

AirBox LTE

Industrial cellular router (2G/3G/4G) + WiFi (802.11n)



- 2G/3G/4G cellular router with auto-fallback
- 802.11n WiFi interface (MIMO 2T2R), 2.4/5 GHz
- Advanced security (VPN, Firewall, radius ...)
- Automatic Cellular <-> WiFi switching
- WiFi fast roaming (< 30ms)
- Shocks & vibrations proof (EN61373)
- Redundant wide range power supply input (+9 to +48 VDC)
- Compact case, wall or DIN Rail mounting
- 2 isolated inputs + 2 isolated outputs



Introduction

AirBox LTE is a cellular router equipped with a dual-band WiFi interface (2.4 / 5 GHz), a multi-constellation GNSS interface (GPS, GLONASS ...), 2 Ethernet ports 10/100/1000 and 2 isolated inputs/2 isolated outputs. It is designed for industrial applications (industry 4.0) and mobility (buses, vehicles ...).

M2M and IIoT: AirBox LTE has WiFi and cellular wireless interfaces to ensure maximum flexibility for industrial applications. It allows a remote and secure access to all the devices connected to the router. Its WiFi interface, configured in access point mode, also offers secure access to the network from a tablet. Its 4 GPIOs make it possible to remotely control equipment or to read the logic state of an input signal.

Mobility: AirBox LTE is equipped with high-speed wireless technologies for transmitting data to and from vehicles.

For bus applications, AirBox LTE makes it possible to pool all data streams (SAE, ticketing, PIS, CCTV ...) on a single router. Its WiFi roaming capabilities (<30 ms) ensure continuous data transmission as buses move to the depot. Its automatic switching capabilities between WiFi and 4G ensure service continuity when they go into operation. Its advanced routing and filtering functions make it easy to deploy large fleets of vehicles. AirBox LTE, complies with the requirements of the UTAC (EMC, resistance to shocks and vibrations).

High availability: its multiple redundant interfaces (2 Ethernet ports, 2 power inputs, 2 SIM cards) and its integrated watchdog guarantee a perfect continuity of operation.

Administration and product monitoring can be done directly from a web browser or from WaveManager.

Technical characteristics overview

Ethernet interface	2-port Gigabit Ethernet 10/100/1000 auto-sensing, Base TX, auto MDI/MDIX, RJ45 Ethernet interface
Cellular interfaces + navigation	1 LTE radio category 4, 3GPP E-UTRA release 10, MIMO DL with Rx diversity Dual SIM LTE, UMTS/HSPA+, GSM/GPRS/EDGE (worldwide) Multi-constellation GNSS (GPS, Galileo, GLONASS, Beidou). Requires an active antenna.
Cellular radio data rate	150 Mbps ↓ & 50 Mbps ↑
Cellular operating frequencies	FDD LTE: B1/B3/B5/B7/B8/B20 TDD LTE: B38/B40/B41 WCDMA: B1/B5/B8 GSM: 900/1800
WiFi interface	1 radio 802.11n (MIMO 2T2R), 300 Mbps, 2.4 / 5 GHz, ANI (Adaptive Noise Immunity)
WiFi radio data rate	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)
WiFi 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
Output power	AirBox/14 : WiFi 1 : 2.4 GHz : up to 23.5 dBm (aggregate) / 5 GHz : up to 21 dBm (aggregate) LTE : GSM : up to 33 dBm
Sensitivity max.	WiFi 802.11n receiver : -95 dBm in 802.11 b/g/n & -94 dBm in 802.11a/n LTE WCDMA B5/B8 receiver : -110.5 dBm
Radio connectors	AirBox/14 : 2 WiFi (RP-SMA) + 2 LTE (SMA) + 1 GNSS (SMA)
Security	Firewall, DoS, https, MAC filtering, WPA/WPA2-Personal & Enterprise (IEEE 802.1X/RADIUS), WEP, tunnels L2 (GRE), VPN (OpenVPN), SNMP V3
WiFi modes	AP, client, MESH (IEEE 802.11s), infrastructure, AD-HOC, fast roaming (less than 30 ms), WMM QoS
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
Administration	http, https, SNMP agent (V1, V2C, V3), WaveManager administration software
I/O	- 2 solid state relay output warnings (with configurable action), 1 Form A, 60VDC 80mA max - 2 inputs for external device control 24VDC max
LEDs Signaling	Radios : activity - status Ethernet : 10/100/1000 link - activity GPS : status Power : on-off (x2)
Power supply	+9VDC to +48VDC, redundant, 5-point Phoenix connector
Consumption	AirBox/14 : TBD
Dimensions & weight	Compact case L : 141.2 x l : 99 x h : 35 mm, weight without accessories : 347g
Standards	CE (RED) & FCC certified (FCC ID : Z9W-RMB / WLE900VX) Radio : • WiFi : EN 300 328 (2.4 GHz), EN 301 893 (5 GHz, DFS) • LTE : EN 301 908 [-1, -2, -13], EN 301 511, EN 303 413 EMC : • WiFi : EN 301 489 [-1], [-17] • LTE : EN 301 489 [-19], [-52] Environmental : EN61373 (shocks and vibration), EN60068 (climatic) Safety : EN 62368-1:2014+A11, EN62311
Environment	IP30 Operating temperature: -20°C to +60°C , storage: -40°C à +85°C, humidity: 0% to 99% (non-condensing)
Warranty	5 years

Ordering references

AirBox/14	WiFi access point, client, repeater (WDS) & MESH point (802.11n) + LTE/GPS router (EMEA, Korea, Thailand, India), RJ45 Ethernet interface 10/100/1000 (Other frequencies → consult us)
Accessories :	
PWS12-UNI-PH3	AC (110V / 220V) to 12VDC power adapter with cable terminated by a 3-pin Phoenix terminal block
WL-FIX-RD2	Din rail fixing kit

All the brand names mentioned in this document are trademarks. ACKSYS is constantly looking at ways to improve its products. The current specifications may therefore be modified without notice and the characteristics set out herein should not be construed as creating any contractual obligation. All the products featured herein are designed and manufactured in Europe.

ACKSYS_AirBox_LTE_US_04/10/18