Release Notes for the Model 58000 10/100 Ethernet Switch

Bay Networks

896-129-A

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Introduction

These release notes contain important information about the changes that occur to the system software and configuration options of the Model 58000 10/100 Ethernet Switch when the FDDI expansion module is installed on the switch. This information is not included in the *Installation and Reference for the Model 58000 10/100 Ethernet Switch.*

> **NOTE:** You must have Ethernet Switch Software Version 2.0.1 running on your Model 58000 switch for the FDDI expansion module to operate. For more information about version 2.0.1 software, refer to Using Ethernet Switch Software Version 2.0.

The following topics are included in these release notes:

- Overview of the FDDI expansion module

- System Information menu changes on the Model 58000 switch software

- Network applications

- Unsupported FDDI network configurations

- New features for Ethernet Switch Software Version 2.0.1

- Downloading Ethernet Switch Software Version 2.0.1

- Related publications

- Ordering Bay Networks™ publications

Overview of the Model 58000-109 FDDI Expansion Module

The Model 58000-109 FDDI Expansion Module is an assembly unit that installs on the Model 58000 10/100 Ethernet Switch, which is installed in a System 5000™ hub. The FDDI expansion module provides users with the capability to connect multiple shared 10BASE-T Ethernet local area networks (LANs) to an FDDI building or campus backbone network.

Users connected to the Model 58000 switch using 10BASE-T or 100BASE-T Ethernet can connect to the 100 megabit per second (Mb/s) FDDI network through the FDDI expansion module.

For more information about the features of the FDDI expansion module, refer to *Installation and Reference for the Model 58000-109 FDDI Expansion Module.*

System Information Menu Changes

When the FDDI expansion module is installed and operational on the Model 58000 switch, the following display line will appear on the System Information menu of the Model 58000 10/100 Ethernet Switch software:

```
100 Mb/s Half Duplex [FDDI]
```

If a 100 Mb/s media dependent adapter (MDA) and the FDDI expansion module are both installed on the Model 58000 switch, the display line will appear as follows on the System Information menu:

```
100 Mb/s Half Duplex [MDAP1 MDAP2 FDDI]
```

➡ **NOTE:** Half-duplex is the default configuration mode for the 100 Mb/s MDA. If the MDA is configured for full-duplex mode, MDAP1 and MDAP2 will not appear on the display line.

These lines are static and are for display purposes only.

➡ **NOTE:** FDDI will always appear as 100 Mb/s half-duplex mode.

Figure 1 shows the System Information menu with the new display line.

```
                    Bay Networks 58000 Ethernet Switch Module
 System Up Time: 1 D-12H-22M-11S              IP Address: 134.177.32.98(M)

 MAC Address: 00008124C460                    Default Gateway: 134.177.32.1

 Switch Software Version: 2.0.1               Subnet Mask: 255.255.255.0


                               System Information
           Switch Firmware Version [None]

           Switch Mode [Basic]

           Memory (Boot/Flash/NVRAM/DRAM) [128K/2048K/256K/4096K]

           Master Switch Priority [8000]

           Master Switch MAC Address [000081000201]

           Master Switch IP Address [134.177.32.98]

           100 Mb/s Half Duplex [MDAP1 MDAP2 FDDI]

           10 Mb/s Full Duplex (Port#) [None]

           10 Mb/s Half Duplex (Port#) [1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16]

           Trunk Ports [MDA P2]



                        The current firmware version.
       <CTRL><P>:Main Menu <CTRL><U>:Previous Menu <CTRL><L>:Refresh Screen
```

Figure 1.   System Information menu

This display line shows that MDAP1 (port 1), MDAP2 (port 2), and the FDDI expansion module are operating at 100 Mb/s half-duplex mode.

Network Applications

The FDDI expansion module extends the capabilities of the Model 58000 switch within the System 5000 hub by providing switched connectivity to the highly reliable and fault-tolerant dual-ring architecture of an FDDI campus backbone. Enterprise users with multiple System 5000 hubs can connect to a centralized network center System 5000 hub that provides integrated FDDI, switching, routing, and remote access capabilities (see Figure 2).

