



2-Port PoE Gigabit Switch Operations Guide

Part #011187
Document Part #930591C
for Firmware Version 1.0.0

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Part # 011187

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Technical Support

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<http://www.cyberdata.net/support/contactsupportvoip.html>

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Email: support@cyberdata.net

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Company and product information is at www.cyberdata.net.

Revision Information

Revision 930591C, which corresponds to design version 1.0.0, was released on April 1, 2013, and has the following changes:

- Updates the product name to “2-Port PoE Gigabit Switch”.
- Updates [Section 2.0, "Checklist"](#).

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Only use attachments/accessories specified by the manufacturer.
10. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
11. Prior to installation, consult local building and electrical code requirements.

Pictorial Alert Icons

	<p>General Alert</p> <p>This pictorial alert indicates a potentially hazardous situation. This alert will be followed by a hazard level heading and more specific information about the hazard.</p>
	<p>Ground</p> <p>This pictorial alert indicates the Earth grounding connection point.</p>

Hazard Levels

Danger: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This is limited to the most extreme situations.

Warning: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

Caution: Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It may also alert users against unsafe practices.

Notice: Indicates a statement of company policy (that is, a safety policy or protection of property).

The safety guidelines for the equipment in this manual do not purport to address all the safety issues of the equipment. It is the responsibility of the user to establish appropriate safety, ergonomic, and health practices and determine the applicability of regulatory limitations prior to use. Potential safety hazards are identified in this manual through the use of words Danger, Warning, and Caution, the specific hazard type, and pictorial alert icons.

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1.0 Installation

The switch is a three port Gigabit PoE (Power over Ethernet) Repeater Ethernet switch. The switch is in full compliance with the IEEE802.3 at standard with one PD (Power Device) port and two PSE (Power Source Equipment) ports.

This switch can work through receiving power from another PoE switch or equipment through the PD port. The PSE ports can supply power to other PoE devices (30W maximum). The combined power output from both PSE ports can be up to 30W, but it also depends upon the PD port supply. For example, if the PD supply port only delivers 15W, then the two PSE ports can only deliver up to approximately 13W.

The switch will provide a simple, economic standard for high performance GBit network applications that allows for the splitting/dividing of one PoE network drop. The 2-Port PoE Gigabit Switch is an ideal choice to promote the department and working group performance. The switch provides simple and understandable LED indicator lights on the front panel, so that you can quickly judge the working state of the switch and help to diagnose the network failure.

1.1 Features

- Supports PoE IEEE802.3at compliant
- Supports PoE IEEE802.3af compliant
- Support two power source equipment to supply external devices
- Supports IEEE802.3x flow control for full-duplex mode and back pressure for half-duplex mode
- Support ports Auto MDI/MDIX
- 8K entry MAC address table of the switch with auto-learning and auto-aging
- LED indicators for monitoring PD, PSE, Link / Activity
- No external power supply design

2.0 Checklist

Before you start installing your equipment, verify that the package contains the following:

- The 2-Port PoE Gigabit Switch
- The 2-Port PoE Gigabit Switch Quick-Reference Placemat

Please notify your supplier immediately if any of the previously items are missing or damaged.

3.0 Installation

3.1 Installation Method

The site where you install the switch may greatly affect its performance. When installing, please take the following into consideration.

- Install the switch in a cool, dry place. See technical specifications for the acceptable temperature and humidity operating ranges.
- Install the switch on a secure, level surface that can support its weight (at least 1Kg). Alternatively, the switch can be applied to any smooth dry surface using furnished stick-on tape.
- Leave at least 10cm of space at the front and rear of the switch to ensure adequate ventilation.

3.2 Desktop or Shelf Installation

When installing the switch on a shelf on desktop, make sure that the previously mentioned guidelines in [Section 3.1, "Installation Method"](#) are followed for adequate ventilation.

4.0 Powering on the 2-Port PoE Gigabit Switch

The switch is powered by your existing central POE Switch. No additional power supply is required. Simply plug your cable from your central POE switch into the PD port of the switch and your switch will power on for use.

