

WLn-RailBox

Dual 11n WiFi access point, client, repeater & MESH point for Railways



- Single or dual radio 11 a/b/g/n (MIMO 3T3R), up to 450 Mbps (radio bit rate)
- MESH, WMM QoS, multiple SSID and centralized RADIUS security supported
- Supports DFS and TPC
- 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

C-KEY READY



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



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.

WLn-RailBox supports 802.1x/RADIUS for a centralized management of all security policies. It incorporates a firewall, has advanced frame filtering functions and supports VLAN, WMM QoS functions to ensure network traffic segmentation and data prioritization (video, voice, entertainment...).

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
Radio data rate	450 Mbps (3 streams)
Operating frequencies	ISM : 2.4-2.483 GHz (up to 14 channels) UNII : 5.15-5.25 GHz (up 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	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
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
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 EN50155 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 Removable fixing plate : 4-point fixing plate with ground lug (L: 80 x l: 225 x h: 4 mm), 200g
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 802.11 a/b/g/n) for automotive applications, +24VDC to +110VDC nominal insulated, shipped with 2 meters of Ethernet RJ45 cable, 2 meters power cable and a fixing plate (already mounted). /R (radio) coding: /1 = 1 x WiFi /2 = 2 x WiFi [P]: Same as above with POE+ IEEE 802.3at Power Supply, no power cable is shipped with this model
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