SmartSwitch 9000
9F426-02
Local Management Appendix

9031680-02

CABLETRON SYSTEMS

Appendix

9F426-02 Module Specific Information

Introduction

This appendix contains local management information that is specific to the 9F426-02 FDDI Switch Module.

Module Interfaces

The 9F426-02 FDDI Switch Module has seven interfaces. Table 1 lists the identifying number, name, and description of each interface.

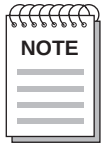
Table 1. 9F426-02 FDDI Switch Module Interfaces

Interface Number	Interface Name	Interface Description
1	SMB1	1 Mbps System Management Bus
2	SMB10	10 Mbps System Management Bus
3	HOST	i960 Host
4	CONTROL	i960 Data Controller
5	INB	Internal Network Bus
6	FRONT1	FDDI 1 Front Panel Port
7	FRONT2	FDDI 2 Front Panel Port

Use the numbers listed in Table 1 to configure the module's default interface (see General Configuration Screen).

FNB Configuration

The FNB Configuration Menu (Figure 1) contains menu selections that allow you to configure the attachment of an FDDI Switch Module to the Flexible Network Buses on the chassis' backplane, and to display an illustration that shows the topology of the FNB's FDDI rings connected to that module.



In earlier versions of SmartSwitch 9000 Module Local Management, the FNB Configuration selection appeared at the bottom of the General Configuration Screen (as depicted in the SmartSwitch 9000 Module Local Management User's Guide). However, in recent versions of SmartSwitch 9000 Module Local Management, the FNB Configuration selection appears on the Module

```
                    SMARTSWITCH 9000  LOCAL MANAGEMENT

                          FNB Configuration Menu

Module Name: 9F426-02                       Firmware Revision: 01.00.24
Slot Number: 10                             BOOTPROM Revision: 00.00.04

                       FNB RESOURCE CONFIGURATION

                       RING MAP CONFIGURATION

                                                                RETURN
```

Figure 1. FNB Configuration Menu (9F426-02 FDDI Switch Module)

Use the arrow keys to highlight an option, and press the **Return** key. The selected screen appears.

FNB Resource Configuration

The 9F426-02 FDDI Switch Module is capable of bridging / switching any three, of five possible interfaces, depending on the way you configure the module. The module's INB connection is fixed (not user-configured).

The FNB Resource Configuration Screen (Figure 2) allows you to connect both front panel ports, both FNB ports, or one front panel and one FNB port to the bridge / switch. Redirecting one or both of the module's front panel FDDI interfaces to the FNB backplane creates an INB to FNB bridge / switch product that allows migration from FNB modules to INB modules.

The SmartSwitch 9000 FNB backplane is composed of two FDDI Networks (FNB-1 and FNB-2). The FNB Resource Configuration Screen lists all possible connections a module can support on the FNB, displays the current connection, and allows you to change the connection.