In this configuration, the Model 58000 switching modules in the System 5000 hub provide Layer 2 frame switching between the 10BASE-T Ethernet LANs and the 100 Mb/s FDDI shared network, thereby providing connectivity to critical resources such as dedicated servers, mainframe or mini devices, WAN connections, and remote access devices.
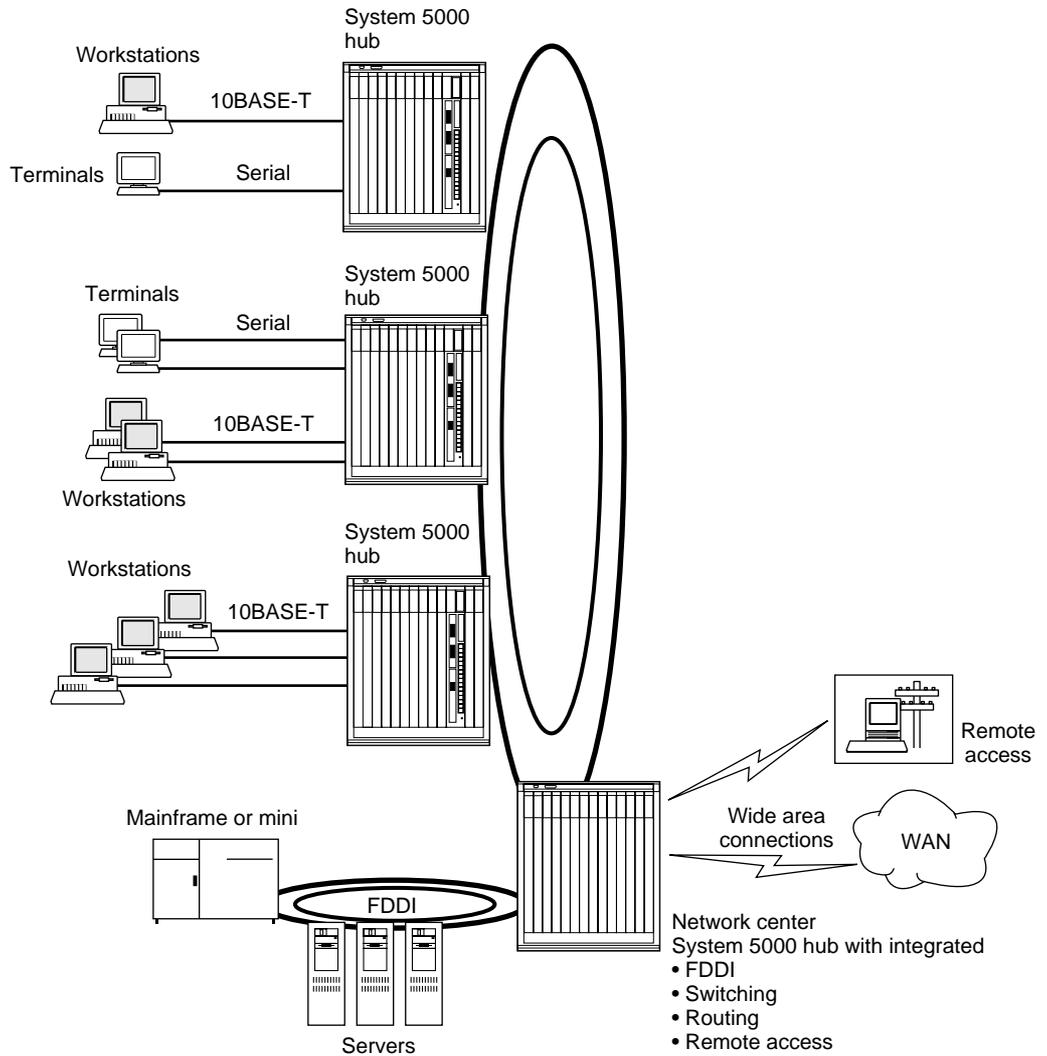
Figure 2.   FDDI expansion modules in multiple System 5000 hubs

Depending on your network requirements, another typical configuration would be to connect the multiple System 5000 hubs to the centralized network center System 5000 hub via the 100BASE-T Fast Ethernet links of the Model 58000 switches (see Figure 3).

