

## 5.8 GHz Outdoor Wireless Ethernet Radios Up To 100 Mbps

These products allow you to build line-of-sight, point-to-point or point-to-multipoint wireless Ethernet connections that link “fringe” IP devices, such as video surveillance cameras or other devices needing robust and secure high data rates.

The radios are packaged in rugged and weatherproof diecast aluminum enclosures and are available in both directional and omnidirectional antenna configurations. Utilizing state of the art MIMO technology, the AW58100 product line achieves very high data rate through a combination of multiple spatial streams and higher level OFDM modulation. The directional flat panel antenna version provides two 90° polarized 23 dBi gain units and is intended to serve in point-to-point bridge configurations or as a subscriber unit in point-to-multipoint connections. The omnidirectional unit provides two 6 dBi gain antennas and is designed to serve as the common access point in point-to-multipoint applications or as a multipoint mesh node.

The AW58100HTA has omnidirectional antennas and serves as the access point in a point-to-multipoint wireless network. The AW58100HTM has identical hardware but with different firmware allowing it to serve as a mesh node in a multipoint-to-multipoint network. The AW58100HTS has directional antennas and serves as a subscriber unit in a point-to-multipoint network in combination with the AW58100HTA. The AW58100HTP-PAIR is a pre-configured matched pair providing a point-to-point bridge.

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.

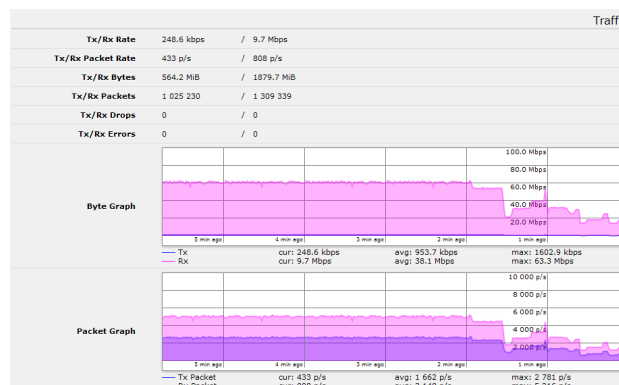
The 5.8 GHz unlicensed band allows a maximum of 4 Watts EIRP for point-to-multipoint configurations, but places no limit on point-to-point. A special pair of flat panel antenna radios are available as a pre-configured matched pair bridge (AW58100HTP-PAIR) for point-to-point fixed connections at 40 Watts EIRP. (Note that the matched pair bridge cannot be separated and used in a point-to-multipoint system because of legal transmit power restrictions.)



## Features

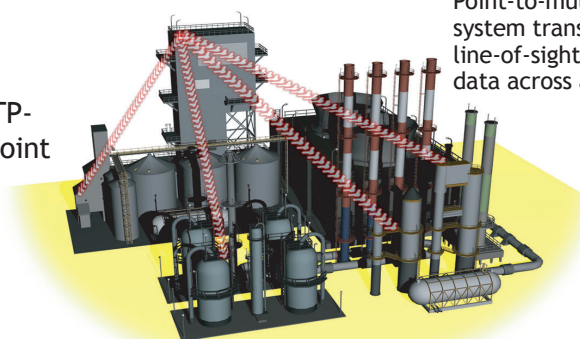
- Up to 100 Mbps RF data rate keeps up with high resolution cameras
- Bridge, star and mesh network topologies supported
- 20 MHz RF channel width with 5 non-overlapping channels available
- Maximum legal radiated power (4 Watts EIRP for AW58100HTS, 1 Watt for AW58100HTA/HTM) for maximum range and interference penetration
- Even more power in the AW58100HTP-PAIR point-to-point bridge configuration (40 Watts EIRP)
- Data Security provided by WPA2-PSK-AES 256-bit encryption
- Built in browser interface for easy re-configuration and link status monitoring
- Rugged weatherproof cast aluminum NEMA enclosures for outdoor use
- Line-of-sight range up to 30 miles for AW58100HTP-PAIR Bridge, 5 miles for HTA/HTS point-to-multipoint configuration, 1/2 mile for HTM/HTM Mesh
- Power over Ethernet for single cable installation

