

Chapter 1

Product Overview

This chapter provides an overview of the workgroup CDDI/FDDI EISA PC adapters for EISA (Extended Industry Standard Architecture) PCs, information about the hardware and software required to run the EISA PC adapters, and unpacking information.

Workgroup high-performance CDDI/FDDI EISA PC adapters connect workstations and servers to CDDI or FDDI networks. The adapters provide a single attachment or dual attachment connection that is fully compliant with SMT (station management) Revision 6.2 (the FDDI station management specification).

The workgroup EISA PC adapters ensure high performance by maximizing data throughput and minimizing network overhead on the host processor. Downloadable firmware permits convenient upgrades and eliminates the need to swap PROM chips.

Workgroup EISA PC adapters feature a highly integrated design and several high-performance features to ease internal data flow and minimize overhead imposed on the host processor. To maximize throughput, EISA PC adapters support 32-bit wide EISA burst-data transfers. Bus mastering via two specially designed direct memory access (DMA) channels and an onboard SMT processor minimize host processor intervention.

EISA PC adapters incorporate SMT Revision 6.2. The adapter firmware is downloadable to enable you to easily update SMT versions.

Figure 1-1 shows the CDDI/FDDI EISA PC adapters.

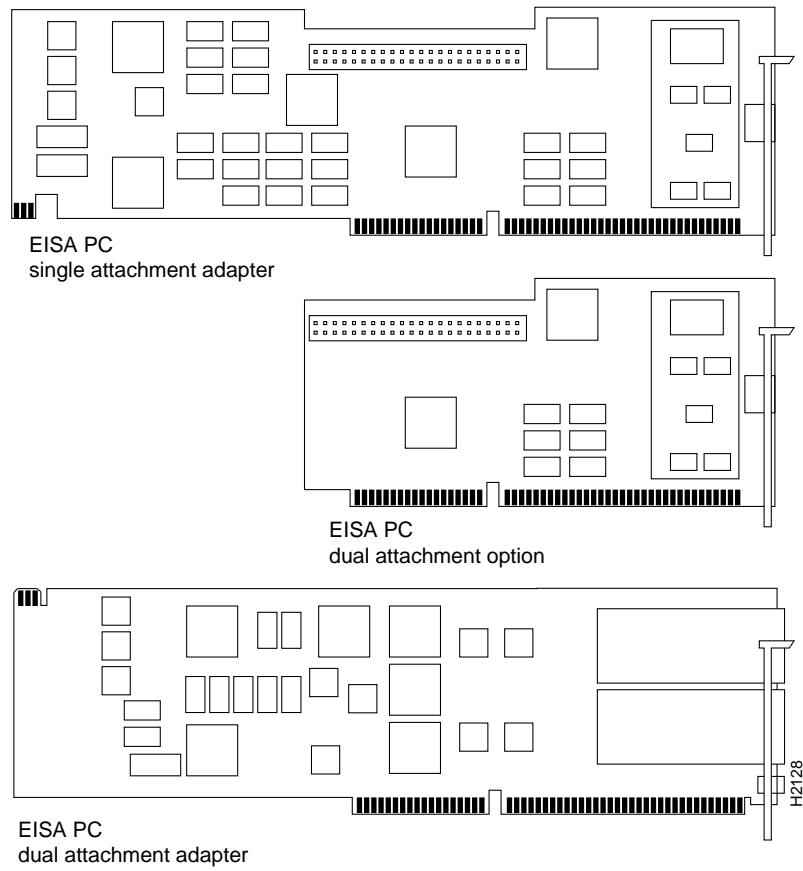


Figure 1-1 Workgroup CDDI/FDDI EISA PC Adapters

Hardware Overview

The workgroup CDDI and FDDI EISA PC adapters are available for single attachment and dual attachment configurations.

Single attachment EISA PC adapters can connect to another station or to a concentrator, which in turn can connect to the dual ring of an FDDI network. A single attachment configuration consists of a single attachment adapter with an FDDI or CDDI port. The single attachment adapter is an S (slave) port. The workstation FDDI interface has one PMD (physical medium dependent) PHY (Physical), one MAC (media access control), and one SMT (station management).

The dual attachment configuration consists of either of the following:

- Single attachment adapter with B port connector, and additional dual attachment option with A port connector
- Dual attachment adapter with both A and B connectors on the same adapter card

A workstation with the dual attachment configuration connects directly to the primary and secondary rings of an FDDI network. The workstation FDDI interface has two PMDs, two PHYs, one MAC, and one SMT.

Figure 1-2 and Figure 1-3 show how single attachment stations and dual attachment stations are connected.

