DATA SHEET

Fortinet AP Series

Controller-Managed Access Points

Fortinet AP series Access Points (APs) provide a high-performance, premise-managed WiFi network with a broad range of 802.11ac Wave 1 and Wave 2 APs that ease deployment and scaling and offer a number of compelling quality-of-experience advantages. They also provide a complete portfolio of security services that offer additional means of protection to combat the ever-evolving threat landscape. **Fortinet also offers an RF technology that uniquely manages the spectrum utilization, allowing it to dramatically simplify deployment vs competing solutions.**

Application Control

Provides administrators with Application Visibility to prioritize applications to improve the user experience by guaranteeing more capacity to select groups, such as mission-critical applications or mobile point-of-sale (mPoS) devices.

Air Traffic Control

Provides sophisticated air traffic control mechanisms to govern station airtime so every client gets a fair turn on-air, which prevents the slowest, or the fastest, devices from hogging resources.

Single Channel Technology

Unique technology that manages spectrum utilization to overcome the interference-related deployment barriers commonly encountered in high density environments.

Product Offerings

802.11ac	
AP822i **AP822e**	APs with dual 2.4 GHz and 5 GHz radios, 2x2 MIMO
OAP832e	Outdoor AP with dual 2.4 GHz and 5 GHz radios, 3x3 MIMO
AP122	Wall plate AP with dual 2.4 GHz and 5 GHz radios

Highlights

Fortinet AP822i and AP822e

The AP822 catalyzes the migration to Gigabit WiFi by bringing the power of enterprise-wide, full channel 802.11ac to more customers. The AP822 is a cost-effective solution designed to meet the mid-range performance requirements of offices, schools, universities, hospitals, hotels, and retail stores, and it supports up to an aggregate 1.17 Gbps data rate for the most demanding business applications such as video and voice.

802.11ac Wave 1 | Dual Radio 2.4 GHz and 5 GHz | 4 Internal/External Antennas

Up to 300 + 867 Mbps

The AP822 is positioned to accelerate the adoption of 802.11ac into more cost-sensitive market segments. For schools, this provides a very cost-effective solution which can be deployed to meet the growing throughput demand from on-campus wireless devices. Hotels can more easily offer a richer WiFi experience where availability of high-quality wireless services is often the primary criterion — above other amenities — for making reservations. Providing high-speed, high-capacity wireless LAN services for the small and medium business is now more attainable with the AP822.

The AP822 access point allows administrators to prioritize applications to improve the user experience based on Fortinet's unique ability to associate specific applications with deployed channel layers. 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 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.

Fortinet's single-channel option uniquely allows the AP822 to support wide WiFi channels in real-world deployments, effectively doubling the data rate over 802.11n and dramatically increasing throughput for Fortinet customers. The AP822 also provides unique roaming support. Fortinet's patented Air Traffic Control® technology enables the network to control client roams, resulting in the industry's lowest roaming latency figures — a true zero-handoff.

Benefits

- Provides an optimized 802.11ac experience, with VHT capabilities
- Only vendor to recommend one or two 80 MHz channel usage for maximum 802.11ac throughput
- No channel planning, and delivers seamless mobility
- Offers flexible deployment options for diverse customer requirements

Specifications for AP822i and AP822e

OPERATING MODES

Centralized deployment mode

Distributed deployment mode

MESH mode

Bridge 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 6.1 or later

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

Upgrades and management via System Director / Network Manager

Support for SNMP

Concurrent Clients Per Radio (Maximum / Recommended) — 128 / 40

WIRELESS SPECIFICATIONS

Model Introduction

AP822i dual-radio, single-band IEEE Std 802.11b/g/n for 2.4 GHz band and IEEE Std 802.11a/n/ac for 5.x GHz band access point with four internal omnidirectional antennas

AP822e dual-radio, single-band IEEE Std 802.11b/g/n for 2.4 GHz band and IEEE Std 802.11a/n/ac for 5.x GHz band access point with four RP-SMA connectors and four external omnidirectional antennas

Supported Radio Technologies

Dual-radio access point for indoor environment

2x2:2SS (two spatial streams)

Supported 2.4 GHz and 5.x GHz for single-band, dual-radio operation; data rate up to 1167 Mbps

Supported transmit beam-forming (TxBF)

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

IEEE Std 802.11b with 22 MHz channels and Direct Sequence Spread Spectrum (DSSS)

IEEE Std 802.11ac WAVE1 with 20/40/80 MHz (HT20/HT40/VHT80) channel width

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

IEEE Std 802.11a/g with 20 MHz channel

Supported Modulation

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

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

IEEE Std 802.11b: BPSK, QPSK, CCK

Supported MCS Index

Supported MCS0–MCS9 for IEEE Std 802.11ac (NSS=1–2)