Screen Capture:  
Web Browser-based  
Management Tools



### Application Example:

Point-to-multipoint wireless system transmitting line-of-sight Ethernet video data across an industrial plant



## Example System diagram



## Technical specifications

CHARACTERISTIC	SPECIFICATION/DESCRIPTION
RF Data Rate	Up to 100 Mbps
Output power AW58100HTA Access Point	1 Watt EIRP with 6 dBi omnidirectional antenna
Output power AW58100HTM Mesh Node	1 Watt EIRP with 6 dBi omnidirectional antenna
Output power AW58100HTS Subscriber Unit	4 Watts EIRP with 23 dBi directional antenna
Output power AW58100HTP-PAIR Bridge (each unit)	40 Watts EIRP with 23 dBi directional antennas
Receiver Sensitivity	-115 dBm for HTS and HTP configurations, -101 dBm for the HTA
Frequency Range	5.725 - 5.850 GHz
Channel Bandwidth	5, 10 or 20 MHz
RF channels	4 Non-Overlapping with 20 MHz Channel Bandwidth
Modulation	OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
Range	Line-of-sight range up to 30 miles for AW58100HTP-PAIR Bridge, 5 miles for HTA/HTS point-to-point configuration, 1/2 mile for HTM/HTM Mesh
Browser Management Tools	Data Communication Statistics, Network Settings, Channel Selection
Data Security	WPA2-PSK-AES, 256-bit
Operating Environment	-40°C to +70°C, sealed for outdoor operation: die cast aluminum package with rubber gasket seals
Mounting	Heavy Duty Pole-Mount Bracket included
Connector	10/100 base T Ethernet RJ-45 with weatherproof sealing gland
Power System	Power Over Ethernet 18 VDC Injectors and power supplies included: 120 VAC 60Hz primary source
AW58100HTA, HTM Antennas	Omnidirectional, 6 dBi gain in horizontal plane, 12" long
AW58100HTA, HTM Size	8.75" Square by 3.25" case plus 12" tall antenna, weight 7 lbs
AW58100HTS, HTP Antenna	Integrated 23 dBi flat panel, dual quadrature elements, 15.2" square, 3 dB Beamwidth 8°
AW58100HTS, HTP Size	15.2" by 15.2" by 3.25", not including pole-mount bracket, weight 7 lbs
Warranty	1 Year Parts & Labor, XTRa-Care Extended Warranty 2 Year Extension available at nominal cost
Certification	FCC, IC

## Ordering Information

AW58100HTA	AW58100HTM	AW58100HTS	AW58100HTP-PAIR
5.8 GHz Outdoor 100 Mbps Wireless Ethernet Access Point Radio	5.8 GHz Outdoor 100 Mbps Wireless Ethernet Mesh Node Radio	5.8 GHz Outdoor 100 Mbps Wireless Ethernet Panel Subscriber Unit	5.8 GHz Outdoor 100 Mbps Wireless Ethernet Bridge
Includes: (1) AW58100HTA Radio (1) Heavy Duty Pole-Mount Bracket (1) AW-POE18i Power Over Ethernet Injector with built in 18 VDC power supply (USA plug only)	Includes: (1) AW58100HTM Radio (1) Heavy Duty Pole-Mount Bracket (1) AW-POE18i Power Over Ethernet Injector with built in 18 VDC power supply (USA plug only)	Includes: (1) AW58100HTS Radio (1) Heavy Duty Pole-Mount Bracket (1) AW-POE18i Power Over Ethernet Injector with built in 18 VDC power supply (USA plug only)	Includes: (1) AW58100HTP-AP High Power Access Point Radio (1) AW58100HTP-SU High Power Subscriber Unit Radio (2) Heavy Duty Pole-Mount Brackets (2) AW-POE18i Power Over Ethernet Injectors with built in 18 VDC power supplies (USA plug only)

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