings. Never use a pencil; graphite can damage switches. (Page 1-4)
ACHTUNG	Verwenden Sie einen spitzen Gegenstand, z.B. einen Kugelschreiber, wenn Sie Schaltereinstellungen ändern wollen. Benutzen Sie dazu keinen Bleistift, da der Graphitabrieb die Schalter beschädigen kann.
ATTENTION	Utilisez un outil pointu pour changer le positionnement des commutateurs. N'utilisez jamais un crayon, car le graphite de la mine pourrait endommager les commutateurs.
PRECAUCIÓN	Con cualquier herramienta puntiaguda se cambian los parámetros de conexión, pero nunca con lápices porque el grafico daña los interruptores.

WARNING 	Some fiber optic equipment can emit laser light that can injure your eyes. Never look into an optical fiber or connector port. Always assume the cable is connected to a light source. (Page 1-6)
VORSICHT	Schauen Sie niemals direkt in ein Glasfaserkabel oder einen Glasfaseranschluß. Die Laserstrahlen in faser-optischen Geräten können Augenverletzungen verursachen.
DANGER	Certains équipements utilisant les fibres optiques peuvent émettre des rayonnement laser dangereux pour les yeux. Ne vous avisez jamais de regarder par l'extrémité d'une fibre optique ou dans l'ouverture d'un connecteur. Considérez- toujours que le câble est relié à une source lumineuse.
AVISO	Algunos equipos de fibra óptica pueden emitir luz láser que daña los ojos. No se debe mirar en una puerta de conector o fibra óptica. Siempre se debe suponer que el cable está conectado a la luz.

CAUTION 

Static electricity can damage modules and electronic components. Digital recommends you use a grounded wrist strap (Digital P/N 29-11762) and grounded work surface when you handle any modules or internal parts. Do not remove any option cards from their antistatic bags until instructed to do so in the installation procedure. (Page 2-1)

ACHTUNG

Module und elektronische Komponenten können durch elektrostatische Entladungen beschädigt werden. Benutzen Sie immer eine antistatische Gelenkmanschette und eine geerdete Arbeitsunterlage, wenn Sie am offenen Gerät arbeiten. Ein Antistatik-Kit ist in der BRD bei DECdirekt unter der Bestellnummer 29-26246 erhältlich. Entfernen Sie die antistatische Verpackung erst von Erweiterungskarten, wenn Sie in der Installationsanleitung entsprechende Anweisungen sehen.

ATTENTION

Les charges excessives d'électricité statique peuvent endommager les modules et les composants électroniques. Digital conseille l'utilisation d'un bracelet de masse et d'un plan de travail mis à la terre (Réf. 29-11762) lors de la manipulation des modules et des composants internes. Si vous possédez des cartes en option, ne les retirez pas de leur housse antistatique avant d'en avoir reçu l'instruction.

PRECAUCIÓN

La electricidad estática puede dañar los componentes electrónicos y los módulos. Digital recomienda que se utilicen cintas de pasadores y superficies de trabajo conectadas a tierra (Digital P/N 29-11762) al trabajar con cualquier módulo o parte interna. No sacar de la bolsa ninguna placa de opciones adicional que pudiera tenerse hasta que se indique en el procedimiento de instalación.

WARNING 

To prevent personal injury or equipment damage, DO NOT insert telecommunications cabling into the optical bypass relay connector. (Page 2-7)

VORSICHT

Um Personen- oder Geräteschäden zu vermeiden, dürfen Sie das Telefonkabel AUF KEINEN FALL am Anschluß des optischen Bypass-Relais anschließen.

DANGER

Pour éviter tout risque d'accident corporel ou de dommage matériel, NE BRANCHEZ PAS de câble de télécommunication sur le connecteur de relais sélectif optique (optical bypass relay connector).

AVISO

Para evitar daños personales o al equipo, NO se debe introducir cableado de telecomunicaciones en el conector óptico de relés de derivación.

WARNING 

To avoid bodily injury or damage to the equipment, do not connect the power cord or any other cable until you are instructed to do so in these procedures.

Do not apply power to the unit unless all covers are installed.
(Page 3-1)

VORSICHT

Schließen Sie das Netzkabel oder andere Kabel erst an, wenn Sie dazu aufgefordert werden. Andernfalls besteht LEBENSGEFAHR! Überdies können die Geräte Schaden nehmen.

Schließen Sie das Gerät erst an das Stromnetz an, wenn alle Abdeckungen ordnungsgemäß angebracht worden sind.

DANGER

Afin d'éviter tout risque d'accident corporel ou matériel, NE BRANCHEZ AUCUN cordon d'alimentation ou autre câble sans en avoir reçu l'instruction explicite dans la procédure.

Ne reliez au secteur qu'après l'installation complète de tous les capots.

AVISO

Para evitar daños internos al equipo, NO conectar el cable de alimentación ni ningún otro hasta que se indique en estos procedimientos.

WARNING 

To avoid bodily injury, use care when connecting the DECconcentrator 500 unit power cord. Regulations in some countries may require an authorized person to connect the power cord.

Make sure you connect the power cord to a grounded wall outlet. (Page 3-1)

VORSICHT

Netzspannung ist lebensgefährlich. Beachten Sie dies, wenn Sie das Netzkabel anschließen. In einigen Ländern dürfen Elektrogeräte nur von entsprechend ausgebildetem Personal, beispielsweise Elektrikern, angeschlossen werden. Prüfen Sie, ob das in Ihrem Land zutrifft.

Schließen Sie das Netzkabel nur an eine geerdete Steckdose an.

DANGER

Afin d'éviter tout risque d'accident corporel, agissez avec la plus grande précaution lors du raccordement du cordon d'alimentation du concentrateur. Assurez-vous que la législation vous autorise bien à effectuer ce branchement.

Assurez-vous que la prise sur laquelle vous raccordez le cordon d'alimentation est effectivement reliée à la terre.

AVISO

Para evitar daños generales, es importante tener cuidado a la hora de conectar el cable de alimentación del concentrador. En algunos países existen estipulaciones para que la conexión la tenga que hacer una persona autorizada.

Hay que comprobar que se conecta el cable de alimentación a una toma conectada a tierra.

WARNING 

A safety earth ground wire has been incorporated into this product through the three-wire plug cap of the ac power cord. For continued protection against risk of electric shock, this product must be connected to a three-wire wall receptacle that has its grounding terminal reliably connected to the building's safety earth ground. (Page 3-2)

VORSICHT

Das Stromkabel in diesem Gerät ist mit einem Schutzleiter versehen. Um optimale Sicherheit zu gewährleisten, dürfen Sie es nur an eine ordnungsgemäß geerdete Schuko-Steckdose anschließen.

DANGER

Cet équipement est mis à la terre au moyen du fil de terre du cordon d'alimentation secteur. Afin d'assurer une protection efficace contre tout risque d'électrocution, cet équipement doit être raccordé à une prise secteur équipée d'un contact de mise à la terre effectivement relié à la terre secteur du bâtiment.

AVISO

El producto consta de un cable de tierra en el enchufe trifásico del cable de alimentación. Para evitar el riesgo continuado de descargas eléctricas, este producto debe conectarse en una toma de pared trifásica que tenga un terminal de tierra con una conexión fiable a la toma de tierra del edificio.

CAUTION 

Make sure that the bend radius of any fiber optic cable is 7.5 centimeters (3 inches) or greater. (Page 3-6)

ACHTUNG

Der Biegeradius von faseroptischen Kabeln muß mindestens 7,5 cm betragen.