Supported MCS0–MCS15 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, DFS)

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

5.725–5.825 GHz (UNII-3)

Country-specific restrictions apply; adjusted by controller upon approval

Data Rates Supported (Mbps)

IEEE Std 802.11ac two streams: 13.0–866.7 Mbps (MCS0-HT20 @ 800 nS to MCS9-VHT80 @ 400 nS)

IEEE Std 802.11ac per stream: 6.5–433.3 Mbps (MCS0-HT20 @ 800 nS to MCS9-VHT80 @ 400 nS)

IEEE Std 802.11n Two streams: 13.0–300.0 Mbps (MCS8-HT20@800nS to MCS15-HT40@400nS)

IEEE Std 802.11n per stream: 6.5–150.0 Mbps (MCS0-HT20 @ 800nS to MCS7-HT40@400nS)

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

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

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

Antennas

Four integrated and external single-band omnidirectional antennas for 2x2 MIMO with maximum antenna gain of 3.3 dBi in 2.4 GHz and 6 dBi in 5 GHz. Internal antennas on the 822i are optimized for vertical wall-mounted orientation of the AP.

CONFIGURATION	MAXIMUM CONDUCTIVE POINT TRANSMIT POWER PER STREAM (DBM)	MAXIMUM EIRP PER STREAM (DBM), EXTERNAL ANTENNA SKU	MAXIMUM EIRP PER STREAM (DBM), INTERNAL ANTENNA SKU	RX (DBM)
802.11b	20.0	24.0	23.0	-91
802.11g	19.0	23.0	22.0	-77
802.11n, 2.4 GHz HT20	18.0	22.0	21.0	-73
802.11n, 2.4 GHz HT40	18.0	21.3	21.0	-71
802.11a	18.0	24.0	22.0	-77
802.11n, 5 GHz, HT20	17.0	23.0	21.0	-73
802.11n, 5 GHz, HT40	17.0	23.0	21.0	-70
802.11ac, 5 GHz, HT20	17.0	23.0	21.0	-71
802.11ac, 5 GHz, HT40	16.0	22.0	20.0	-65
802.11ac, 5 GHz, VHT80	16.0	22.0	20.0	-63

PHYSICAL SPECIFICATIONS

Power

Operated at IEEE Std 802.3af power, powered by IEEE Std 802.3af or 802.3 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) (disabled when powered with 802.3af), auto-sensing link speed and MDI/MDX

Four RPSMA RF connectors (For AP822e, external antenna SKU)

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

One USB 2.0 port (Type-A) (disabled when powered with 802.3af)

One console port

One reset button

One Kensington security slot

LED Indicators

One tri-color LED for AP status

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

Mounting

Wall mount: junction box wall mount bracket included

Three mounting kits included with access point:

650-00232, 15/16" T-bar & wall-mount combo adapter

650-00233, 9/16" T-bar adapter

Flat-surface wall-mount bracket (used with 650-00232)

840-00126, Wall Mount Hardware Kit (including to 669-00004 space, 665-00085 M3x10 screws, & 665-00102-M3x30 screws)

Option (ordered separately)

One RJ45 Console

CBL-RJ45-ADAPT-X5, GbE extension adapter

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

Installation in the Air-Handling Space

AP822e metal enclosure only by removing plastic façade

Dimensions

AP822i or AP822e (with mounting bracket): 7.1 x 7.1 x 2.7 inches (18.0 x 18.0 x 6.8 cm)

AP822e without plastic façade: 6.3 x 6.3 x 2.1 inches (16.1 x 16.0 x 5.2 cm)

Weight

AP822i (with mounting bracket): 2.3 lbs (1.1 kg)

AP822e (with mounting bracket): 1.9 lbs (0.9 kg)

AP822e without façade and mounting bracket: 1.5 lbs (0.7 kg)

Specifications for AP822i and AP822e

Environmental
Operating temperature: 32–122°F (0–50°C)
Operating humidity: 5–95% non-condensing
Storage temperature: -40–158°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)
For more country-specific regulatory approval, please contact your Fortinet representative

CERTIFICATIONS
WiFi CERTIFIED™
EU RoHS
CB Report

WARRANTY
Limited lifetime warranty

PART NUMBERS
AP822i
Four integrated dual-band omnidirectional metal PIFA antennas
AP822e
Four reverse polarity SMA connectors; shipment comes with four omnidirectional antennas

SPECIFICATION OF DEFAULT ANTENNA

	MODEL NUMBER	DESCRIPTION
1	ANT-01ABGN-0406-O	External antenna (Default in AP822e): ANT-01ABGN-0406-O, 2.4/5 GHz 3.3/6 dBi omnidirectional antenna with a single RP-SMA jack

