



8 Port Passive PoE Switch

Gigabit WS-GPOES-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 10/100/1000 auto detect operation, with status LED
 - Auto detect 568A or 568B crossover cabling
 - Auto detect speed with 10/100 or gigabit on each port
- Available power supply options with external power brick
 - 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 or Mode B
 - 10/100 data and Mode A power pins 12 (-) and 36 (+)
 - 10/100 data on 12 and 36, Mode B power on pins 45 (+) and 78
 - Gigabit data on all 4 pairs, power selectable
- 1 Uplink port 10/100/1000 mb
 - No PoE voltage out, Mode B PoE in
- Dual PTC fuses on each PoE output port
 - One 650 ma fuse per PoE port
- 18 volt to 56 volt operation – low power- under 5 watts
- 2 power supply inputs
 - 1x 2.1mm x 5.5mm power connectors, center positive– 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
- 802.3af emulation (always on, no autonegotiation)
 - 48 volts - use either A or B Mode
 - Switch on each port enables power to that port
- 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-GPOE-1-WM
- Transparent VLAN passthru
- Uses RTL8370 chipset – see RTL8370.pdf for switching functions
- 195mm x 82mm x 26mm W x H x D

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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 – turn the PoE switch on for ports in use. It should power up and connect – and you are all set. The WS-GPOES-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. See <http://find-a-poe.com/find-a-poe/> for help and Videos

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

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 is not “802.3af signaling compatible” 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.

802.3af Mode A use - 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.

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



PoE off, A or B switches - On the back of the device are 7 switches that can be set in A or B mode – one for each PoE port. Select either A, B or none (center).

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-GPOES-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.

WiFi-Texas.com Inc

815-A Brazos #326
Austin Texas, 78701
512-479-0317

URL: <http://wifi-texas.com/> Skype:wifiqos