

WLn-RailBox

Dual 802.11n WiFi access point, client, repeater, Mesh gateway + GPRS/3G router for railways



C-KEY READY



Top «C-KEY» for quick configuration, save & restore

- Single or dual radio 802.11a/b/g/n (MIMO 3T3R), up to 450 Mbps (radio bit rate)
- MESH, WMM QoS, multiple SSID and centralized RADIUS security supported
- 1 optional Mobile broadband / router GSM / GPRS / EDGE / 3G / HSPA + GPS
- Auto-sensing Gigabit 10/100/1000 Base TX auto MDI/MDIX network interface
- DC insulated power supply input (+24VDC to +110VDC) or PoE+ IEEE 802.3at
- Shock & vibration proof, rugged aluminum enclosure, IP66 seal rating



Introduction

WLn-RailBox is a rugged device designed for railway and light rail applications. It can be mounted in trains, subways, trams for positive train control (PTC), fare collection, maintenance, remote management, wayside and track monitoring and in any equipment that requires robustness like forklifts, trailers, tractors, cranes, 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.

Furthermore it combines an optional mobile broadband router plus a GPS that allows using the device as a mobile hotspot in transportation applications.

It fulfills the most severe requirements in terms of operating environment: from -20°C to +70°C, shock and vibration proof, protection against dust and water projections (IP66).

WLn-RailBox is certified for railway applications (EN 50155 [IEC 60571] / EN 50121-3-2 / EN 50121-4).

Technical characteristics overview

Ethernet link	2-port Gigabit Ethernet 10/100/1000 auto-sensing, waterproof ultra-lock 8-point M12 X-coded connectors (CAT-6A) plug & play mode & auto MDI/MDIX cross-over
WiFi network	1 or 2 radios compliant to the IEEE 802.11a/b/g/n, MIMO 3T3R, 2.4 / 5 GHz standards
Wireless WAN	Mobile broadband router GSM / GPRS / EDGE / 3G / HSPA + GPS, 850 MHz – 2100 MHz frequency range, dual SIM
GPS	Optional GPS receiver with NMEA 0183 data stream, tracking sensitivity -154 dBm (typical)
WiFi radio data rate	450 Mbps (3 streams)
Radio channels	2.4 GHz: 14 channels in 11b/g, 10 channels in 11n HT40 5 GHz: 19 channels in 11a/h, 9 channels in 11n HT40
Output power	Transmitter +20 dBm nominal
Sensitivity	Receiver -92 dBm for IEEE 802.11 a/g/n and -95 dBm for IEEE 802.11b
Antennas connections	3 or 6 QMA connectors for the WiFi Optional: 2 x QMA connectors for cellular radio + 1 x QMA connector for GPS
Modulation	OFDM: BPSK, QPSK, 16QAM, 64QAM / DSSS: DBPSK, DQPSK, CCK
Security	64/128 bits WEP, WPA-PSK, WPA2-PSK, IEEE 802.1x (centralized RADIUS authenticator & supplicant), MAC addresses filtering, SSID broadcast control
WiFi Modes	Access point to build a WiFi network infrastructure, client to connect any Ethernet equipments to this network, repeater, MESH point (IEEE 802.11s), infrastructure, AD-HOC, client router, WMM QoS, multicast, VPN, dynamic routing and firewall modes are fully supported, fast roaming (less than 30 ms), redundancy (VRRP)
Administration	Built-in WEB interface, the setup of the device is achieved using any web browser, SNMP agent, ACKSYS NDM, C-Key (save / restore configuration key)
Operating systems	Windows, Linux, UNIX as well as any operating system supporting TCP/IP
Signaling	LEDs signaling radio quality, activity and status, Link 10/100/1000 and activity for the LAN port
Power supply	+24VDC to +110VDC EN 50155 nominal, 1500V insulation, dual input (ultra-lock waterproof M12 connector 4-pole A-coded) or PoE + (IEEE 802.3at) power supply with ground lug
Consumption	16W typical power consumption (dual radio)
Dimensions & weight	Compact shockproof rugged aluminum enclosure, (L: 80 x l: 175 x h: 57 mm), 840g
Standards	EN 301489-17 & EN 61000-6-2 (CEM), IP66 seal rating, EN 50155 (IEC 60571), EN 50121-3-2, EN 50121-4 (railways ground & rolling stock)
Environment	Operating temperature: -25°C to +70°C (HR 0-99%) or extended -40°C to +75°C, storage: -40°C to +80°C

Ordering references

WLn-RailBox/R[P]	Single or Dual WiFi Access Point, Ethernet Bridge, Repeater & MESH point (IEEE 802.11n a/b/g) for automotive applications, optional GPRS/3G/GPS, +24VDC to +110VDC nominal insulated, shipped with 2 meters of Ethernet RJ45 cable & 2 meters power cable /R (radio) coding: /1 = 1 x WiFi /2 = 2 x WiFi /3 = 1 x WiFi + 1 x GPRS/3G/GPS [P]: Same as above with POE+ IEEE 802.3at Power Supply, no power cable is shipped with this model
WL-PLT-1	4-point fixing plate with ground lug

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