AirWave

Ultra-compact, high-performance WiFi 6 router for industrial mobility



- All-in-one : Client/router/AP/Mesh
- 2 concurrent radios 2.4GHz and 5 Ghz
- Fast data rates up to 1.2 Gbps - **WiFi 6** - MU-MIMO 2T2R - 2.4/5 GHz
- Micro-SD card slot for configuration and logs storage
- Built-in Cybersecurity according to EN18031 with secure boot, secured access, VPN encryption, native firewall...
- Monitoring, deployment, and management made easier with WaveManager (NMS) cloud or on-premise, SNMP, MQTT, CLI, or HTTPS
- **Fast roaming** and **mesh** functions for industrial mobile applications
- Industrial design :
  - 9 to 48VDC power supply and PoE 802.3af
  - Compact metal enclosure, wall or DIN rail mounting
  - Enhanced ESD protection and shock/vibration resistance

APPLICATIONS

AGVs, AMRs, Robots...
Industrial automation
Remote access

Presentation

AirWave is a high-performance WiFi 6 router/client/access point designed for AGV/AMR, mobile robotics and Industry 4.0. It delivers seamless connectivity in harsh, metallic environments through advanced fast roaming and mesh technology, ensuring mission-critical reliability in a miniature form factor.

Core Benefits

- Next-Gen Performance: WiFi 6 (802.11ax) with OFDMA and MU-MIMO for high-speed, low-latency communication in high-density areas.
- Seamless Mobility: Industry-leading fast roaming and shock/vibration resistance—perfect for mobile robotics and logistics vehicles.
- Versatile Design: Ultra-compact footprint with DIN rail mounting, designed to fit easily into tight electrical cabinets or machinery.
- Multifunction Connectivity: Operates as an Access Point, Client, Router, or Mesh node. Supports all major industrial protocols (PROFINET, Modbus/TCP, etc.).
- Industrial Security: Integrated EN18031 cybersecurity standards and WPA3 support for robust network protection.
- Simplified Management : Deploy and monitor your entire network effortlessly with the WaveManager tool, available for both on-premise and cloud-based administration.

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Technical features

Ethernet interface	1-port 2.5 Gigabit Ethernet Base TX auto-sensing, auto MDI/MDIX cross-over (10/100/1000/2500), RJ45 Ethernet interface
WiFi interface	2 concurrent radios WiFi6 (IEEE 802.11 ax) 2.4 GHz and 5 GHz, MIMO 2T2R, ANI (Adaptive Noise Immunity)
WiFi radio data rate	1201Mbps @ 5GHz, 573.5 Mbps @ 2.4GHz
Operating frequencies	ISM : 2.4-2.483 GHz (up to 14 channels) UNII : 5.15-5.25 GHz (up to 4 channels) UNII-2 : 5.25-5.35 GHz (up to 4 channels) UNII-2 ext : 5.470-5.725 GHz (up to 11 channels) UNII-3 : 5.725-5.825 GHz (up to 4 channels) Supports DFS and TPC
Output power	2.4 GHz: up to 25 dBm (aggregate) / 5 GHz : up to 23 dBm (aggregate)
Sensitivity max.	2.4 GHz : -83 dBm / 5 GHz : -91 dBm
Radio connectors	2 x RP-SMA
Security	EN 18031 with firewall, CRA, DoS, https, MAC filtering, WPA/WPA2/WPA3-Personal & Enterprise (IEEE 802.1X/RADIUS), tunnels L2 (GRE), VPN (OpenVPN, IPsec), SNMP V3, Rogue AP detector, Secure BOOT
WiFi modes	Access point, client, router, Rogue AP detector, advanced mesh (optional)
WiFi services	Fast roaming, hot Spot 2.0, Wireless Load Balancing (Load balancing, band steering, client roaming control), WMM QoS
Ethernet networking	IPv4/IPv6 compliance, frames filtering, bridging, repeater, STP/RSTP, VLAN, DHCP (server & client), DNS relay
Ethernet routing	Multicast (PIM), IP redundancy (VRRP), static routes, NAT 1:1, NAT router, router
Administration	http, https, MQTT, SNMP agent (V1, V2C, V3), CLI Micro-SD card : save/ restore configuration and logs storage WaveManager On premise or Cloud administration tool
LEDs Signaling	Radio : status | Ethernet : status - activity | Power : on-off | SD card status
Power supply	+9VDC to +48VDC, 3-pin Phoenix connector & PoE 802.3af
Consumption	IDLE mode: 4 W/ Maximum average: 10 W / Recommended power supply: 15 W
Dimensions & weight	Compact case L : 105 x l : 79 x h : 30 mm without DIN rail or mounting plate, 236g
Standards and certifications	CE (RED) : Safety : EN 62368-1:2014+A11, EN62311 CE (RED) : EMC : EN 301-489-1, EN 301-489-17 CE (RED) : Radio : EN 300 328 2.1.1 (2.4 GHz), EN 301 893 2.1.1 (5 GHz, DFS) CE (RED) : Cybersecurity : EN 18031 FCC : FCC ID xxx-xxx : UKCA Korea (KCC)
Environment	IP30 Operating temperature: 0°C to +65°C , storage: -40°C à +85°C, humidity: 0% to 99% (non-condensing)
MTBF	TBD
Warranty	5 years

Ordering references

AirWave	Compact all-in-one industrial WiFi 11ax router (client, access point, repeater, router + optional advanced mesh), concurrent dual radios 2.4 GHz and 5 Ghz, one 2.5 GbE port. Delivered with antennas.
Optional accessories	
PWS12-UNI-PH3	AC (110V / 220V) to 12VDC power adapter with cable terminated by a 3-pin Phoenix terminal block
WL-FIX-RD2	Din rail fixing kit
WL-PLT-2	Mounting plate
SOCLE-RPS/RPS-1.5M	Magnetic base for RP-SMA antenna 1.5m cable (RP-SMA plug)
Optional Software	
WaveManager (NMS)	Lifetime on-premise licence

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