

FIPS 140-2 High Security 2.4 GHz Indoor Wireless Ethernet Radio

Anyone in a government agency or private industry such as health care, energy or financial with a need to transfer sensitive data is often required to encrypt this data with a method that conforms to NIST (National Institute of Standards and Technology) Standard FIPS 140-2. AvaLAN Wireless has developed a hardware encryption module (AW140) that has been validated by CMVP (the Cryptographic Module Validation Program) to FIPS 140-2 Level 2. We have packaged the module within our wireless Ethernet radios to provide you with a FIPS-validated secure private network.

This robust and reliable product 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.

The radio’s case is rugged extruded aluminum and is designed to meet C1D2 standards for hazardous environments (certification pending). 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 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. Encryption keys are set through a completely different physical interface (USB) and cannot be seen or changed over the Ethernet data path. A small LCD panel on the front of the unit can also verify proper operation at a glance. A DIN Rail mounting clip is provided on the case back to facilitate installation in industrial equipment cabinets.



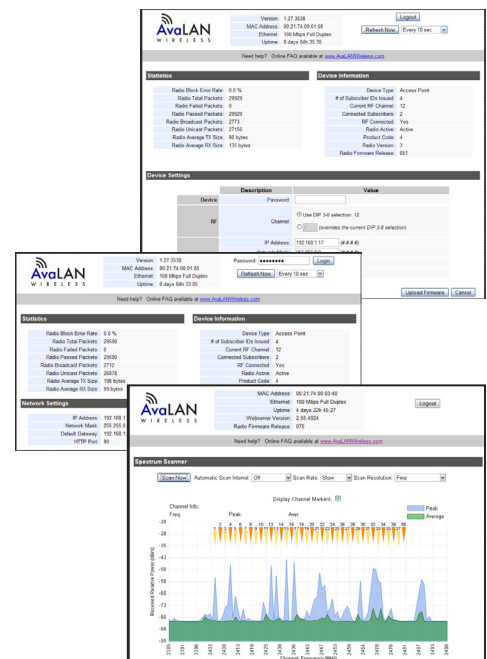
Certificate No. 1452



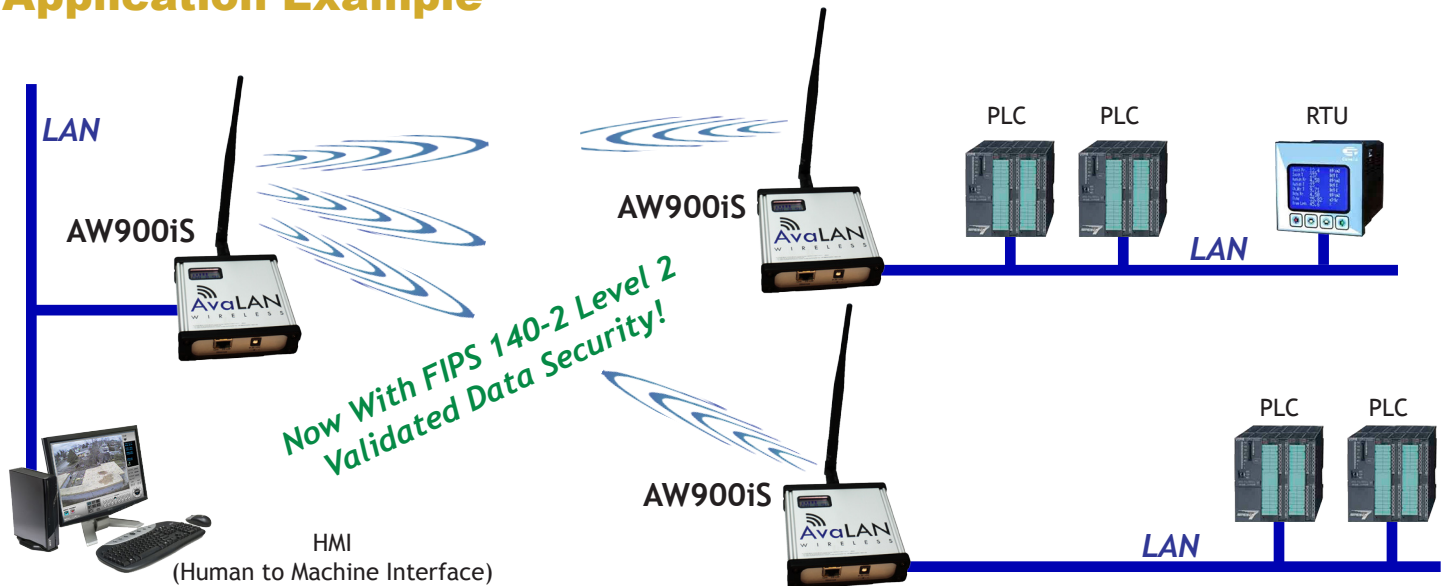
Features

- FIPS 140-2 Level 2 Validated Data Security
- 1.5 Mbps Data Rate
- Five times greater range than Wi-Fi, through walls or line-of-sight
 - Indoor range, up to 10 building walls
 - Up to 40 mile range to connect to difficult locations
- 128 bit AES encryption, FIPS 197 - NIST Certified
- One Watt power consumption
- Built-in spectrum analyzer
- Radio can be configured as an access point or client
 - Install up to 16 clients per access point
 - 29 Non-overlapping channels
- Does not require an FCC license to operate or install

Screen Captures: Web Browser-based Management Tools



Application Example



Technical specifications

PARAMETER	SPECIFICATION
Security Validation	NIST FIPS 140-2 Level 2 Validated by CMVP Certificate No. 1452
Encryption Method	FIPS 197 Standard: 128-bit AES, keys set through password-protected browser interface
RF transmission rate	1.536 Mbps
Ethernet throughput	935 Kbps
Output power	+21 dBm
Receiver Sensitivity	-97 dBm at 10^{-4} BER
Range	40 miles line-of-sight with 19 dBi antenna
RF channels	29 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
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 30 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 AW2400xTR and AW2400xTP radios

Ordering Information

AW2400iS
FIPS 140-2 High Security 2.4 GHz Indoor Wireless Ethernet Radio
Contents: <ul style="list-style-type: none"> • (1) AW2400iS Radio • (1) AW2-400 2.5 dBi Omnidirectional Antenna • (1) AW-POE Power Over Ethernet Injector • (1) 110 VAC to 12 VDC power adapter • (1) Mini USB Cable

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