Windbit WAP841-IBE

Quad radio Wi-fi 7 access point

Introduction

Windbit WAP841-IBE is a next-generation enterprise-grade wireless access point designed to meet the demands of high-density, high-performance Wi?Fi environments. Built on a modern hardware architecture, it delivers reliable, high-throughput wireless connectivity for businesses, campuses, hospitality, and public venues.
Engineered for scalability and long-term reliability, the Windbit WAP841-IBE is an ideal solution for organizations seeking to upgrade their wireless networks with a future-ready access point that combines performance, stability, and enterprise-class features.

Highlight

- **Quad radio architecture supporting concurrent operation in the 2.4GHz, 5GHz, and 6GHz bands**
- **Wi-Fi7–class performance with support for advanced modulation, wide channel bandwidths, OFDMA, MLO**
- **Up to 8 spatial streams delivering an aggregate wireless throughput of up to 9.3Gbps**
- **Multi-gigabit uplink connectivity, including high-speed Ethernet interfaces up to 10GbE**
- **AI radio enables real-time full-band scanning, ensuring high security and superior user experience**
- **Advanced RF optimization, including dynamic channel selection, adaptive transmit power control**
- **Enterprise-grade security features, supporting modern authentication, encryption,**

Interfaces

LAN RJ45(PoE IN)	1 x 100/1000/2.5G/5GBASE-T port, shared with SFP+
LAN SFP+	1 x 10GE SFP+ port, compatible with 1GE/2.5GE/10GE
LAN IoT	1 x 10/100/1000BASE-T port, PoE 802.3af out
Radio 1	2.4 GHz: 2x2 MIMO, 802.11n, ax, be
Radio 2	5 GHz: 2x2 MIMO, 802.11n, ac, ax, be
Radio 3	6 GHz: 2x2 MIMO, 802.11ax, be
Radio 4	AI Radio, 2.4 GHz/5 GHz, MIMO 2x2
Others	1x Console RJ45, 1x USB 2.0, 1x BT 5.3

Competitive Advantages

Ultra?high wireless capacity	Quad?radio architecture and Wi?Fi?7?class features deliver high aggregate throughput, ensuring consistent performance in all scnearios.
Automatic Wi-Fi network optimization	The device dynamically adjusts channels and transmission power, optimizing the radio environment and improving wireless efficiency.
Simple and efficient administration	Flexible for all scenarios: Web configuration in standalone access point mode, or cloud management, or ready for a wireless LAN controller.
Captive portal, centralized management	The management platform incorporates a captive portal and integrated tools, avoiding external solutions and reducing operating costs.

Key Features

- **Advanced 4096-QAM technology** With 4096-QAM modulation and 802.11be, the maximum access speed can reach 9,335 Gbps. With all radios activated simultaneously, a high-speed and highly efficient Wi-Fi 7 experience is achieved.
- **High security and reliability** Encryption and authentication technologies including WPA3, 802.1X and PPSK, ensuring secure communications, advanced access control and comprehensive data protection in corporate environments.
- **Channel width up to 320MHz** The channels can be 20 MHz, 40 MHz, 80 MHz, 160MHz, and 320 MHz.
- **Wireless Intruder Detection System (WIDS)** And user isolation, detection and containment of unauthorized access points. CPU Protection Policy (CPP). Network Foundation Protection Policy (NFPP).
- **Orthogonal Frequency-Division Multiple Access (OFDMA)** OFDMA allows multiple users to simultaneously receive/send packets through the AP, minimizing user contention and data forwarding, thereby reducing latency and improving network efficiency.
- **Improved signal quality** It supports cyclic shift/delay diversity (CDD/CSD), maximum ratio combination (MRC), space-time block coding (STBC), and low-density parity checking (LDPC).
- **High number of BSSIDs** Network administrators can encrypt and isolate separate VLANs or subnets of the same SSID, with specific authentication methods for each SSID. Supports up to 48 (16 BSSIDs per radio).
- **IPv4/IPv6 Services** DHCPv4 server, NAT4, neighbor discovery (ND), ICMPv6, IPv6 DHCP client, static routing, PPPoE client, IPsec VPN.

