

# 2.4 GHz Outdoor Wireless Ethernet Panel

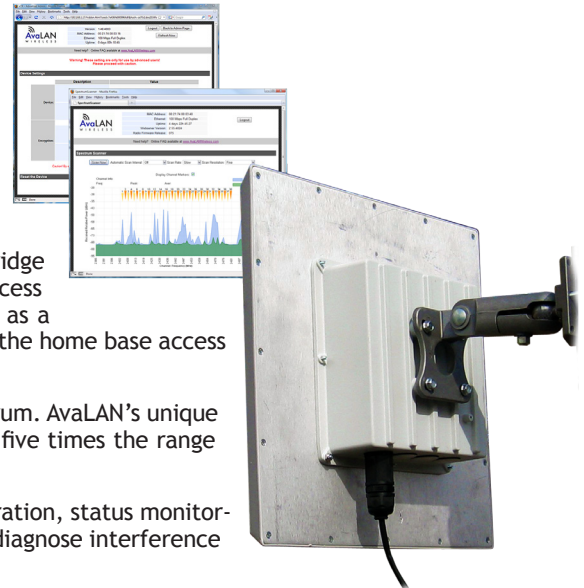
This robust and reliable product features our popular xTR series radio technology integrated with a high gain 19 dBi flat panel antenna. It provides a rugged, weatherproof and easily mounted combination package for those applications that can benefit from the increased range and decreased interference that a directional signal provides. The AW2400xTP allows you to build 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 AW2400xTP-PAIR and a single radio – the AW2400xTP, configurable as an access point or client in point-to-multipoint applications. Usually the AW2400xTP is used as a client pointed toward an omnidirectional antenna-equipped AW2400xTR serving as the home base access point.

The 2.4 GHz band is the most globally accepted unlicensed portion of the RF spectrum. AvaLAN’s unique solution offers 29 non-overlapping channels and maximum legal power to provide five times the range of Wi-Fi through walls or line-of-sight.

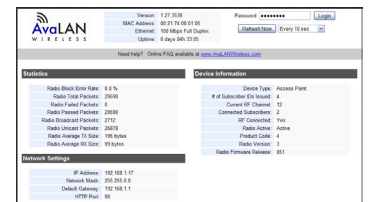
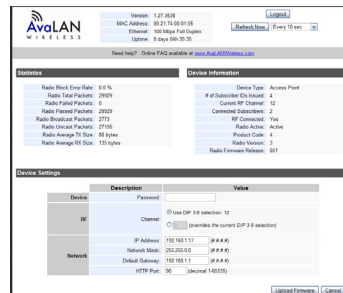
The AW2400xTR radios include a built-in web browser interface for remote configuration, status monitoring and firmware update. This interface also provides a spectrum analyzer to help diagnose interference issues.

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.



## Features

- Rugged cast aluminum NEMA Enclosure combined with a high gain 19 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 29 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 30 miles
- Available as individual radios for multi-point systems or as a pre-configured matched pair bridge, the AW2400xTP-PAIR



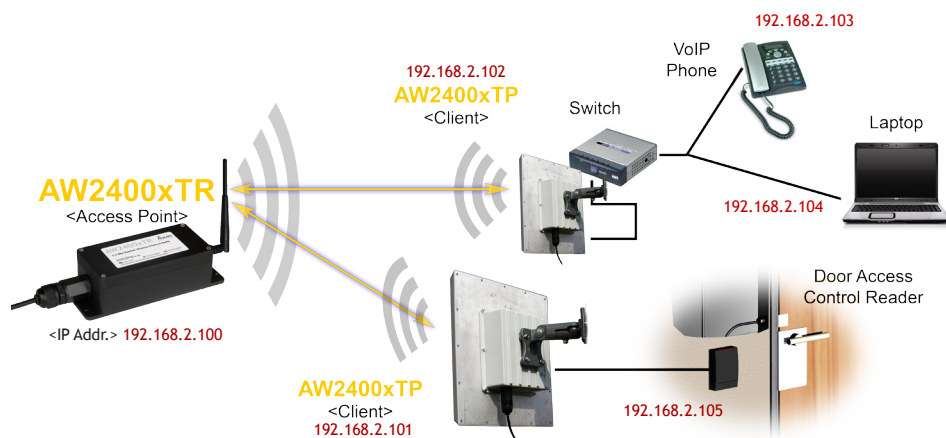
Screen Captures:  
Web Browser-based  
Management Tools

### 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 29 access points (in the 2.4 GHz band) can be deployed to support up to 464 fixed subscriber units across a given site.

## Technical specifications

Characteristic	Specification/Description
RF transmission rate	1.536 Mbps
Ethernet data rate	935 Kbps
RF Output Power	+21 dBm (4 Watts EIRP with 19 dBi antenna)
Receiver Sensitivity	-97 dBm at 10 <sup>-4</sup> Bit Error Rate
Range	Up to 30 miles line-of-sight
RF channels/bandwidth	29 non-overlapping with 2.0833 MHz spacing and 1.75 MHz bandwidth, automatic or manually selectable via web browser interface
Connector type	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
Power regulation	Switching regulator
Transmit current draw	140 ma at 12 VDC
Operating Environment	-40° C to +70° C
Mechanical	Die-cast aluminum enclosure with integrated flat panel antenna, 13" by 13" by 3.25", weight 7 lbs including mounting bracket, wind load 1.23 ft <sup>2</sup>

## Ordering Information

### AW2400xTP

900 MHz Outdoor Wireless Ethernet Panel.

Contents:

- (1) AW2400xTP Radio
- (1) Pole-mount Bracket
- (1) AW-POE Power Over Ethernet Injector
- (1) 110 VAC to 12 VDC power adapter

### AW2400xTP-PAIR

900 MHz Outdoor Ethernet Panel Bridge.

Contents:

- (2) AW2400xTP Radios
- (2) Pole-mount Brackets
- (2) AW-POE Power Over Ethernet Injectors
- (2) 110 VAC to 12 VDC power adapters

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