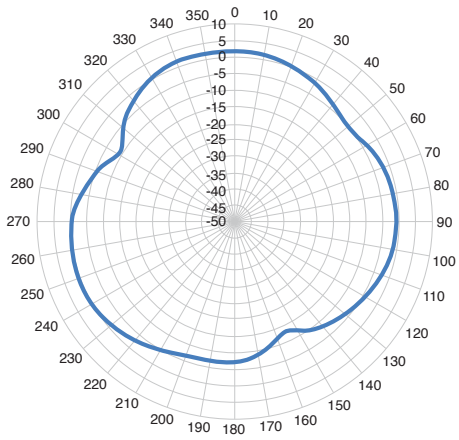
SPECIFICATION OF OPTIONAL EXTERNAL ANTENNAS (SOLD SEPARATELY)

	MODEL NUMBER	DESCRIPTION
1	ANT-ABGN230-W	2.4/5.x GHz 2/3 dBi omnidirectional rubber ducky antenna with a single RP-SMA jack
2	ANT-ABGN-470	2.4/5.x GHz 4.7/4.7 dBi omnidirectional rubber ducky antenna with a single RP-SMA jack
3	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 jacks

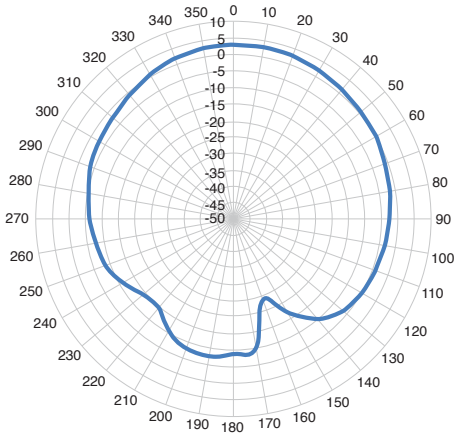
Antenna Model

AP822i

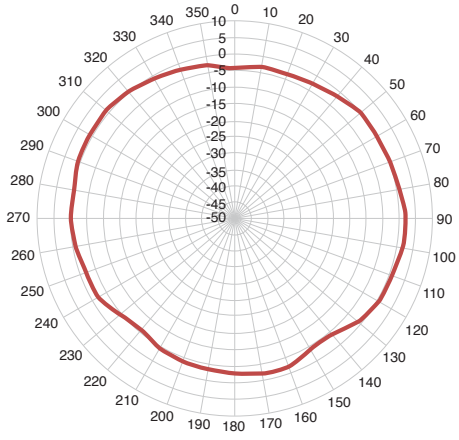
Internal Antenna	2.4–2.5 GHz	4.9–5.9 GHz
Average Antenna Gain	3.3 dBi	6 .0 dBi
Polarization	Linear	Linear
Azimuth Beam-width	360°	360°
Elevation Beam-width	75°	55°
VSWR	1:1.5	1:1.5



