DATA SHEET

AP832

802.11ac Wireless Access Point

Fortinet AP832

High-performance wireless connectivity for high-density environments

Dual-radio, Two-stream 802.11ac Wireless Access Point

The AP832 is the industry's first 802.11ac access point capable of supporting two concurrent 5 GHz 3x3:3ss radios. It is designed for high-density deployments in large offices, schools, universities, hospitals, hotels, and large retail stores. The AP832 supports an aggregate 2.6 Gbps data rate for the most demanding business applications like video and voice.

The AP832 access point allows administrators to prioritize applications to improve the user experience with Fortinet's unique Context Aware Layers technology. For schools, this means Learning Management System applications can be assigned to one dedicated channel layer, while online classroom video feeds can be dedicated to another channel layer. For healthcare, life-critical applications such as patient monitoring can be dynamically assigned to one channel layer, doctor and nursing applications can be assigned to a second layer, and patient applications can be placed on a third channel layer.

The AP832 also provides unique roaming support because Fortinet enables the network (not the client) to control AP client hand-off via our Air Traffic Control® technology, resulting in the industry's lowest roaming latency figures — a true zero-handoff.

Additionally, Fortinet's single-channel technology allows the AP832 to leverage the 802.11ac design for pervasive, real-world deployments of 80 MHz channels, effectively doubling the available data rate and dramatically increasing throughput availability for Fortinet customers.

Like other Fortinet access points, the AP832 integrates seamlessly with our Mobile Center, Mobile Connect, Spectrum Manager, and other application solutions to bring intelligent management and resilient wireless services to your network.

Features

- Supports IEEE 802.11ac with duals radios and three spatial streams
- Support for multiple operating modes: centralized, distributed, mesh, bridged, and VPN tunnel modes
- Integration with Fortinet controllers and management software applications
- Supports either internal or external antennas

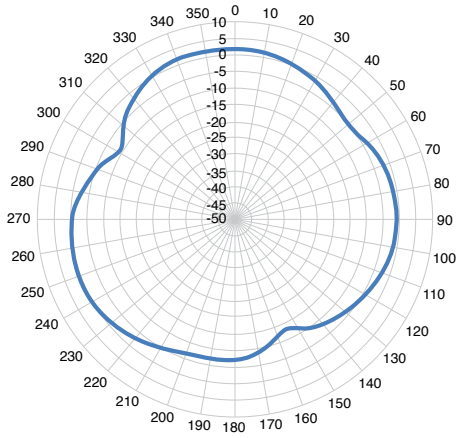
Benefits

- Supports IEEE 802.11ac with dual radios and three spatial streams
- Support for multiple operating modes: centralized, distributed, mesh, bridged, and VPN tunnel modes
- Integration with Fortinet controllers and management software applications
- Supports either internal or external antennas

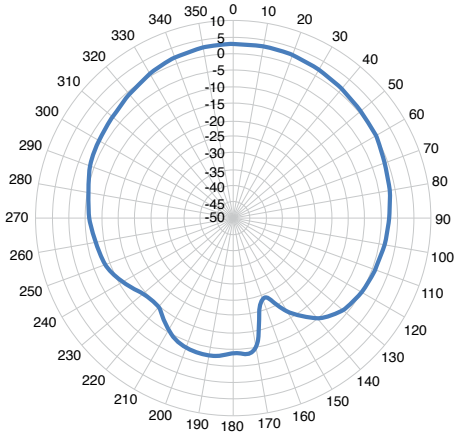
Wi Fi CERTIFIED®

ANTENNA RADIATION PATTERNS (INTERNAL ANTENNA MODEL)

