CHAPTER 6

Configuring Interfaces

A switch's main function is to relay frames from one data link to another. To do that, the characteristics of the interfaces through which the frames are received and sent must be defined. The configured interfaces can be Fibre Channel interfaces or the management interface (mgmt0).

This chapter describes the basic interface configuration to get your switch up and running. It includes the following sections:

Note See Chapter 3, "Initial Configuration," and Chapter 12, "Configuring IP Services," for more information on configuring mgmt0 interfaces.

Tip Before you begin configuring the switch, ensure that the switch functioning as designed. To verify the status of a switch at any time, enter the **show module** command in EXEC mode. (See the "Verifying the Status of the Switch" section on page 3-10.)

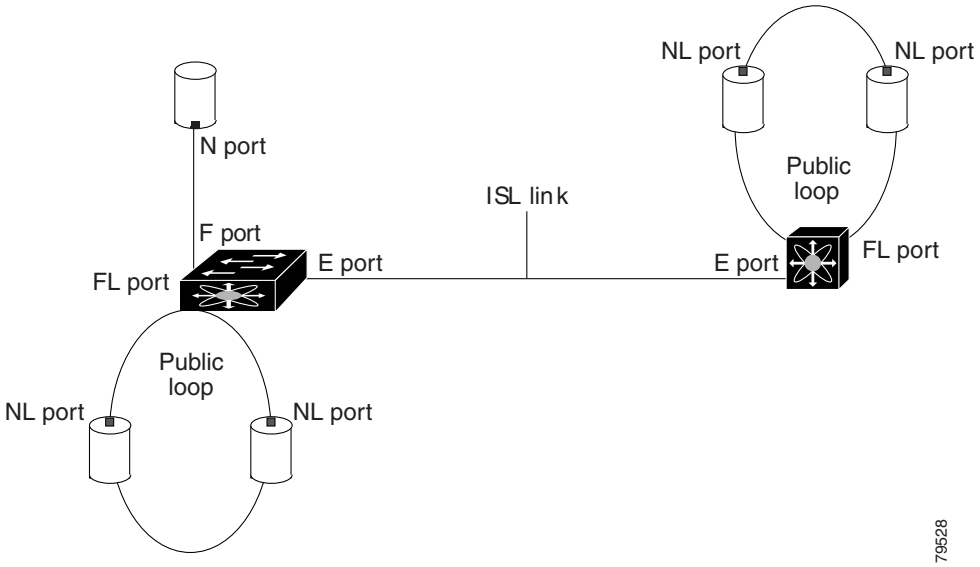
Fibre Channel Interfaces

This section describes Fibre Channel interface characteristics, including (but not limited to) modes, states, and speeds. It includes the following sections:

About Interface Modes

Each physical Fibre Channel interface in a switch may operate in one of several port modes: E port, F port, and FL port (see Figure 6-1). Each interface may be configured in auto or Fx port modes. These two modes determine the port type during interface initialization.

Figure 6-1 Cisco MDS 9020 Fabric Switch Port Modes



Each interface has an associated administrative configuration and an operational status:

- The administrative configuration does not change unless you modify it. This configuration has various attributes that you can configure in administrative mode.
- The operational status represents the current status of a specified attribute, such as the interface speed. This status cannot be changed and is read-only. Some values may not be valid when the interface is down (for example, the operational speed).

A brief description of each interface mode follows.

E Port

In expansion port (E port) mode, an interface functions as a fabric expansion port. This port may be connected to another E port to create an Inter-Switch Link (ISL) between two switches. E ports carry frames between switches for configuration and fabric management. They serve as conduits between switches for frames that are destined to remote N ports and NL ports. E ports support class 2, class 3, and class F service.

F Port

In fabric port (F port) mode, an interface functions as a fabric port. This port may be connected to a peripheral device (host or disk) operating as an N port. An F port can be attached to only one N port. F ports support class 2 and class 3 service.

FL Port

In fabric loop port (FL port) mode, an interface functions as a fabric loop port. This port may be connected to one or more NL ports (including FL ports in other switches) to form a public arbitrated loop. If more than one FL port is detected on the arbitrated loop during initialization, only one FL port becomes operational and the other FL ports enter nonparticipating mode. FL ports support class 2 and class 3 service.