ATTENTION

Assurez-vous que le rayon de courbure des fibres optiques n'est jamais inférieur à 75 mm.

PRECAUCIÓN

Hay que comprobar que el radio de inclinación de cualquier cable óptico de fibra es de es de 7,5 centímetros (3 pulgadas) o mayor.

Preface

This manual explains how to install the DECconcentrator 500 multimode option cards into the DECconcentrator 500 unit. The multimode option cards provide long-distance links to the Fiber Distributed Data Interface (FDDI) over multimode fiber.

Intended Audience

This manual is for the hardware installer and system/network manager who are familiar with fiber optic network technologies, the FDDI ANSI X3T9 standards, and safety procedures.

Structure of This Manual

This manual has three chapters and four appendixes as follows:

- | | |
|-------------------|--|
| Chapter 1 | Provides an overview and physical description of the DECconcentrator 500 multimode Network Management Card and the Port Cards. |
| Chapter 2 | Describes how to install the multimode Network Management Card and the Port Cards. |
| Chapter 3 | Contains the procedures to connect the power and fiber optic cables. It also describes how to verify the installation of the multimode Network Management Card and the Port Cards. |
| Appendix A | Contains multimode fiber optic system cable purchase information. |

- Appendix B** Contains the DECconcentrator 500 unit Identification List.
- Appendix C** Lists related documents.
- Appendix D** Contains the software microcode update package part numbers.

Please fill out and return the postage-paid Reader's Comments form on the last page of this document to assist us in preparing for future documentation.

Multimode Option Cards

This chapter provides an overview and a physical description of the multimode option cards. Multimode option cards allow devices that are connected to multimode fiber to participate in the FDDI network.

There are four multimode option cards: one Network Management Card and three Port Cards.

1.1 Network Management Cards

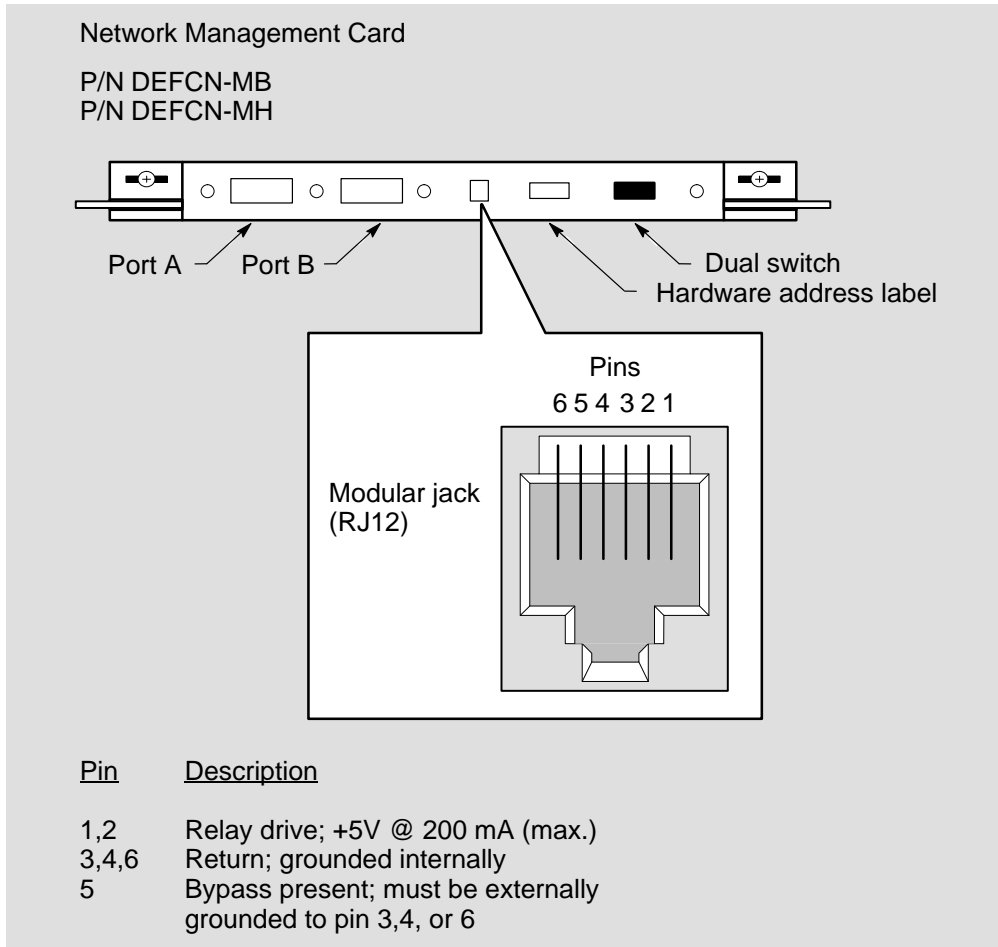
Shown in Figure 1-1, the multimode Network Management Card has two FDDI ports (type A and type B), two switches, and an optical bypass relay connector. The Network Management Card provides:

- Supports connection to the dual ring and tree'd connection.
- Hardware/firmware remote management
- Downline upgrade capability
- Support of optical bypass to maintain FDDI dual ring integrity

NOTE

The Network Management Card must be installed in the top slot of the DECconcentrator 500 unit.

Figure 1-1: Multimode Network Management Card



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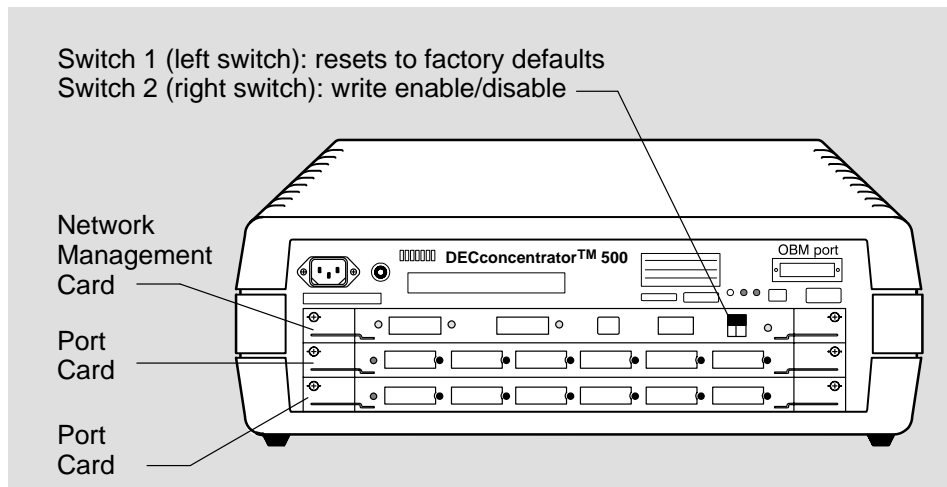
1.1.1 Optical Bypass Relay

The Network Management Card has an RJ12 connector that provides signals for an optical bypass switch. This switch maintains connectivity of the FDDI dual ring in the absence of power or during fault conditions of a node. The bypass relay allows the light to bypass the optical receiver in the faulty node, maintaining the operation of the FDDI ring. Refer to the connector pinout information in Figure 1-1 when selecting optical bypass devices. For additional optical bypass information, refer to the *Fiber Distributed Data Interface Network Configuration Guidelines* manual.

