

900 MHz Indoor Wireless Ethernet Radio

This new product allows you to build non-line-of-sight, 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.

The AW900iTR radios include a built-in spectrum analyzer and they are IP addressable with web browser based remote configuration and diagnostic tools included. A small LCD panel on the front of the unit can also verify proper operation at a glance. The radio’s case is rugged extruded aluminum and is designed to meet C1D2 standards for hazardous environments (certification pending). A DIN Rail mounting clip is provided on the case back to facilitate installation in industrial equipment cabinets.

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.

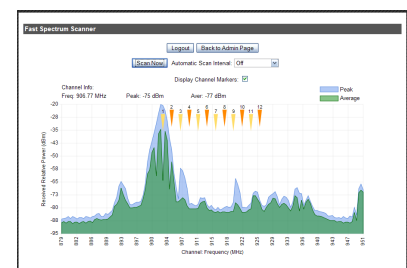
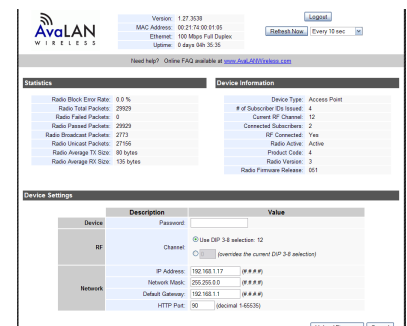
With non line-of-site capabilities, these radios can easily penetrate indoors up to 1,500’ or through 10 building walls and supports industrial-grade temperature ranges. The system configuration can include up to 12 access points - each on its own non-overlapping channel (up to 192 subscriber units across 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.



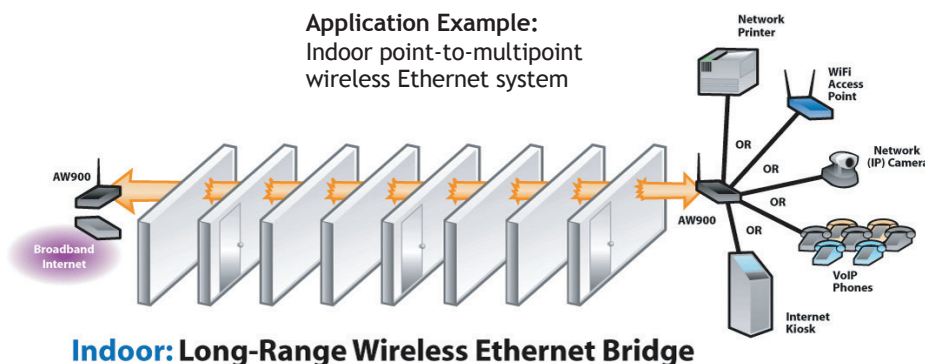
Features

- 1.5 Mbps Data Rate
- High RF output power provides maximum foliage and/or wall penetration
 - Indoor range, up to 10 building walls
 - Line-of-sight range up to 40 miles with 15 dBi antenna
- 128 bit AES encryption, FIPS 197 - NIST Certified
- Built-in spectrum analyzer
- Radio can be configured as an access point or client
 - Install up to 16 clients per access point
 - 12 Non-overlapping channels
- Does not require an FCC license to operate or install

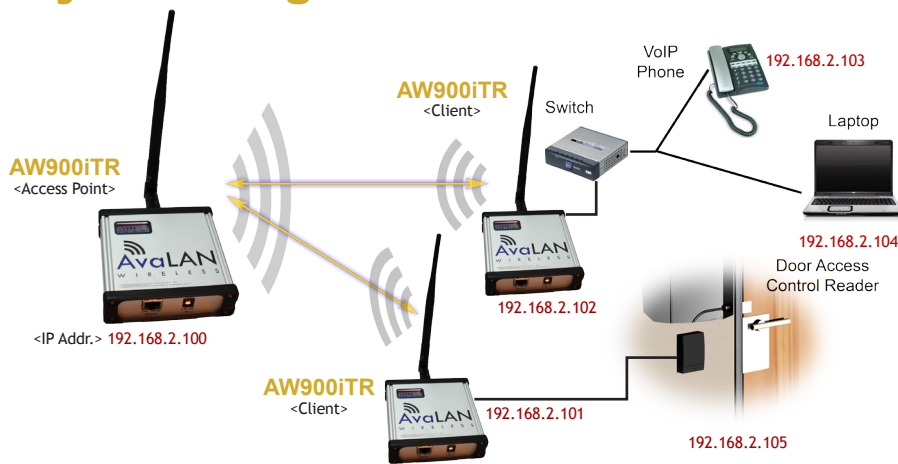
Screen Captures: Web Browser based Management Tools



Application Example: Indoor point-to-multipoint wireless Ethernet system



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

PARAMETER	SPECIFICATION
RF transmission rate	1.536 Mbps
Ethernet throughput	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	12 non-overlapping channels with 2.0833 MHz spacing
Frequency selection	Automatic or manually selectable via web browser interface
RF Connector	RPTNC Female
Ethernet	RJ-45
Power Connector	P5 2.1 mm
Adjacent band rejection	SAW receiver filter attenuates cellular and pager interference
Mounting	DIN rail clip
Power regulation	Built-in switching regulator
Browser management tools	Statistics, Network Settings, Spectrum Analyzer, Firmware Upgrade
Power consumption	Transmit: 1.7 Watts Receive: 0.8 Watts
Voltage	9 to 48 VDC
Transmit current draw	140 mA at 12 VDC
Temperature range	-40° C to +70° C
Size	110 x 110 x 35 mm
Compatibility	Compatible with AW900xTR and AW900xTP radios

Ordering Information

AW900iTR	AW900iTR-PAIR
900 MHz Indoor Wireless Ethernet Radio	900 MHz Indoor Wireless Ethernet Bridge
Includes: (1) AW900iTR Radio (1) AW2-900 2.5 dBi Omnidirectional Antenna (1) 110 VAC to 6 VDC power adapter	Includes: (2) AW900iTR Radios (2) AW2-900 2.5 dBi Omnidirectional Antennas (2) 110 VAC to 6 VDC power adapters

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