Fx Port

Interfaces that are configured as Fx ports can operate in either F port or FL port mode. The Fx port mode is determined during interface initialization depending on the attached N port or NL port. This administrative configuration disallows interfaces to operate in any other mode—for example, preventing an interface to connect to another switch.

Auto

Interfaces that are configured in auto mode can operate in one of the following modes: F port, FL port, or E port. The port mode is determined during interface initialization. For example, if the interface is connected to a node (host or disk), it operates in F port or FL port mode depending on the N port or NL port mode. If the interface is attached to a third-party switch, it operates in E port mode.

About Interface States

The interface state depends on the administrative configuration of the interface and the dynamic state of the physical link.

Administrative States

The administrative state refers to the administrative configuration of the interface, as described in Table 6-1.

Table 6-1 Administrative States

Administrative State	Description
Up	Interface is enabled.
Down	Interface is disabled. If you administratively disable an interface by shutting down that interface, the physical link layer state change is ignored.

Operational States

The operational state indicates the current operational state of the interface, as described in Table 6-2.

Table 6-2 Operational States

Operational State	Description
Up	Interface is transmitting or receiving traffic as desired. To be in this state, an interface must be administratively up, the interface link layer state must be up, and the interface initialization must be completed.
Down	Interface cannot transmit or receive (data) traffic.

Reason Codes

Reason codes are dependent on the operational state of the interface, as described in Table 6-3.

Table 6-3 Reason Codes for Interface States

Administrative Configuration	Operational Status	Reason Code
Up	Up	None.
Down	Down	Administratively down—If you administratively configure an interface as down, you disable the interface. No traffic is received or transmitted.
Up	Down	See Table 6-4.

If the administrative state is up and the operational state is down, the reason code differs based on the nonoperational reason code, as described in Table 6-4.

Table 6-4 Reason Codes for Nonoperational States

Reason Code	Description	Applicable Modes
Link failure or not connected	The physical layer link is not operational.	All
SFP not present	The small form-factor pluggable (SFP) hardware is not plugged in.	
Initializing	The physical layer link is operational, and the protocol initialization is in progress.	
Reconfigure fabric in progress	The fabric is currently being reconfigured.	
Offline	The Cisco MDS 9000 FabricWare software waits for the specified R_A_TOV time before retrying initialization.	
Inactive	The interface is deleted or is in a suspended state.	
Hardware failure	A hardware failure is detected.	
Error disabled	Error conditions require administrative attention. Interfaces may be error-disabled for various reasons. For example: • Configuration failure. • Incompatible buffer-to-buffer credit configuration. To make the interface operational, you must first fix the error conditions causing this state; and next, administratively shut down or enable the interface.	
Isolation due to ELP failure	The port negotiation failed.	E ports
Isolation due to ESC failure	The port negotiation failed.	
Isolation due to domain overlap	The Fibre Channel domains (fcdomain) overlap.	
Isolation due to domain ID assignment failure	The assigned domain ID is not valid.	
Isolation due to other side E port isolated	The E port at the other end of the link is isolated.	
Isolation due to invalid fabric reconfiguration	The port is isolated due to fabric reconfiguration.	
Isolation due to domain manager disabled	The fcdomain feature is disabled.	
Isolation due to zone merge failure	The zone merge operation failed.	
Nonparticipating	FL ports cannot participate in loop operations. It may happen if more than one FL port exists in the same loop, in which case all but one FL port in that loop automatically enters nonparticipating mode.	FL ports

Fibre Channel Interface Configuration

To configure a Fibre Channel interface, perform this task:

	Command	Purpose
Step 1	`switch# config t`	Enters configuration mode.
Step 2	`switch(config)# interface fc1/1`	Configures the specified interface. **Note** When a Fibre Channel interface is configured, it is automatically assigned a unique world wide name (WWN). If the interface's operational state is up, it is also assigned a Fibre Channel ID (FC ID).

