

Connectors and Cables

This appendix provides connector and cable descriptions for the following fixed ports on the switch:

- Switched 10BaseT and 100BaseTX RJ-45 ports
- Switched 100BaseFX SC port
- Switched AUI port
- Console port

Switched 10BaseT and 100BaseTX RJ-45 Ports

The 100BaseTX ports (Ax and Bx) and the 10BaseT ports (1x through 12x or 24x) use RJ-45 connectors (Figure B-1). Table B-1 describes the port pin assignments.

Figure B-1 10BaseT RJ-45 Connector

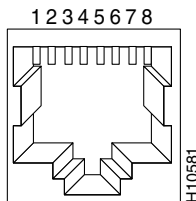


Table B-1 **10BaseT and 100BaseTX RJ-45 Port Pin Assignments**

Pin	Label
1	RD+
2	RD-
3	TD+
4	NC
5	NC
6	TD-
7	NC
8	NC

As indicated by the X, the 10BaseT and 100BaseTX ports have their transmit (TD) and receive (RD) signals internally crossed for attachment of an adapter using a straight-through cable.

When connecting the 10BaseT ports to 10BaseT-compatible servers, routers, or workstations, use a *straight-through* cable wired for 10BaseT. When connecting to other switches or repeaters, use a *crossover* cable.

When connecting the 100BaseTX ports to 100BaseT-compatible servers, routers, or workstations, use a *straight-through* cable. When connecting to the 100BaseTX port on another switch or hub, use a *crossover* cable.

Note Always observe the following general rules when connecting devices: Use a straight-through cable to connect two ports when one of the ports is designated with an **X**; use a crossover cable to connect two ports when both ports are designated with an **X**.

The schematics for the crossover and straight-through cables are shown in Figure B-2 and Figure B-3, respectively.

Figure B-2 Crossover Cable Schematic

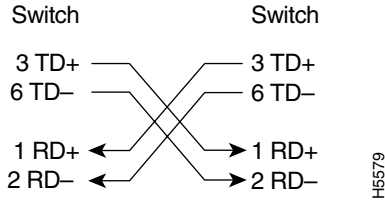
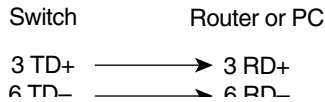


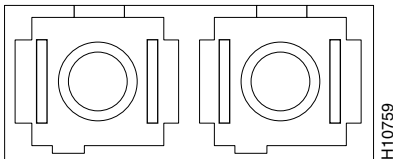
Figure B-3 Straight-Through Cable Schematic



Switched 100BaseFX Port

The 100BaseFX port (port Ax), as illustrated in Figure B-4, uses a duplex SC connector.

Figure B-4 SC Connector



Switched Ethernet AUI Port

The Ethernet AUI port uses a 15-pin female connector, as shown in Figure B-5. The pin assignments for this port are described in Table B-2.

Figure B-5 Ethernet AUI Port

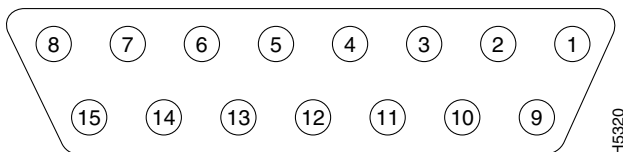


Table B-2 Ethernet AUI Port Pin Assignments

Pin	Label	Description
1	GND	Ground
2	CI+	Positive AUI differential collision-data input
3	TX+	Positive AUI differential transmit-data input
4	GND	Ground
5	RX+	Positive AUI differential receive-data output
6	GND	Ground
7	NC	—
8	GND	Ground
9	CI-	Negative AUI differential collision data
10	TX-	Negative AUI differential transmit-data input
11	GND	Ground
12	RX-	Negative AUI differential receive data output
13	+12V	12V supply for external MAU
14	GND	Ground
15	NC	—

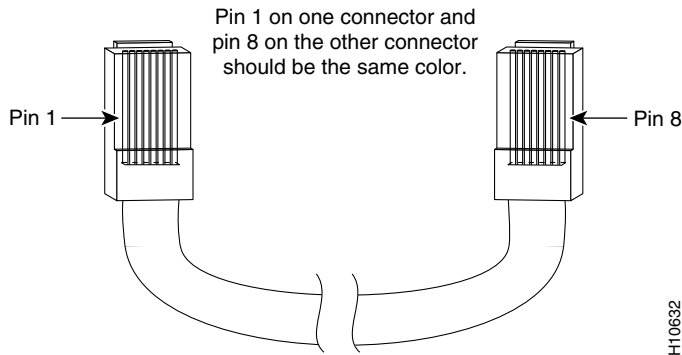
Console Port

The console port uses an 8-pin RJ-45 connector, as shown in Figure B-1. The supplied RJ-45-to-RJ-45 rollover cable and adapters are used to connect the console port of the switch to a management station or modem. The following sections describe the rollover cable and adapters for the console port.

