



## Cabling Specifications

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This appendix describes cables and cabling guidelines for the Cisco 815 integrated services router and contains the following sections:

- [Ethernet Cables](#)
- [Ethernet Network Cabling Guidelines](#)
- [Console Cable and Adapter](#)



**Note**

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For information about cables used with Cisco WAN interface cards (WICs), refer to the [Cisco Interface Cards Hardware Installation Guide](#).

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## Ethernet Cables

This section describes the Ethernet cables that are used to connect the router to your local Ethernet network. A 10/100BASE-TX router, such as the Cisco 815 integrated services router, requires Category 5 unshielded twisted-pair (UTP) or shielded twisted-pair (STP) cable. [Table B-1](#) gives the pinouts for an Ethernet cable.

**Table B-1 Ethernet Cable Pinouts**

RJ-45 Pin <sup>1</sup>	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	10BASE-T	100BASE-TX
Maximum segment length	100 meters	100 meters
Maximum number of segments per network	5	<ul style="list-style-type: none"> <li>With Class I repeaters: 1</li> <li>With Class II repeaters: 2</li> </ul>
Maximum hop count <sup>1</sup>	4	<ul style="list-style-type: none"> <li>With Class I repeaters: none</li> <li>With Class II repeaters: 1</li> </ul>
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 Adapter

A console cable is provided with your router. Use this cable to connect the router to a PC or terminal. The router comes with a DB-9-to-DB-25 adapter that may be used for connecting the router to a modem, using the console cable.

[Table B-3](#) describes the wiring for the console port and the console cable. This table also includes pinouts for the DB-9-to-DB-25 adapter.

**Table B-3** Console Cable and Adapter Pinouts

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