To configure a range of interfaces, perform this task:

	Command	Purpose
Step 1	`switch# config t`	Enters configuration mode.
Step 2	`switch(config)# interface fc1/1-4`	Configures the range of specified interfaces.

Graceful Shutdown

Interfaces on a port are shut down by default (unless you modified the initial configuration). The Cisco MDS 9000 FabricWare software implicitly performs a graceful shutdown in response to either of the following actions for interfaces operating in the E port mode:

- If you shut down an interface
- If a Cisco MDS 9000 FabricWare application executes a port shutdown as part of its function

A graceful shutdown ensures that no frames are lost when the interface is shutting down. When a shutdown is triggered either by you or the Cisco MDS 9000 FabricWare software, the switches connected to the shutdown link coordinate with each other to ensure that all frames in the ports are safely sent through the link before shutting down. This enhancement reduces the chance of frame loss.

A graceful shutdown is not possible if the Min_LS_interval interval is higher than 10 seconds. (See "Displaying Global FSPF Information" section on page 11-4.)

To shut down an interface, perform this task:

	Command	Purpose
Step 1	`switch# config t`	Enters configuration mode.
Step 2	`switch(config)# interface fc1/1`	Configures the specified interface.
Step 3	`switch(config-if)# shutdown`	Shuts down the interface and administratively disables traffic flow (default).

To enable traffic flow, perform this task:

	Command	Purpose
Step 1	`switch# config t`	Enters configuration mode.
Step 2	`switch(config)# interface fc1/1`	Configures the specified interface.
Step 3	`switch(config-if)# no shutdown`	Enables traffic flow to administratively allow traffic when the **no** prefix is used (provided the operational state is up).

Interface Modes

To configure the interface mode, perform this task:

	Command	Purpose
Step 1	`switch# config t`	Enters configuration mode.
Step 2	`switch(config)# interface fc1/1` `switch(config-if)#`	Configures the specified interface.
Step 3	`switch(config-if)# switchport mode F` `switch(config-if)#`	Configures the administrative mode of the port. You can set the interface mode to auto, E, F, FL, or Fx port mode. **Note** Fx ports refers to an F port or an FL port (host connection only), but not E ports.
	`switch(config-if)# switchport mode auto` `switch(config-if)#`	Configures the interface mode to autonegotiate an E, F, or FL port mode of operation.

Administrative Speeds

By default, the administrative speed for an interface is automatically calculated by the switch.

To configure the administrative speed of the interface, perform this task:

	Command	Purpose
Step 1	`switch# config t`	Enters configuration mode.
Step 2	`switch(config-if)# switchport speed 1000` `switch(config-if)#`	Configures the administrative speed of the interface to 1000 Mbps. The number indicates the speed in megabits per second (Mbps). You can set the speed to 1000 Mbps (for 1-Gbps interfaces), 2000 Mbps (for 2-Gbps interfaces), 4000 Mbps (for 4-Gbps interfaces), or auto (default).
	`switch(config-if)# switchport speed auto` `switch(config-if)#`	Reconfigures the factory default (auto) administrative speed of the interface.

Interface Descriptions

To configure a description for an interface, perform this task:

	Command	Purpose
Step 1	`switch# config t`	Enters configuration mode.
Step 2	`switch(config)# interface fc1/1` `switch(config-if)#`	Configures the specified interface.
Step 3	`switch(config-if)# switchport description cisco-HBA2`	Configures the description of the interface. The string may be up to 32 characters long.
	`switch(config-if)# no switchport description`	Clears the description of the interface.

Beacon Mode

By default, the beacon mode is disabled on all switches. The beacon mode is indicated by a flashing green light that helps you identify the physical location of the specified interface.

The **beacon** command has no effect on the operation of the interface.