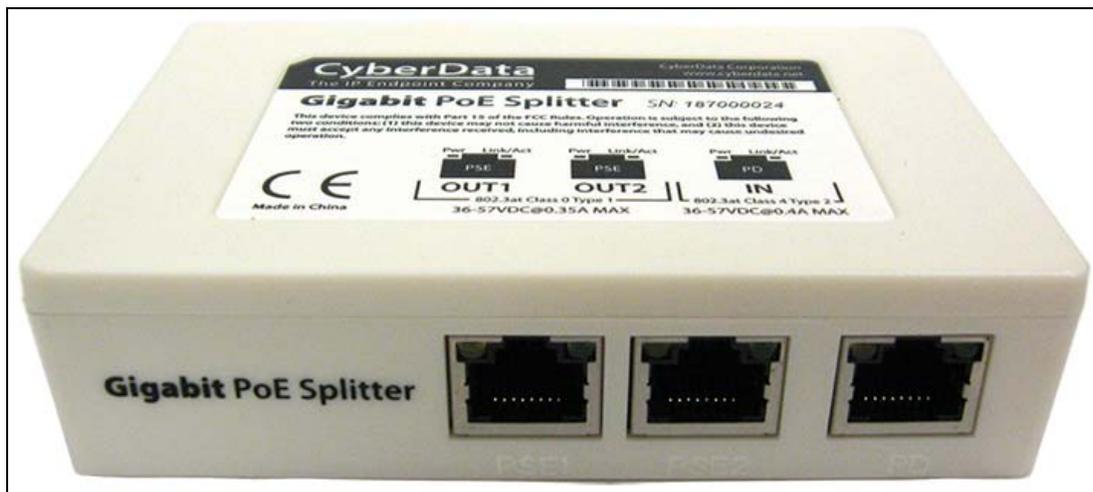
Figure 1. Front Panel of the 2-Port PoE Gigabit Switch



Table 1. Powering on the 2-Port PoE Gigabit Switch

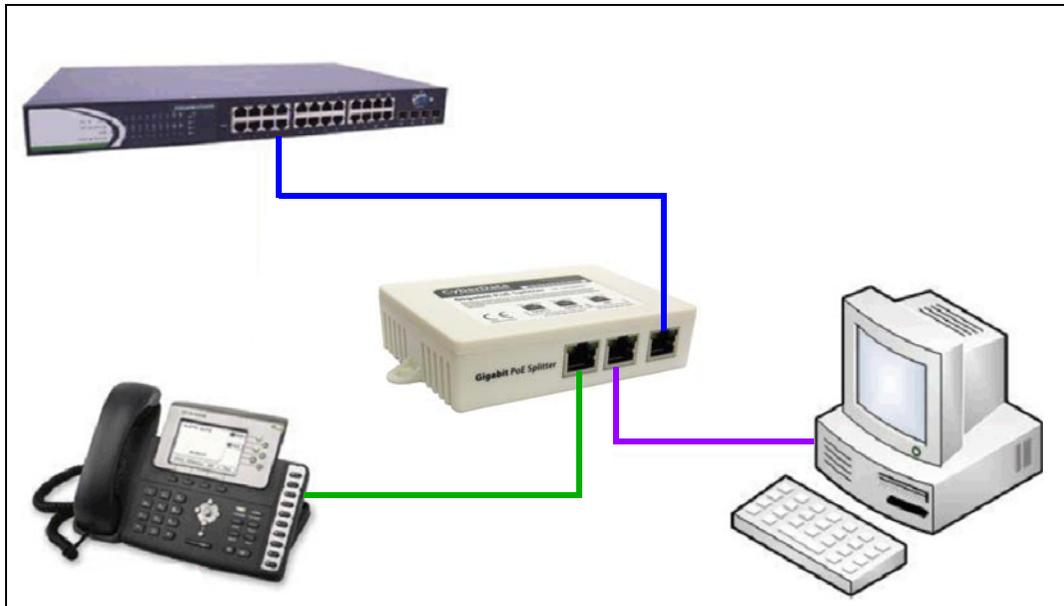
LED	Status	Description
PD (Orange)	ON	Switch has a connection from the PD port to the PSE device. Power has been successfully applied.
	OFF	Connection to the PSE device is not present. No power has been applied to the switch.
PSE (Orange)	ON	PD device such as IP phone is connected to the port and drawing power.
	OFF	PD device is not connected or no power is being drawn from the switch.
Link/Act (Green)	ON	A valid link is established.
	Blink	Traffic is present on port.
	OFF	No link has been established.