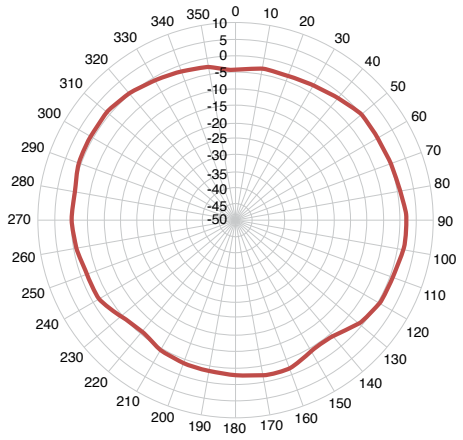
Internal Antenna (MERU-P1633)	2.4–2.5 GHz	4.9–5.9 GHz
Average Antenna Gain	3.0 dBi	4.0 dBi
Polarization	Linear	Linear
Azimuth Beam-width	195°	190°
Elevation Beam-width	98°	100°
VSWR	1:2.0	1:2.0



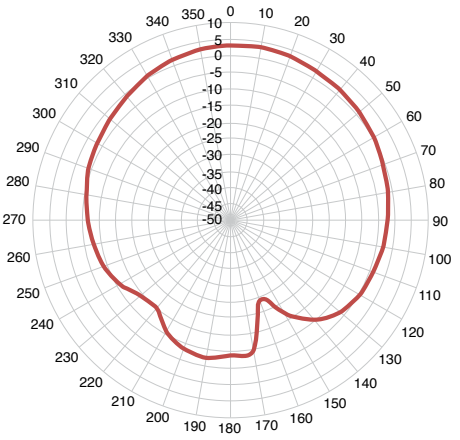
2.4 GHz H-plane



2.4 GHz E-plane



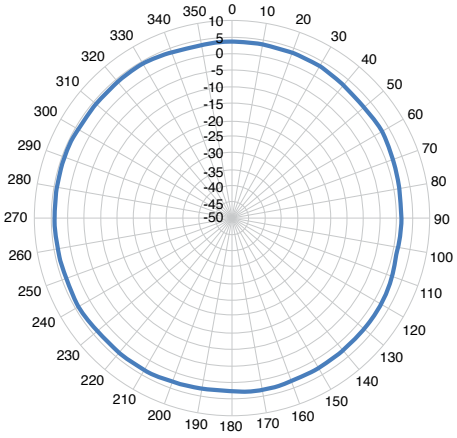
5 GHz H-plane



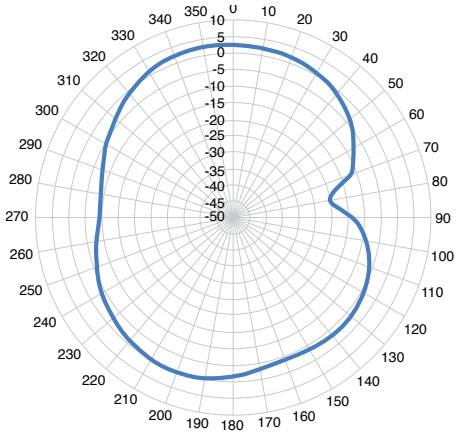
5 GHz E-plane

ANTENNA RADIATION PATTERNS (EXTERNAL ANTENNA MODEL

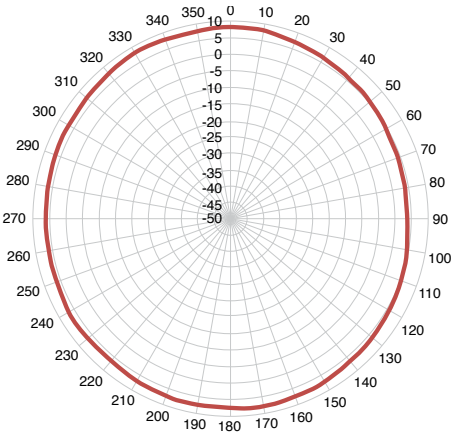
Internal Antenna (MERU-P1633)	2.4–2.5 GHz	4.9–5.9 GHz
Average Antenna Gain	3.0 dBi	4.0 dBi
Polarization	Linear	Linear
Azimuth Beam-width	195°	190°
Elevation Beam-width	98°	100°
VSWR	1:2.0	1:2.0