1.1.2 Network Management Card Dual Switch

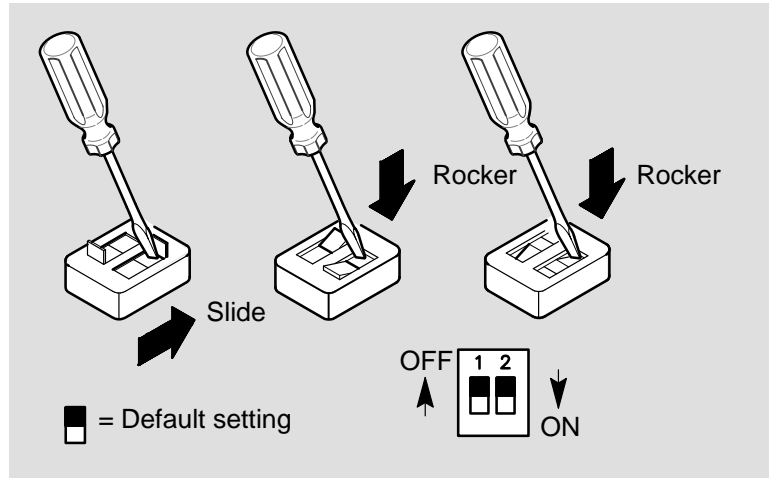
As shown in Figure 1-2, the Network Management Card has two switches on the Input/Output panel. The switches are used for initialization after option-card installation. Each switch is a dual-position switch. Figure 1-3 shows the three different types of switches. Refer to Table 1-1 for Network Management Card switch settings.

Figure 1-2: Multimode Network Management Card Dual Switch



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Figure 1–3: Types of Network Management Card Switches



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CAUTION

Use a pointed tool to change the switch settings. Never use a pencil; graphite can damage the switches.

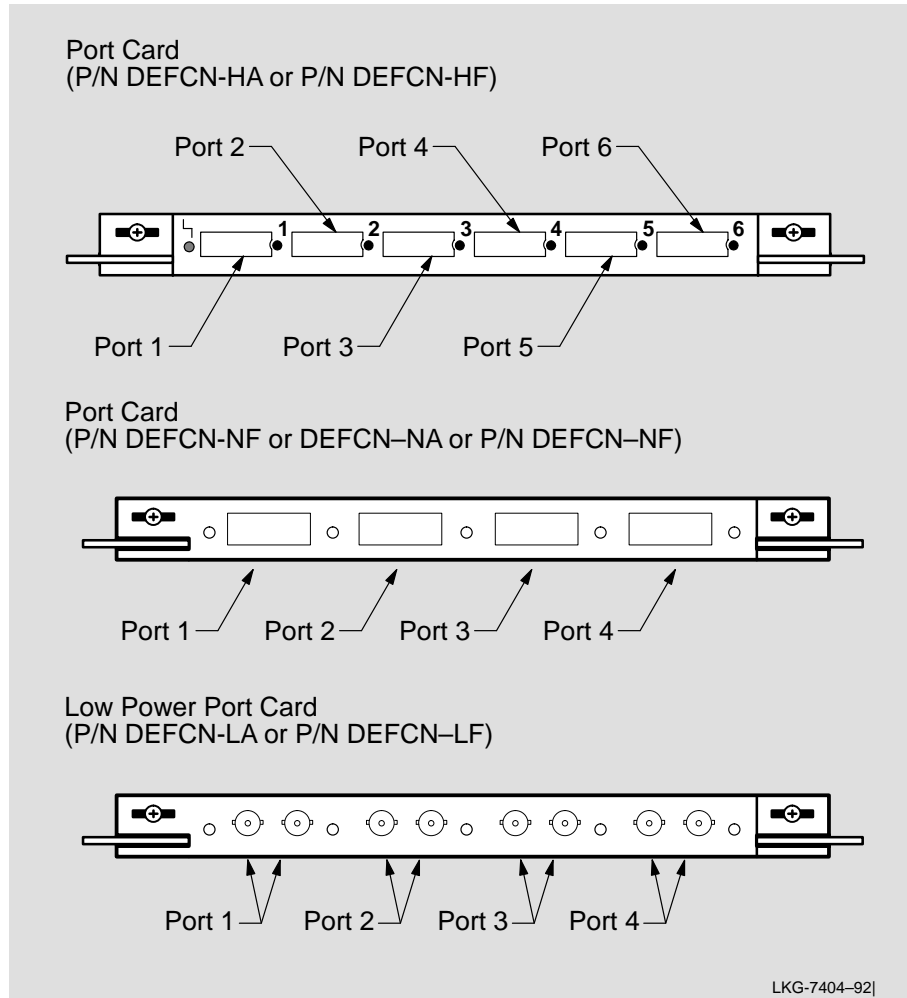
Table 1–1: Network Management Card Switch Settings

Switch	Factory Setting	Function
1	OFF	When set to OFF at power up or restart, no action occurs.
1		When set to ON at power up or restart, this switch resets any system parameters that have been altered through remote management to the default settings.
1		To reset after the DECconcentrator 500 unit is installed and operational, do the following:
1		1. Set the switch to ON.
1		2. Turn the power on and wait for self-test to complete.
1		3. Set the switch to OFF.
2	OFF	When set to ON, enables write access to system control parameters for network management.

1.2 Port Cards

Figure 1-4 shows the Multimode Port Cards. Port Cards (P/N DEFCN-HA and DEFCN-NA) have FDDI-type M ports, no switches, and can connect up to four or six stations to the DECconcentrator 500 unit. The Low-Power Port Card has four pairs of ST-type fiber optic ports and no switches. The Low-Power Port Card operates with all FDDI devices. However, it does not meet the full 2-km distance or the 11-dB loss budget requirement of the FDDI standard.

Figure 1-4: Multimode Port Cards



1.3 Laser Safety Information

WARNING 

Some fiber optic equipment can emit laser light that can injure your eyes. Never look into an optical fiber or connector port. Always assume that the cable is connected to a light source.

Several of the DECconcentrator 500 option cards (DEFCN-CA, -CF, -DA, -DF, -EA, -EF, -FA, -FF) use laser sources. The laser sources conform to the Class 1 safety regulations of the Center for Diseases and Radiological Health (CDRH) of the United States Department of Health and Human Services, the Public Health Service, and the Food and Drug Administration. Class 1 laser devices are not considered hazardous.

Installing the Option Card

This chapter explains the following:

- Checking the shipment contents
- Disconnecting the power and data cables
- Removing a blank panel or a previously installed option card
- Installing the option card

CAUTION 

Static electricity can damage modules and electronic components. Digital recommends you use a grounded wrist strap (Digital P/N 29-11762) and a grounded work surface when you handle modules or internal parts. Do not remove any option cards from their antistatic bags until instructed to do so in the installation procedure.

NOTE

The only tool required for installation is a Phillips-head screwdriver.