In this configuration, the centralized System 5000 hub includes the Model 58000 switch with the FDDI expansion module connecting to an FDDI dual-ring backbone. Layer 2 frame switching also occurs between the 10BASE-T Ethernet LANs and critical resources located in the network center.
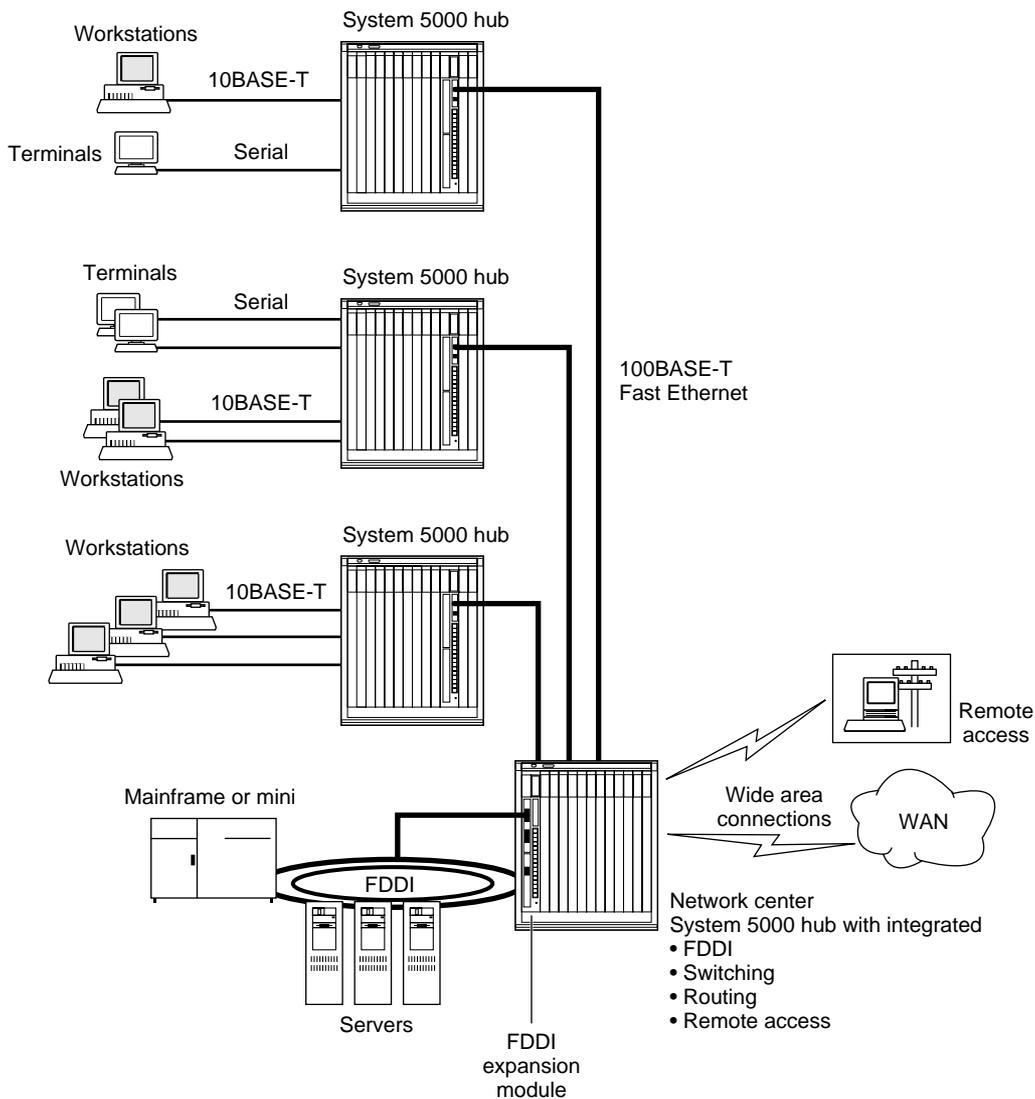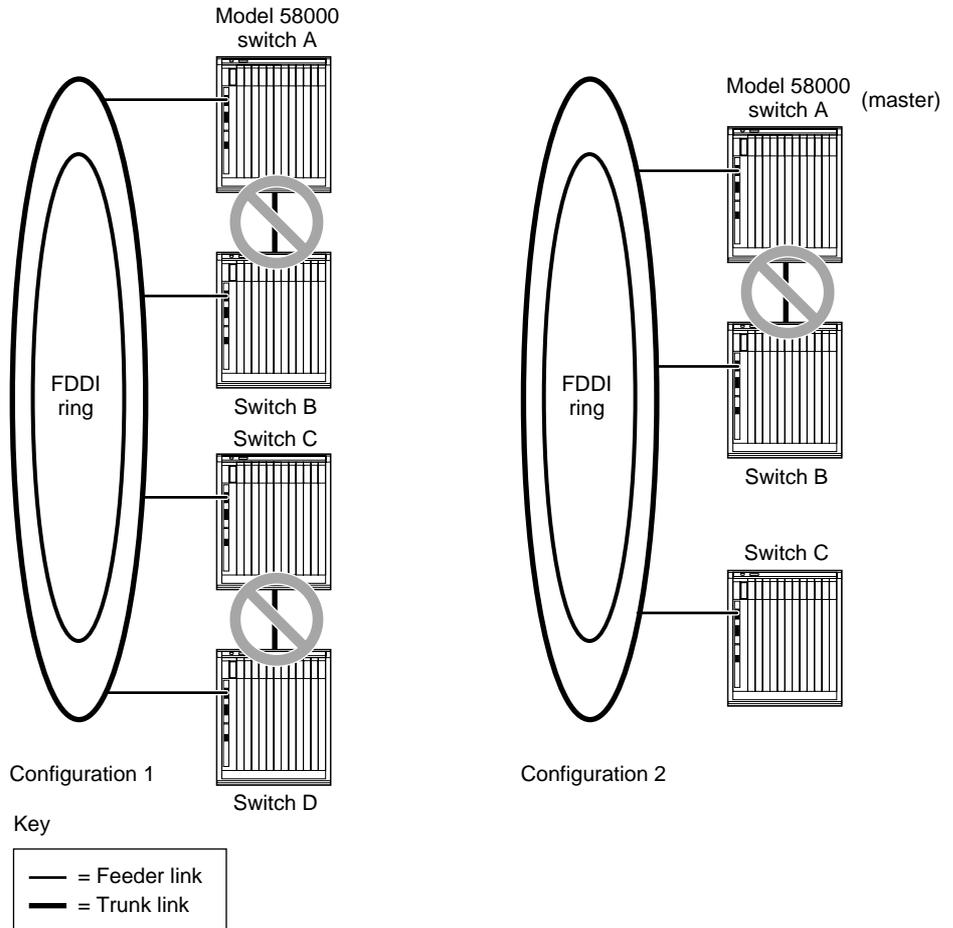

