Long Range Wireless DSL-Ethernet Extender

Enabling high speed internet everywhere!

Features:

- Long range, **Non-Line-of-Sight** Wireless Ethernet Bridging at DSL speed
- **Does not interfere** with Wi-Fi networks - enabling wireless backhaul to the AP
- Highest **Quality of Service** (QoS) available –
  Synchronous point to point protocol enables extremely low data latency (<1ms)
  and minimized jitter suitable for VoIP and video applications
- **128bit encrypted** payload protection provides secure data delivery.
- Simple plug and play set up auto-configured as matched pairs
- Operates in the **902-928MHz** band and does not require an FCC
  license to operate or install
- Compatible with Power over Ethernet injector/splitters
- VLAN extensions supported

Applications:

- Difficult to wire Wi-Fi Access Points
- Difficult to wire Pan/Tilt/Zoom Ethernet Video Cameras
- Mobile or difficult to wire Kiosk installations
- Long distance indoor wireless Ethernet links
- Non-line-of-sight outdoor wireless Ethernet links
- Long range extension of VoIP telephone installations

Range:

Indoor AW900
Antenna: +2.5dBi omni
Indoor Range: (typical)
  - Over 2500ft with 4 walls*
  - 5x the range of 802.11@2Mbps

Technical Specifications: (typical)

1.536 Mb/s raw data rate enables usable throughput that is 15% faster than 768Kb/s DSL
21 dBm output power
-101dBm receive sensitivity at $10e^{-4}$ BER
16 Status LEDs - Power, RF Link, Ethernet Link, Traffic, RF RX, RF TX, 4/Channel and 6/Link Quality
12 Non-overlapping channels - automatically selected and adaptively optimized (or manually selected)
Block error detection/correction improves throughput and ensures a robust link
Direct sequence spread spectrum with adaptive coding rates
Temperature range -30°C to 60°C
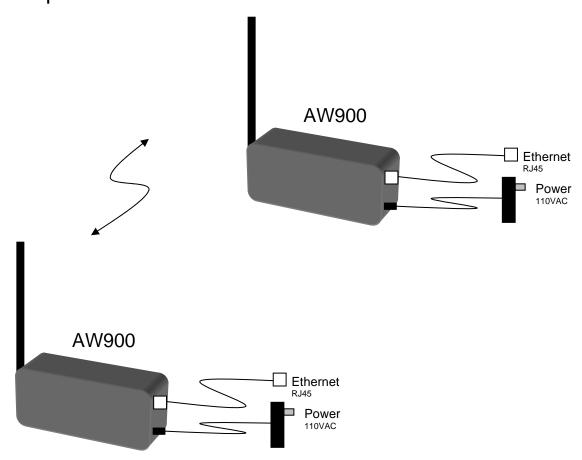High performance SAW filter protects against adjacent-band Cellular and Pager interference

Contents:

2 Power Adapters
2 Ethernet Cables
2 Antennae
2 AW900 Radio Units

Setup:

AW900

Ethernet
RJ45

Power
110VAC

AW900

Ethernet
RJ45

Power
110VAC

Any Ethernet device can be connected – PC, Ethernet video camera, hub, router, etc. The AW900 functions in place of an Ethernet cable and provides a transparent wireless point to point Ethernet cable replacement. Cross-over cables are **not** necessary as the AW900 automatically senses which type of device is present (client or hub).

Troubleshooting:

Under normal operation the Green LED will be flickering whenever there is Ethernet traffic being transported. The light should be on steady when the link is up but no traffic is present.

No Light:
>   Check the power connections.

Blinking light: (0.5 seconds on then 0.5 seconds off)
>   The radio is looking for its matched partner. If both units are powered up and the lights continue to blink they may be too far away to create the connection. Try other locations that may have a less obstructed path or try to reorient the antennas.

Solid light but still not working:
>   Check your network.

Flickering light but still not working:
>   Unplug both AW900 units for 5 seconds and plug back in. If this does not fix things then unplug and replug your attached network devices. The AW900 keeps track of Ethernet MAC address to avoid transporting unnecessary traffic. This will force a complete refresh the attached-MAC address tables in the AW900 and should resolve any issues.

Still not working?
>   If practical, use an Ethernet cable to see if the network is working over a wired connection. If a wire does not work then the problem is with the network.

Email: support@avalanwireless.com

Product limited warranty:
This product is warranted to the original purchaser for normal use for a period of 90 days from the date of purchase. If a defect covered under this warranty occurs Avalan will repair or replace the defective part, at its option, at no cost. This warranty does not cover defects resulting from misuse or modification of the product.

Compliance Statement (Part 15.19)
This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions:
1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Warning (Part 15.21)
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RF Exposure (OET Bulletin 65)
To comply with FCC RF exposure requirements for mobile transmitting devices, this transmitter should only be used or installed at locations where there is at least 20cm separation distance between the antenna and all persons.

Information to the User - Part 15.105 (b)
   Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
--Reorient or relocate the receiving antenna.
--Increase the separation between the equipment and receiver.
--Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
--Consult the dealer or an experienced radio/TV technician for help.