

# Non-line-of-sight :: 900 MHz

The AW900x replaces costly wiring with a wireless Ethernet bridge that can enable remote Wi-Fi APs, Ethernet pan/tilt/zoom security cameras, VoIP phones, or Internet kiosks. AvaLAN's product offers the ideal combination of price, range, data rate, security, interference avoidance, quality-of-service, and ease-of-use.



### AW900x Kit

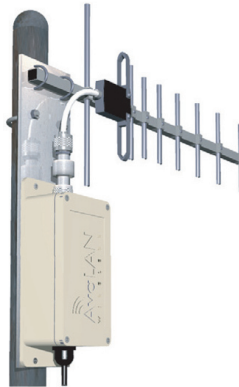
Long-range 900 MHz wireless outdoor Ethernet bridge. Kit includes:

- (2) AW900x outdoor radios
- (2) 110 VAC to 12 VDC power adapters
- (2) Power over Ethernet injectors

Requires antennae: Use with AW2, AW5H-900, AW5P-900, AW6, AW10, AW11, or AW15 – all FCC approved

## Features

- Foliage penetrating, non-line-of-sight wireless Ethernet bridging
- Does not interfere with Wi-Fi networks
- Highest Quality of Service (QoS) available – synchronous point-to-point protocol enables extremely low data latency and jitter
- 128 bit encrypted payload protection provides secure data delivery
- Simple plug and play – pre-configured as matched pairs with no user programming required
- Power over Ethernet enabled
- Operates in the 902-928 MHz band and does not require an FCC license to operate or install
- VLAN extensions supported



## Benefits

The AW900x is the best solution when:

- a Broadband Ethernet drop will cost too much or is impractical to install
- guaranteed DSL-rate throughput is required (kiosks/Wi-Fi APs/PTZ cameras)
- guaranteed latency for voice or video is required (PTZ cameras/VoIP)
- Wi-Fi is too slow due to saturation or 2.4 GHz interference (airport/mall/PTZ cameras)
- ultra-low current consumption is required (1 Watt/solar powered systems)

## Range

### Antennas:

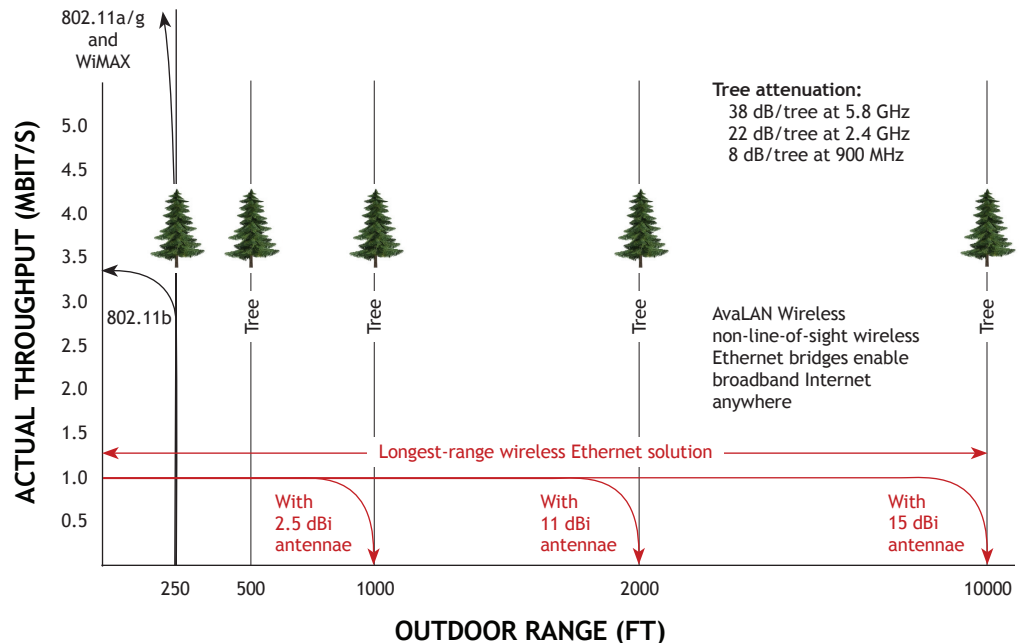
- 11 dBi (shown)
- 15 dBi (available)