Identifying a Rollover Cable

You can identify a rollover cable by comparing the two modular ends of the cable. Hold the cable ends side-by-side, with the tab at the back. The wire connected to the pin on the outside of the left plug should be the same color as the wire connected to the pin on the outside of the right plug (see Figure B-6).

Figure B-6 Identifying a Rollover Cable



Connecting to a PC

Use the thin, flat, RJ-45-to-RJ-45 rollover cable and RJ-45-to-DB-9 female DTE adapter (labeled TERMINAL) to connect the console port to a PC running terminal emulation software. Figure B-7 shows how to connect the console port to a PC. Table B-3 lists the pin assignments for the console port, the RJ-45-to-RJ-45 rollover cable, and the RJ-45-to-DB-9 female DTE adapter (labeled TERMINAL).

Figure B-7 Connecting the Console Port to a PC

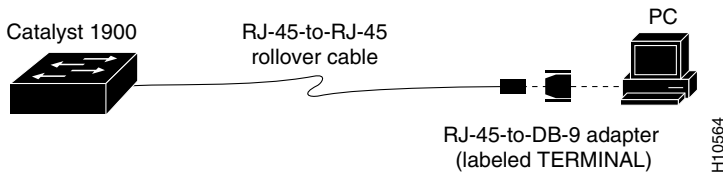


Table B-3 Console Port Signaling and Cabling Using a DB-9 Adapter

Console Port (DTE)	RJ-45-to-RJ-45 Rollover Cable		RJ-45-to-DB-9 Terminal Adapter	Console Device
	RJ-45 Pin	RJ-45 Pin	DB-9 Pin	
RTS	1 ¹	8	8	CTS
DTR	2	7	6	DSR
TxD	3	6	2	RxD
GND	4	5	5	GND
GND	5	4	5	GND
RxD	6	3	3	TxD
DSR	7	2	4	DTR
CTS	8 ¹	1	7	RTS

1. Pin 1 is connected (inside the terminal adapter) to Pin 8.

Connecting to a Terminal

Use the thin, flat, RJ-45-to-RJ-45 rollover cable and RJ-45-to-DB-25 female DTE adapter (labeled TERMINAL) to connect the console port to a terminal. Figure B-8 shows how to connect the console port to a terminal. Table B-4 lists the pin assignments for the console port, the RJ-45-to-RJ-45 rollover cable, and the RJ-45-to-DB-25 female DTE adapter (labeled TERMINAL).

Figure B-8 Connecting the Console Port to a Terminal

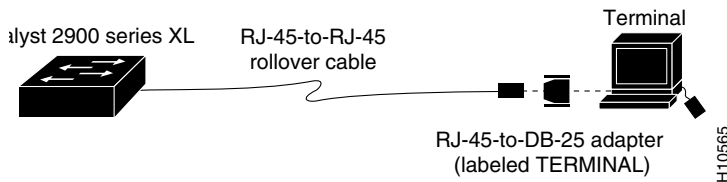


Table B-4 Console Port Signaling and Cabling Using a DB-25 Adapter

Console Port (DTE)	RJ-45-to-RJ-45 Rollover Cable		RJ-45-to-DB-25 Terminal Adapter	Console Device
Signal	RJ-45 Pin	RJ-45 Pin	DB-25 Pin	Signal
RTS	1 ¹	8	5	CTS
DTR	2	7	6	DSR
TxD	3	6	3	RxD
GND	4	5	7	GND
GND	5	4	7	GND
RxD	6	3	2	TxD
DSR	7	2	20	DTR
CTS	8 ¹	1	4	RTS

1. Pin 1 is connected (inside the terminal adapter) to Pin 8.

Connecting to a Modem

Use the thin, flat, RJ-45-to-RJ-45 rollover cable and RJ-45-to-DB-25 male DCE adapter (labeled MODEM) to connect the console port to a modem. Figure B-9 shows how to connect the console port to a modem. Table B-5 lists the pin assignments for the console port, the RJ-45-to-RJ-45 rollover cable, and the RJ-45-to-DB-25 male DCE adapter (labeled MODEM).

Figure B-9 Connecting the Console Port to a Modem

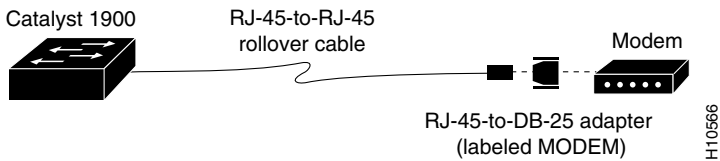


Table B-5 Console Port Signaling and Cabling Using a DB-25 Adapter

Console Port (DTE)	RJ-45-to-RJ-45 Rollover Cable		RJ-45-to-DB-25 Modem Adapter	Modem
Signal	RJ-45 Pin	RJ-45 Pin	DB-25 Pin	Signal
RTS	1 ¹	8	4	RTS
DTR	2	7	20	DTR
TxD	3	6	3	TxD
GND	4	5	7	GND
GND	5	4	7	GND
RxD	6	3	2	RxD
DSR	7	2	8	DCD
CTS	8 ¹	1	5	CTS

1. Pin 1 is connected (inside the terminal adapter) to Pin 8.