

AirBox

Industrial dual WiFi access point (11n + 11ac), dual band (2.4 or 5 GHz)



- WiFi access point, client or repeater modes
- Mesh function to wirelessly interconnect access points
- Optional 4G router + positioning (GNSS)
- Advanced security (Firewall, VPN, radius ...)
- High availability : 2 redundant Ethernet ports, redundant wide range power supply input (+9 to +48 VDC)
- Compact case, wall or DIN Rail mounting
- Centralized administration and configurations management
- 2 isolated inputs + 2 isolated outputs



Introduction

Available in dual WiFi radio version (11n + 11ac), AirBox fits directly into the era of Industry 4.0 by offering dual band (2.4 / 5GHz) connectivity to objects (IIoT, PLCs, tablets ...) and strengthening the communication between machines (M2M). AirBox supports up to 80 clients connected simultaneously (@ 2Mbps) in AP mode and can be integrated in electrical cabinets as in tight spaces (antenna fitted externally).

The single radio model (WiFi 11n) can be used in client mode to remotely connect any Ethernet equipment or PLCs as well as mobile devices (trolleys, AGVs) to the factory wireless infrastructure.

AirBox advantageously leverages MIMO technology to strengthen the radio link and features a high-performance roaming algorithm (<30ms) to ensure seamless communication in motion, even in environments with very high density of AP.

AirBox embedded intelligence simplifies the network design and does not require any wireless LAN controller. Administration is centralized via ACKSYS WaveManager software.

Network is secured thanks to AirBox high level of security (Firewall, VPN, 802.1X ...).

Two pairs of digital I/O are controllable with the SNMP protocol to operate remote equipment or read the logic state of a signal.

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) or 2 radios 802.11n (MIMO 2T2R, 300 Mbps) + 802.11ac (MIMO 3T3R, 1.3 Gbps), 2.4 / 5 GHz, ANI (Adaptive Noise Immunity)
WiFi radio data rate	802.11a: 6, 9, 12, 18, 24, 36, 48 and 54 Mbps 802.11b/g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps 802.11n: MCS0-7, 2 streams (6.5 to 300 Mbps) 802.11ac: MCS0-9, 3 streams (6.5 Mbps to 1.3 Gbps)
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/10 : 2,4 GHz : 23,5 dBm (aggregate) / 5 GHz : 21 dBm (aggregate) AirBox/12 : WiFi 1 : 2,4 GHz : up to 23,5 dBm (aggregate) / 5 GHz : up to 21 dBm (aggregate) WiFi 2 : 2,4 GHz : up to 23,8 dBm (aggregate) / 5 GHz : up to 22,8 dBm (aggregate) 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 WiFi 802.11ac receiver : -94 dBm in 802.11 b/g/n, -95 dBm in 802.11a/n, -94 dBm in 802.11ac LTE WCDMA B5/B8 receiver : -110,5 dBm
Radio connectors	AirBox/10 : 2 WiFi (RP-SMA) • AirBox/12 : 2 WiFi (RP-SMA) + 3 WiFi (RP-SMA) • 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/10 : 5.7 W typical - 9.1 W max • AirBox/12 : 10.5 W typical - 14.4 W max • AirBox/14 : TBD
Dimensions & weight	Compact case L : 141.2 x l : 99 x h : 35 mm, weight without accessories : /10 = 318g • /12 = 348g • /14 = 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/10	WiFi access point, client, repeater (WDS) & MESH point (802.11n), RJ45 Ethernet interface 10/100/1000
AirBox/12	WiFi access point, client, repeater (WDS) & MESH point (802.11n + 802.11ac), RJ45 Ethernet interface 10/100/1000
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

Toutes les marques citées sont des marques déposées. ACKSYS recherche continuellement l'amélioration de ses produits. Les présentes spécifications peuvent être modifiées sans préavis et les caractéristiques indiquées ne correspondent pas à des obligations contractuelles. Tous ces produits sont étudiés et fabriqués en France.

ACKSYS_AirBox_US_Rev A1_09/10/18