

AirBox LTE

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



- 2G/3G/4G cellular router with auto-fallback
- ITS application-ready (LTE band 38 support)
- 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 (2G/3G/4G LTE) equipped with a dual-band WiFi interface (2.4 / 5 GHz), a GNSS interface (GPS, Galileo, GLONASS, Beidou), 2 Gigabit Ethernet ports 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 access to all your devices (maintenance, control for non-critical applications, remote I/O...). Its WiFi interface, configured in access point mode, also offers local access to the network from a tablet or a smartphone. It supports all kind of Ethernet flows (video, Modbus TCP, EtherNet/IP, Profinet...) and its 4 GPIOs make it possible to remotely control equipment or to read the logic state of an input signal. AirBox LTE ensures the integrity of data and network thanks to its onboard services (VPN, Firewall, WPA-ENTERPRISE...).

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. AirBox LTE allows vehicles tracking with its GNSS feature. It is also rugged (shock and vibration proof), E-marked ECE R10 and maintenance-free.

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 achieved directly from a web browser or from WaveManager, the centralized administration software provided by ACKSYS. Besides, its advanced routing and filtering functions make it easy to deploy large fleets of vehicles.

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 ↑ (maximum radio data rate)
Cellular operating frequencies	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28 LTE-TDD: B38/B39/B40/B41 WCDMA: B1/B2/B4/B5/B6/B8/B19 GSM: B2/B3/B5/B8
WiFi interface	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	WiFi • 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 : • 2.4 GHz : -94 dBm • 5 GHz : -96 dBm LTE WCDMA B5/B8 receiver : -110.5 dBm
Radio connectors	• WiFi : 2 x RP-SMA • LTE : 2 x SMA (female) • GNSS : 1 x SMA (female)
Security	Firewall, DoS, https, MAC filtering, WPA/WPA2-Personal & Enterprise (IEEE 802.1X/RADIUS), WEP, tunnels L2 (GRE), VPN (OpenVPN), SNMP V3, client isolation in AP mode
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	9.6 W typical - 12 W maximum
Dimensions & weight	Compact case L : 141.2 x l : 99 x h : 35 mm, weight without accessories : 347g
Standards and certifications	CE (RED) Safety : EN 62368-1:2014+A11, EN62311 EMC : • WiFi : EN301-489-1, EN301-489-17 • LTE : EN 301 489 [-19], [-52] Radio : • WiFi : EN 300 328 2.1.1 (2.4 GHz), EN 301 893 2.1.1 (5 GHz, DFS) • LTE : EN 301 908 [-1, -2, -13], EN 301 511, EN 303 413 FCC Radio : • WiFi : FCC ID Z9W-RMB • LTE : FCC ID XMR201708EC25E E-marking ECE R10 Environmental Shocks & vibrations : EN 61373 (CAT 1 CLASS B)
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), shipped with two 2.4GHz - 3 dBi / 5GHz - 4 dBi antennas & two cellular antennas
Additional accessories:	
WL-ANT-2458/3-ORPS	Antenne omnidirectionnelle articulée 3 dBi (2.4GHz) / 4 dBi (5GHz), connectique RPSMA
ANT727/20SM	Antenne cellulaire omni SMA, 2dBi, 700-960 / 1700-2170 / 2300-2700 MHz
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

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