5.0 Network Connection

Figure 2. Front Panel of 2-Port PoE Gigabit Switch

Connect your devices (computer, router, switch, IP Phone, Wireless Access Point, IP Camera etc.) to the ports with a CAT-5/CAT-5e/CAT-6 network cable. Since the switch supports Auto MDI/MDI-X, you can use either a straight through or cross-over network cable.

Figure 3. Typical Installation of the 2-Port PoE Gigabit Switch



- Connect the switch from the PD port to your central Gigabit PoE Switch.
- Connect your IP Phone from the PSE port on the switch.
- Connect your computer or other networking device to any of the PSE2 ports on the switch.

6.0 Technical Specifications

Table 2. Technical Specifications

Standards	IEEE802.3af, IEEE802.3x, IEEE802.3ab, IEEE802.3az	
Network Media (Cable)	10BASE-T: UTP category 3,4,5 cable (maximum 100m) 100BASE-T: UTP category 5,5e cable (maximum 100m) 1000BASE-T: UTP category 5e,6 cable (maximum 100m)	
Number of Ports	3 x 10/100/1000Mbps Auto-Negotiation ports	
LED indicators	10/100/1000M	Link/Act
	Other	PD, PSE
Transfer Method	Store-and-Forward	
Switching Capacity	6G	
MAC Address Learning	Automatically learning, automatically Update 8K	
Frame Filtering and Forward Rate	148800pps	
Environment	Operating Temperature: 0 °C ~40 °C Storage Temperature: -10 °C ~70 °C Operating Humidity: 10%~90% non-condensing Storage humidity: 5%~90% non-condensing	

Appendix A: The Standard RJ-45 Introduction

Regarding cable-making methods, a cable which does not meet the standards of the sequence data will make the data transmission speed slow, unstable and even be blocked. [Table A-1](#) represents the standard RJ-45 jack and the connector ([Figure A-1](#)) and pin definition:

Figure A-1. Standard RJ-45 Jack / Connector

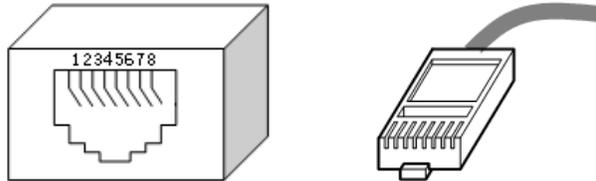


Table A-1. RJ-45 Connector Pin Definitions

Pin Number	Signal
1	_TX1 +(PoE Power+)
2	_TX1 - (PoE Power+)
3	_RX1 + (PoE Power-)
4	_TX2 +
5	_TX2 --
6	_RX1 - (PoE Power-)
7	_RX2 +
8	_RX2 -

A.1 The Standard Cable, RJ-45 Pin Assignment

The following figures shows a straight cable and a crossover cable connection. Use a straight cable connection to connect switch/Hub or other devices:

Figure A-2. Straight cable for the switch (uplink MDI-II port) to switch/Hub or other devices connection.

