

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 interface + Navigation	Not available on these models, please refer to the datasheet of AirBox LTE.		
Cellular radio data rate	Not available on these models, please refer to the datasheet of AirBox LTE.		
Cellular operating frequencies	Not available on these models, please refer to the datasheet of AirBox LTE.		
WiFi interfaces	2.4 / 5 GHz, ANI (Adaptive Noise Immunity) AirBox/10 : 1 radio : 802.11n (MIMO 2T2R, 300 Mbps) AirBox/12 : 2 radios : • Radio 1 802.11n (MIMO 2T2R, 300 Mbps) • Radio 2 : 802.11ac (MIMO 3T3R, 1.3 Gbps)		
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) (only available on AirBox/12)		
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	-	• up to 23.5 dBm (aggregate) at 2.4 GHz • up to 21 dBm (aggregate) at 5 GHz
	AirBox/12	WiFi 1 : WiFi 2 :	• up to 23.5 dBm (aggregate) at 2.4 GHz • up to 21 dBm (aggregate) at 5 GHz • up to 23.8 dBm (aggregate) at 2.4 GHz • up to 22.8 dBm (aggregate) at 5 GHz
Sensitivity max.	AirBox/10	-	• -94 dBm at 2.4 GHz • -96 dBm at 5 GHz
	AirBox/12	WiFi 1 : WiFi 2 :	• 94 dBm at 2.4 GHz • -96 dBm at 5 GHz • -94 dBm at 2.4 GHz • -95 dBm at 5 GHz
Radio connectors	• AirBox/10 : 2 x RP-SMA • AirBox/12 : 2 x RP-SMA (WiFi 1) + 3 x RP-SMA (WiFi 2)		
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	• AirBox/10 : 6 W typical - 7 W max • AirBox/12 : 11 W typical - 15 W max		
Dimensions & weight	Compact case L : 141.2 x l : 99 x h : 35 mm, weight without accessories : • /10 = 318g • /12 = 348g		
Standards and certifications	CE (RED)	Safety : EN 62368-1:2014+A11, EN62311 EMC : EN301-489-1, EN301-489-17 Radio : EN 300 328 2.1.1 (2.4 GHz), EN 301 893 2.1.1 (5 GHz, DFS)	
	FCC	Radio : • WiFi 1 : FCC ID Z9W-RMB • WiFi 2 : FCC ID TK4WLE900VX	
	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/10	WiFi access point, client, repeater (WDS) & MESH point (802.11n), RJ45 Ethernet interface 10/100/1000, shipped with two 2.4GHz - 3 dBi / 5GHz - 4 dBi antennas
AirBox/12	WiFi access point, client, repeater (WDS) & MESH point (802.11n + 802.11ac), RJ45 Ethernet interface 10/100/1000, shipped with five 2.4GHz - 3 dBi / 5GHz - 4 dBi antennas
Additional accessories:	
WL-ANT-2458/3-ORPS	Flat & swivel omnidirectional antenna, 2.4GHz (3dBi) / 5GHz (4dBi), RPSMA
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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