Figure 3.   FDDI expansion module in the network center

Unsupported FDDI Network Configurations

When configuring your FDDI network with Model 58000 switches that are operating in LattisSpan™ mode, avoid building an illegal data loop configuration. Figure 4 shows two different configurations that result in illegal data loop configurations.

Figure 4.   Unsupported data loop configurations

The first configuration shows four switches with individual feeder links to the FDDI ring. When two or more switches are connected together by trunk links, a data loop occurs.

The second configuration shows three switches with individual feeder links to the FDDI ring. Switches A and B are connected by a trunk link. If switch C has a higher priority than switch A (the master switch) a data loop will occur.

For more information about the LattisSpan protocol and information about planning your switched network, refer to *Using Ethernet Switch Software Version 2.0*.

New Features for Ethernet Switch Software Version 2.0.1

This section briefly describes the new features in Ethernet Switch Software Version 2.0.1 that apply to the Model 58000 switch. For a complete description of version 2.0.1 software, refer to *Using Ethernet Switch Software Version 2.0*.

The following features in the version 2.0.1 software apply to the Model 58000 switch:

- 802.1D Spanning Tree/LattisSpan Protocol—allows you to configure the switch to operate in spanning tree mode (switch uses 802.1D Spanning Tree Protocol to control and manage the network topology).

- Support for the Model 58000-109 FDDI Expansion Module—allows you to install the FDDI expansion module on the Model 58000 switch and provides connectivity to an FDDI backbone for shared Ethernet LANs.

- Conversation Steering—allows you to configure a port on the Model 58000 switch for the purpose of monitoring traffic on the switch.

- Telnet Support—provides you with remote access to the user interface menus of the Model 58000 switch through the Telnet Protocol.

- Management Information Base (MIB) II Interface Group Support— permits each switch port to be treated as a separate interface with the same MAC address, allowing for all switch interfaces to share the same switch MAC address.

- One Way Trunk Elimination—detects and eliminates a "one way trunk" condition, where a trunk can pass traffic only in one direction.

- RMON per Port Monitoring—implements Alarm and Event groups of Remote Network Monitoring (RMON) MIB (RFC 1757).

- Troubleshooting Instrumentation—provides you with new diagnostics menus, including a diagnostics log, system status, and port statistics and status.

Downloading Ethernet Switch Software Version 2.0.1

To download Ethernet Switch Software Version 2.0.1, the Ethernet Switch Software Version 1.4.3 Upgrade Kit must be running on your system. If the version 1.4.3 upgrade kit is currently running on your system, go to step 4 on .

If the 1.4.3 upgrade kit is not running on your system, follow these steps to load the 1.4.3 upgrade kit and then load switch software version 2.0.1:

1. **Make sure the load parameters are set correctly for the TFTP Load Server IP Address and Image File Name by selecting and verifying these parameters at the Boot Parameters menu of the Model 58000 switch.**

   a. In the Main Menu, choose Configuration Parameters.

   b. In the Configuration Parameters menu, choose Boot Parameters.

   A Boot Parameters menu similar to that in Figure 5 is displayed.

```
                    Bay Networks 58000 Ethernet Switch Module

 System Up Time: 1 D-12H-22M-11S          IP Address: 134.177.32.98(M)

 MAC Address: 00008124C460                Default Gateway: 134.177.32.1

 Switch Software Version: 1.4.3           Subnet Mask: 255.255.255.0


                            Boot Parameters

Modify Boot Mode [Local]

Modify Image Load Mode [Local]

Modify Boot Router IP Address [123.123.11.1]

Modify TFTP Load Server IP Address [123.123.11.5]

Modify TFTP Retry Count [5]

Modify Image File Name [c:\comm\58k143.img]




              Change the boot mode to Local or Network.
      Use cursor keys to choose item. Press <RETURN> to confirm choice.
    <CTRL><P>: Main Menu <CTRL><U>: Previous Menu <CTRL><L>: Refresh Screen
```

Figure 5.   Boot Parameters menu

   c. Choose Modify TFTP Load Server IP Address.

     The system displays the current TFTP load server IP address and prompts you to change the setting.

   d. Verify that the setting is correct. If the setting is not correct, change the setting.

   e. Choose Modify Image File Name.

   f. Enter the version 1.4.3 upgrade kit file name—for example:

     `58k143uk.img.`

2. Download the version 1.4.3 upgrade kit.

   a. Return to the Main Menu and choose Reset System Menu.