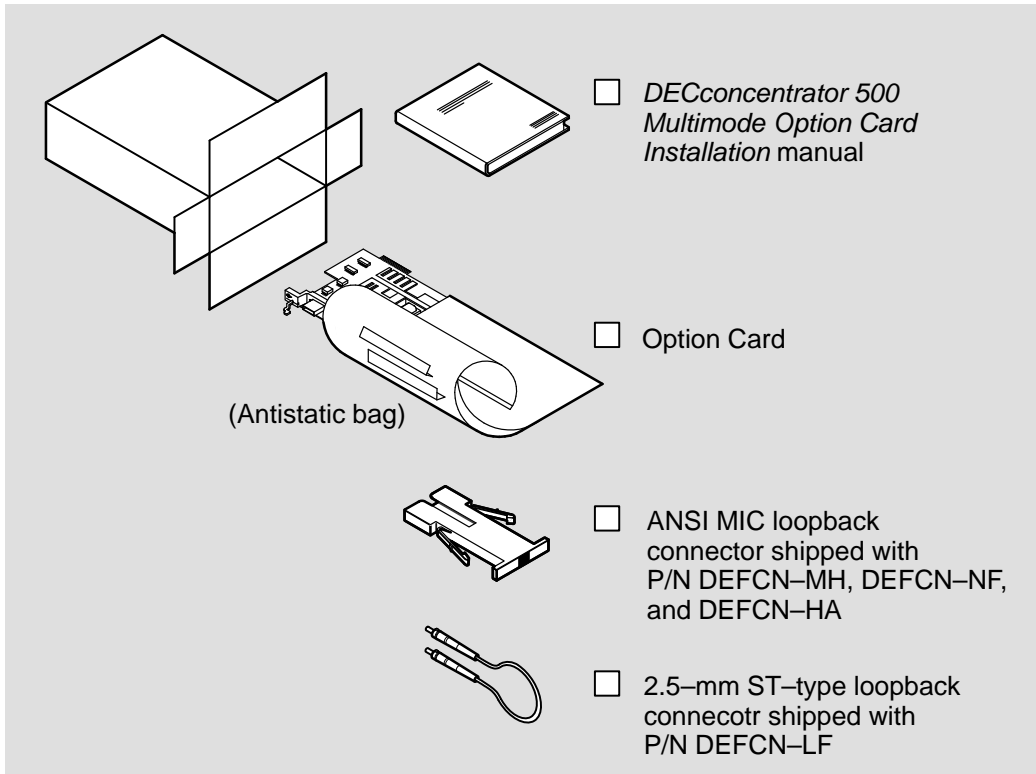
If you experience problems with the installation, refer to the problem-solving section of the *DECconcentrator 500 Installation* manual. Observe all cautions when you install an option card.

2.1 Checking the Shipment Contents

Refer to Figure 2–1 to check the contents of your shipment. Do not remove an option card from its antistatic bag until you are instructed to do so.

In case of damage, contact your shipping agent and Digital sales representative. In case of missing parts, contact your Digital sales representative.

Figure 2–1: Checking the Contents of Your Shipment



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2.2 Disconnecting the Power and Data Cables

NOTE

Adding an option card disrupts network traffic. Digital recommends that you add an option card when there will be little or no use of the network.

Remove the power cord and data cables from the DECconcentrator 500 unit as follows:

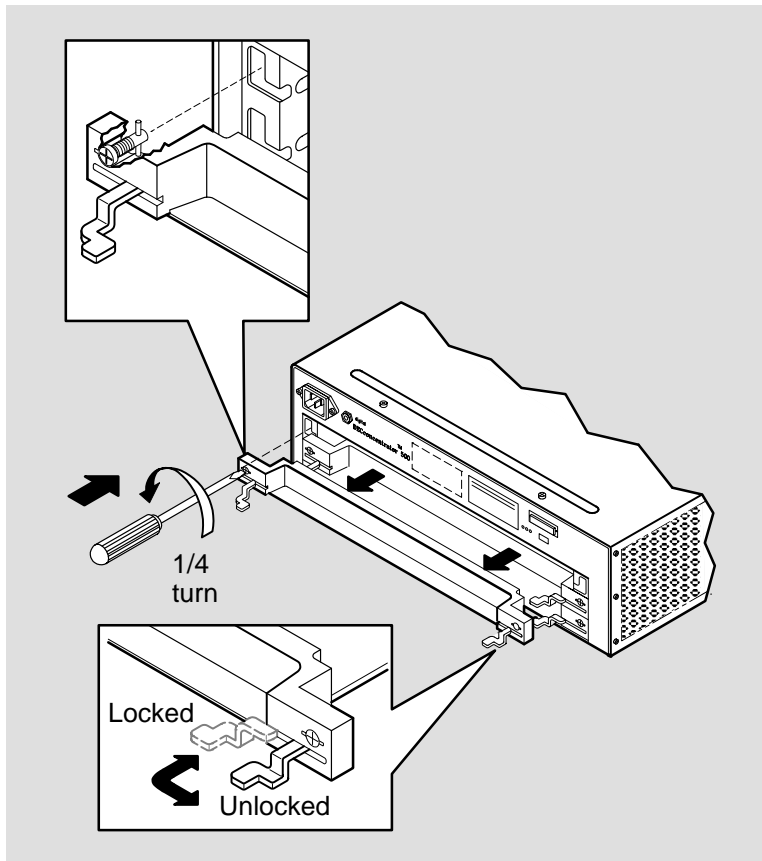
1. Disconnect the power cord from the power source.
2. Disconnect any fiber optic cable from the unit that prevents access to the slot where the option card is to be installed. Note the cable orientation and port location for each cable you remove.

2.3 Removing a Blank Panel or a Previously Installed Option Card

To remove a blank panel or a previously installed option card, do the following:

1. Place the antistatic wrist strap around your wrist and attach the other end of the strap to the DECconcentrator 500 unit chassis.
2. Use a Phillips-head screwdriver to push in and turn the two captive screws counterclockwise one quarter turn.
3. Unlock the locking levers (see Figure 2-2). Remove the blank panel or option card.

Figure 2-2: Removing a Blank Panel or a Previously Installed Option Card



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2.4 Installing an Option Card

NOTE

Always install the Network Management Card in the top slot of the DECconcentrator 500 unit.

If you are installing only Port Cards, install a Port Card in the top slot.

To install an option card, do the following:

1. Attach the antistatic wrist strap around your wrist and attach the other end of the strap to the DECconcentrator 500 unit chassis.
2. Remove the option card from its antistatic bag. Make sure that the locking levers on the option card are in the outward (unlocked) position (see Figure 2–3).
3. Slide the option card into the appropriate slot. Make sure that the sides of the option card are seated in the guides of the DECconcentrator 500 unit. Push firmly into place.
4. Lock the option card in place by pushing the levers inward, then turn the two captive screws clockwise one quarter turn.

