Product Datasheet - Technical Specifications

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AirXroad

11n WiFi access point, Ethernet bridge, repeater & MESH point for automotive & heavy duty applications

- All-in-one : AP/client/repeater/Mesh/router

- WiFi 802.11a/b/g/n (MIMO 2T2R), radio data rate up to 300 Mbps, 2.4/5 GHz

- Easy and secure configuration: web browser (HTTPS), SNMPV3, WaveManager

- Operating System : WaveOS

- DC power supply input (+9VDC to +48VDC) & PoE 802.3af

- Multichannel fast roaming (in client mode)

- Shock & vibration proof rugged aluminium enclosure IP66 seal rating

- E-marking (ECE R10 certification for integration in onboard vehicles)

Introduction

AirXroad is a compact rugged enclosure equipment, ideally designed for applications in road transportation, depots, warehouses, agriculture, manufacturing floors, docks, distribution centers, shipyards and lumberyards... it can be mounted in trucks, city buses, forklifts, trailers, tractors or cranes or in any rotating machinery, for material handling, real-time information transmission, and inventory management.

The device relies on the multi-streams MIMO technology that contributes to an expanded coverage, higher data throughput and increased radio link reliability.

It fulfills the most severe requirements in terms of operating environment: from -40°C to +70°C, shock and vibration proof, protection against dust and water projections (IP66).

AirXroad is E-marked ECE R10 (EMC standard for electronic equipment installed aboard vehicle), and can thus be installed in full safety aboard of all on-road equipment.

Technical characteristics overview

Ethernet interface	1-port Gigabit Ethernet 10/100/1000 Base TX auto-sensing, auto MDI/MDIX cross-over, 8 pts X-coded M12 connector
WiFi interface	1 radio IEEE 802.11a/b/g/n, MIMO 2T2R, 2.4 / 5 GHz
WiFi radio data rate	802.11a: 6, 9, 12, 18, 24, 36, 48 and 54 Mbps 802.11b/g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps 802.11n: MCS0-7, 2 streams (6.5 to 300 Mbps)
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
RF Output power	2,4 GHz : 23,5 dBm (aggregate) / 5 GHz : 21 dBm (aggregate)
RF Sensitivity	Receiver : -92 dBm for 802.11 b/g/n and -96 dBm for 802.11a/n
Antennas connectors	2 RP-SMA male connectors
WiFi modes	Access point, client, MESH (IEEE 802.11s), infrastructure, AD-HOC, fast roaming (less than 30 ms), WMM QoS
Administration	http, https, SNMP agent (V1, V2C, V3), ACKSYS WaveManager & WaveViewer administration softwares
Security	Firewall, DoS, https, MAC filtering, WPA/WPA2-Personal & Enterprise (IEEE 802.1X/RADIUS), WEP, tunnels L2 (GRE), VPN (OpenVPN), SNMP V3
Ethernet networking	Frames filtering, bridging, repeater, STP/RSTP, VLAN, DHCP (server & client), DNS relay
Ethernet routing	Multicast (PIM), IP redundancy (VRRP), static routes, NAT router, router
LEDs Signaling	Radio : activity - status | Ethernet : link 10/100/1000 - activity | Power : on-off
Power supply	+9VDC to +48VDC ULTRA-LOCK M12 4-point connector & PoE 802.3af
Consumption	IDLE mode : 1.7 W / Maximum average : 5.8 W / Recommended power supply : 7 W
Mechanical specifications	Dimensions : 115 mm x 64 mm x 34 mm Weight : 332 g
IP rating	IP66
Environmental conditions	Operating temperature: -40°C to +70°C, storage : -40°C à +85°C, relative humidity: 0% to 99% (non-condensing)

Standards and certifications	CE (RED) Safety : EN 62368-1:2014+A11, EN62311
	                 EMC : EN301-489-1, EN301-489-17
	                 Radio : EN 300 328 2.1.1 (2.4 GHz), EN 301 893 2.1.1 (5 GHz, DFS)
	
	FCC FCC ID : Z9W-RMB (radio)
	IC IC : 114688A RMB (radio)
	
	E-marking ECE R10
	
	Environmental Shocks & vibrations : EN 61373 (CAT 1 CLASS B)
	                      Climatic : EN60068

Warranty	5 years

Ordering references

AirXroad	WiFi Access Point, Ethernet Bridge, Repeater and MESH point (IEEE 802.11n a/b/g) for automotive applications, power input from +9VDC to +48VDC plus POE, shipped without cables or antennas

Additional accessories

WL-M12U/8X-ETH-2M	Ethernet cable, 8pts X-coded M12 SPEEDCON to RJ45, 10 Gbps 2 meters
WL-M12U/8X-ETH-5M	Ethernet cable, 8pts X-coded M12 SPEEDCON to RJ45, 10 Gbps 5 meters
WL-M12U/8X-ETH-10M	Ethernet cable, 8pts X-coded M12 SPEEDCON to RJ45, 10 Gbps 10 meters
WLg-M12U-PWR-2M	Power supply cable ULTRA-LOCK M12 4 point, 2 meters
WLg-M12U-PWR-5M	Power supply cable ULTRA-LOCK M12 4 point, 5 meters
WLg-M12U-PWR-10M	Power supply cable ULTRA-LOCK M12 4 point, 10 meters
WL-ANT-2458/2-ORPS	Dual band (2.4 / 5 GHz) 2 dBi omni-directional RP-SMA antenna

AXR-SET	Connecting set includes :
	    - 1 x WLg-M12U-PWR-2M
	    - 1 x WL-M12U/8X-ETH-2M
	    - 2 x WL-ANT-2458/2-ORPS

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