     A Reset System menu similar to that shown in <u>Figure 6</u> is displayed.

```
                    Bay Networks 58000 Ethernet Switch Module

 System Up Time: 1 D-12H-22M-11S           IP Address: 134.177.32.98(M)

 MAC Address: 000081000201                 Default Gateway: 134.177.32.1

 Switch Software Version: 1.4.3            Subnet Mask: 255.255.255.0



                            Reset System

 ┌──────────┐
 │ Reset    │
 └──────────┘
 Reset to Default

 Download Image

 Select Boot Image Version (Active/Select) [Image2/Latest Image]

 Schedule Image Reboot (Set/Countdown) [0D:0H:0M/0D:0H:0M]

 Cancel Scheduled Reboot




           Configuration information will be kept after Reset.
     Use cursor keys to choose item. Press <RETURN> to confirm choice.
  <CTRL><P>: Main Menu  <CTRL><U>: Previous Menu  <CTRL><L>: Refresh Screen
```

Figure 6.   Reset System menu

   b. Choose Download Image.

The system prompts you to confirm your entry. The version 1.4.3 upgrade kit is downloaded immediately.

3.   Select the version 1.4.3 upgrade kit.

   a.   Return to the Main Menu and choose Reset System Menu.

   b.   Choose Select Boot Image Version.

   The system displays the available software image versions, including the version 1.4.3 upgrade kit.

   c.   Choose the version 1.4.3 upgrade kit.

   The system prompts you to confirm your entry.

   d.   Choose Reset to reset the system.

4.   Use the switch software version 1.4.3 upgrade kit to download switch software version 2.0.1

   a.   Make sure the load parameters are set correctly for the TFTP Load Server IP Address. See step 1 for details.

   b.   From the Boot Parameters Menu, Choose Modify Image File Name.

   c.   Enter the 2.0.1 file name.

   d.   Return to the Main Menu and choose Reset System Menu.

   A Reset System menu similar to that shown in <u>Figure 7</u> is displayed.

```
             Bay Networks 58000 Ethernet Switch Module

System Up Time: 1 D-12H-22M-11S          IP Address: 134.177.32.98(M)

MAC Address: 000081000201                Default Gateway: 134.177.32.1

Switch Software Version: 1.4.3.KIT       Subnet Mask: 255.255.255.0


                          Reset System


 Reset

 Reset to Default

 Download Image

 Select Boot Image Version (Active/Select) [Image2/Latest Image]

 Schedule Image Reboot (Set/Countdown) [0D:0H:0M/0D:0H:0M]

 Cancel Scheduled Reboot



        Configuration information will be kept after Reset.

   Use cursor keys to choose item. Press <RETURN> to confirm choice.

<CTRL><P>: Main Menu  <CTRL><U>: Previous Menu  <CTRL><L>: Refresh Screen
```

Figure 7.   Reset System menu (1.4.3.KIT)

    e. Choose Download Image.

       The system prompts you to confirm your entry. The 2.0.1 image file is downloaded immediately.

    f. Select the 2.0.1 image by choosing Select Boot Image Version.

       The system displays the available software image versions, including the 2.0.1 image version.

    g. Choose the 2.0.1 image version.

       The system prompts you to confirm your entry.

    h. Choose Reset to reset the system.

Related Publications

For more information about the Model 58000 10/100 Ethernet Switch and related products, refer to the following publications:

- *Installation and Reference for the Model 58000 10/100 Ethernet Switch* (Bay Networks part number 893-878-A)

  This guide describes the Model 58000 switch and provides information about how to plan a switched network and how to install and configure the Model 58000 switch.

- *Installation and Reference for the Model 58000-1xx Media Dependent Adapters* (Bay Networks part number 893-877-A)

  This guide describes Model 58000-1xx MDAs and provides detailed instructions on how to install the MDAs on the switch.

- *Installation and Reference for the Model 58000 MDA Expansion Module* (Bay Networks part number 893-876-A)

  This guide describes the Model 58000 MDA Expansion Module and provides detailed instructions on how to install the expansion module on the switch.

- *Installation and Reference for the Model 58000-109 FDDI Expansion Module* (Bay Networks part number 893-920-A)

  This guide describes the Model 58000-109 FDDI Expansion Module and provides detailed instructions on how to install the expansion module on the switch.

  •   *Using Ethernet Switch Software Version 2.0* (Bay Networks part number 893-00963-A)

  This guide provides detailed descriptions of the Ethernet switching software features and includes procedures for using conversation steering, Telnet, and Ethernet frame switch troubleshooting tools.

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