### Non-line-of-sight range (foliage)

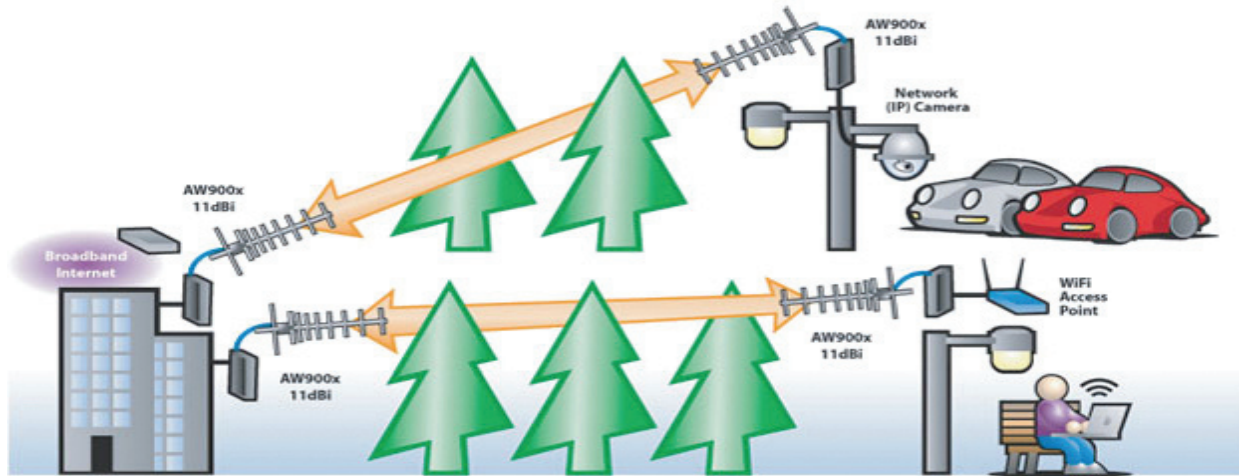
- Up to 10x the range of Wi-Fi (with 15 dBi directional antennae)
- Up to 2 miles with 4 trees (with 15 dBi directional antennae)

### Line-of-sight (clear Fresnel zone)

- More than 40 miles (with 15 dBi directional antennae)



## Sample applications



## Technical specifications

CHARACTERISTIC	SPECIFICATION / DESCRIPTION
RF transmission rate	1.536 Mb/s
Ethernet throughput	935 Kb/s
Output power	+21 dBm (4 Watts EIRP used with 15 dBi antenna)
Receive sensitivity	-112 dBm at 10e-4 BER with 15 dBi antenna
Latency	< 2 ms – assuming a dedicated wireless link to client device
Jitter	±0.5 ms – depending on packet size, interference, and SNR
Power consumption	FX 0.6 W, TX 1.4 W
Voltage	4 to 48 VDC
Radio channels	12 non-overlapping
Automatic frequency select	Yes – radio channel automatically selected and adaptively optimized
Manual frequency mode	Yes
Status LEDs	Power, Ethernet Link, RF RX, RF TX, 4/Channel, and 6/Link Quality
MAC pass-through filter	Yes – can be disabled
Error correction technique	Sub-block error detection and retransmission
Adjacent-band rejection	SAW receiver filter attenuates cellular and pager interference
Enclosure type	NEMA 4X
Temperature range	-40° C to 70° C
Power over Ethernet	Includes injectors/power supplies – 9 to 48 VDC ready

## Ordering information

PART NUMBER	DESCRIPTION	CONTENTS
AW900x	Outdoor long range wireless Ethernet bridge	(2) AW900x outdoor radios, (2) power adapters, (2) POE injectors

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