To enable beacon mode for a specified interface or range of interfaces, perform this task:

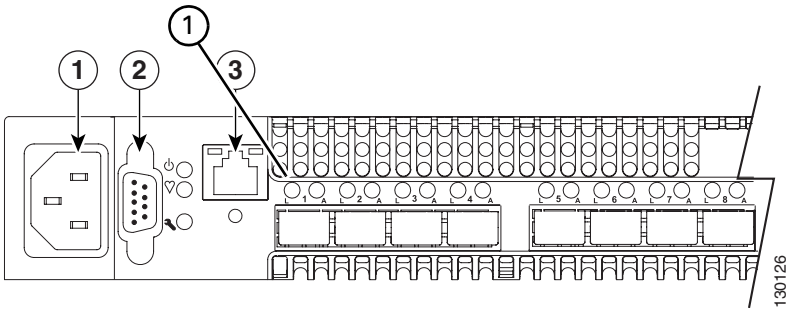
	Command	Purpose
Step 1	`switch# config t` `switch(config)#`	Enters configuration mode.
Step 2	`switch(config)# interface fc1/1` `switch(config-if)#`	Configures the specified interface.
Step 3	`switch(config-if)# switchport beacon`	Enables the beacon mode for the interface.
	`switch(config-if)# no switchport beacon`	Disables the beacon mode for the interface.

The flashing green light indication turns on automatically when an external loopback is detected that causes the interfaces to be isolated. The flashing green light indication overrides the beacon mode configuration. The state of the LED is restored to reflect the beacon mode configuration after the external loopback is removed.

Beacon LED Identification

Figure 6-2 displays the Logged-In LED for port 1 in a Cisco MDS 9020 Fabric Switch. The beacon flashes the Logged-In LEDs on all ports.

Figure 6-2 Cisco MDS 9020 Fabric Logged-In LED (Beacon)



1	Logged-In LED (Green)

SFP Transmitter Types

The SFP hardware transmitters are identified by their acronyms when displayed in the **show interface brief** command. If the related SFP has a Cisco-assigned extended ID, then the **show interface** and **show interface brief** commands display the ID instead of the transmitter type. The **show interface transceiver** command and the **show interface fc***slot*/*port* **transceiver** command display both values for Cisco supported SFPs. Table 6-5 defines the acronyms used in the command output. (See the "Displaying Interface Information" section on page 6-12.)

Table 6-5 SFP Transmitter Acronym Definitions

Definition	Acronym
Standard transmitters defined in the GBIC specifications	
short wave laser	swl
long wave laser	lwl
long wave laser cost reduced	lwcr
electrical	elec
Extended transmitters assigned to Cisco-supported SFPs	
CWDM-1470	c1470
CWDM-1490	c1490
CWDM-1510	c1510
CWDM-1530	c1530
CWDM-1550	c1550
CWDM-1570	c1570

Table 6-5 SFP Transmitter Acronym Definitions (continued)

Definition	Acronym
Standard transmitters defined in the GBIC specifications	
CWDM-1590	c1590
CWDM-1610	c1610

Management Interface Configuration

You can remotely configure the switch through the management interface (mgmt0). To configure a connection remotely, you must configure the IP parameters (IP address, subnet mask, and default gateway) from the CLI so that the switch is reachable.

Note Before you begin to configure the management interface manually, obtain the switch's IP address and IP subnet mask.

To configure the mgmt0 Ethernet interface, perform this task:

	Command	Purpose
Step 1	`switch# config terminal` `switch(config)#`	Enters configuration mode.
Step 2	`switch(config)# interface mgmt0` `switch(config-if)#`	Configures the management Ethernet interface on the switch to configure the management interface.
Step 3	`switch(config-if)# ip address 172.16.1.2 255 255.255.0`	Enters the IP address and IP subnet mask for the interface specified in Step 2.
Step 4	`switch(config-if)# no shutdown`	Enables the interface.
Step 5	`switch(config-if)# exit` `switch(config)#`	Returns to configuration mode.
Step 6	`switch(config)# ip default-gateway 10.1.1.4 switch(config)#`	Configures the default gateway IP address.
Step 7	`switch(config)# exit` `switch#`	Returns to EXEC mode.
Step 8	`switch# copy running-config startup-config`	(Optional) Saves your configuration changes to the file system. **Note** If you wish to save your configuration, you can enter this command at any time.

The management port (mgmt0) is autosensing and operates in full duplex mode at a speed of 10/100 Mbps. The speed and mode cannot be configured.

Note You need to explicitly configure a default gateway to connect to the switch and send IP packets or add a route for each subnet.

