C I S C O S Y S T E M S ®

Doc. No. 78-1265-01

Installing A/B Port Cards

Product Numbers: WS-C1511=, WS-C1513=, and WS-C1514=

Preventing Electrostatic Discharge Damage

Electrostatic discharge (ESD) can damage equipment and impair electrical circuitry. It occurs when electronic components are improperly handled and can result in complete or intermittent failures. Always follow ESD-prevention procedures when removing and replacing components. Ensure that the chassis is electrically connected to earth ground using an ESD mat or a ground wire. Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact. To safely channel unwanted ESD voltages to ground, connect the clip to the surface of an unpainted chassis frame. To properly guard against ESD damage and shocks, the wrist strap and cord must operate effectively. If no wrist strap is available, ground yourself by touching the metal part of the chassis.

⚠ **Caution** For safety, periodically check the resistance value of the antistatic strap, which should be between 1 and 10 mega ohms.

About this Publication

This publication includes the procedures required to install Copper Distributed Data Interface multilevel transmission (CDDI/MLT-3) and Fiber Distributed Data Interface (FDDI) A/B port cards in the workgroup switch and concentrator models that use this card. The equal sign (=) appended to the product numbers designates these products as *spare parts*.

Following are the sections and procedures included:

- Cabling Requirements

    — FDDI

    — CDDI

- A/B Port Cards

    — Port Card Installation

    — Port Card Removal

Cabling Requirements

Following are the cabling requirements for the A/B port cards.

FDDI

The multimode FDDI connectors on the switch accept 62.5/125-micron or 50/125-micron multimode fiber with standard FDDI media interface connectors (MICs). The single-mode connectors accept 8.7 to 10/125-micron single-mode fiber with standard FDDI ST-type connectors. Table 1 lists FDDI distance specifications and Figure 1 and Figure 2 illustrate single-mode and multimode connectors, respectively.

Table 1   FDDI Maximum Transmission Distances

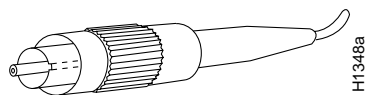| Transceiver Type	Maximum Distance Between Stations
Single-mode	18.6 miles (up to 30 km)
Multimode	1.2 miles (up to 2 km)

Figure 1   Single-Mode FDDI Interface Connector—ST Type

Warning   Invisible laser radiation may be emitted from the aperture ports of the single-mode FDDI card when no cable is connected. *Avoid exposure and do not stare into open apertures.*
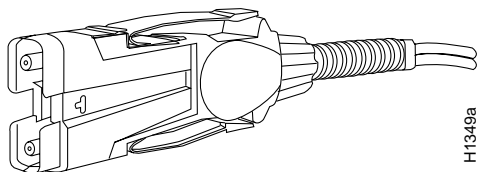

Figure 2   Multimode FDDI Interface Connector—MIC Type

CDDI

Check all existing cables to ensure that you have the proper connectors (modular RJ-45) and for conformance with the following CDDI/MLT-3 distance requirements and:

- Data-grade unshielded twisted-pair (UTP) wiring—Electronics Industries Association/Telecommunications Industries Association (EIA/TIA)-568 category 5, data-grade cable is required for CDDI installations. The total length of data grade UTP cable from the switch to another switch, station, or CDDI concentrator must not exceed 330 feet (100.6 m), including patch cords and cross-connect jumpers.

- Shielded twisted-pair (STP) wiring—You must use IBM Type 1 STP wiring for your CDDI installation. The total length of STP cable measured from the adapter or media access unit (MAU) to the switch must not exceed 330 feet (100.6 m).

Note   You must use high-performance, category 5, data-grade, modular cross-connect cables for external CDDI connections.

When you plan your CDDI installation, remember the following:

- Use cross-connect (patch) panels which comply with the EIA/TIA 568B category 5 wiring standard.

- Do *not* use bridge taps.

- Do *not* use protection coils.

- Do *not* share services (such as voice and data on the same cable). CDDI uses two of the four pairs in the twisted-pair cable. The remaining two pairs cannot be used for other applications.

- Do *not* exceed the maximum cable length for CDDI UTP and STP of 330 feet (100.6 m).

A/B Port Cards

The A/B port cards are options that provide two additional CDDI/MLT-3 or FDDI ports.

![caution triangle] **Caution**   During these procedures, the concentrator must be turned off, thereby disrupting the ring.

The A/B card slot supports a single media access control (MAC), dual attachment station (DAS) with dual homing configuration for FDDI (can also be used as single attachment station [SAS]). The slot also accepts CDDI/MLT-3 cards for UTP and STP connections.