NOTE

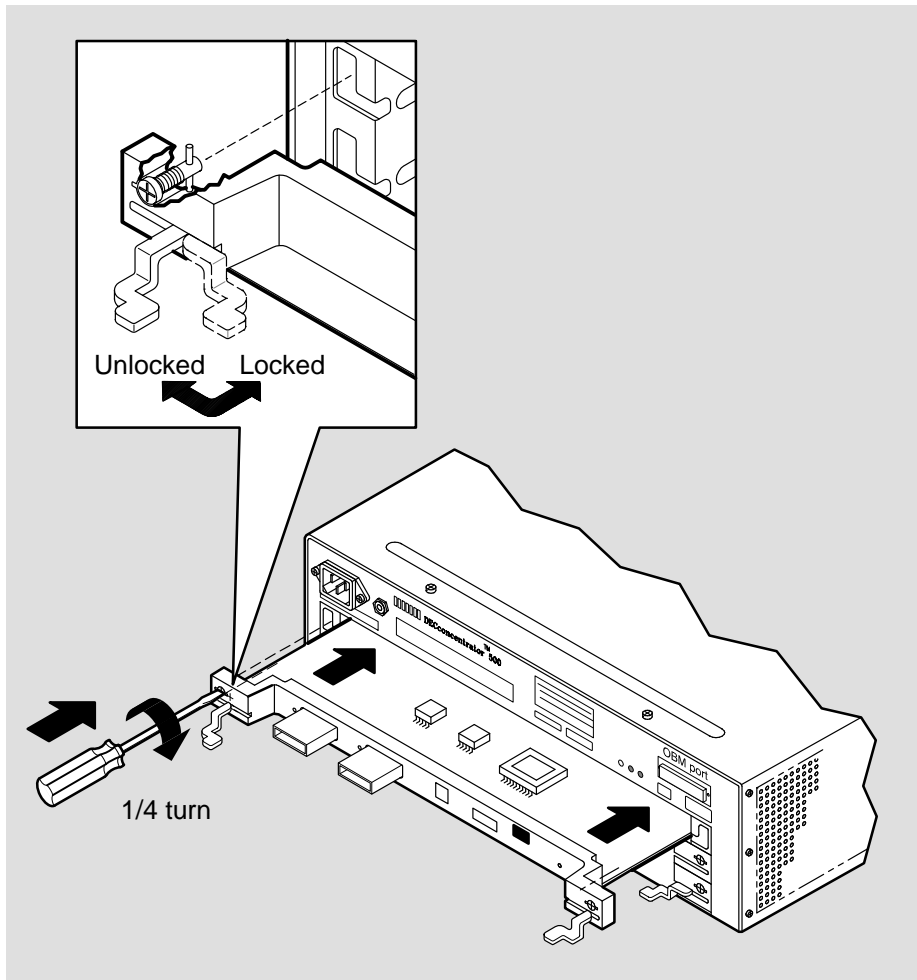
If the card is a Network Management Card, refer to Figure 1–2 and Table 1–1 for information about the card switches. Notify the system/network manager that you are resetting the network management parameters to the default setting.

5. Remove the antistatic wrist strap from your wrist and the DECconcentrator 500 unit.

NOTE

To connect the optical bypass relay, refer to Section 2.5.

Figure 2-3: Installing Option Cards



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2.5 Connecting the Optical Bypass Relay

To connect the cables, do the following:

NOTE

The power to the DECconcentrator 500 must be off when connecting or disconnecting the optical bypass connector.

1. Pull the protective cap or rubber boot from the port and fiber optic cable plug.

WARNING

To prevent personal injury or equipment damage, DO NOT insert telecommunications cabling into the optical bypass relay connector.

2. Connect the backbone fiber optic cables to the optical bypass relay unit.
 - Connect the correct Digital ANSI MIC cables to PHY A and to PHY B on the optical bypass relay unit.
3. Insert the optical bypass relay unit RJ12 cable connector into the Network Management Card (see Figure 1–1).
4. Connect the optical bypass relay unit fiber optic cables to the appropriate connectors on the Network Management Card.

Verifying the Installation

This chapter contains the procedures to connect the power and fiber optic cables. It also explains how to verify the operation of the DECconcentrator 500 unit and the ports.

3.1 Applying Power

WARNING 

To avoid bodily injury or damage to the equipment, do not connect the power cord or any other cable until you are instructed to do so in these procedures.

Do not apply power to the unit unless all covers are installed.

WARNING 

To avoid bodily injury, use care when connecting the DECconcentrator 500 unit power cord. Regulations in some countries may require an authorized person to connect the power.

Make sure you connect the power cord to a grounded wall outlet.

To verify the DECconcentrator 500 unit option card installation, do the following:

WARNING 

A safety earth ground wire has been incorporated into this product through the three-wire plug cap of the ac power cord. For continued protection against risk of electric shock, this product must be connected to a three-wire wall receptacle that has its grounding terminal reliably connected to the building's safety earth ground.

NOTE

If you installed a Network Management Card, go to step 1. If you installed a Port Card, go to step 2.

1. Set switch 1 on the Network Management Card to the ON position (refer to Figure 1–3). If you are using the optical bypass relay, ensure that it is correctly connected (refer to Section 2.5).
2. Plug the power cord into the DECconcentrator 500 unit first and then into the wall outlet. This applies power to the DECconcentrator 500 unit and starts the self-test. Refer to the self-test section in the *DECconcentrator 500 Installation* manual.

After the self-test is complete, the port Light Emitting Diodes (LEDs) blink green. If the LEDs are not blinking green, refer to the problem-solving section in the *DECconcentrator 500 Installation* manual.

3. Set switch 1 to OFF (if a Network Management Card was installed).
4. Set switch 2 to ON for network management; otherwise, leave switch 2 set to OFF.

3.2 Loopback Testing

The loopback test determines whether the DECconcentrator 500 Network Management Card or Port Card is faulty. This test can also determine whether there is a problem with the cable or the device at the end of the cable. The port LED should be blinking green before you start the loopback test.

To perform the loopback test, do the following:

1. Remove the protective cap from the multimode port to be tested.

NOTE

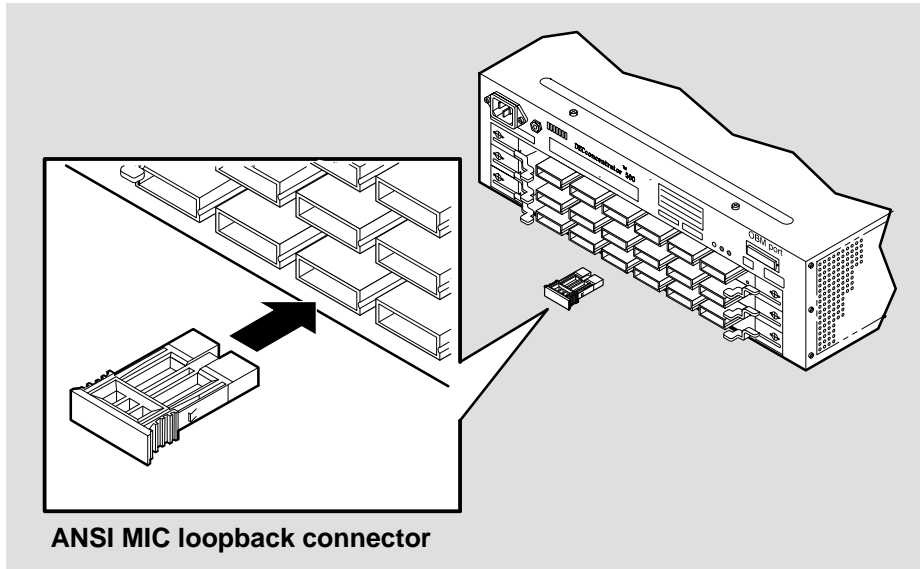
To avoid additional optical power loss, do not touch the fiber ends. Always replace protective caps when the fiber is not connected.

2. Connect the loopback connector to the port to be tested. Refer to Figure 3–1 (for ANSI MIC) and to Figure 3–2 (for 2.5-mm ST-type).

