

Cabling Specifications

This appendix describes cables and cabling guidelines for the Cisco 1700 router and contains the following sections:

- Ethernet Cables
- Ethernet Network Cabling Guidelines
- Console Cable and Adapters

Note For information about cables used with Cisco WAN interface cards, refer to the *Cisco WAN Interface Cards Hardware Installation Guide* that comes with each of the cards.

Ethernet Cables

This section describes the Ethernet cables that are used to connect the router to your local Ethernet network. A 10/100BaseTX router, like the Cisco 1700 router, requires Category 5 unshielded twisted-pair (UTP) or shielded twisted-pair (STP) cable.

Table B-1 Straight-Through Ethernet Cable (RJ-45-to-RJ-45) Pinouts

RJ-45 Pin ¹	Signal	Direction	RJ-45 Pin
1	TX+	—>	1
2	TX–	—>	2
3	RX+	<—	3
6	RX–	<—	6

1. Pins 4, 5, 7, and 8 are not used for signaling.

Ethernet Network Cabling Guidelines

Table B-2 describes some guidelines for creating Ethernet networks. Figures might vary, depending on the manufacturer of the network equipment.

Table B-2 Ethernet Cabling Guidelines

Specification	10BaseT	100BaseTX
Maximum segment length	100 meters	100 meters
Maximum number of segments per network	5	<ul style="list-style-type: none">• With Class I repeaters: 1• With Class II repeaters: 2
Maximum hop count ¹	4	<ul style="list-style-type: none">• With Class I repeaters: none• With Class II repeaters: 1
Maximum number of nodes per segment	1024	1024
Cable type required	UTP Category 3, 4, or 5	UTP Category 5 or STP

1. Hop count = Routing metric used to measure the distance between a source and a destination.

Console Cable and Adapters

A console cable kit is provided with your router. Use this kit when connecting your router to a PC or terminal.

The console cable kit contains:

- RJ-45-to-RJ-45 console cable (blue)
- RJ-45-to-DB-9 adapter (gray)

Table B-3 describes the wiring for the console port, the console cable, and the included adapters. This table also includes pinouts for an RJ-45-to-DB-25 adapter. Figure B-1 illustrates how to identify the console cable, which is also referred to as a *rollover* cable.

Table B-3 Console Cable and Adapter Pinouts

Console (DTE)	Console Port	Console Cable	Adapter	Adapter	Terminal (DTE)
Signal	RJ-45 Pin	RJ-45 Pin	DB-9 Pin	DB-25 Pin	Signal
RTS	1	8	8	5	CTS
DTR	2	7	6	6	DSR
TXD	3	6	2	3	RXD
GND	4	5	5	7	GND
GND	5	4	5	7	GND
RXD	6	3	3	2	TXD
DSR	7	2	4	20	DTR
CTS	8	1	7	4	RTS

Figure B-1 Identifying a Rollover Cable