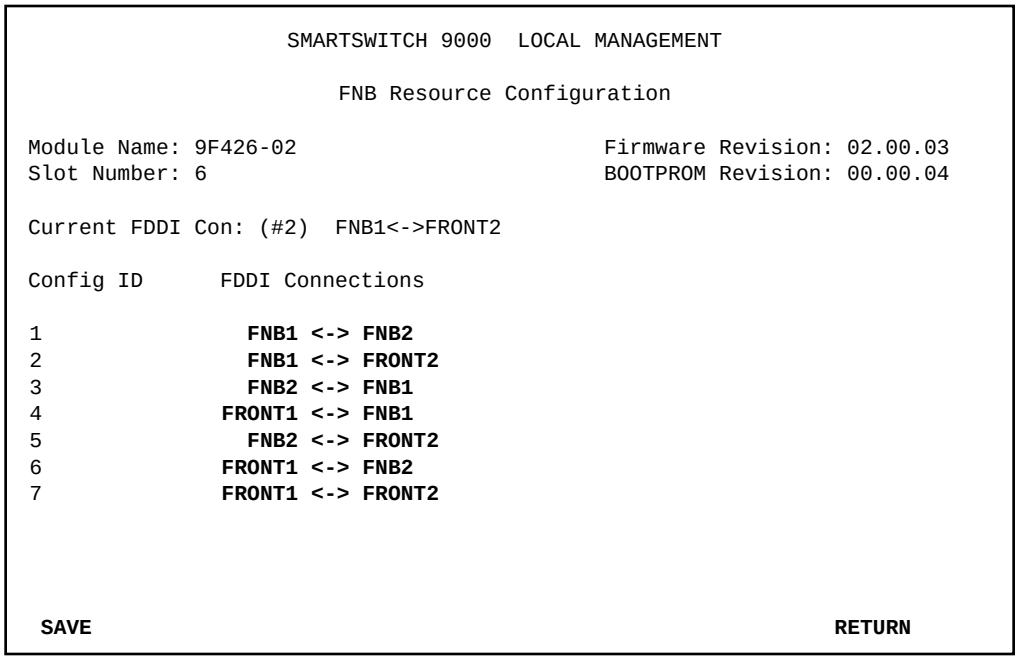


Figure 2. FNB Resource Configuration Screen (9F426-02 FDDI Switch Module)

FNB Resource Configuration Screen Fields

The following information briefly explains each FNB Resource Configuration Screen field.

Current FDDI Con
Displays the current connections of the selected module to the SmartSwitch 9000's FNB.

Config ID
Displays an identification number that is automatically assigned to each configuration.

FDDI Connections
Displays all possible connections of the selected module to the SmartSwitch 9000's FNB (For a description of each of these connections, refer to Table 2).

Changing the Current FNB Connection

To change the current FNB connection:

1. Use the arrow keys to highlight a desired FDDI connection.
2. Press the **Return** key.
3. The connection you selected appears in the **Current FDDI Con** field.
4. Use the arrow keys to highlight **SAVE** at the bottom of the screen and press the **Return** key.

   The message "SAVED OK" appears. This message indicates that the FNB connection you selected has been implemented. If you exit without saving, the message "NOT SAVED -- PRESS SAVE TO KEEP CHANGES" appears. If you proceed to exit without saving, the FNB connection you selected will not be implemented.
5. Use the arrow keys to highlight **RETURN** and press the **Return** key.

FNB Resource Configuration Codes

Table 2 lists and describes the FDDI connections from which you can select.

Table 2. 9F426-02 FDDI Switch Modules FNB Resource Configuration Codes

Configuration ID	FDDI Connections	Description
1	FNB1 <-> FNB2	The two FDDI Networks on the backplane (FNB-1 and FNB-2) are connected to the same bridge / switch.
2	FNB1 <-> FRONT2	The FNB-1 on the backplane and the FDDI-2 port on the module's front panel are connected to the same bridge / switch.
3	FNB2 <-> FNB1	The two FDDI Networks on the backplane (FNB-1 and FNB-2) are connected to the same bridge / switch.
4	FRONT1 <-> FNB1	The FDDI-1 port on the module's front panel and the FNB-1 on the backplane are connected to the same bridge / switch.
5	FNB2 <-> FRONT2	The FNB-2 on the backplane and the FDDI-2 port on the module's front panel are connected to the same bridge / switch.
6	FRONT1 <-> FNB2	The FDDI-1 port on the module's front panel and the FNB-2 on the backplane are connected to the same bridge / switch.
7	FRONT1 <-> FRONT2	The module's two front panel ports (FDDI-1 and FDDI-2) are connected to the same bridge / switch.

Ring Map Configuration

The Ring Map Configuration Screen (Figure 3) contains configuration and connection information with an illustration of the ring topology for the FDDI rings connected to the module.

