

900 MHz Outdoor Wireless Ethernet Radio

This robust and reliable product allows you to build non-line-of-sight, point-to-point and point-to-multipoint wireless Ethernet connections 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.

Two versions are available: a preconfigured matched pair point-to-point Ethernet bridge – the AW900xTR-PAIR and a single radio – the AW900xTR, configurable as an access point or client in point-to-multipoint applications.

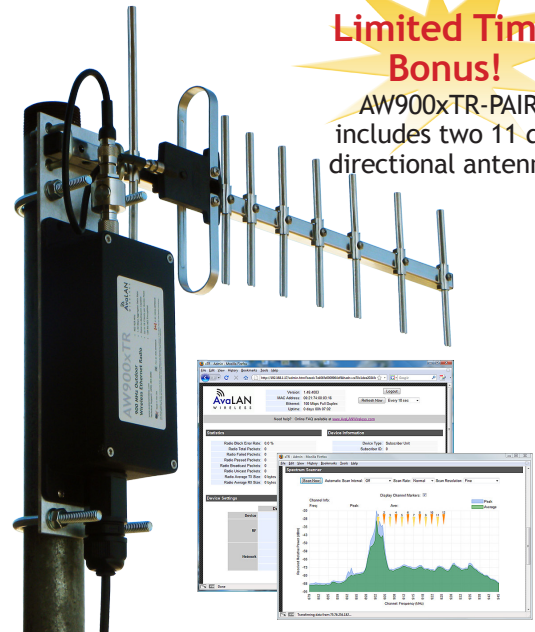
The AW900xTR radios include a built-in web browser interface for remote configuration, status monitoring and firmware update. This interface also provides a spectrum analyzer to help diagnose interference issues.

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.

With non line-of-site capabilities, these radios can easily penetrate up to 1,500’ through trees or up to 40 miles line-of-sight and supports industrial-grade temperature ranges. The system configuration can include up to 12 access points - each on its own non-overlapping channel (up to 192 subscriber units across a given site with 16 active clients per access point). 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.

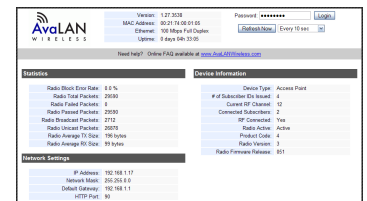
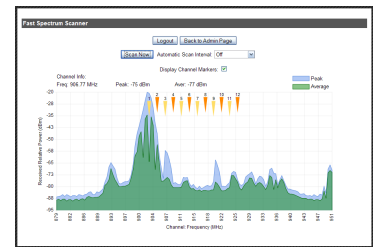
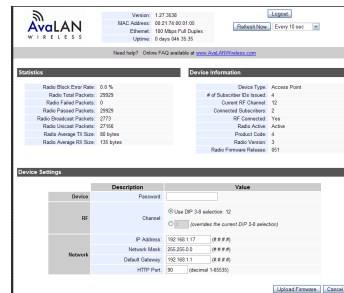
Limited Time Bonus!

AW900xTR-PAIR includes two 11 dBi directional antennas



Features

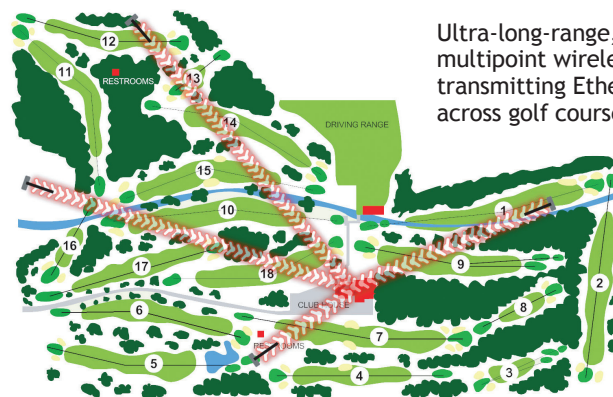
- Built-in spectrum analyzer
- 128 bit AES encryption, FIPS 197 - NIST Certified
- Remote diagnostics and link analysis with browser interface
- Radio can be configured as an access point or client
- Simple plug and play – minimal user programming required
- Install up to 16 clients per access point
- 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
- Rugged weatherproof cast aluminum outdoor package meets IP66 Standard for water and dust protection
- Line-of-sight range up to 40 miles with 15 dBi antenna
- 2.5 dBi Omnidirectional antenna included
- Six other optional antennas are available with up to 15 dBi directional gain
- Available as individual radios for multi-point systems or as a pre-configured matched pair bridge



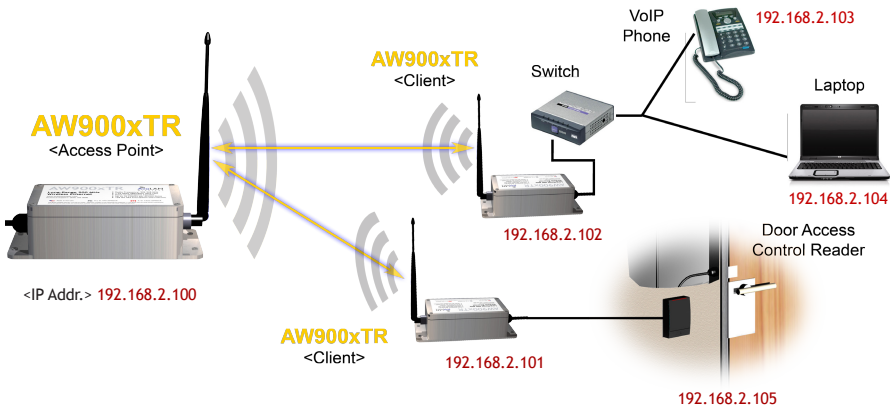
Screen Captures: Web Browser-based Management Tools

Application 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 data rate	935 Kbps
Output power	+21 dBm (4 Watts EIRP when used with 15 dBi antenna)
Receiver Sensitivity	-97 dBm at 10 ⁻⁴ BER
Range	40 miles line-of-sight with 15 dBi antenna
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	RF: RPTNC Female / 10/100 base T Ethernet RJ-45
Data Encryption	128-bit AES, FIPS197, keys set through password-protected browser interface
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
Transmit current draw	175 mA at 9 VDC 140 mA at 12 VDC 35 mA at 48 VDC
Temperature range	-40° C to +70° C
Physical Package	Heavy die-cast Aluminum, black powder-coated finish, meets IP66 Standard for water and dust protection. Sealing gland for Ethernet cable entry.
Size	200 x 80 x 58 mm not including connectors; 0.570 Kg
Compatibility	May be mixed in combination with AW900iTR and AW900xTP radios, not compatible with older AW900x, AW900xT, AW900i and AW900iT.

Ordering Information

AW900xTR

900 MHz Outdoor Wireless Ethernet Radio.

Contents:

- (1) AW900xTR Radio
- (1) AW2-900 2.5 dBi Omnidirectional Antenna
- (1) AW-POE Power Over Ethernet Injector
- (1) 110 VAC to 12 VDC power adapter

AW900xTR-PAIR

900 MHz Outdoor Wireless Ethernet Bridge.

Contents:

- (2) AW900xTR Radios
- (2) AW11-900 11 dBi Directional Yagi Antennas
- (2) AW2-900 2.5 dBi Omnidirectional Antennas
- (2) AW-POE Power Over Ethernet Injectors
- (2) 110 VAC to 12 VDC power adapters

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