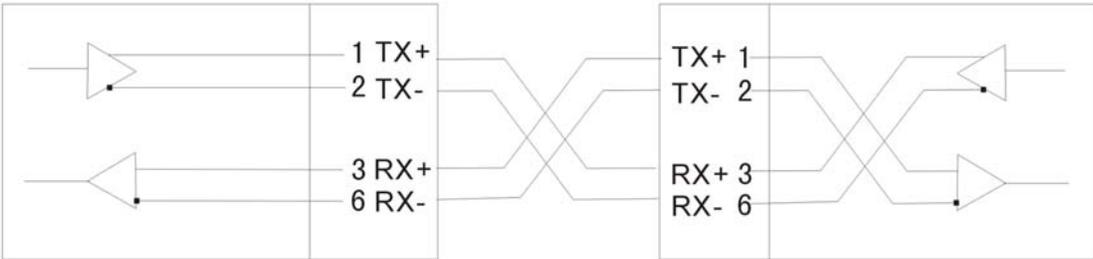
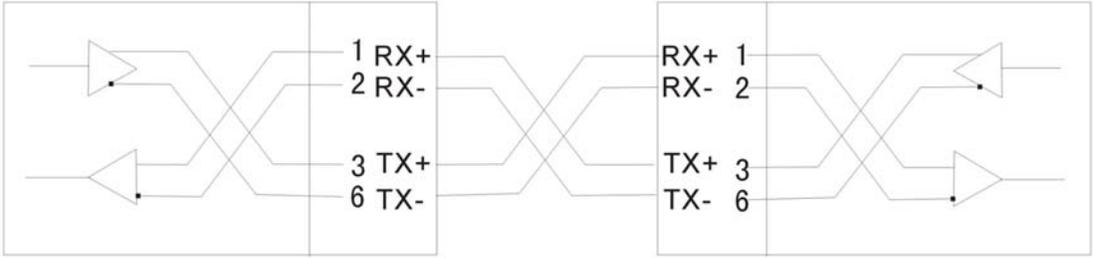


Figure A-3. Crossover cable for switch (MDI-X port) to switch/hub or other network devices (MDI-X port) connection.

