

Cabling Specifications

This appendix lists the pinouts for ports on the supervisor engine module and other modules, and for some interface cable connectors that connect modules to the external network. All pins not specifically listed are not connected.

Following is a list of the signal summaries contained in this appendix:

- Supervisor Engine Module with RJ-45 and Media-Independent Interface (MII) Connectors
- Supervisor Engine Module 40-Pin MII Fast Ethernet Connector Signals
- Supervisor Engine Module 100BaseTX MDI X Port Signals
- Ethernet Module (10Base T) and Group Switching Ethernet Module RJ-21 Telco Connector Signals
- ATM LAN Emulation Module (UTP) RJ-45 Port Pinouts
- Optical Bypass Switch Pinouts
- CDDI Straight-Through Connector Pinouts
- CDDI Cross-Connect Connector Pinouts

Console Port Signals

The console port on the supervisor engine module is an EIA/TIA-232, data communications equipment (DCE), DB-25 receptacle. Both data set ready (DSR) and data carrier detect (DCD) are active when the system is running. The Request To Send (RTS) signal tracks the state of the Clear To Send (CTS) input. The console port does not support modem control or hardware flow control. Table D-1 and Table D-2 list the signals used on this port for all types of supervisor engine modules used in the Catalyst 5000.

Console Port Signals

Table D-1 Supervisor Engine Module with RJ-45 and Media-Independent Interface (MII) Connectors

Pin	Signal	Direction	Description
1	GND		Ground
2	RxD	—>	Receive data
3	TxD	<—	Transmit Data
4	CTS	<—	Clear to send
5	RTS	—>	Request-to-send
7	GND		Ground
8	DTR	—>	Data terminal ready
20	DCD	<—	Data carrier detect

Table D-2 Supervisor Engine (MMF and SMF) DB-25 Console Port Signals

Pin	Signal	Direction	Description
1	GND		Ground
2	RxD	Input	Receive Data
3	TxD	Output	Transmit Data
4	CTS	Input	Clear-to-Send
5	RTS	Output	Request-to-Send
7	GND		Ground
8	DTR	Output	Data Terminal Ready
18	GND		Ground

Fast Ethernet MII Connector Signals

Most Ethernet transceivers require a transceiver cable to connect an Ethernet transceiver to the supervisor engine module and Ethernet switching module Ethernet ports. Some unshielded twisted-pair (10BaseT) transceivers are compact enough to connect directly to the Ethernet module ports without impeding other connections. For descriptions of Ethernet transceivers, connectors, and cables, refer to the section “Setting Up Ethernet Connection Equipment” in the chapter “Installation Overview.”

Table D-3 lists the signals for the supervisor engine module 40-pin MII Fast Ethernet connector.

Table D-3 Supervisor Engine Module 40-Pin MII Fast Ethernet Connector Signals

Pin	Signal
1	+5V
2	MDIO
3	MDC
4	RxD<3>
5	RxD<2>
6	RxD<1>
7	RxD<0>
8	Rx_DV
9	Rx_Clk
10	Rx_Er
11	Tx_Er
12	Tx_Clk
13	Tx_En
14	TxD<0>
15	TxD<1>

Fast Ethernet MII Connector Signals

Pin	Signal
16	TxD<2>
17	TxD<3>
18	Col
19	CRS
20	+5V
21	+5V
22	Common
23	Common
24	Common
25	Common
26	Common
27	Common
28	Common
29	Common
30	Common
31	Common
32	Common
33	Common
34	Common
35	Common
36	Common
37	Common
38	Common
39	Common
40	+5V

Table D-4 lists the signals for the supervisor engine module RJ-45 Fast Ethernet 100BaseTX MDI X port and Fast Ethernet 100BaseTX module ports.

Table D-4 Supervisor Engine Module 100BaseTX MDI X Port Signals

Pin	Signal	Direction	Description
1	RxD+	<—	Receive data +
2	RxD–	<—	Receive data –
3	TxD+	—>	Transmit Data +
4	NC		No connection
5	NC		No connection
6	TxD–	—>	Transmit Data –
7	NC		No connection
8	NC		No connection

Table D-5 lists the signals for the 10BaseT 24-port switching module RJ-21 Telco Ethernet connector port.