Figure 3 shows the following three models of A/B port cards:

- WS-C1511—Multimode FDDI with FDDI MICs

- WS-C1513— CDDI/MLT-3 with category 5 UTP modular RJ-45 connectors

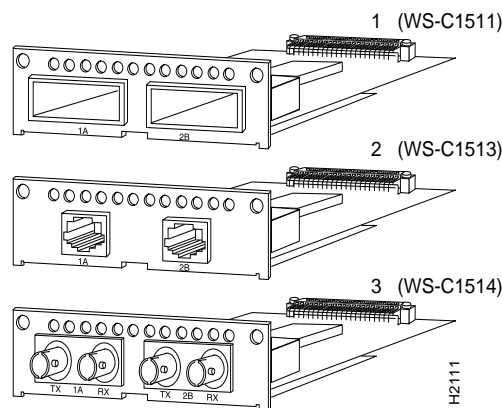- WS-C1514—Single-mode FDDI with standard FDDI ST-type connectors

Figure 3   **FDDI and CDDI A/B Port Cards**

Port Card Installation

Following is the procedure for installing an A/B port card:

Step 1 Unplug the power cable but, to channel ESD voltages to ground, ground the chassis and attach an ESD-preventive wrist strap.

⚠ **Caution** To prevent damage, never install or remove a port card with power applied to the concentrator.

Step 2 Remove the two screws holding the blank plate to the concentrator and remove the plate.

⚠ **Caution** To prevent damage to the FDDI transceivers on the FDDI port card (in step 3), gently press down on the port card as you insert it so that the transceivers clear the chassis. The fit is snug.

Step 3 Slide the port card into the slot in the concentrator. Make sure the metal base plate on the card slides under the guides in the concentrator. (See Figure 4.)

Step 4 Secure the card to the concentrator using the two Phillips screws supplied with the port card.
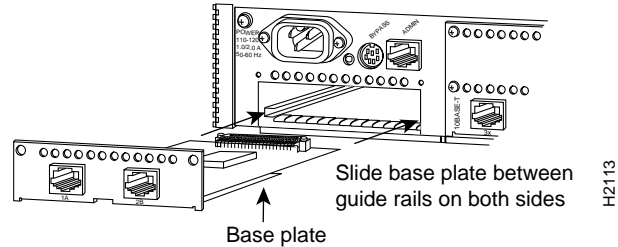
Step 5 Reinsert the power cable.

Figure 4 Installing the A/B Port Card

Port Card Removal

Following is the procedure for removing an A/B port card:

Step 1 Unplug the power cable but, to channel ESD voltages to ground, ground the chassis and attach an ESD-preventive wrist strap.

⚠ **Caution** To prevent damage, never install or remove a port card with power applied to the concentrator.

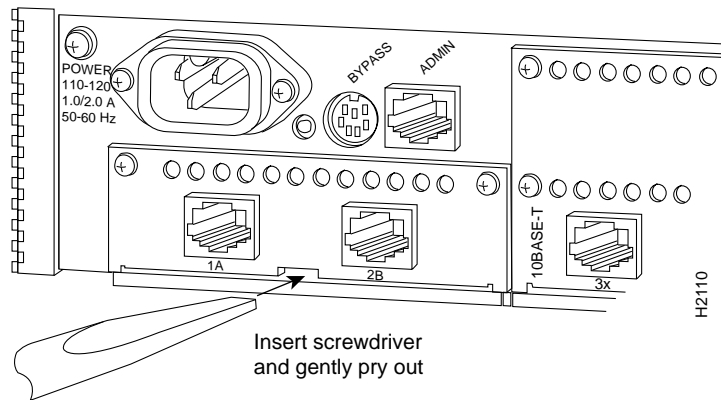**Step 2** Remove the two screws that secure the port card to the concentrator. (See Figure 5.)

Insert screwdriver
and gently pry out

Figure 5   Removing the A/B Port Card

⚠ **Caution**   To prevent damage to the FDDI transceivers on the FDDI port card (in step 3), gently press down on the port card as you remove it so that the transceivers clear the chassis. The fit is snug.

Step 3   Gently pry the A/B port card out of the slot with a flat-blade screwdriver. (See Figure 5.) After traveling approximately 1/2 inch, the card will be free from the connector and will slide out easily.

Step 4   Reinsert the power cable.

> **Note** For technical assistance, contact a service representative or the Cisco Technical Assistance Center (TAC) at 800 553-2447, 415 903-7209, or `tac@cisco.com`. For upgrade or product information, contact the Customer Response Center at 800 553-6387, 415 903-7208, or `cs-rep@cisco.com`.

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