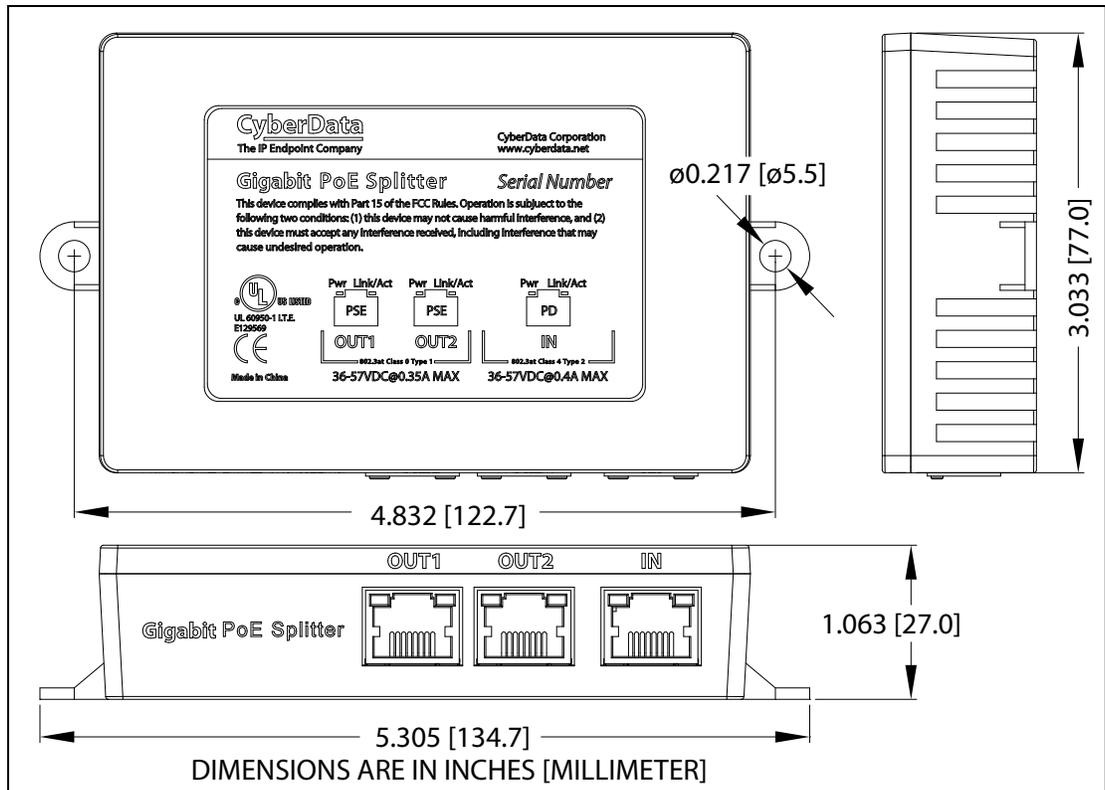


Appendix B: Mounting

B.1 Dimensions and Mounting Hole Measurements

Figure B-1 shows the dimensions and mounting hole measurements for the 2-Port PoE Gigabit Switch.

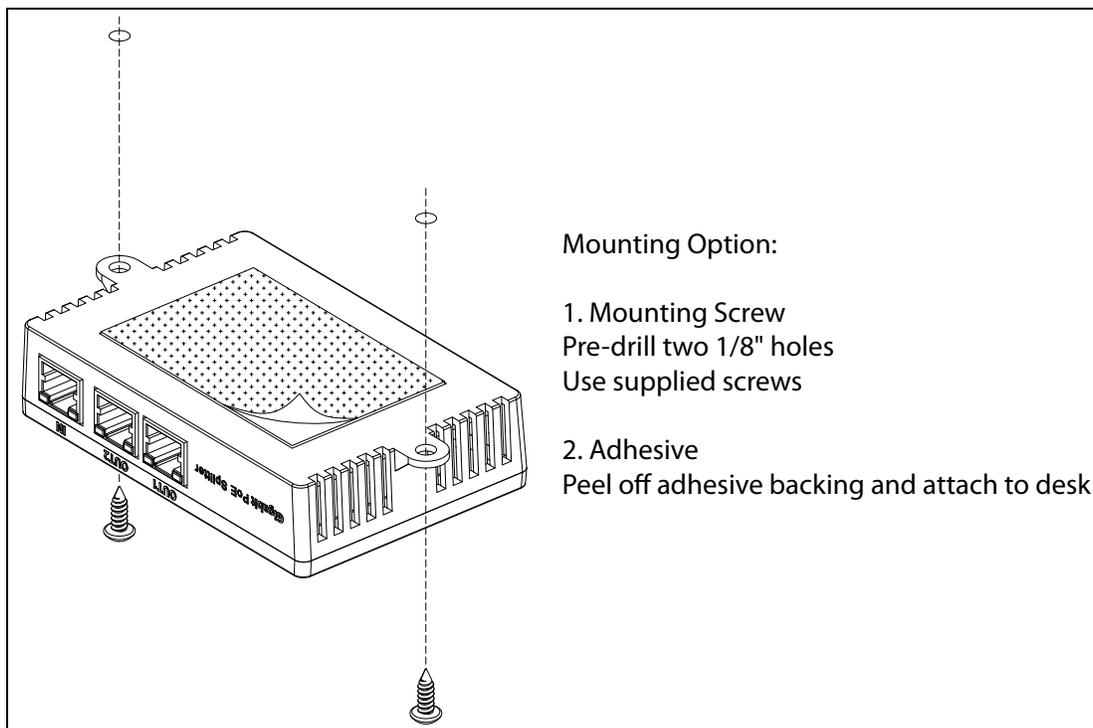
Figure B-1. Mounting



B.2 Mounting Option

Figure B-2 shows a mounting option for the 2-Port PoE Gigabit Switch.

Figure B-2. Mounting



Appendix C: Typical Installation

C.1 Typical Installation

Figure C-1 shows a typical installation setup for the 2-Port PoE Gigabit Switch.

Figure C-1. Typical Installation

