PoE Web-Smart Switch

Model 502917

User's Manual

FCC Warning

This device has been tested and found to comply with limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and radiates radio frequency energy and, if not installed and used in accordance with the user's manual, may cause interference in which case user will be required to correct the interference at his own expense.

CE Mark Warning

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user many be required to take adequate measures.

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Chapter 1

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8 Ports Power Over Ethernet Switch

Introduction

The 502917 is 8port Power Over Ethernet Switch consists 8 PSE/ Ethernet ports that is powered, detecting, classification capability, and programmable PD disconnect sensing, and with additional 8 10/100Mbps Ethernet port. That solves limitation of power outlet location offer system designer flexible solution to locate network device wherever.

Key Features

- 10/100 auto-sensing ports — automatically detect optimal network speeds
- IEEE 802.3af-compliant RJ-45 PSE/PoE output ports
- Power output up to 15.4 Watts per port
- All RJ-45 ports with Auto-MDIX (auto uplink) support
- Supports NWAY auto-negotiation
- Supports 8 VLAN groups, port-based and tagged VLAN support
- Supports Quality of Service (QoS), port-based and tagged with 2 priority levels
- Supports bandwidth control per port
- Supports MAC address locking per port
- Broadcast storm control enable/disable
- Store and forward switching architecture
- Full/half duplex operation
- IEEE 802.3x flow control for full duplex
- Zero packet loss back-pressure flow control for half duplex
- Packet filtering/forwarding rates: 148.800 pps (100 Mbps), 14.880 pps (10 Mbps)
- Supports 4096 MAC address entries
- 128 kBytes buffer memory
- Desktop-size metal case
- LEDs for power, link/activity and PoE

Chapter 2

Package Contents

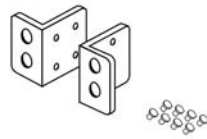Before you start to install the Switch, please verify your package that contains the following items:

- One 8 port Power Over Ethernet Switch
- Rack-mount Kit For Rack Installation
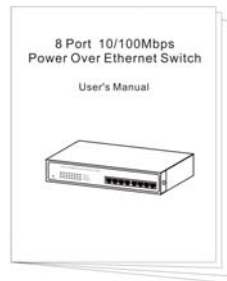- One Power Cord
- One User's Manual

8 Port 10/100Mbps
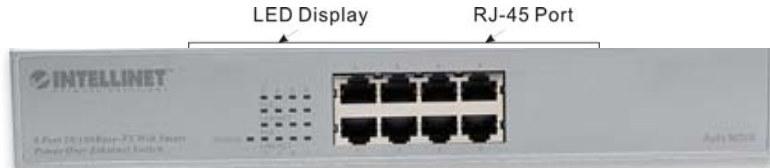Power Over Ethernet Switch

Power Cord   User's Manual

Note: If any of these items is found missing or damaged, please contact your local supplier for replacement.

Chapter 3

Front Panel Layout

A. Function of 8 RJ-45 Ports

There are 8 ports RJ-45 connectors on the front panel, and all ports has build IEEE802.3af PoE/PSE, is for the connecting with Powered Device (PD) device.

B. LED Indicators of 8 Port 10/100Mps Switch

LED	Color	Status	Description	No. Of LED
Power	Yellow	On	Power on	1
PD Link	Green	On	Port is linking to a PD device	8 (1~8)
		Off	No PD device link to the port	8 (1~8)
10/100M	Green	On	Port is on the 100M status	8 (1~8)
		Off	Port is on the 10M status	8 (1~8)
LINK/ACT.	Green	On	10/100Mbps port for connection	8 (1~8)
		Flashing	10/100Mbps for data activating	8 (1~8)

C. LED Definitions

Power LED	
On	The unit is powered on and ready for use.
Off	The unit is powered off.
PD link	
On	Link to a PD device, the port supply power output
Off	No PD device link, no power request from the device
10/100M LED	
On	The port is on the 100Mbps status.
Off	The port is on the 10Mbps status.
LINK/ACT LED	
On	The port is ready for 10/100Mbps connection.
Flashing	The data is transmitted or received on the port.

Rear Panel Layout

A.   AC Power Input.

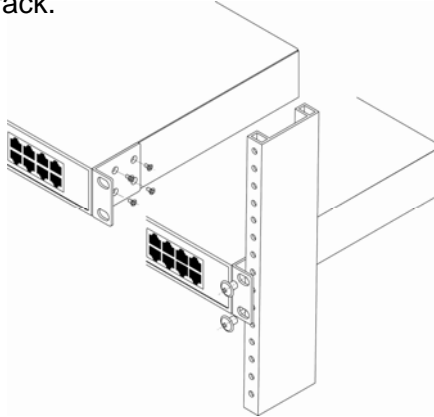AC input (90-260V/AC, 50-60Hz) UL Safety.

