



Multi Port Passive POE injector

Using your WS-POE-12v DC-DC converter



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

- Are you using our power injector? If not, note that a "PoE switch" sends 48v not 24v. **48 volts will destroy the splitter** – only use approved 24v power supplies, battery, or a Solar PV system.

- Do not use with a PoE Switch. For PoE switch applications, please see our WT-AF-12v products

- Which PoE to use? Please see <http://wifi-texas.com> "Find a PoE" – you can enter your device and we will show you the PoE you need.

We also offer kits for up to 16 cameras. Each splitter can handle 12 watts or 1 amp max. Cameras typically need about 7 watts each, so your power supply can be selected for the number of cameras connected.

Connect the male RJ-45 of the injector (small box) to your Ethernet switch, router or hub. Connect the injector's female RJ-45's to your long Ethernet cable. Any Ethernet cable will work. Since cameras operate at about 5 mb/s max – even CAT-5 cable will work fine up to 328 ft. At the camera end, connect your Ethernet cable to the Female connector on the larger box. Then the DC plug from the splitter to the 12v input of the device, and the RJ-45 male connector to the Data socket of your device. We ship our splitter with a standard 2.1mm x 5.5mm DC plug. We have adapters in stock for 0.7mm, 1.35mm, 2.5mm and other standards.

Multi port kits are also available – up to 16 devices from one source, mix 5v and 12v



5v splitters are available for applications like

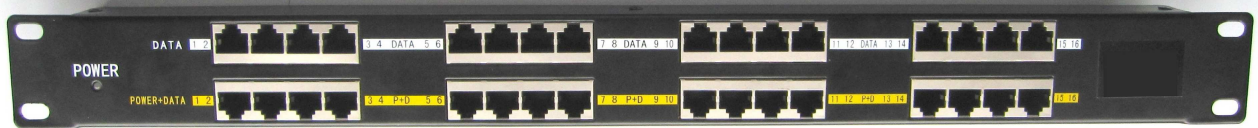
- Foscam and similar 5v cameras
 - iPad charging via CAT-5
- Raspberry Pi and Arduino

Here is why 24v is used on Ethernet cables

A device needs power – a simple non-IR camera needs about 4 watts. So at 5 volts – that is .8 amps. The power cord in the 5v supply is very short – say 6 feet. The loss in 6 ft of power cord is about 120 milliwatts – not a problem. Power loss is the current squared times the distance.

If we use 24 volts for a 4 watt device, – the power is the same, but the current is lower – about 160 milliamps. An ethernet wire can be up to 328 ft – so the loss is 50 times greater than at 6 ft, but since the current is 5 times lower – the power loss (a square of the current) is 25 times lower – the loss in the entire cable is therefore 310 milliwatts. A 10 watt device will cause about 2 watts to be lost in 328 ft of cable, so we should budget 12 watts worst case total per 10 watt device. At 5 volts – the cable loss over 328 ft for a 10 watt device would be 40 watts

Other Products – with 24 volt supply options



16 Port PoE injector – shielded RJ-45, dual inputs



12 Port PoE Injector

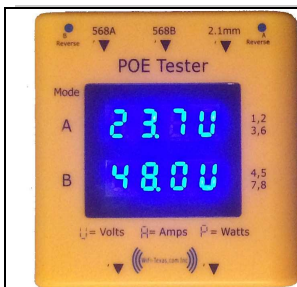


8 Port 10/100 mb



8 port switch

How Much Power is Needed?



Our new PoE Tester will display the power and current that your device needs using RJ-45 connectors - put this between the injector and the load, and you can find out the power consumption for each device. Designed to pass data and power, it can be left inline during operation, at 10/100 or gigabit data rates.

It measures voltage, current and power used, Contact us for this unique tester – which also functions as a PoE injector, splitter and tester for desktop power supplies.