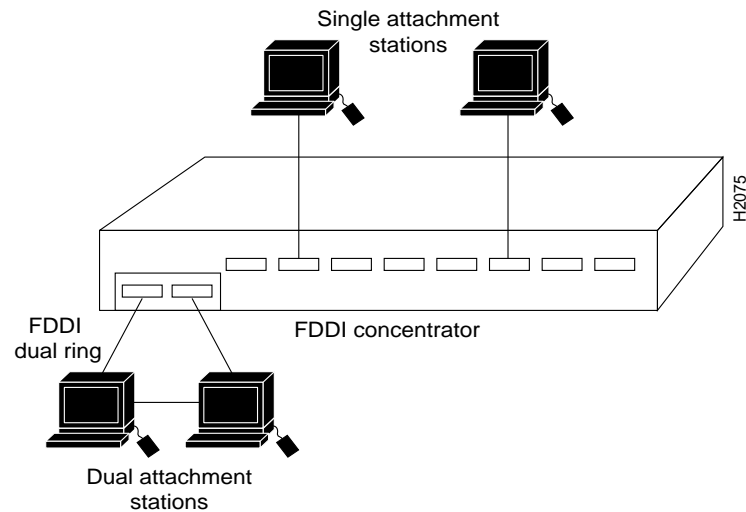


Figure 1-2 Single Attachment and Dual Attachment Stations

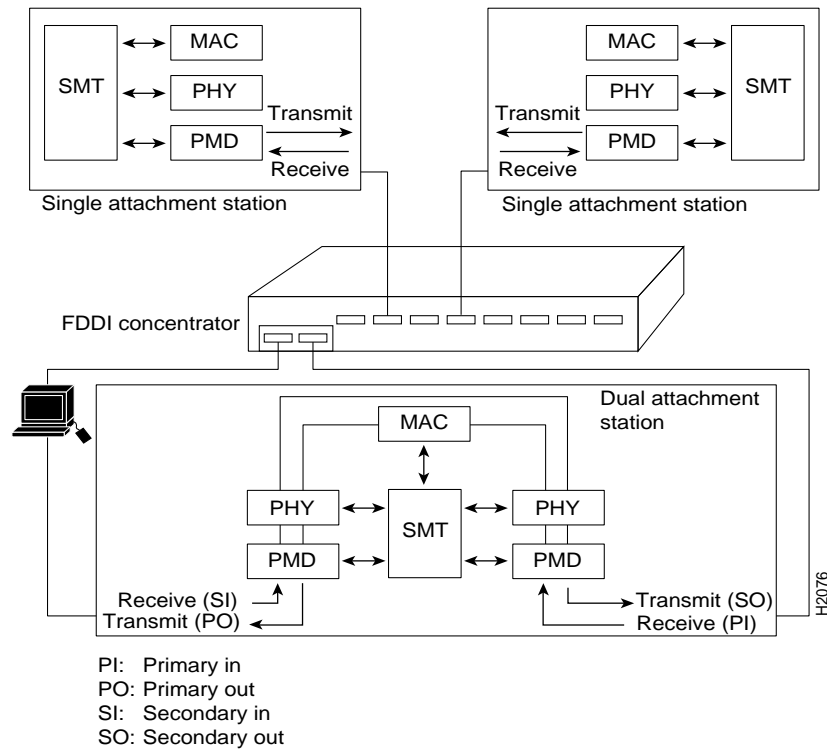


Figure 1-3 Single Attachment and Dual Attachment Stations

You also can connect a dual attachment station in the redundant configuration called *dual homing*. Figure 1-4 is an example of a dual homing configuration. A dual attachment station is connected to two concentrators that are connected to the dual ring. Port A on the station is the backup connection that only becomes active if the primary connection (Port B) fails.

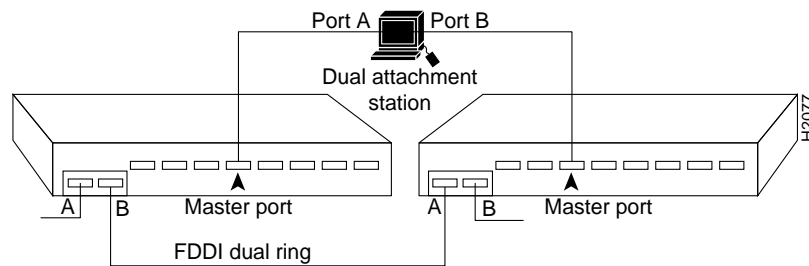


Figure 1-4 Dual Homing

Adapter LEDs

Each EISA PC adapter has two LED indicators on the faceplate for easy monitoring of the adapter internal status and the FDDI link. The FDDI dual attachment option adapter also has a connector for an optical bypass switch, while the FDDI dual attachment adapter has a connector for a bypass switch cable adapter. The LEDs and connector are shown in Figure 1-5.