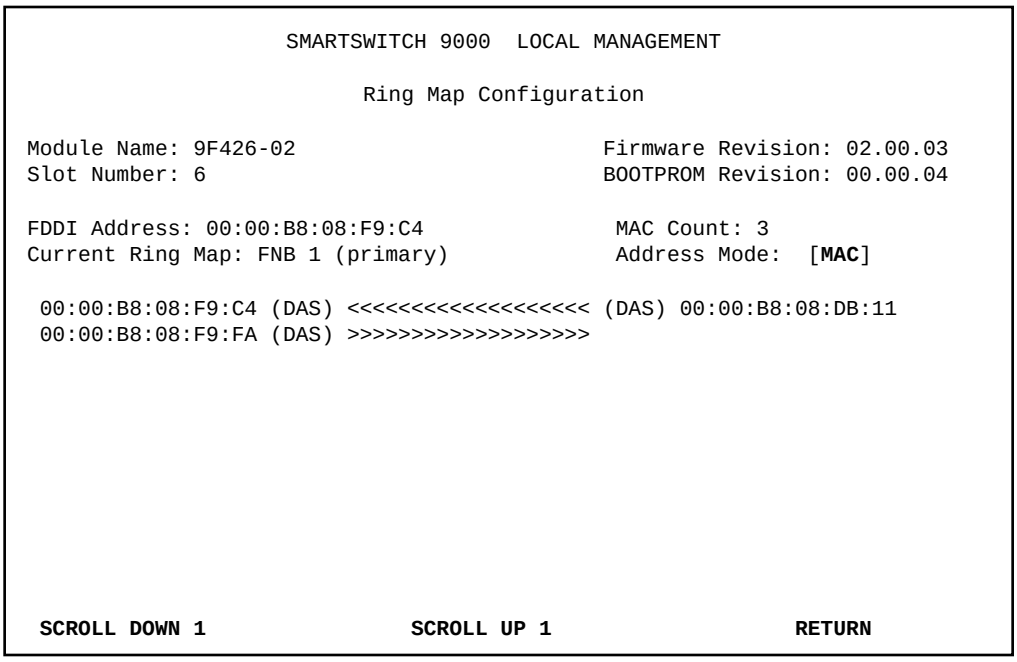


Figure 3. Ring Map Configuration Screen (9F426-02 FDDI Switch Module)

Ring Map Configuration Screen Fields

The following information briefly explains each Ring Map Configuration Screen field.

FDDI Address
Displays the address of the module. The format of this address (either MAC or Canonical) is determined by the value you select in the Address Mode field.

MAC Count
Displays the number of MACs (Media Access Controllers) that are attached to the specified ring.

Current Ring Map
Identifies the ring (FNB-1 or FNB-2) on which a MAC for the specified module resides, and whether that MAC is located on the primary or secondary path of that ring. If an additional ring is attached to the specified module, the name of that additional ring appears as a command at the bottom of the screen.

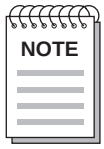
Address Mode (Toggle)
Allows you to select the format in which addresses appear on this screen (either MAC or Canonical). Press the **Space Bar** to toggle to the desired value.

The Ring Map
Displays a series of addresses in upstream / downstream order. These addresses, which represent each FDDI device attached to the ring, are arranged on the screen to simulate the circular fashion of a ring. When first displayed, the station at the upper left corner of this map is your current station. The screen displays node class, node address, and twisted and / or wrapped conditions (T for twisted, W for wrapped). The following lists the node class possibilities:

- NAS (Null Attached Station) Isolated station; station not connected to an FDDI ring.
- DAS (Dual Attached Station) Station that does not support M ports, but connects directly to an FDDI primary and secondary ring using A and B ports.
- DAC (Dual Attached Concentrator) Station that supports M ports and connects directly to an FDDI primary and secondary ring using A and B ports.
- SAS (Single Attached Station) Station that accesses the main ring through a concentrator, creating a ring of trees topology.

- SAC (Single Attached Concentrator) Station that accesses the main ring through another concentrator and, in turn, allows the connection of more devices. SACs provide the same connections as DACs, without attaching to the dual ring.
- NAC (Null Attached Concentrator) Isolated concentrator; concentrator not connected to an FDDI ring.

While the map is updated, for example, during a ring topology change, the screen may show ??-??-??-??-??-?? to illustrate an undetermined address.



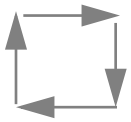
The Ring Map display stops at the first occurrence of an undetermined address, and does not display any known information beyond this point.

To view details of a listed ring map address, use the arrow keys to highlight that address and press the **Return** key. The Ring Map Node Screen (9F426-02 FDDI Switch Module), Figure 4, appears.

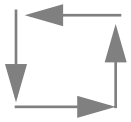
Ring Map Screen Commands

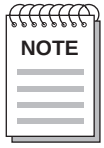
RETURN
Closes the Ring Map Screen, and returns you to the FNB Configuration Menu.

SCROLL DOWN 1
Allows you to rotate the station addresses in the ring, one clockwise position.