Chapter 4

Rack Mounting

Optional Rack-mounting brackets are available to mount 502917 in standard EIA 19-inch rack. 502917 is supplied with two mounting brackets and eight screws. And please assemble according to the following steps.

First, put the 502917 on the flat surface. Locate the mounting brackets on the sides of the Switch with the mounting holes on each.

Next, insert the screw through the bracket and into the bracket mounting holes in the 502917. Then, place the Switch in to 19-inch rack.
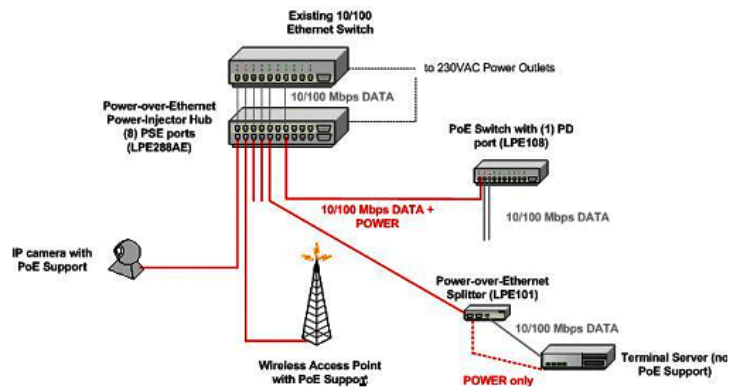
Chapter 5

Installation

How to connect the 502917 to PD device and existing Switch

Power-over-Ethernet Switches

Connect straight-through twisted-pair cable (Cat. 5) from existing Switch to the input (Data) port of 502917, then connect the Output (Data+Power) port to the PD device, such as Wireless AP, Another switch with PD function…etc.

Chapter 6

Technical Specifications

Standards
• IEEE 802.3 (10Base-T Ethernet)
• IEEE 802.3u (100Base-TX Fast Ethernet)
• IEEE 802.3x (flow control, full duplex mode)
• IEEE 802.3af (Power over Ethernet)

General
• Media support:
   - 10Base-T Cat3, 4, 5 UTP/STP RJ-45
   - 100Base-TX Cat5 UTP/STP RJ-45
• Ports: 8 RJ-45 10/100 Mbps PoE ports
• Packet filter/forwarding rate:
   - 148.800 pps (100 Mbps)
   - 14.880 pps (10 Mbps)
• Configuration options:
   - Port bandwidth control:
disable/128/256/512/1024/2048/4096/8192 kbps
   - VLAN: port-based and tagged, up to 8 groups
   - Quality of Service (QoS): 2 priority levels and port-based
ratio controlling the ratio between high and low priority
   - Full and half duplex per port
   - MAC address locking
• Certifications: FCC Class A, CE Mark

LEDs
• Power
• Link/activity for 10 and 100 Mbps
• PoE

Power
• Input: 90 to 260 V AC, 50 to 60 Hz
• Power consumption: 180 Watts (maximum)

Package Contents
• PoE Web-Smart Switch
• Power cable
• User manual

A. ANSI/TIA/EIA-568-A PLUG & Twisted-pair Cable

The IEE802.3u Standards permits the use of category 3, 4, 5 or better balanced cable pairs, installed according to ANSI/EIA-568-A. This appendix provides pinout and brief information for the CAT5 unshielded twisted pair cables
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B. EIA568A pin assignment:

Pin Number	Assignment
1	Plus data transmission (Pair 3)
2	Minus data transmission (Pair 3)
3	Plus data receiver (Pair 2)
6	Minus data receiver (Pair 2)
4	Not used by 10BASE-T and
5	100Base-TX (Data pair 1)
7	Not used by 10BASE-T and
8	100Base-TX (Data Pair 4)

C. Recommend CAT5 UTP specifications

Physical:

- FR-PVC cable construction
- Cable Type: 4-pair unshielded-twisted pair solid copper
- Conductors: 24 AWG, solid bare annealed copper
- Operating temperature: -20 ^{0}C to +75 ^{0}C

Electrical:

- Impedance: 100 ±15 %
- Near-End Cross-talk: 38dB @ 100 MHz
- Attenuation: 22 dB/100 m typical @ 100 MHz
- Maximum DC resistance : 9.38 / 100 m (24 AWG) at 20^{0}C
- Maximum DC insulation resistance 150M/km