Displaying Interface Information

The **show interface** command is invoked from the EXEC mode and displays the interface configurations. Without any arguments, this command displays the information for all the configured interfaces in the switch. (See Examples 6-1 to 6-8.)

Example 6-1 Displays All Interfaces

```
switch# show interface
fc1/1 is Down (Administratively down)
    Hardware is Fibre Channel, SFP is long wave laser
    Port WWN is 20:00:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/2 is Down (Administratively down)
    Hardware is Fibre Channel, SFP is short wave laser without OFC
    Port WWN is 20:01:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/3 is Down (Administratively down)
    Port WWN is 20:02:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/4 is Down (Administratively down)
    Port WWN is 20:03:00:0d:ec:19:cb:0e
```

```
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/5 is Down (Administratively down)
    Port WWN is 20:04:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/6 is Down (Administratively down)
    Port WWN is 20:05:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/7 is Down (Administratively down)
    Port WWN is 20:06:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/8 is Down (Administratively down)
    Port WWN is 20:07:00:0d:ec:19:cb:0e
```

```
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/9 is Down (Administratively down)
    Hardware is Fibre Channel, SFP is short wave laser without OFC
    Port WWN is 20:08:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/10 is Down (Administratively down)
    Port WWN is 20:09:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/11 is Down (Administratively down)
    Port WWN is 20:0a:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/12 is Down (Administratively down)
```

```
    Port WWN is 20:0b:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/13 is Down (Administratively down)
    Hardware is Fibre Channel, SFP is unknown
    Port WWN is 20:0c:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/14 is Down (Administratively down)
    Port WWN is 20:0d:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/15 is Down (Administratively down)
    Port WWN is 20:0e:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
```

```
fc1/16 is Down (Administratively down)
    Hardware is Fibre Channel, SFP is short wave laser without OFC
    Port WWN is 20:0f:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/17 is Down (Administratively down)
    Port WWN is 20:10:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/18 is Down (Administratively down)
    Port WWN is 20:11:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

fc1/19 is Down (Administratively down)
    Port WWN is 20:12:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
```

```
fc1/20 is Down (Administratively down)
    Hardware is Fibre Channel, SFP is electrical
    Port WWN is 20:13:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits

mgmt0 is up
    Hardware is FastEthernet
    Internet address is 10.20.83.122/24
```

You can specify a range of interfaces by entering the following example format:

```
interface fc1/1-3
```

Example 6-2 Displays Multiple, Specified Interfaces

```
switch# show interface fc1/1-3
fc1/1 is Up (Link failure or not connected)
    Hardware is Fibre Channel, SFP is long wave laser
    Port WWN is 20:00:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Port mode is Unknown, FCID is 0x690000
    Speed is Auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      7 output OLS, 0 LRR, 3 loop inits

fc1/2 is Up (Link failure or not connected)
    Hardware is Fibre Channel, SFP is short wave laser without OFC
    Port WWN is 20:01:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Port mode is Unknown, FCID is 0x690100
    Speed is Auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
```

```
      0 errors
    0 input OLS, 0 LRR, 0 loop inits
    6 output OLS, 0 LRR, 2 loop inits

fc1/3 is Up (SFP not present)
    Port WWN is 20:02:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Port mode is Unknown, FCID is 0x690200
    Speed is Auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      6 output OLS, 0 LRR, 2 loop inits
```

Example 6-3 Displays a Specific Interface

```
switch# show interface fc1/2
fc1/2 is Down (Administratively down)
    Hardware is Fibre Channel, SFP is short wave laser without OFC
    Port WWN is 20:01:00:0d:ec:19:cb:0e
    Admin port mode is auto
    Receive data field Size is 2112
    Beacon is turned off
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 discards, 0 errors
        0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
```

