

# RuggedAir100

WiFi access point, client, repeater & Mesh point designed for industrial applications in harsh environments



- All-in-one : AP/client/repeater/Mesh point
- WiFi 802.11n (MIMO 2T2R), 2.4/5 GHz
- Advanced security functions, VPN, firewall...
- WaveManager centralized management software
- Operating System : WaveOS
- Rugged device : shocks & vibrations proof, IP66, dual insulated redundant input +9VDC to +48VDC or PoE
- Fast roaming < 30 ms
- Compatible with its predecessor WLg-ABOARD



## Introduction

As its predecessor (WLg-ABOARD) with which it is compatible, RuggedAir100 is an "all-in-one" multifunction product (access point, client, repeater, router & Mesh point) designed for industrial applications in harsh environment (IP66 waterproof, shocks and vibrations proof, extended temperature range, M12 connectors...). It can be used either on the ground to create indoor or outdoor WiFi coverages, or on board to connect all types of mobile equipment or vehicles (trams, construction/agricultural machines, trucks, automated cranes, harbor cranes...) to the ground network.

- **Reliability** : it is equipped with a redundant wide range (9-48 VDC) or POE power supply as well as 2 antennas making it possible to reinforce the quality of the radio link and to increase the throughputs.
- **Mobility** : its roaming performances (<30 ms) and its shocks/vibrations resistance make it easy to integrate in any type of mobile equipment or vehicle.
- **Ease of deployment and maintenance** : RuggedAir100 can be easily managed from the network with the centralized management software WaveManager, through SNMP or from a simple web browser. It also has a C-Key (key saving configuration) for instant replacement on site.
- **Security** : it integrates advanced security standards (Firewall, VPN, 802.1X ...) as well as routing and filtering functions to facilitate mass deployments.

## Technical characteristics overview

<b>Ethernet interface</b>	2-port Ethernet 10/100 auto-sensing, Base TX, auto MDI/MDIX, M12 D-coded Ethernet interface
<b>WiFi interface</b>	1 radio 802.11n (MIMO 2T2R, 300 Mbps), ANI (Adaptive Noise Immunity)
<b>WiFi radio data rate</b>	802.11a: 6, 9, 12, 18, 24, 36, 48 & 54 Mbps 802.11b/g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 & 54 Mbps 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) 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
<b>Output power</b>	2,4 GHz : 23,5 dBm (aggregate) / 5 GHz : 21 dBm (aggregate)
<b>Sensitivity max.</b>	WiFi 802.11n receiver : -92 dBm for 802.11 b/g/n and -96 dBm for 802.11a/n
<b>Radio connectors</b>	2 N-type connectors
<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>WiFi Modes</b>	AP, client, MESH (IEEE 802.11s), infrastructure, AD-HOC, fast roaming (less than 30 ms), WMM QoS
<b>Ethernet networking</b>	Frames filtering, bridging, repeater, STP/RSTP, VLAN, DHCP (server & client), DNS relay
<b>IP routing</b>	Multicast (PIM), IP redundancy (VRRP), static routes, NAT router, router
<b>Administration</b>	http, https, SNMP agent (V1, V2C, V3), WaveManager administration software, save / restore configuration key (C-Key)
<b>I/O</b>	A 3-pin Waterproof M8 connector with : - one solid state relay output warning (with configurable action), 1 Form A, 60VDC 80mA max - one input for external device control 24VDC max
<b>LEDs Signaling</b>	Radio : activity - status   Ethernet : link - activity   Power : on-off   C-Key : activity
<b>Power supply</b>	+9VDC to +48VDC, redundant, PoE af (at type 1, mode A/endspan compatible), M12 connector 4-pole A-coded
<b>Consumption</b>	IDLE mode : 1.7 W / Maximum average : 3.92 W / Recommended : 6.5 W
<b>Dimensions &amp; weight</b>	L : 175 x l : 80 x h : 75 mm (without connectors), weight TBD
<b>Standards and certifications</b>	CE (RED) Safety : EN 62368-1:2014+A11, EN62311 EMC : EN 301 489 [-1], [-17] Radio : EN 300 328 (2.4 GHz), EN 301 893 (5 GHz, DFS) FCC Radio : FCC ID Z9W-RMB Environmental Shocks & vibrations : EN 61373 (CAT 1 CLASS B) Climatic : EN60068-2 [-1, -2, -30]
<b>Environment</b>	IP66 Operating : -40°C to +70°C , HR: 0-99%
<b>Warranty</b>	5 years

## Ordering references

RuggedAir/1A	WiFi AP, client, repeater (WDS) & MESH point (802.11n), M12 Ethernet interface 10/100. Shipped without cable or antenna.
<b>Included accessories</b>	
C-Key_M1	Save / Restore configuration key
WL-PLT-1	4-point fixing plate with ground lug
<b>Other accessories</b>	
WLg-M12U-ETH-2M	Ultra-Lock 4-point Ethernet cable, M12 to RJ45, 2 meters
WLg-M12U-ETH-5M	Ultra-Lock 4-point Ethernet cable, M12 to RJ45, 5 meters
WLg-M12U-ETH-10M	Ultra-Lock 4-point Ethernet cable, M12 to RJ45, 10 meters
WLg-M12U-PWR-2M	Ultra-Lock waterproof 4-point M12 power supply cable, 2 meters
WLg-M12U-PWR-5M	Ultra-Lock waterproof 4-point M12 power supply cable, 5 meters
WLg-M12U-PWR-10M	Ultra-Lock waterproof 4-point M12 power supply cable, 10 meters
WL-ANT-2458/2-ONM	Dual band (2.4 / 5 Ghz) 2 dBi omni-directional antenna
RGA100-SET	Connecting set (1 x 2m M12 4-point Power cable, 1 x 2m M12 4-point Ethernet cable, 2 x 2 dBi omnidirectional N-type antennas)

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