



## Installation

This installation guide gives step-by-step instructions about how to install the Express Plus Ethernet Switches: LB9020A

### Selecting a Site for the Express Plus Ethernet Switch: LB9020A

As with any electric device, you should place the switch where it will not be subjected to extreme temperatures, humidity, or electromagnetic interference. Specifically, the site you select should meet the following requirements:

- The ambient temperature should be between 32 and 104 degrees Fahrenheit (0 to 40 degrees Celsius).
- The relative humidity should be less than 90 percent, non-condensing.
- Surrounding electrical devices should not exceed the electromagnetic field (RFC) standards for IEC 801-3, Level 2 (3V/M) field strength.
- Make sure that the switch receives adequate ventilation. Do not block the ventilation holes on each side of the switch or the fan exhaust port on the rear of the switch.
- The power outlet should be within 1.8 meters of the switch.

### Connecting to Power

Internal power:

**Step 1:** Connect the supplied AC power cord to the receptacle on the back of the switch, and then plug it into a standard AC outlet with a voltage range from 100 to 260 Vac.

**Step 2:** Turn on the switch by flipping the ON/OFF switch on the rear of the unit to **I (ON)** position.

**Step 3:** The **O** position is **OFF**.

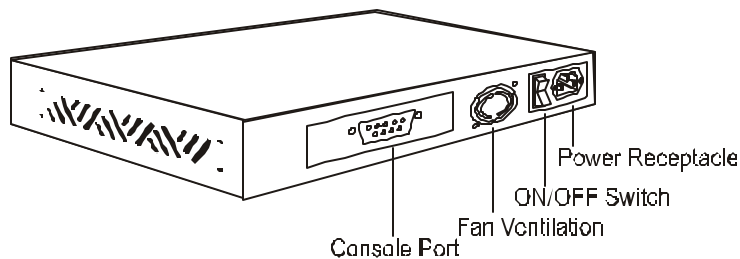


Figure 1: Rear view

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## Connecting to Your Network

### Cable Type & Length

It is necessary to follow the cable specifications below when connecting the switch to your network. Use appropriate cables that meet your speed and cabling requirements.

Table 3: Cable Specifications

Speed	Connector	Port Speed Half/Full Duplex	Cable	Max. Distance
10BASE-T	RJ-45	10/20 Mbps	2-pair UTP/STP Cat. 3, 4, 5	100 m
100BASE-TX	RJ-45	100/200 Mbps	2-pair UTP/STP Cat. 5	100 m
100BASE-FX	ST, SC, MT-RJ, VF-45	100/200 Mbps	MMF (50 or 62.5 $\mu$ m)	2 km
100BASE-FX	SC	100/200 Mbps	SMF (9 or 10 $\mu$ m)	15, 40, or 75 km

### Cabling

**Step 1:** First, ensure the power of the switch and end devices is turned off.

<Note> Always ensure that the power is off before any installation.

**Step 2:** Prepare cable with corresponding connectors for each type of port in use.

<Note> To connect two regular RJ-45 ports between switches or hubs, you need a cross-over cable.

**Step 3:** Consult Cable Specifications Table on previous page for cabling requirements based on connectors and speed.

**Step 4:** Connect one end of the cable to the switch and the other end to a desired device.

**Step 5:** Once the connections between two end devices are made successfully, turn on the power and the switch is operational.

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