Example 6-4 Displays Port Description

```
switch# show interface description
-------------------------------------------------
Interface Description
-------------------------------------------------
fc1/1     fc1/1
fc1/2     fc1/2
fc1/3     fc1/3
fc1/4     fc1/4
fc1/5     fc1/5
fc1/6     fc1/6
fc1/7     fc1/7
fc1/8     fc1/8
fc1/9     fc1/9
fc1/10    fc1/10
fc1/11    fc1/11
fc1/12    fc1/12
```

```
fc1/13    fc1/13
fc1/14    fc1/14
fc1/15    fc1/15
fc1/16    fc1/16
fc1/17    fc1/17
fc1/18    fc1/18
fc1/19    fc1/19
fc1/20    fc1/20
```

Example 6-5 Displays Interface Information in a Brief Format

```
switch# show interface brief
--------------------------------------------------------------------
Interface  Admin       Status            FCOT  Oper      Oper
           Mode                                Mode      Speed
                                                         (Gbps)
--------------------------------------------------------------------
fc1/1      auto        down              lwl     --
fc1/2      auto        down              swl     --
fc1/3      auto        down              --      --
fc1/4      auto        down              --      --
fc1/5      auto        down              --      --
fc1/6      auto        down              --      --
fc1/7      auto        down              --      --
fc1/8      auto        down              --      --
fc1/9      auto        down              swl     --
fc1/10     auto        down              --      --
fc1/11     auto        down              --      --
fc1/12     auto        down              --      --
fc1/13     auto        down              unk     --
fc1/14     auto        down              --      --
fc1/15     auto        down              --      --
fc1/16     auto        down              swl     --
fc1/17     auto        down              --      --
fc1/18     auto        down              --      --
fc1/19     auto        down              --      --
fc1/20     auto        down              elec    --

-------------------------------------------
Interface               Status     IP Address
-------------------------------------------
mgmt0                   up         10.20.83.122
```

Example 6-6 Displays Interface Counters

```
switch# show interface counters

fc1/1
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses
```

```
fc1/2
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses

fc1/3
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses

fc1/4
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses

fc1/5
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses
```

```
fc1/6
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses

fc1/7
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses

fc1/8
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses

fc1/9
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses
```

```
fc1/10
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses

fc1/11
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses

fc1/12
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses

fc1/13
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses
```

```
fc1/14
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses

fc1/15
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses

fc1/16
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses

fc1/17
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses
```

```
fc1/18
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses

fc1/19
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses

fc1/20
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
      0 frames input, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 discards, 0 errors, 0 CRC
        0 too long, 0 too short
      0 frames output, 0 bytes
        0 class-2 frames, 0 bytes
        0 class-3 frames, 0 bytes
        0 errors
      0 input OLS, 0 LRR, 0 loop inits
      5 output OLS, 0 LRR, 1 loop inits
      0 link failures, 0 sync losses
```

Example 6-7 Displays Interface Counters in Brief Format

```
switch# show interface counters brief
-------------------------------------------------------------------------------
Interface        Input (rate is 5 min avg)               Output (rate is 5 min avg)
                 -------------------------               --------------------------
                 Rate             Total                  Rate             Total
                 MB/s             Frames                 MB/s             Frames
-------------------------------------------------------------------------------
fc1/1            0                0                      0                0
fc1/2            1.12E-04         2844                   1.12E-04         2840
fc1/3            0                0                      0                0
fc1/4            0                0                      0                0
fc1/5            0                0                      0                0
```

```
fc1/6           0                   0                   0                   0
fc1/7           0                   0                   0                   0
fc1/8           0                   0                   0                   0
fc1/9           0                   0                   0                   0
fc1/10          0                   0                   0                   0
fc1/11          0                   0                   0                   0
fc1/12          0                   0                   0                   0
fc1/13          0                   0                   0                   0
fc1/14          0                   0                   0                   0
fc1/15          0                   0                   0                   0
fc1/16          0                   0                   0                   0
fc1/17          0                   0                   0                   0
fc1/18          0                   0                   0                   0
fc1/19          0                   0                   0                   0
fc1/20          0                   0                   0                   0
```

Note The **show interface transceiver** command will display information only if a transceiver is present. (See Example 6-8.)