NOTE

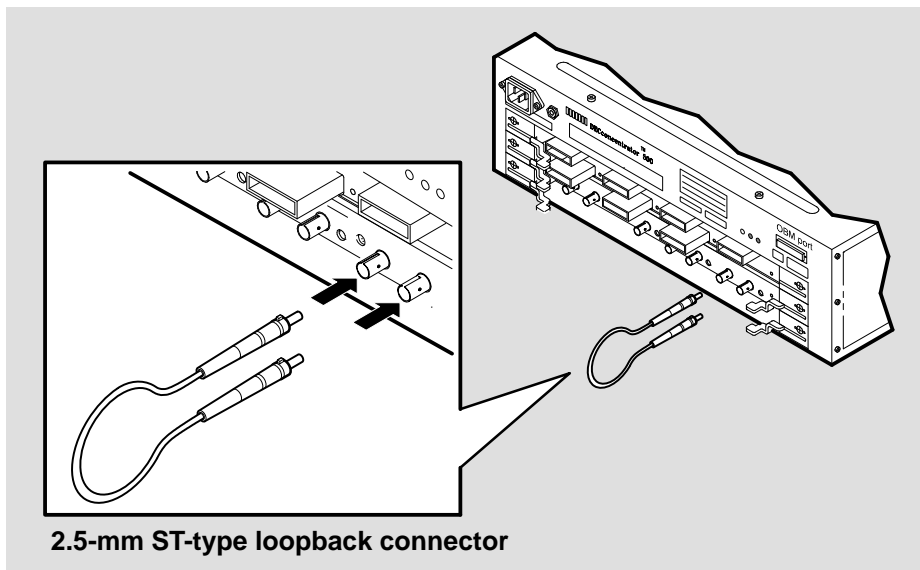
Perform the loopback test on one port at a time. Do not connect loopback connectors to more than one port at a time.

Figure 3–1: ANSI MIC Loopback Connection



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Figure 3–2: 2.5-mm ST-type Loopback Connection

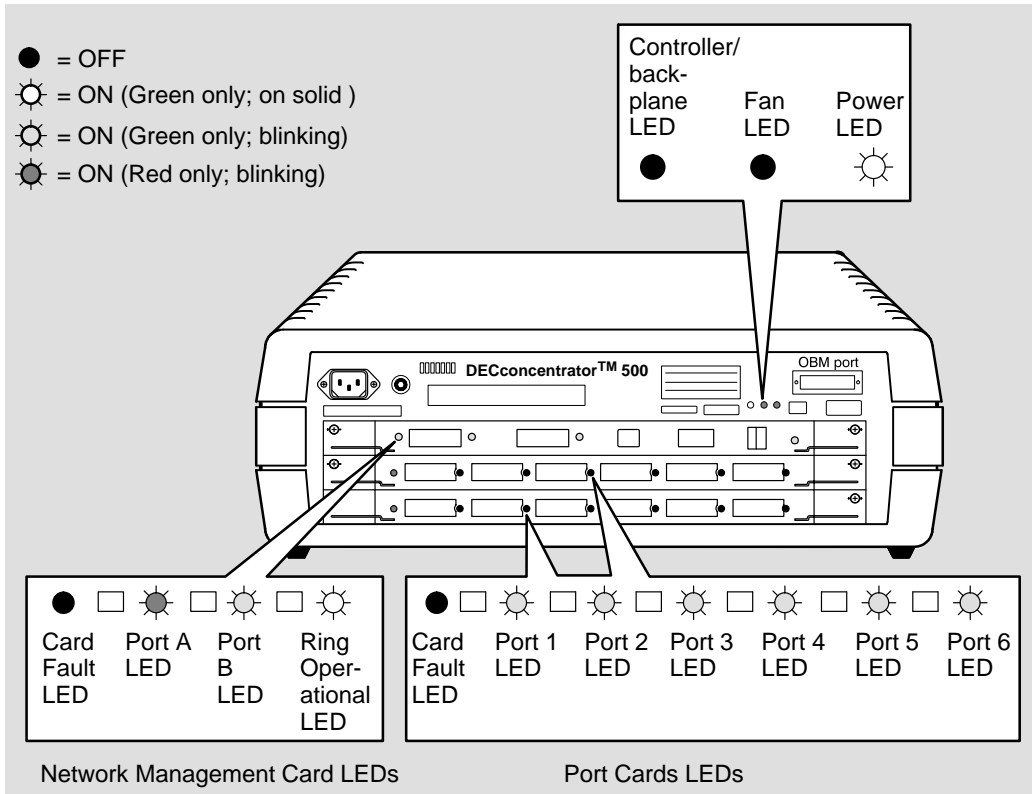


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After loopback connection, the port LED blinks red, indicating successful completion of the loopback test. Figure 3-3 shows the LEDs for the loopback connection to port A. If the LEDs do not match those in Figure 3-3, refer to the problem-solving section in the *DECconcentrator 500 Installation* manual.

3. Remove the loopback connector. The port LED blinks green again.

Figure 3-3: Port LED Status During Loopback Testing



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3.3 Connecting Fiber Optic Cables

Refer to the *Fiber Distributed Data Interface Network Configuration Guidelines* manual for multimode fiber cable specifications.

CAUTION

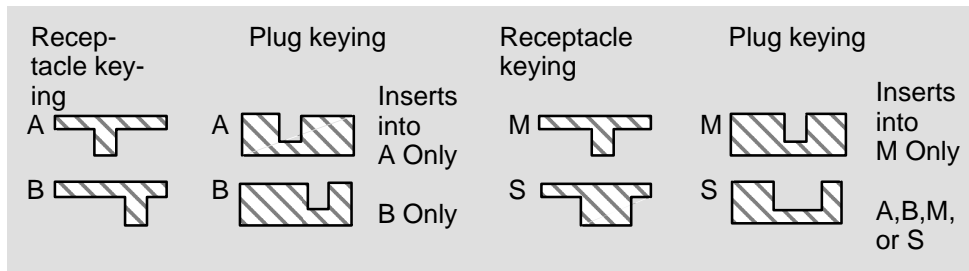
Make sure that the bend radius of any fiber optic cable is 7.5 centimeters (3 inches) or greater.

Steps 1 through 3 describe how to connect the fiber optic cables. (Refer to Section 2.5 for optical bypass relay cable connection.) Figure 3–4 shows keying the ANSI MIC connector.

NOTE

To avoid additional optical power loss, do not touch the fiber ends. Always replace protective caps when the fiber is not connected.

Figure 3–4: ANSI MIC Keying



LKG-5012-92I

To connect the cables, do the following:

1. Pull the protective cap or rubber boot from the port and fiber optic cable plug.
2. Connect the fiber optic cable to the appropriate connector (see Figure 3–5). Observe the LEDs after you connect the fiber optic cables (see Figure 3–6).
3. For each cable connected to the DECconcentrator, add the cable identification number to the DECconcentrator 500 Identification List in Appendix NO TAG.

