

# 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

|                                     |  |
|-------------------------------------|--|
| <b>Ethernet interface</b>           | 1-port Gigabit Ethernet 10/100/1000 Base TX auto-sensing, auto MDI/MDIX cross-over, 8 pts X-coded M12 connector  |
| <b>WiFi interface</b>               | 1 radio IEEE 802.11a/b/g/n, MIMO 2T2R, 2.4 / 5 GHz   |
| <b>WiFi radio data rate</b>         | 802.11a: 6, 9, 12, 18, 24, 36, 48 and 54 Mbps<br>802.11b/g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps<br>802.11n: MCS0-7, 2 streams (6.5 to 300 Mbps)  |
| <b>Operating frequencies</b>        | ISM : 2.4-2.483 GHz (up to 14 channels)<br>UNII : 5.15-5.25 GHz (up to 4 channels)<br>UNII-2 : 5.25-5.35 GHz (up to 4 channels)<br>UNII-2 ext : 5.470-5.725 GHz (up to 11 channels)<br>UNII-3 : 5.725-5.825 GHz (up to 4 channels)<br>Supports DFS and TPC   |
| <b>RF Output power</b>              | 2,4 GHz : 23,5 dBm (aggregate) / 5 GHz : 21 dBm (aggregate)  |
| <b>RF Sensitivity</b>               | Receiver : -92 dBm for 802.11 b/g/n and -96 dBm for 802.11a/n  |
| <b>Antennas connectors</b>          | 2 RP-SMA male connectors   |
| <b>WiFi modes</b>                   | Access point, client, MESH (IEEE 802.11s), infrastructure, AD-HOC, fast roaming (less than 30 ms), WMM QoS   |
| <b>Administration</b>               | http, https, SNMP agent (V1, V2C, V3), ACKSYS WaveManager & WaveViewer administration softwares  |
| <b>Security</b>                     | Firewall, DoS, https, MAC filtering, WPA/WPA2-Personal & Enterprise (IEEE 802.1X/RADIUS), WEP, tunnels L2 (GRE), VPN (OpenVPN), SNMP V3  |
| <b>Ethernet networking</b>          | Frames filtering, bridging, repeater, STP/RSTP, VLAN, DHCP (server & client), DNS relay  |
| <b>Ethernet routing</b>             | Multicast (PIM), IP redundancy (VRRP), static routes, NAT router, router   |
| <b>LEDs Signaling</b>               | Radio : activity - status   Ethernet : link 10/100/1000 - activity   Power : on-off  |
| <b>Power supply</b>                 | +9VDC to +48VDC ULTRA-LOCK M12 4-point connector & PoE 802.3af   |
| <b>Consumption</b>                  | IDLE mode : 1.7 W / Maximum average : 5.8 W / Recommended power supply : 7 W   |
| <b>Mechanical specifications</b>    | Dimensions : 115 mm x 64 mm x 34 mm<br>Weight : 332 g  |
| <b>IP rating</b>                    | IP66   |
| <b>Environmental conditions</b>     | Operating temperature: -40°C to +70°C, storage : -40°C à +85°C, relative humidity: 0% to 99% (non-condensing)  |
| <b>Standards and certifications</b> | CE (RED) Safety : EN 62368-1:2014+A11, EN62311<br>EMC : EN301-489-1, EN301-489-17<br>Radio : EN 300 328 2.1.1 (2.4 GHz), EN 301 893 2.1.1 (5 GHz, DFS)<br>FCC FCC ID : Z9W-RMB (radio)<br>IC IC : 114688A RMB (radio)<br>E-marking ECE R10<br>Environmental Shocks & vibrations : EN 61373 (CAT 1 CLASS B)<br>Climatic : EN60068 |
| <b>Warranty</b>                     | 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 |
| <b>Additional accessories</b> |   |
| 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 :<br>- 1 x WLg-M12U-PWR-2M<br>- 1 x WL-M12U/8X-ETH-2M<br>- 2 x WL-ANT-2458/2-ORPS   |

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