HARDWARE TECHNICAL FEATURE

Interfaces and connectors
1 x 100/1000/2.5G/5GBASE-T port, combo with SFP+. PoE IN
1 x 10GE SFP+ port, compatibility with 1GE/2.5GE/10GE modules
IoT port: 1 x 10/100/1000BASE-T port, supplying IEEE 802.3af power. 1 x RJ45 console port,1 x USB 2.

Integrated internal omnidirectional Wi-Fi 7 antennas
2× antennas 2.4 GHz (3 dBi)
2× antennas 5 GHz (3 dBi)
2× antennas 6 GHz (3 dBi)

Environmental specifications
Operating temperature: –10 °C to +50 °C. Storage temperature: –40°C to +70°C
Storage: -40 °C to +70 °C. Storage humidity: 5% RH to 95% RH (non-condensing)
Operating humidity: 5%–95%. Operating altitude: –500 m to +5,000 m

Quad radio modules
2.4 GHz: 2x2 MIMO, 802.11n, ax, be
5 GHz: 2x2 MIMO, 802.11n, ac, ax, be
6 GHz: 2x2 MIMO, 802.11ax, be. AI Radio, 2.4 GHz/5 GHz, MIMO 2x2

Dimensions, weight and mounting kit
Dimensions: 220 mm × 220 mm × 42,7 mm
Weight: Equipment: 1,2 kg / Mounting kit 0.05 kg
Wall/ceiling kit included by default

SOFTWARE TECHNICAL FEATURE

Wi-Fi interface
Maximum number of users per AP: 768 (256 per radio). Practical max: 100
Hide SSID, 5GHz priority (Band Steering)
SSID: authentication modes, encryption mechanisms, and VLAN attributes

Security methods
PSK, Web y 802.1X, WPA (TKIP), WPA2 (AES), WPA2-PSK, WPA3 y WEP
User isolation, Rogue APs and containment, dynamic ACLs
Support for RADIUS, CPU Protection Policy (CPP), and Network Foundation Protection Policy (NFPP)

Filtering with ACLs
Standard IP ACL, MAC extended ACL, IP extended ACL, and expert-level ACL
IPv6 ACLs with time-based control and Layer 2 interface-based ACLs
Layer 3 interface-based ACLs and Ingress ACLs associated with Wi-Fi interface

Control and limitations of connections
Connection limitations by SSID or radio interface
Bandwidth limitation
Rate Limiting based on STA/SSID/AP

VLAN
Maximum number of SVIs (IPv4): 200
Maximum number of SVIs (IPv6): 200
Max. number of VLANs: 4,094, VLAN ID range: 1–4,094

IPv4 Services
Static addressing or DHCP Client
Maximum number of IPv4 addresses configured per L3 interface: 200
NAT, FTP ALG and DNS ALG

IPv6 Services
IPv6 addressing, Neighbor Discovery (ND), ICMPv6, IPv6 ping, IPv6 tracert
IPv6 DHCP client
Maximum number of IPv6 addresses configured per L3 interface: 400

Routing IP
Static IPv4/IPv6 routes
Maximum number of static IPv4 routes: 1,024
Maximum number of static IPv6 routes: 1,000

Multicast & VPN
Multicast-to-Unicast Conversion
Client PPPoE
VPN IPSec

Management and maintenance
Telnet, SSH, TFTP, Web, WLAN Controller, Cloud Controller
SNMPV1,V2c,V3,
Cloud management, Wireless Intelligent AI Optimization Service