Figure 3–5: Connecting the Cables

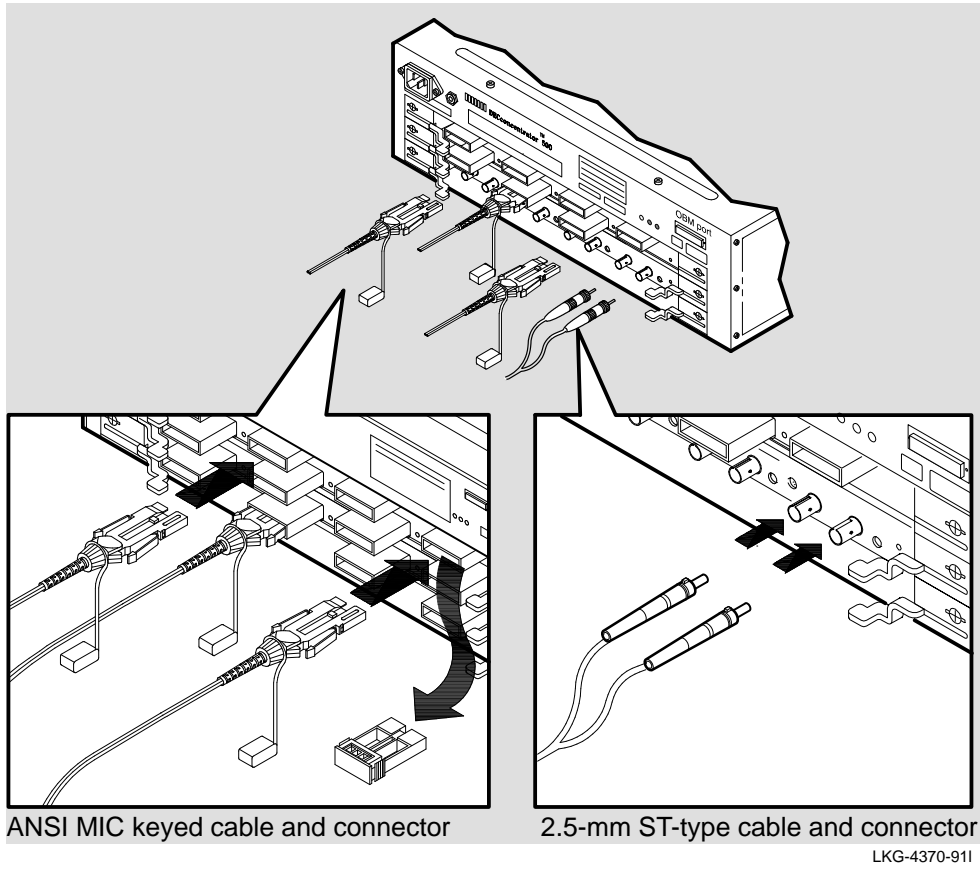
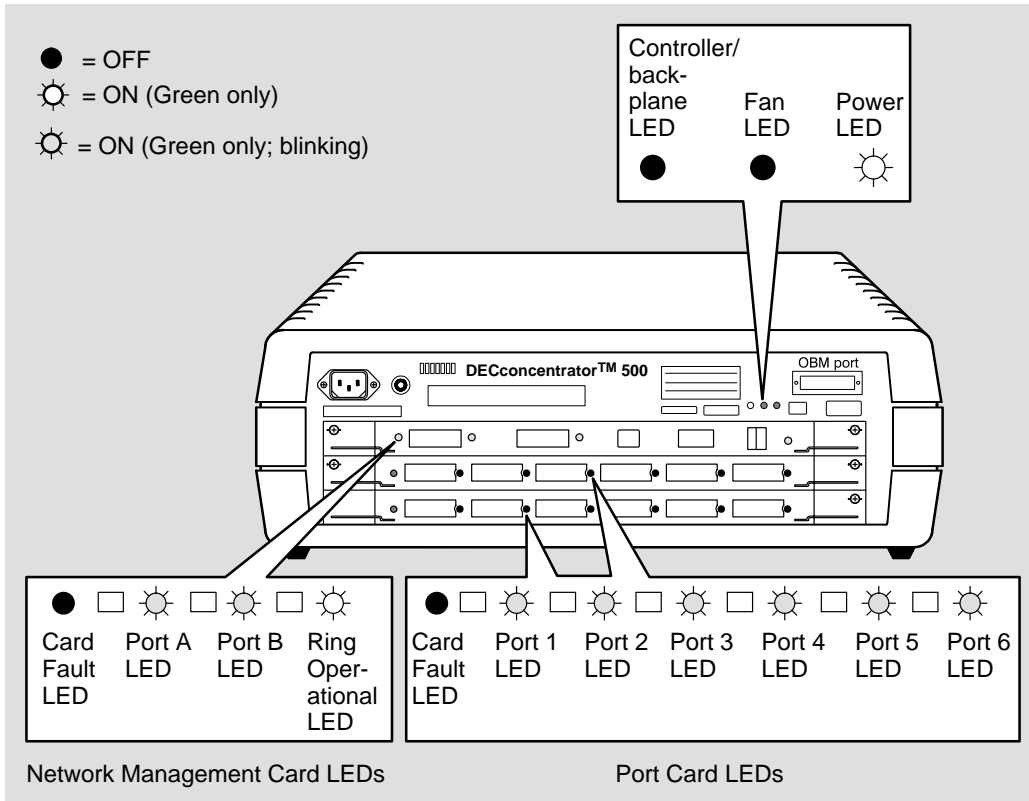


Figure 3–6: LEDs in a Fully Configured DECconcentrator 500 Unit



LKG-6795-92I

NOTE

Figure 3–6 assumes that all ports are connected to active stations.

Purchasing Multimode Fiber Optic System Cables

This appendix contains information about purchasing multimode fiber optic system cables.

NOTE

Verify that the installation site meets the physical, environmental, power, and cabling requirements for the DECconcentrator 500 unit. Check the cable plant log-book entry for the cable plant certification.

A.1 Multimode Fiber Optic System

The multimode option cards use ANSI-compliant and low-power optical transmission systems. The optical transmissions differ by the total distance and loss budgets supported. The ANSI option card uses the ANSI FDDI MIC connector and the low-power option card uses the 2.5-mm ST-type connector. Refer to the *Fiber Distributed Data Interface Network Configuration Guidelines* manual for multimode fiber optic system specifications.

Table A–1 lists the fiber optic connector attenuation specifications.

Table A–1: Fiber Optic Connector Specification

Connector	Attenuation
ANSI FDDI MIC	Maximum attenuation not directly specified by ANSI X3T9
ST-type 2.5-mm (0.10 in)	Maximum attenuation less than 0.7 dB

A.2 Multimode Fiber Optic Cabling

The multimode option cards use a 1300-nm optical system with multimode fiber. Digital recommends using 62.5/125 Graded Index Multimode Optical Fiber. The fiber must conform to Digital general specification 1710003-GS.

Digital recommends using the patch cables listed in Table A–2 for connection of FDDI-to-FDDI and FDDI-to-2.5-mm ST-type.

Table A–2: ANSI Multimode Patch Cables

Cable Length	FDDI-to-FDDI Digital P/N	FDDI-to-2.5 mm ST-type Digital P/N
1 m (3.3 ft)	BN24B-01	BN24D-01
3 m (9.8 ft)	BN24B-03	BN24D-03
4.5 m (14.8 ft)	BN24B-4E	BN24D-4E
10 m (32.8 ft)	BN24B-10	BN24D-10
20 m (65.6 ft)	BN24B-20	BN24D-20
30 m (98.4 ft)	BN24B-30	BN24D-30

Digital recommends you use the patch cables listed in Table A–3 for low-power multimode connection.

Table A–3: Low-Power Multimode Patch Cables

Cable Length	2.5 mm ST-type-to-2.5 mm ST-type Digital P/N
1 m (3.3 ft)	BN24E-01
3 m (9.8 ft)	BN24E-03
4.5 m (14.9 ft)	BN24E-4E
10 m (32.8 ft)	BN24E-10
20 m (65.6 ft)	BN24E-20
30 m (98.4 ft)	BN24E-30

B

DECconcentrator 500 Unit Identification List

Use the DECconcentrator 500 Identification List to record the following information:

- DECconcentrator 500 model number
- DECconcentrator 500 serial number
- Network Management Card
 - Cable ID number
 - Hardware address
 - Ports used
 - Switch 1 setting
 - Switch 2 setting
- Port Card
 - Ports used
 - Cable ID number

Fill in the DECconcentrator 500 Identification List (see Figure B–1) and give a copy to the system/network manager.

