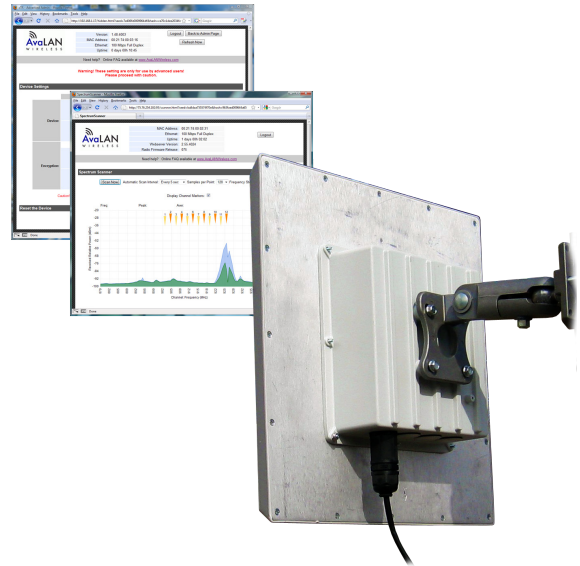AvaLAN
W I R E L E S S

900 MHz Outdoor Wireless Ethernet Panel

This product features our popular xTR series radio technology integrated with a high gain 12.5 dBi flat panel antenna. It provides a rugged, weatherproof and easily mounted combination package for those applications that can benefit from the increased range and decreased interference that a directional signal provides. The AW900xTP includes a built-in spectrum analyzer and is IP addressable with web browser based remote configuration and diagnostic tools included.

The AW900xTP allows you to build non-line-of-sight, point-to-point or point-to-multipoint wireless Ethernet links that connect "fringe" IP devices, including IP access control readers, remote printers, remote PCs, VoIP phones, point-of-sale devices, digital signage or industrial control devices. Obviously a point-to-multipoint application will require an omnidirectional access point such as our AW900xTR in order to receive signals from AW900xTP clients dispersed at multiple angles.
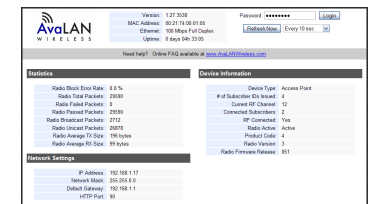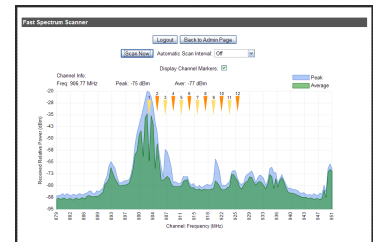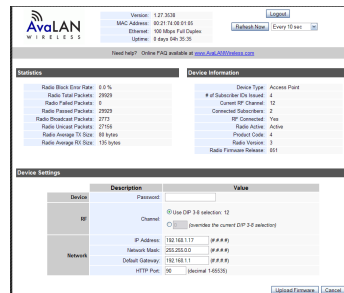
These products are an ideal replacement for modest data rate installations where 802.11 systems are under-performing or failing completely due to insufficient range or excessive interference. AvaLAN's products offer the ideal combination of price, range, data rate, security, interference avoidance, quality-of-service, and a simple plug and play set up with minimal user programming required.

The AW900xTP is also available as a pre-configured matched pair bridge. Order the AW900xTP-PAIR.
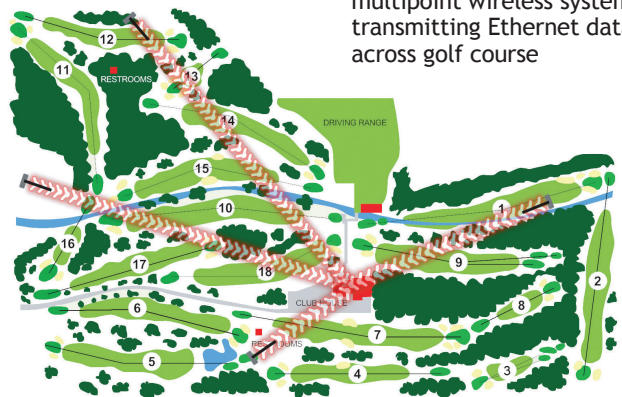
Features