Example 6-8 Displays Transceiver Information

```
switch# show interface transceiver
fc1/1 sfp is present but not supported
    name is FINISAR CORP.
    part number is FTRJ-8519-3-2.5
    revision is X1
    serial number is E113LSF
    vendor specific data (bytes 96-127)
      0xFF 0xFF 0xFF 0xFF 0xFF 0xFF 0xFF 0xFF
      0xFF 0xFF 0xFF 0xFF 0xFF 0x00 0x00 0x00
      0xFF 0xFF 0xFF 0xFF 0xFF 0xFF 0xFF 0x00
      0x00 0x00 0xFF 0xFF 0xFF 0xFF 0xA7 0xCE

fc1/2 sfp is present but not supported
    name is FINISAR CORP.
    part number is FTRJ-8519-3-2.5
    revision is X1
    serial number is H112UZ3
    vendor specific data (bytes 96-127)
      0xFF 0xFF 0xFF 0xFF 0xFF 0xFF 0xFF 0xFF
      0xFF 0xFF 0xFF 0xFF 0xFF 0x00 0x00 0x00
      0xFF 0xFF 0xFF 0xFF 0xFF 0xFF 0xFF 0x00
      0x00 0x00 0xFF 0xFF 0xFF 0xFF 0xA7 0xCE

fc1/3 sfp is not present
fc1/4 sfp is not present
fc1/5 sfp is not present
fc1/6 sfp is not present
fc1/7 sfp is not present
fc1/8 sfp is not present
fc1/9 sfp is present but not supported
    name is FINISAR CORP.
    part number is FTRJ8524P2BNL
    revision is A
    serial number is P6G2333
    vendor specific data (bytes 96-127)
      0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
      0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
      0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
      0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
```

```
fc1/10 sfp is not present
fc1/11 sfp is not present
fc1/12 sfp is not present
fc1/13 sfp is present but not supported
    name is
    part number is
    revision is
    serial number is
    vendor specific data (bytes 96-127)
      0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
      0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
      0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
      0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00

fc1/14 sfp is not present
fc1/15 sfp is not present
fc1/16 sfp is present but not supported
    name is FINISAR CORP.
    part number is FTRJ-8519-3-2.5
    revision is X1
    serial number is E113GL5
    vendor specific data (bytes 96-127)
      0xFF 0xFF 0xFF 0xFF 0xFF 0xFF 0xFF 0xFF
      0xFF 0xFF 0xFF 0xFF 0xFF 0x00 0x00 0x00
      0xFF 0xFF 0xFF 0xFF 0xFF 0xFF 0xFF 0x00
      0x00 0x00 0xFF 0xFF 0xFF 0xFF 0xA7 0xCE

fc1/17 sfp is not present
fc1/18 sfp is not present
fc1/19 sfp is not present
fc1/20 sfp is present but not supported
    name is Molex Inc.
    part number is 74720-0502
    revision is D
    serial number is 33281334
    vendor specific data (bytes 96-127)
      0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
      0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
      0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
      0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00
```

Example 6-9 displays the running configuration for a specified interface.

Example 6-9 Displays the Running Configuration

```
switch# show running-config
ip default-gateway 10.20.83.1
logging level fcdomain 2
logging level fspf 2
logging level fcns 2
logging level fcs 2
logging level port 2
logging level zone 2
logging level auth 2
logging level ipconf 2
logging level module 2
logging level ntp 2
logging level sysmgr 2
no snmp-server contact
no snmp-server location
zone name asdfa
zoneset name dave
```

```
interface mgmt0
  ip address 10.20.83.122 255.255.255.0
interface fc1/1
interface fc1/2
interface fc1/3
interface fc1/4
interface fc1/5
interface fc1/6
interface fc1/7
interface fc1/8
interface fc1/9
interface fc1/10
interface fc1/11
interface fc1/12
interface fc1/13
interface fc1/14
interface fc1/15
interface fc1/16
interface fc1/17
interface fc1/18
interface fc1/19
interface fc1/20
```

Default Settings

Table 6-6 lists the default settings for Fibre Channel interface parameters.

Table 6-6 Default Interface Parameters

Parameters	Default
Interface mode	Auto
Interface speed	Auto
Administrative state	Shutdown (unless changed during initial setup)
Beacon mode	Off (disabled)
Data field size	2112 bytes