Figure B-1: DECconcentrator 500 Identification List

<input type="checkbox"/>	DECconcentrator 500 Model Number	_____
<input type="checkbox"/>	DECconcentrator 500 Serial Number	_____
<input type="checkbox"/>	Network Management Card: Hardware address	_____
<input type="checkbox"/>	Network Management Card: switch 1 setting	_____
<input type="checkbox"/>	Network Management Card: switch 2 setting	_____
<input type="checkbox"/>	Network Management Card: ports used	_____
	Port A cable ID number	_____
	Port B cable ID number	_____
<input type="checkbox"/>	First Port Card: ports used	_____
	Port 1 cable ID number	_____
	Port 2 cable ID number	_____
	Port 3 cable ID number	_____
	Port 4 cable ID number	_____
	Port 5 cable ID number	_____
	Port 6 cable ID number	_____
<input type="checkbox"/>	Second Port Card: ports used	_____
	Port 1 cable ID number	_____
	Port 2 cable ID number	_____
	Port 3 cable ID number	_____
	Port 4 cable ID number	_____
	Port 5 cable ID number	_____
	Port 6 cable ID number	_____
<input type="checkbox"/>	Third Port Card: ports used	_____
	Port 1 cable ID number	_____
	Port 2 cable ID number	_____
	Port 3 cable ID number	_____
	Port 4 cable ID number	_____
	Port 5 cable ID number	_____
	Port 6 cable ID number	_____

Related Documents

The following documents contain additional information. Refer to the back of this manual for ordering information.

- *DECconcentrator 500 Problem Solving* (Order No. EK-DEFCN-PS)

This manual describes isolating DECconcentrator 500 faults to the field-replaceable unit (FRU) and removing and replacing each FRU. This is a field problem-solving manual.

- *DECconnect System Fiber Optic Planning and Configuration* (Order No. EK-DECSY-FP)

This manual describes the planning requirements, product information, and guidelines for configuring DECconnect System Fiber Optic Networks that use the DECconnect System fiber optic products.

- *DECconnect System Fiber Optic Installation* (Order No. EK-DECSY-FI)

This manual describes how to install a DECconnect System fiber optic cable plant.

- *POLYCENTER Framework and Application Planning and Installation for VMS* (Order No. AA-PD58D-TE)

This manual describes how to plan for and install DECmcc on the VMS operating system.

- *POLYCENTER Framework and Application Planning and Installation for ULTRIX* (Order No. AA-PH0WB-TE)

This manual describes how to plan for and install DECmcc on the ULTRIX operating system.

- *POLYCENTER Framework and Application Concentrator Access Module Use* (Order No. AA-PH31C-TE)

This manual describes the DECconcentrator 500 entity model, entity management, and the directives necessary to perform typical management operations.

- *Fiber Distributed Data Interface Network Configuration Guidelines* (Order No. EK-DFDDI-CG)

This manual describes the guidelines for connecting devices to an FDDI network. It also includes network configuration examples.

- *Fiber Distributed Data Interface System Level Description* (Order No. EK-DFSLD-SD)

This manual describes the FDDI system, how it works, and the role of the individual components.

Additional Networking Documentation

Refer to the Network Management Software documentation specific to your network product. Also refer to the following documents for additional information.

- *Networks and Communications Product Documentation* (Order No. EK-NACPD-RE)

This manual lists the title and order number for each publication associated with Digital Equipment Corporation's Networks and Communications products.

- *Networks Buyer's Guide*

This guide describes Digital's networking products. Contact your local sales office to receive a copy.

Part Numbers for Software Updates

Digital Equipment Corporation plans periodic software microcode updates. Contact your sales representative or see the *Networks Buyer's Guide* to find out whether new software microcode is available. The following table lists the update packages, media, and part numbers for the updates.

Table D-1: Update Packages

Microcode and Media	Digital Part Number
FDDI DECconcentrator 500 Software Update Package for VMS, 16MT9	QB-YX2A9-AA
FDDI DECconcentrator 500 Software Update Package for VMS, TK50	QB-YX2A9-AB
FDDI DECconcentrator 500 Software Update Package for ULTRIX/VAX, 16MT9	QB-YX2A9-AC
FDDI DECconcentrator 500 Software Update Package for ULTRIX/VAX, TK50	QB-YX2A9-AD
FDDI DECconcentrator 500 Software Update Package for ULTRIX/RISC, 16MT9	QB-YX2A8-AE
FDDI DECconcentrator 500 Software Update Package for ULTRIX/RISC, TK50	QB-YX2A8-AF
FDDI DECconcentrator 500 Software Update Package for MS-DOS, 720-KB diskette	QB-YX2A8-AG

Glossary

American National Standards Institute (ANSI)

An organization that compiles and publishes computer industry standards.

ANSI

See American National Standards Institute.

attenuation

Magnitude of optical power loss usually expressed in units of decibels (dB).

DECconcentrator

An FDDI node that provides additional attachment points for stations that are not part of the dual ring, or for other concentrators in a tree structure. A concentrator has two Physical Layer entities and may have one or more Data Link layer entities. The concentrator is the focal point of Digital's dual ring of trees.

configuration switch

The switches located on the Network Management Card handle. Switch 1 is used to enable/disable the reset to default parameters function (active only during initialization). Switch 2 is used to enable/disable remote write access.

Fiber Distributed Data Interface (FDDI)

A set of ANSI/ISO standards that define a high-bandwidth (100-Mb/s) general-purpose local area network connection between computers and peripheral equipment in a timed-token passing, dual ring of trees configuration.

ANSI Media Interface Connector (MIC)

A category of connectors that meet the ANSI PMD standard and are used to connect single attachment stations, dual attachment stations, and DECconcentrator 500 units to an FDDI network. Type A and B connectors are used to connect a DECconcentrator 500 unit to the dual ring. Type M and S connectors are used to connect DECconcentrator 500 units and single attachment stations.

FDDI connector

See ANSI Media Interface Connector.

FDDI network

A fiber optic network that meets the ANSI X3T9 standard. A counter rotating timed-token dual ring network operating at a bandwidth of 100 Mb/s.

fiber

Dielectric that guides light; waveguide.

fiber optic cable

A transmission medium designed to transport signals in the form of pulses of light.

fiber optics

A technology whereby signals are transmitted over an optical waveguide medium through the use of light-generating transmitters and light-detecting receivers.

LASER

Light Amplification by Stimulated Emission of Radiation. Predominantly used for transmission over single-mode cable systems.

LED

Light emitting diode.

microcode

Software code that includes an internal program that controls the execution of computer instructions.

Network Management Card

An option card for the DECconcentrator 500 unit that provides for the connection to the dual ring and the hardware/firmware to allow remote management. A multimode Network Management Card has two ports and two switches.

optical receiver

An optoelectronic circuit that converts an incoming optical signal to an electronic logical signal.

optical transmitter

An optoelectronic circuit that converts an outgoing electronic logical signal to an optical signal.

Port Card

An option card for the DECconcentrator 500 unit that provides for the connection of stations to the DECconcentrator 500 unit. The multimode Port Card conforms to the ANSI X3T9 standard.

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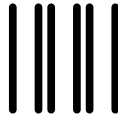
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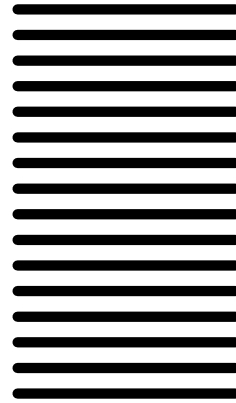
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