- Rugged cast aluminum NEMA Enclosure combined with a high gain 12.5 dBi flat panel antenna
- Ready to install and use
- 13″ square, pole-mount bracket included
- Built-in spectrum analyzer
- 128 bit AES encryption, FIPS 197 - NIST Certified
- Remote diagnostics and link analysis with browser interface
- Radio can be configured as an access point or client
- Simple plug and play — minimal user programming required
- Install up to 16 clients per access point
- Can operate up to 12 access points, each on its own non-overlapping channel
- Does not require an FCC license to operate or install
- High RF output power provides maximum foliage and / or wall penetration
- Line-of-sight range up to 25 miles
- Available as individual radios for multi-point systems or as a pre-configured matched pair bridge, the AW900xTP-PAIR
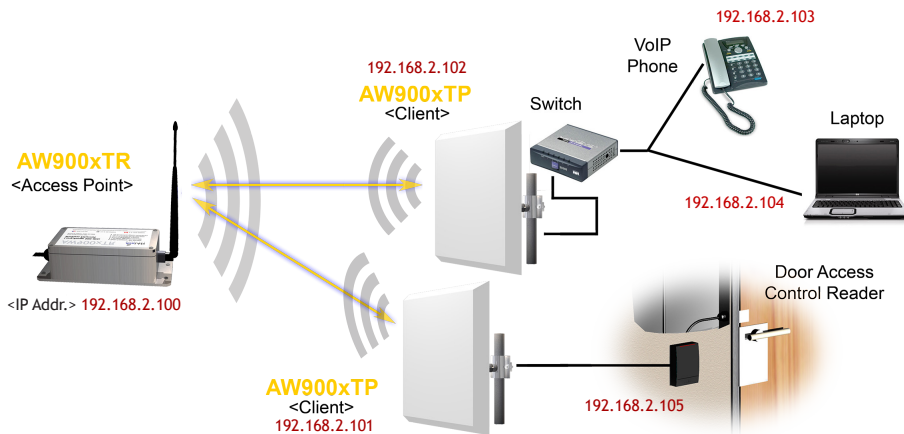
Screen Captures:
Web Browser-based Management Tools

EXAMPLE:
Ultra long range, point-to-multipoint wireless system transmitting Ethernet data across golf course

System diagram

- Radios are IP addressable*, with Remote Configuration & Diagnostic Tools
- Radios Support Multiple IP Addresses at Each Remote Node**

* There is a limit of 128 routable MAC addresses per access point. This allows an Ethernet switch to be attached to subscriber units ("Client" in image at left), but limits to 128 the total number of Ethernet devices to which the access point can connect.

** There is a limit of 16 active subscriber units for each access point. A total of 12 access points (in the 900 MHz band) can be deployed to support up to 192 fixed subscriber units across a given site.

Technical specifications

CHARACTERISTIC	SPECIFICATION / DESCRIPTION
RF transmission rate	1.536 Mbps
Ethernet throughput	935 Kbps
Output power	+34 dBm (2.5 Watts EIRP)
Receiver Sensitivity	-110 dBm at 10^{-4} BER
Radio link budget	144 dB
Range	25 miles line-of-sight
Antenna 3 dB Beam Width	42°
Antenna Front-to-Back Ratio	>25 dB
RF channels/bandwidth	12 non-overlapping channels with 2.0833 MHz spacing and 1.75 MHz bandwidth
Frequency selection	Automatic or manually selectable via web browser interface.
Connector types	10/100 base T Ethernet RJ-45 with weatherproof sealing gasket
Error correction technique	Sub-block error detection and retransmission
Adjacent band rejection	SAW receiver filter attenuates cellular and pager interference
Power regulation	Built-in switching regulator
Browser management tools	QoS Statistics, Network Settings, Spectrum Analyzer, Firmware Upgrade
Power consumption	Transmit: 1.7 Watts Receive: 0.8 Watts
Voltage	9 to 48 VDC via unused pins in RJ-45 jack - pins 4,5 positive, 7,8 ground
Temperature range	-40° C to +80° C
Size	350 x 350 x 200 mm; 5 Kg Including pole-mount adapter
Compatibility	May be mixed in combination with AW900iTR and AW900xTR radios, not compatible with older AW900x, AW900xT, AW900i and AW900iT.

Ordering Information

AW900xTP

900 MHz Outdoor Wireless Ethernet Panel.

Contents:
- (1) AW900xTP Radio
- (1) Pole-mount Bracket
- (1) AW-POE Power Over Ethernet Injector
- (1) 110 VAC to 12 VDC power adapter

AW900xTP-PAIR

900 MHz Outdoor Ethernet Panel Bridge.

Contents:
- (2) AW900xTP Radios
- (2) Pole-mount Brackets
- (2) AW-POE Power Over Ethernet Injectors
- (2) 110 VAC to 12 VDC power adapters

05.07.2010