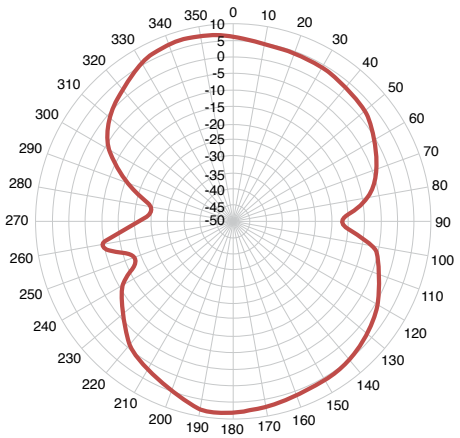
2.4 GHz H-plane



2.4 GHz E-plane



5 GHz H-plane



5 GHz E-plane

SPECIFICATIONS

QOS

WMM support

Dynamic WMM rate adaptation

Configurable QoS rules per user and application

OPERATING MODES

Centralized deployment mode

Distributed deployment mode

Remote VPN tunnel mode

SECURITY

WEP, WPA-PSK, WPA-TKIP, WPA2-AES, 802.11i, 802.1X (EAP-TLS, EAP-TTLS, PEAP, LEAP, EAP-FAST, EAP-SIM, EAP-AKA, and EAP-MD5)

802.1X and captive portal authentication against local database on the controller, RADIUS, and Active Directory

RADIUS-assisted per-user and per-ESSID access control via MAC filtering

MANAGEMENT

Centrally managed by any Fortinet controller running System Director

Automatically discovers controllers and downloads configuration settings for plug-and-play deployment

Upgrades and management using System Director/Network Manager

Support for SNMP

WIRELESS SPECIFICATIONS

Model Introduction

AP832i dual-radio, dual-band IEEE Std 802.11a/b/g/n/ac access point with six internal omnidirectional antennas

AP832e dual-radio, dual-band IEEE Std 802.11a/b/g/n/ac access point with six RP-SMA connectors and six external omnidirectional antennas

Supported Radio Technologies

Dual-band, dual-radio access point

3x3:3SS (three spatial streams)

Indoor application

Supported 2.4 GHz (TurboQAM Mode) and 5.x GHz for dual-band, dual-radio operation, data rate up to 1.9 Gbps

Supported dual 5.x GHz IEEE Std 802.11ac operation with RF collocation (FCC Permit by Ask provision), data rate up to 2.6 Gbps

Supported transmit beam-forming (TxBF)

IEEE Std 802.11ac standard

IEEE Std 802.11n/ac with Orthogonal Frequency Division Multiplexing (OFDM)

EEE Std 802.11b with Direct Sequence Spread Spectrum (DSSS)

IEEE Std 802.11ac with 20/40/80 MHz (VHT20/40/80) channel width

IEEE Std 802.11n with 40 MHz (HT40) channel width

IEEE Std 802.11a/g with 20 MHz channel

IEEE Std 802.11b with 5 MHz channel

Supported Modulation

IEEE Std 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM

IEEE Std 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM

IEEE Std 802.11b: BPSK, QPSK, CCK

Featured 256-TurboQAM modulation for 2.4 GHz and 5 GHz operations

Supported MCS Index

Supported MCS0–MCS9 for IEEE Std 802.11ac

Supported MCS0–MCS23 for IEEE Std 802.11n

Supported Frequency Bands

2.400–2.4835 GHz (ISM)

5.150–5.250 GHz (UNII-1)

5.250–5.350 GHz (UNII-2, upon DFS approval)

5.470–5.725 GHz (UNII-2 Extended, upon DFS approval)

5.725–5.825 GHz (UNII-3)

