

Specifications and Cables

This appendix provides system, cabling, and port wiring specifications and regulatory agency approvals for the hub. Table B-1 lists the system specifications for the hub, and Table B-2 lists the agency approvals.

Table B-1 System Specifications

Description	Specification
Environmental Ranges	
Nonoperating temperature	-13 to 158°F (-25 to 70°C)
Nonoperating humidity	0 to 90%, noncondensing
Nonoperating altitude	up to 30,000 ft (9146 m)
Operating temperature	32 to 113°F (0 to 40°C)
Operating humidity	0 to 85%, noncondensing
Operating altitude	up to 9840 ft (3000 m)
Power Requirements	
AC input voltage	100 to 127 VAC, 200 to 240 VAC
Power consumption	20W
Physical Dimensions	
Dimensions (H x W x D)	3.1 x 11.2 x 8.7 in. (7.9 x 28.5 x 22.1 cm) Height includes the stacking curves on top of the hub.
Weight	3.0 lb (1.4 kg)

Port Wiring Specifications

Table B-2 Agency Approvals

Safety	EMI
AS/NZS 3260, TS001	FCC Part 15 Class B
UL 1950/CSA 22.2 No. 950	EN 55022B Class B (CISPR 22 Class B)
IEC 950/EN 60950	VCCI Class B
	AS/NRZ 3548 Class B

Port Wiring Specifications

Table B-3 contains wiring specifications for the eight hub ports.

Table B-3 10BaseT/100BaseTX Port Wiring

8 Pin¹	Description
1	RX+
2	RX-
3	TX+
6	TX-

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

Ethernet Cable Specifications

This section contains wiring specifications, types, and limits of 10BaseT and 100BaseT Ethernet cable.

Straight-Through vs. Crossover Ethernet Cable

A crossover cable is used to connect two standard MDI-X ports when connecting two hubs or a hub and a switch together. When the Micro Hub MDI/MDI-X button is OUT, port 5 is an MDI-X port like any other port on the hub. When the Micro Hub MDI/MDI-X button is IN, port 5 is then similar to a port adapter, and you can use a standard straight-through cable between hubs.

Cable Wiring

Table B-4 describes the wiring for the straight-through 10BaseT and 100BaseTX Ethernet cable. Table B-5 describes the wiring for the crossover 10BaseT and 100BaseTX Ethernet cable.

Table B-4 **Straight-Through 10BaseT/100BaseTX Ethernet Cable**

RJ-45 (from Network Device) Pin	Signal	Direction	RJ-45 (from Hub) Pin
1	RX+	—>	1
2	RX-	—>	2
3	TX+	<—	3
4	—	—	4
5	—	—	5
6	TX-	<—	6
7	—	—	7
8	—	—	8

Table B-5 Crossover 10BaseT/100BaseTX Cable

RJ-45 (from Network Device) Pin ¹	Signal	Direction	RJ-45 (from Hub) Pin
1	RX+	—>	3
2	RX-	—>	6
3	TX+	<—	1
4	—		—
5	—		—
6	TX-	<—	2
7	—		—
8	—		—

1. Incorrectly connected unused wires generate noise on long lengths.

Examples of Micro Hub Wiring Limits

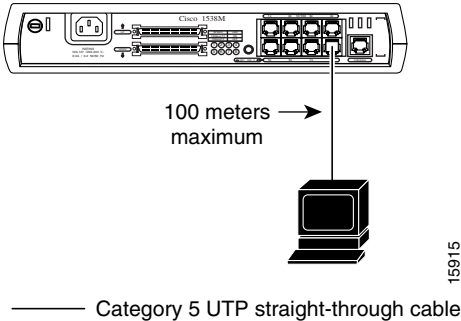
This section provides two examples of using the Micro Hub in simple network configurations, as specified in the IEEE 802.3u standard. These configurations were designed to satisfy the requirements of most networks that are built to the EIA/TIA-568 wiring standard. This standard specifies 100-meter Category 5 cable connections from wiring closets to desktops.

Note In any configuration, the maximum Category 5 cable length is 100 meters.

Example 1: Single Hub, Category 5 Segments

With only Category 5 cable segments, the maximum length for any cable segment is 100 meters, as shown in Figure B-1.

Figure B-1 Single Micro Hub with Category 5 Cable Segments



Example 2: Two Hubs, Category 5 Segments

When stations are connected to the Micro Hubs with 100-meter Category 5 UTP cable segments, the Category 5 cable connecting the two Micro Hubs is limited to a distance of 5 meters, as shown in Figure B-2. This configuration can have up to 14 connected stations.

Figure B-2 Two Micro Hub Hubs with Category 5 Cable Segments

