



8 Port Passive PoE Switch

Using your WS-POES-8-7 with 7 PoE ports



VOIP phones, cameras and WiFi AP's need from 3 to 15 watts each, with this switch, you can provide remote power up to 328 ft from the power source.

Specifications

- 8 switch ports with 10/100 auto detect operation, with status LED
 - Auto detect 568A or 568B crossover cabling
- Available power supply options
 - 18 volts, 24 volts, 48 volts 56 volts
 - 30 watts, 60 watts, 120 watts
 - 100 to 240 volt AC input, 50 or 60 hz high efficiency
- 7 always on PoE outputs with either Mode A and/or Mode B
 - Mode A power and data on pins 12 (-) and 36 (+)
 - Mode B power or pins 45 (+) and 78 (-) with data on pins 12 and 36
- 1 Uplink port 10/100 mb
 - No PoE voltage out, Mode B PoE in
- Dual PTC fuses on each PoE output port
 - One 650 ma fuse per port for Mode A
 - One 1000 ma fuse per port for Mode B
- 18 volt to 56 volt operation – low power- under 3 watts
- 3 power supply inputs
 - 2x 2.1mm x 5,5mm power connectors, center positive
 - Mode A input with LED status – 2.5 Amp Max
 - Mode B input with LED status – 2.5 Amp Max
 - Mode B PoE power input from the uplink port – 1.25 amps max
 - LED indicates 18/24 volt operation or 48/56 volt operation
- Dual Power supply operation
 - Redundancy - 48v 802.3af only – see text
 - Load balancing – 48v 802.3af only – see text
 - Mixed voltage – Mode A at 48v and Mode B at 24v – see text
- 802.3af emulation (always on, no autonegotiation)
 - 48 volts - use either A or B Mode
- Mikrotik, OpenMesh, Ubiquiti 24v passive PoE
 - 24 volt - use mode B only
- Low Power – excellent for Battery and Solar applications
- PoE repeating is possible in Mode B – power this switch and attached devices remotely using a WS-POE-1-WM
- 195mm x 82mm x 26mm W x H x D

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Before plugging in your devices – please check a few things.

- Do you have a power supply? While in most cases, PoE is 48v, some devices use 24 volts or 18 volts – for this reason, the power supply is a separate order item.
- 802.3af? Then you need a 48 volt supply – available at our webpage. Not sure about the voltage and power – please see “Find A PoE” on our web page at <http://wifi-texas.com> .
- 12v, PoE ? Many devices use 12v when powered by a wall transformer, and 48v when powered via Ethernet. If the text looks like “12v, PoE” – this means 48v.
- How many devices will you provide power to? Budget 6 watts for a typical device – some are more, if the spec is not clear – then safe is to plan for 15 watts per port. We offer power supplies that range from 7 watts to 120 watts.

Network installation - Connect the uplink port to your Router or Ethernet switch. Connect the POE ports to your devices – it should power up and connect – and you are all set. The WS-POES-8-7 detects 568A and 568B cabling – so no crossover cables are required. Note below for Power Supply Options

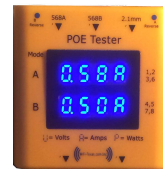
We offer 56, 48, 24, 18 and 12 volt power supplies – if you need a power supply, please call - If your device data sheet shows “48v 350ma” please understand that this is not the power your device needs, but the max power that is available according to the 802.3af spec. For example, a Polycom VOIP phone is 802.3af compatible, but needs about 4 watts to operate. Therefore, one 8 port switch and a 30 watt power supply can power 7 phones at low cost.

Rack Mount adapter Allows 2 switches to be placed in a 1U rack space. 14 PoE ports and 2 uplink ports. See WS-POES-1U



UL and FCC approved Power supplies connect at the back in mode A or Mode B

PoE Tester shows actual voltage available, current flowing and power used



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Passive vs 802.3af - This switch is a passive injector and switch combined. It does not do 802.3af autonegotiation – it does power 802.3af devices, using a 48 volt power supply that is on all the time (an 802.3af switch only applies voltage when the client device sends a command to the switch). Especially for fixed installations where Cameras, WiFi-Access points and phones are hard wired, this is an ideal solution.

Power Supply Mode A input - Mode A means power and data share pins 12 36. Standard 802.3af client devices support power either with Mode A or Mode B. But, sometimes only 2 of the 4 pairs of conductors in an Ethernet cable are connected – Mode A allows operation in this condition. Note – it does not matter if 568A and 568B or crossover cables are used. 802.3at devices can be powered if both Mode A and Mode B inputs have 56 volts (10/100 speeds only).

Power Supply Mode B input - Mode B uses the unused RJ45 pins 45 and 78. All non-802.3af devices use Mode B, and 802.3at uses both A and B. While any voltage up to 56v can be used, OpenMesh, Mikrotik and UBNT devices generally use 24 volts.

Mixed operation - Since Mode B only devices do not accept power on pins 12 36, in some cases (please test first!!) you can combine 48 volts on mode A with 24 volts on Mode B for dual power supply operation. OpenMesh for example is known to work this way.

Failover Mode A and B operation with 802.3af - Standard 802.3af client devices support power either with Mode A or Mode B. If two power supplies with 48 volts are connected to this device, everything will operate if either of the power supplies is working. The LEDs on the front panel will indicate the status of each power supply. This implements a failover solution if each supply can handle the full load. If the load is more than one supply can handle, the total load can shared between power supplies.

Devices with “12v, PoE” specifications - If the device shows “12v, PoE” on the data sheet – this means that the device uses 12v when powered from a transformer – and 48v when powered via Ethernet cable. It will not work if 12 volts is applied as PoE.

IP Phones need 48 volts, Polycom and Cisco specials - Aside from 6 very old Polycom phones, all IP Phones need 48v PoE. Please do not try to power an IP phone with 24 volt PoE – it will not power up. Older Cisco IP phones like the 7940 and 7960 need our crossover cable model WS-CS-RJ45 – one for each phone.

Advanced Network configuration, VLANs etc - The WS-POES-8-7 can be configured for advanced settings with VLAN and other features via an eeprom stored configuration on the RJ11 connector in back. Contact tech support for more info on this.

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How PoE works

A device needs power to operate. Not volts or amps – power - expressed as watts. That power can be supplied at different voltages. The electronics inside the device needs usually about 3.3 or 5 volts. But at low voltages, the wires from power supply have a lot of loss beyond about 6 feet. So for short distance power, 5v Cameras are shipped with a 5v power supply and work for about 6 feet. But if you try to make a longer DC cord there is a lot of loss in the wire. With 24v or 48v on Ethernet – the loss is reduced by a factor of 25 or even 80.

PoE Injectors from WiFi-Texas



12 and 16 port rack mount 6 and 12 port gigabit 5v, 12 volt active splitters



1 port and 8 port devices and power supplies

5 volt and 12 volt products

To operate a USB device or a 5v camera via Ethernet, we offer the DC-DC convertor WS-POE-5v – it operates with a 24 volt power supply in mode B, for distances up to 328 ft.

To operate a 12v camera or router via Ethernet, we offer the DC-DC convertor WS-POE-12v – it operates with a 24 volt power supply in mode B, for distances up to 328 ft.

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