Country-specific restrictions apply; adjusted by controller upon approval

Operating Channels

.4 GHz Channels

- CH1–11 for U.S., Canada
- CH1–13 for Japan, Europe, rest of world

5 GHz HT20 (20 MHz) Channel

- Non-DFS Channel: CH36, 40, 44, 48, 144, 149, 153, 161, 165
- DFS Channel upon approval: CH 52, 56, 60, 64, 100, 104, 108, 112, 116, 120*, 124*, 128*, 132*, 136, 140, 144 (*weather radar)

5 GHz HT40 (40 MHz) Center Channel

- Non-DFS channel: CH38, 46, 151, 159
- DFS channel upon approval: CH54, 62, 102, 110, 118*, 116*, 134* 134, 142 (*weather radar)

5 GHz VHT80 (80 MHz) Center Channel

- Non-DFS channel: CH42, 155
- DFS channel upon approval: CH58, 106, 122* (*weather channel)

Platform supports Dynamic Frequency Selection (DFS & DFS/TPC) for future 5 GHz channel adoption

Country-specific restrictions apply; adjusted by controller upon approval

Supported Data Rate (Mbps)

IEEE Std 802.11ac three streams: 19.5–1300 Mbps (MCS0-HT20@800nS to MCS9-HT40@400nS)

IEEE Std 802.11ac per stream: 6.5–433.3 Mbps (MCS0-HT20@800nS to MCS9-HT40@400nS)

IEEE Std 802.11n Three streams: 13–450 Mbps (MCS9-HT20@800nS to MCS23-HT40@400nS)

IEEE Std 802.11n Per stream: 6.5–150 Mbps (MCS0-HT20 @ 800nS to MCS7-HT40@400nS)

IEEE Std 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps

IEEE Std 802.11b: 1, 2, 5.5, 11 Mbps

TRANSMIT POWER (TX) AND RECEIVER SENSITIVITY (RX) PER STREAM

CONFIGURATION	MINIMUM TRANSMIT EIRP (DBM)	MAXIMUM TRANSMIT EIRP (DBM)	RX SENSITIVITY (DBM
802.11b	10.0	24.0	-85
802.11g	10.0	23.0	-70
802.11n, 2.4 GHz HT20	10.0	22.0	-65
802.11n, 2.4 GHz HT40	10.0	21.0	-64
802.11a	13.0	22.0	-69
802.11n, 5 GHz, HT20	13.0	21.0	-67
802.11n, 5 GHz, HT40	13.0	20.0	-64
802.11ac, 5 GHz, HT20	13.0	21.0	-69
802.11ac, 5 GHz, HT40	13.0	20.0	-67
802.11ac, 5 GHz, VHT80	13.0	20.0	-64

Configurable Transmission Power

Transmission power configurable in 1.0 dBm increments

Unused radios can be disabled via software for lower power consumption

SPECIFICATIONS

PHYSICAL SPECIFICATIONS

Power

Operated at IEEE 802.3af power

Powered by IEEE Std 802.1af or at PoE (Power over Ethernet) injector or switch

12V external power adapter (sold separately)

Other Interfaces

Networks: One 10/100/1000 BASE-T Ethernet RJ45 uplink (G1), one 10/100/1000 BASE-T Ethernet RJ45 (G2) for downlink and future expansion purposes, auto-sensing link speed and MDI/MDX

Six RPSMA RF connectors for external antenna SKU (AP832e)

One RJ45 port (G1) support IEEE Std 802.3af or at PoE

One USB 2.0 port (Type-A) for future feature

One console port

One reset button

One Kensington security slot

LED Indicators

One tri-color LED over facade for AP status

Additional LEDs for Ethernet activity over two RJ45 ports (G1 and G2)

Mounting

Wall, desktop, or ceiling mount

Three mounting kits included with access point:
- 650-00232, 15/16" T-bar and wall-mount combo adapter
- 650-00233, 9/16" T-bar adapter
- Flat-surface wall-mount bracket (used with 650-00232)

Option (ordered separately)