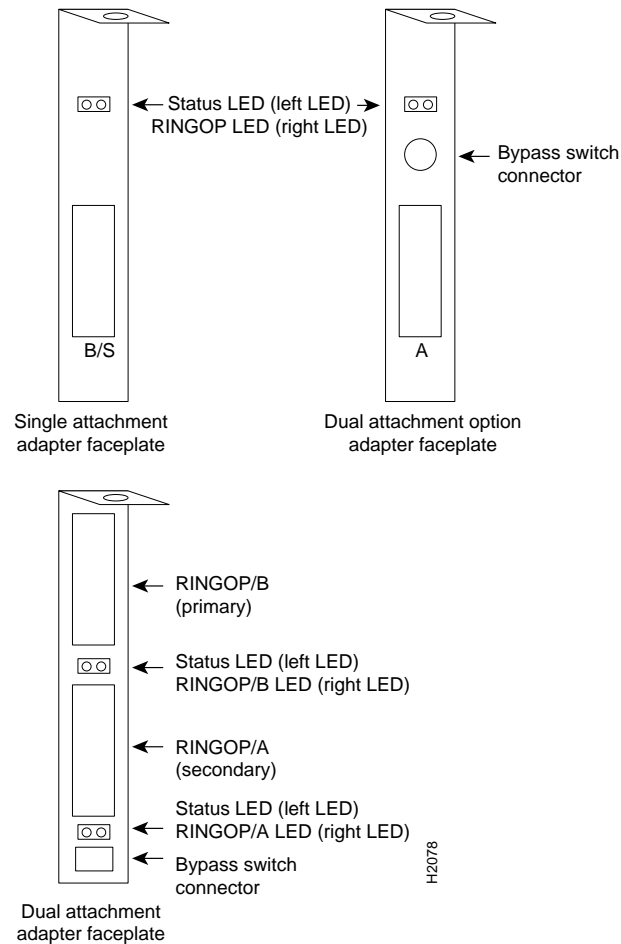


Figure 1-5 Workgroup EISA PC Adapter Faceplates

The adapter LEDs descriptions follow:

- **Status LED**—Indicates the adapter status. When the LED is on, the adapter has passed its internal diagnostics.
- **RINGOP LED**—Monitors ring operation. When this LED is on, the adapter is connected to the FDDI ring.

See Table 3-1 for a complete description of the RINGOP LEDs.

Bypass Switch Connector

The dual attachment FDDI adapter and optional dual attachment adapter have a connector for an optical bypass switch. When activated, a bypass switch removes a nonfunctioning dual attachment adapter from the ring. The 6-pin mini-DIN connector, used on the optional dual attachment adapter and bypass switch connector cable adapter, is compatible with most optical bypass switches. (For more information, see Appendix D, “Optical Bypass Switch Connector Pinout Information.”)

Hardware Requirements

Your EISA PC system must meet the following hardware requirements:

- If you are installing the single attachment or dual attachment adapter, you must have an available bus-mastering EISA slot.
- If you are installing a dual attachment option, you must have an additional, adjacent EISA slot. This slot does not need to be a bus-mastering slot.
- One interrupt line (3, 5, 7, 9, 11, 12, or 15) must be available for the EISA configuration utility to configure the adapter.
- You must have 8 kilobytes (KB) of shared memory placed anywhere from 0xA0000 to 0xEE000. This is configured by the EISA configuration utility.

Software Requirements

Your EISA PC system must meet the following software requirements:

- EISA configuration utility (supplied with the PC)

- For the Novell client, DOS Version 3.1 or later
- For the Novell server, NetWare Version 4.x and 3.1x
- For Windows NT, Version 3.1

Workgroup EISA PC Adapter Package

Upon receipt of your workgroup EISA PC adapter package, do the following:

- Step 1** Inspect the unopened package for any damage that occurred during shipping.
- Step 2** Open the package carefully and make sure the adapter has arrived in good condition. If you notice any damage, notify your carrier.
- Step 3** Keep the packing materials for reuse. You may need them to store, transport, or return the contents. *All materials returned under warranty must be packed in their original packing materials.*
- Step 4** Make sure that the package contains the items for your particular adapter configuration. The EISA PC adapter package contains the following:

Workgroup EISA PC Single Attachment Adapter

- Workgroup CDDI/FDDI EISA PC adapter
- 3.5-inch workgroup EISA PC Driver disk
- *Workgroup CDDI/FDDI EISA PC Adapter User Guide*
- Warranty Registration Card

Workgroup EISA PC Dual Attachment Option

If you purchased the EISA PC adapter dual attachment option, your package also contains the following:

- Workgroup FDDI or CDDI EISA PC dual attachment option
- 3-inch ribbon cable
- MIC A and B key (FDDI only)

Workgroup EISA PC Dual Attachment Adapter

- Workgroup CDDI/FDDI EISA PC dual attachment adapter

- 3.5-inch workgroup EISA PC Driver disk
- *Workgroup CDDI/FDDI EISA PC Adapter User Guide*
- Warranty Registration Card
- MIC A and B (FDDI only)
- Optical bypass cable adapter

If an item is missing, contact a technical support representative immediately.

Step 5 Store the EISA PC adapter in the antistatic bag until you are ready to install it in your PC.

Step 6 Fill out the Warranty Registration Card and mail or fax it to Cisco Systems, Inc.

