



## Multi Port Passive POE injector

### Using your WS-POE-5v DC-DC converter for Cameras/iPads/Tablets



Power supply sold separately

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-5v 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 10 watts or 2 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 5v 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 USB – see next page.

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### 12v and 5v can be mixed – up to 16 devices from one source



### 12v splitters are available for applications like

- Foscam and similar outdoor cameras
  - Linksys routers
- 12 volt Windows 8 tablets

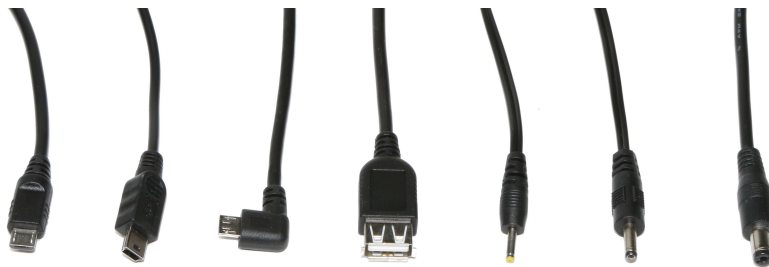
## Here is why 24v is used on Ethernet cables

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

## USB Adapters

USB requires 5 volts. You can power any USB device with our WS-POE-5v splitter if you use one of our cables.



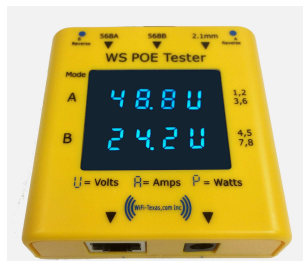
For Andriod, use the Micro USB or Mini USB, for Apple use the female USB adapter.

If you want to use the female USB with an Android, contact us since the pinout is a little different.

## Other Products – with 24 volt supplies



12 and 16 Port PoE injectors – shielded RJ-45, dual inputs



PoE Tester



8 Port PoE Switch