

# FDDI and CDDI Modules

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Catalyst 5000 family switches support both Fiber Distributed Data Interface (FDDI) and Copper Distributed Data Interface (CDDI) switching modules. This chapter describes the FDDI and CDDI modules and consists of these sections:

- FDDI and CDDI Module Features, page 5-2
- CDDI Module (WS-X5103), page 5-2
- FDDI Module Multimode Fiber (WS-X5101), page 5-4
- FDDI Module Single-Mode Fiber (WS-X5104), page 5-6

For specifications on all FDDI and CDDI switching modules, see Appendix A, “Specifications.”

For information on installing FDDI and CDDI modules, refer to Chapter 3, “Switching Module Installation.”

For information on configuring FDDI and CDDI modules, refer to the *Software Configuration Guide* for your switch.

## FDDI and CDDI Module Features

FDDI is a LAN standard, defined by American National Standards Institute (ANSI) X3T9.5, specifying a 100-Mbps, token-passing network using fiber-optic cable, with transmission distances of up to 1.2 miles (2 kilometers). FDDI uses a dual-ring architecture to provide redundancy. CDDI transmits over relatively short distances of approximately 328 feet (100 meters), providing data rates of 100 Mbps. CDDI also uses dual-ring architecture to provide redundancy.

The FDDI/CDDI modules run their own software image in addition to the supervisor engine software image. For additional information on the FDDI/CDDI module software, refer to the *Catalyst 5000 Family Release Notes for FDDI Software Release 3.1(x)*.

## CDDI Module (WS-X5103)

The CDDI module, shown in Figure 5-1, provides a single-attachment-station (SAS) or dual-attachment-station (DAS) connection to two Category 5 unshielded twisted-pair (UTP), 100-Mbps CDDI interfaces using two RJ-45 connectors.

**Figure 5-1** CDDI Module



This module requires supervisor engine module software release 1.3 or later.

The LEDs provide status information for the module and the individual CDDI port connections. The LEDs are described in Table 5-1.

**Table 5-1 CDDI Module LED Descriptions**

LED	State	Description
STATUS		Indicates a series of self-tests and diagnostic tests.
	Green	All the tests pass.
	Red	A test other than an individual port test failed.
	Orange	System boot, self-test diagnostics running, or the module is disabled.
RING OP		Indicates whether the ring is operational.
	Green	The ring is operational.
	Off	The ring is not operational.
THRU		Indicates whether the ports are connected to primary and secondary rings.
	Green	Ports A and B of the CDDI/FDDI module are connected.
	Off	Ports are not connected.
WRAP A		Indicates the status of port A wrap.
	Green	Port A is connected to the ring and port B is isolated.
	Off	Port A is not connected to the ring or port B is not isolated.
WRAP B		Indicates the status of port B wrap.
	Green	Port B is connected to the ring and port A is isolated.
	Off	Port B is not connected to the ring or port A is not isolated.

## FDDI Module Multimode Fiber (WS-X5101)

**Table 5-1 CDDI Module LED Descriptions (continued)**

LED	State	Description	
A		Indicates the status of port A.	
	Green	Port A is connected to the ring.	
	Orange	Port A receives a signal but fails to connect, or a dual homing condition exists.	
B	Off	No receive signal is detected.	
	B		Indicates the status of port B.
		Green	Port B is connected to the ring.
Orange	Port B receives a signal but fails to connect, or a dual homing condition exists.		
Off	No receive signal is detected.		

## FDDI Module Multimode Fiber (WS-X5101)

The FDDI module, shown in Figure 5-2, provides a SAS or DAS connection to the FDDI backbone network using two multimode, media interface connector (MIC) fiber-optic connections.

**Figure 5-2 FDDI Module MMF**



This module requires supervisor engine module software release 1.3 or later.

The LEDs provide status information for the module and the individual FDDI port connections. The LEDs are described in Table 5-2.

**Table 5-2 FDDI Module MMF LED Descriptions**

LED	State	Description
STATUS		Indicates a series of self-tests and diagnostic tests.
	Green	All the tests pass.
	Red	A test other than an individual port test failed.
	Orange	System boot, self-test diagnostics running, or the module is disabled.
RING OP		Indicates whether the ring is operational.
	Green	The ring is operational.
	Off	The ring is not operational.
THRU		Indicates whether the ports are connected to primary and secondary rings.
	Green	Ports A and B of the CDDI/FDDI module are connected.
	Off	Ports are not connected.
WRAP A		Indicates the status of port A wrap.
	Green	Port A is connected to the ring and port B is isolated.
	Off	Port A is not connected to the ring or port B is not isolated.
WRAP B		Indicates the status of port B wrap.
	Green	Port B is connected to the ring and port A is isolated.
	Off	Port B is not connected to the ring or port A is not isolated.
A		Indicates the status of port A.
	Green	Port A is connected to the ring.
	Orange	Port A receives a signal but fails to connect, or a dual homing condition exists.
	Off	No receive signal is detected.

## FDDI Module Single-Mode Fiber (WS-X5104)

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**Table 5-2 FDDI Module MMF LED Descriptions (continued)**

LED	State	Description
B		Indicates the status of port B.
	Green	Port B is connected to the ring.
	Orange	Port B receives a signal but fails to connect, or a dual homing condition exists.
	Off	No receive signal is detected.
IN		Indicates the status of the device connected to the line module.
	On	The bypass switch is activated and is in Thru mode (the line module is attached to the dual ring).

The six-pin, mini-DIN connector, labeled BYPASS, connects an external optical bypass switch to the FDDI MMF. When the bypass switch is activated, the FDDI module MMF is inserted into the ring. The optical bypass switch LED, labeled IN, indicates the status of the device connected to the module. When the bypass switch is activated and in Thru mode (the module is attached to the dual ring), the bypass switch LED is on. For more information on the optical bypass switch, see Chapter 2, "Installation Preparation."

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**Note** Use an optical bypass switch only with the A/B port card option. If you install or remove an optical bypass switch, you must reset the FDDI module.

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## FDDI Module Single-Mode Fiber (WS-X5104)

The FDDI module single-mode fiber (SMF), shown in Figure 5-3, provides a SAS or DAS connection to the 100-Mbps FDDI backbone network using two single-mode, straight-tip (ST) fiber-optic connectors (for a SAS) or four single-mode, ST fiber-optic connectors (for a DAS).



## FDDI Module Single-Mode Fiber (WS-X5104)

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**Table 5-3 FDDI Module SMF LED Descriptions (continued)**

LED	State	Description
A		Indicates the status of port A.
	Green	Port A is connected to the ring.
	Orange	Port A receives a signal but fails to connect, or a dual homing condition exists.
	Off	No receive signal is detected.
B		Indicates the status of port B.
	Green	Port B is connected to the ring.
	Orange	Port B receives a signal but fails to connect, or a dual homing condition exists.
	Off	No receive signal is detected.
IN		Indicates the status of the device connected to the line module.
	On	The bypass switch is activated and is in Thru mode (the line module is attached to the dual ring).

The six-pin, mini-DIN connector, labeled BYPASS, connects an external optical bypass switch to the FDDI module SMF. When the bypass switch is activated, the FDDI module SMF is inserted into the ring. The optical bypass switch LED, labeled IN, indicates the status of the device connected to the module. When the bypass switch is activated and in Thru mode (the module is attached to the dual ring), the bypass switch LED is on. For more information on the optical bypass switch, see Chapter 2, "Installation Preparation."

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**Note** Use an optical bypass switch only with the A/B port card option. If you install or remove an optical bypass switch, you must reset the FDDI module.

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