CBL-SERIAL-DB9-35, DB9-stereo console cable

CBL-RJ45-ADAPT-X5, GE extension adapter

MNT-FEET-SET-X5, rubber feet for desktop staging

Installation in the Air-Handling Space

AP832e metal enclosure only by removing plastic façade

Dimensions

AP832i or AP832e (with mounting bracket): 7.1 x 7.1 x 2.7 inches (18.0 x 18.0 x 6.8 cm)

AP832e without plastic façade: 6.3 x 6.3 x 2.1 inches (16.1 x 16.0 x 5.2 cm)

Weight

AP832i (with mounting bracket): 2.3 lbs (1.1 kg)

AP832e (with mounting bracket): 1.9 lbs (0.9 kg)

AP832e without façade and mounting bracket: 1.5 lbs (0.7 kg)

Environmental

Operating temperature: 32–122°F (0–50°C)

Operating humidity: 5–95% non-condensing

Storage temperature: -40–185°F (-40–70°C) ambient

Storage humidity: 5–95% non-condensing

REGULATORY APPROVAL

FCC (United States of America)

CE Mark (European Community)

Industry Canada (Canada)

TELEC (Japan)

Safety Approval (worldwide)

EU RoHS

For more country-specific regulatory approval, please contact your Fortinet representative

CERTIFICATIONS

WiFi certified IEEE Std 802.11a/b/g/n (ac)*

*WiFi alliance certification started in June 2013 and Fortinet AP832 has been submitted for certification

WARRANTY

Limited lifetime warranty

PART NUMBERS

AP832i

Six integrated dual-band omnidirectional PIFA antennas

AP832e

Six extended reverse polarity SMA connectors; shipment comes with six omnidirectional rubber ducky antennas

SPECIFICATION OF DEFAULT ANTENNA

	MODEL NUMBER	DESCRIPTION
1	ANT-6ABGN-24	2.4/5.x GHz 2.5/4 dBi directional patch wall/pole-mount antenna, with 36-inch external coaxial cables and 6x RP-SMA male jacks
2	ANT-I3ABGN-0304	2.4/5.x GHz 3/4 dBi omnidirectional ceiling mount antenna, with 36-inch external coaxial cables and 3x RP-SMA male jacks

SPECIFICATION OF OPTIONAL EXTERNAL ANTENNAS (SOLD SEPARATELY)

	MODEL NUMBER	DESCRIPTION
1	ANT-6ABGN-24	2.4/5.x GHz 2.5/4 dBi directional patch wall/pole-mount antenna, with 36-inch external coaxial cables and 6x RP-SMA male jacks
2	ANT-I3ABGN-0304	2.4/5.x GHz 3/4 dBi omnidirectional ceiling mount antenna, with 36-inch external coaxial cables and 3x RP-SMA male jacks
3	ANT-ABGN-23	2.4/5.x GHz 3/4 dBi directional patch wall/pole-mount antenna, with 60-inch external coaxial cables and 6x RP-SMA male jacks
4	ANT-ABNG230-W	2.4/5.x GHz 2/3 dBi omnidirectional rubber ducky antenna with 1x RP-SMA male jacks
5	ANT-ABGN-470	2.4/5.x GHz 4.7/4.7 dBi omnidirectional rubber ducky antenna with 1x RP-SMA make jack
6	ANT-I2ABGN-0304-O	2.4/5.x GHz 3/4 dBi omnidirectional ceiling mount antenna, with 36-inch external coaxial cables and 2x RP-SMA male jacks
7	ANT-O4ABGN-0607-PT	2.4/5.x GHz 6/7 dBi directional patch wall/pole-mount antenna, with 36-inch external coaxial cables and 4x RP-SMA male jacks
8	ANT-O6ABGN-0607-PT	2.4/5.x GHz 6/7 dBi directional patch wall/pole-mount antenna, with 36-inch external coaxial cables and 6x RP-SMA male jacks
9	ANT-O6ABGN-0606-O	2.4/5.x GHz 6/6 dBi omnidirectional wall/pole-mount antenna, with 36-inch external coaxial cables and 6x RP-SMA male jacks

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