ADDITIONAL TECHNICAL FEATURE

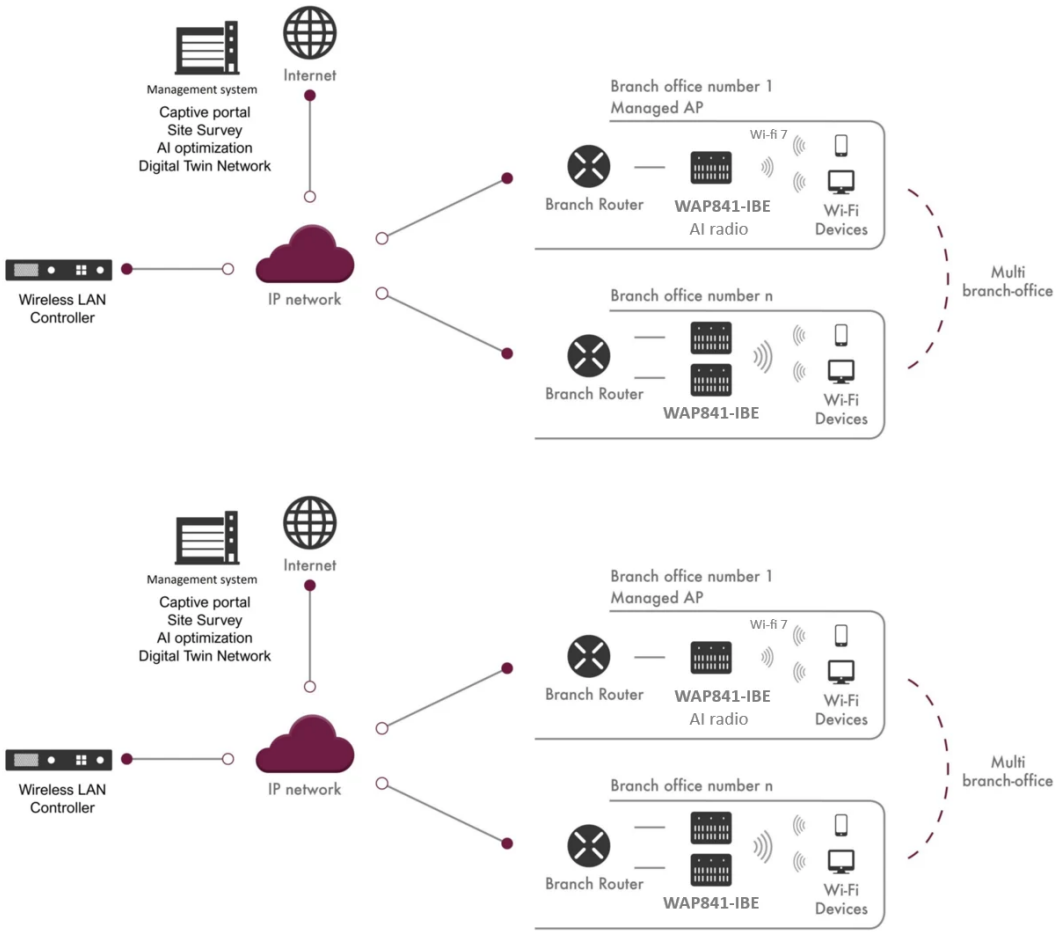
Certifications
EN 55032, EN 55035, EN 61000-3-3, EN IEC 61000-3-2, EN 301 489-1, EN 301 489-3,
EN 301 489-17, EN 300 328, EN 301 893, EN 300 440, FCC Part 15, EN IEC 62311, IEC 62368-1, and EN 62368-1

Device Memory
1024MB DRAM + 256 MB flash
Mean Time Between Failure (MTBF)
200,000 hours (22 years) at 25°C (77°F)

Security lock option
Kensington lock
Other buttons
1x reset button

1x Multicolor LED for system status
AP status. SW update.
CAPWAP management connection status.
Wireless user online status

Scenarios



Founded in 1985, Teldat is a Spanish company whose mission is to provide companies with valuable solutions for cloud access, remote office communications, cybersecurity and voice/data connectivity both in the office and in specific environments whether they are industrial, railway, vehicles or public services.

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