SCROLL UP 1
Allows you to rotate the station addresses in the ring, one counterclockwise position.





When the ring map contains only one station, the Scroll Up 1 and Scroll Down 1 commands do not appear.

FNB 2 or FNB 1

The Current Ring Map field identifies the ring (FNB-1 or FNB-2) on which a MAC for the specified module resides. If an additional ring is attached to the module, the name of that additional ring appears as a command. To view the ring map of the additional ring, use the arrow keys to highlight the name of the additional ring and then press the **Return** key.

Ring Map Node

The Ring Map Node Screen displays specific information for a selected FDDI node on the Ring Map.

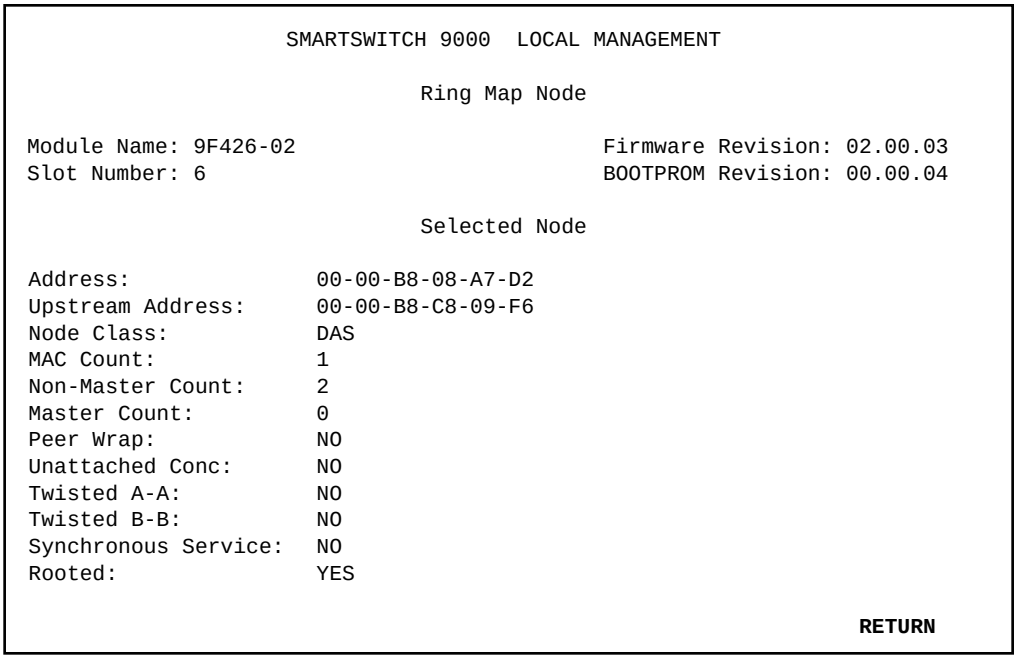


Figure 4. Ring Map Node Screen (9F426-02 FDDI Switch Module)

Ring Map Node Screen Fields

The following information briefly explains each Ring Map Node Screen field.

Address
Displays the address of the selected node.

Upstream Address
Displays the address of the selected node's nearest upstream neighbor.

Node Class
Displays the class (NAS, DAS, DAC, SAS or SAC) of the selected node. For an explanation of these class codes, see page 7.

MAC Count
Displays the number of MACs (Media Access Controllers) that are physically housed in the selected node.

Non-Master Count
Displays the number of A and B ports on the selected node.

Master Count
Displays the number of M ports controlled by the selected node.

Peer Wrap
Indicates whether a wrap condition exist on a port. A peer wrap does not occur when the A or B port is attached to an M port.

Unattached Conc (DAC only)
Indicates whether the selected node has no active A or B port.

Twisted A-A
Indicates whether the A port is connected to another A port.

Twisted B-B
Indicates whether the B port is connected to another B port.

Synchronous Service
Indicates whether the selected node uses synchronous bandwidth which guarantees a certain percentage of the total FDDI bandwidth for real time applications.

Rooted
Indicates whether the selected node has an active A or B port when one, and only one, end of the fiber link connects to an M port.

Exiting the Ring Map Node Screen

To exit the Ring Map Node Screen and return to the Ring Map Configuration Screen, use the arrow keys to highlight **RETURN** and then press the **Return** key.