Table D-5 Ethernet Module (10Base T) and Group Switching Ethernet Module RJ-21 Telco Connector Signals

Pin	Signal	Direction	Description	Ethernet Port No.
1	RxD (+ or –)	<—	Receive Data	1
2	TxD (+ or –)	—>	Transmit Data	1
26	RxD (+ or –)	<—	Receive Data	1
27	TxD (+ or –)	—>	Transmit Data	1
3	RxD (+ or –)	<—	Receive Data	2
4	TxD (+ or –)	—>	Transmit Data	2
28	RxD (+ or –)	<—	Receive Data	2

Fast Ethernet MII Connector Signals

Pin	Signal	Direction	Description	Ethernet Port No.
29	TxD (+ or -)	—>	Transmit Data	2
5	RxD (+ or -)	<—	Receive Data	3
6	TxD (+ or -)	—>	Transmit Data	3
30	RxD (+ or -)	<—	Receive Data	3
31	TxD (+ or -)	—>	Transmit Data	3
7	RxD (+ or -)	<—	Receive Data	4
8	TxD (+ or -)	—>	Transmit Data	4
32	RxD (+ or -)	<—	Receive Data	4
33	TxD (+ or -)	—>	Transmit Data	4
9	RxD (+ or -)	<—	Receive Data	5
10	TxD (+ or -)	—>	Transmit Data	5
34	RxD (+ or -)	<—	Receive Data	5
35	TxD (+ or -)	—>	Transmit Data	5
11	RxD (+ or -)	<—	Receive Data	6
12	TxD (+ or -)	—>	Transmit Data	6
36	RxD (+ or -)	<—	Receive Data	6
37	TxD (+ or -)	—>	Transmit Data	6
13	RxD (+ or -)	<—	Receive Data	7
14	TxD (+ or -)	—>	Transmit Data	7
38	RxD (+ or -)	<—	Receive Data	7
39	TxD (+ or -)	—>	Transmit Data	7
15	RxD (+ or -)	<—	Receive Data	8
16	TxD (+ or -)	—>	Transmit Data	8
40	RxD (+ or -)	<—	Receive Data	8
41	TxD (+ or -)	—>	Transmit Data	8
17	RxD (+ or -)	<—	Receive Data	9

Fast Ethernet MII Connector Signals

Pin	Signal	Direction	Description	Ethernet Port No.
18	TxD (+ or -)	—>	Transmit Data	9
42	RxD (+ or -)	<—	Receive Data	9
43	TxD (+ or -)	—>	Transmit Data	9
19	RxD (+ or -)	<—	Receive Data	10
20	TxD (+ or -)	—>	Transmit Data	10
44	RxD (+ or -)	<—	Receive Data	10
45	TxD (+ or -)	—>	Transmit Data	10
21	RxD (+ or -)	<—	Receive Data	11
22	TxD (+ or -)	—>	Transmit Data	11
46	RxD (+ or -)	<—	Receive Data	11
47	TxD (+ or -)	—>	Transmit Data	11
23	RxD (+ or -)	<—	Receive Data	12
24	TxD (+ or -)	—>	Transmit Data	12
48	RxD (+ or -)	<—	Receive Data	12
49	TxD (+ or -)	—>	Transmit Data	12
25			(Not Used)	
50			(Not Used)	

ATM UTP Connector Pinouts

Table D-6 lists the signals for the ATM LAN Emulation (UTP) Module RJ-45 connector.

Table D-6 **ATM LAN Emulation Module (UTP) RJ-45 Port Pinouts**

Pin	Signal	Direction	Description
1	TxD+	—>	Transmit data +
2	TxD–	—>	Transmit data –
3	NC		No connection
4	NC		No connection
5	NC		No connection
6	NC		No connection
7	RxD+	<—	Receive data +
8	RxD–	<—	Receive data –

FDDI Optical Bypass Switch Signals

Table D-7 lists the signal descriptions for the mini-DIN optical bypass switch available on the FDDI modules. The mini-DIN-to-DIN adapter cable connector allows connection to an optical bypass switch that uses a DIN connector.

Table D-7 Optical Bypass Switch Pinouts

Pin	Description
1	+5V to secondary switch
2	+5V to primary switch
3	Ground to enable primary switch
4	Ground to enable secondary switch
5	Sense circuit—1 kohm to +5 V
6	Ground—Sense circuit return

CDDI Transmit and Receive Connector Pinouts

Table D-8 lists the signal descriptions for straight-through connectors and Table D-9 lists the signal descriptions for cross-connect connectors used with CDDI modules.

Table D-8 CDDI Straight-Through Connector Pinouts

Pin	Signal	Direction	Signal	Pin
1	TxD	—>	RxD	1
2	TxD	—>	RxD	2
3	NC	No connection	NC	3
4	NC	No connection	NC	4
5	NC	No connection	NC	5
6	NC	No connection	NC	6
7	RxD	<—	TxD	7
8	RxD	<—	TxD	8

Table D-9 CDDI Cross-Connect Connector Pinouts

Pin	Signal	Direction	Signal	Pin
1	RxD	<—	TxD	8
2	RxD	<—	TxD	7
3	NC	No connection	NC	6
4	NC	No connection	NC	5
5	NC	No connection	NC	4
6	NC	No connection	NC	3
7	TxD	—>	RxD	2
8	TxD	—>	RxD	1