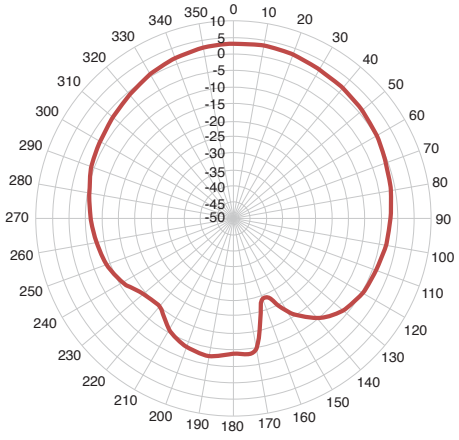
2.4 GHz H-plane



2.4 GHz E-plane



5 GHz H-plane

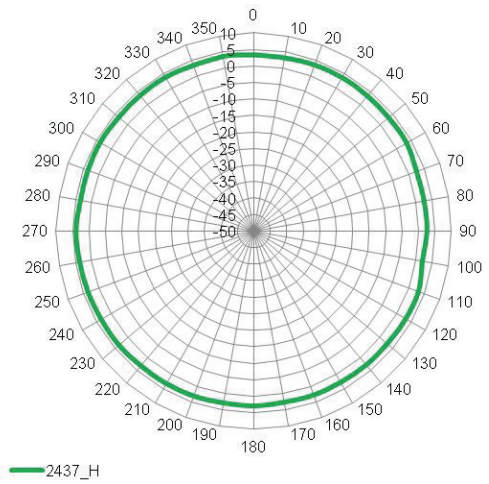


5 GHz E-plane

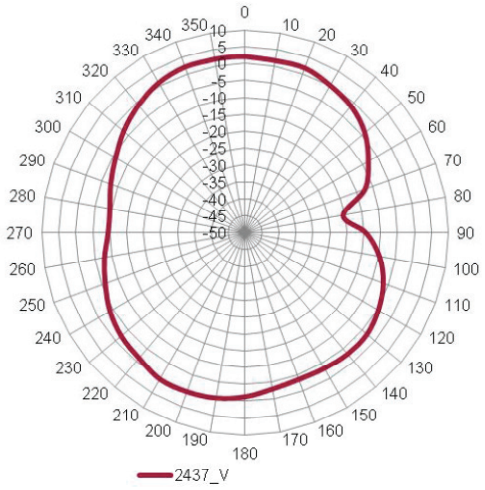
Antenna Model

AP822e

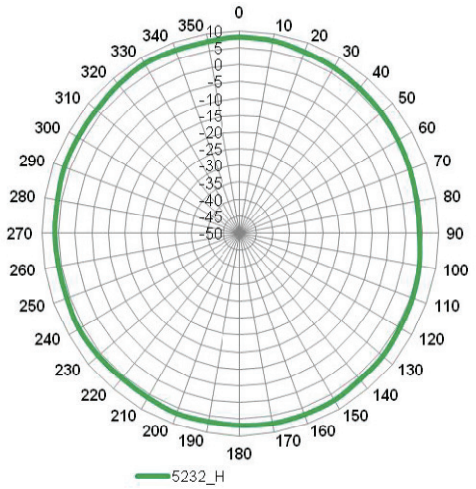
External Antenna	2.4–2.5 GHz	4.9–5.9 GHz
Average Antenna Gain	3.3 dBi	6.0 dBi
Polarization	Linear	Linear
Azimuth Beam-width	360°	360°
Elevation Beam-width	75°	55°
VSWR	1:1.5	1:1.5



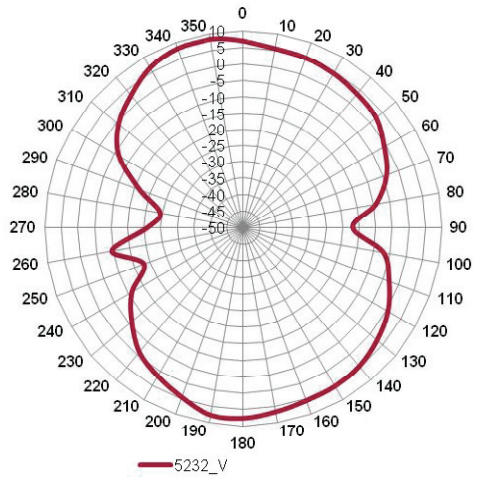
2.4 GHz H-plane



2.4 GHz E-plane



5 GHz H-plane



5 GHz E-plane

Highlights

Fortinet OAP832e

The OAP832e is an 802.11ac outdoor access point (AP) capable of supporting a variety of external antennas. Designed for high-density deployments such as stadiums, arenas, university campuses, hospitals, convention centers, and warehouses. The OAP832e supports an aggregate 1.75 Gbps data rate for demanding business applications like video and voice.

802.11ac Wave 1 | Dual Radio 2.4 and 5 GHz | 6 External Antennas

Up to 450 + 1,300 Mbps

The OAP832e access point allows administrators to prioritize applications with Fortinet's unique channel-layering technology to improve the user experience. For schools, this means Learning Management System applications can be assigned to a dedicated channel layer, while online classroom video feeds can be carried on another channel layer. For healthcare, life-critical applications such as patient monitoring can be dynamically assigned to one channel layer, doctor and nursing applications to a second layer, and patient applications to a third.

The OAP832e 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 OAP832e 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. It should be noted that all the Fortinet APs in this document can operate in multi channel mode as well as virtual cell mode.

As with other Fortinet APs, the OAP832e integrates seamlessly with FortiConnect and other applications to bring intelligent management and resilient wireless services to your network.

Benefits

- Provides an optimized 802.11ac experience with Very High Throughput (VHT) capabilities
- Delivers seamless mobility, with no channel planning
- Offers flexible deployment options for different customer requirements
- Offers full management and security assurances

Specifications for OAP832e

QOS

802.11E support (including WMM)

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

OAP832e IEEE802.11a/b/g/n/ac access point, dual radio with six N-type connectors for external antennas

Supported Radio Technologies

2.4 GHz and 5 GHz radio access point

3x3:3SS (three spatial streams)

Outdoor application

Supported 2.4 GHz (TurboQAM Mode)

Supported transmit beam-forming (TxBF)

IEEE Std 802.11ac standard

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

IEEE 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 22 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 (NSS=1-3) 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, DFS)

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

5.725–5.825 GHz (UNII-3)

Country-specific restrictions apply: adjusted by controller upon approval

Operating Channels

2.4 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	MAXIMUM CONDUCTIVE POINT TRANSMIT POWER PER STREAM (DBM)	MAXIMUM EIRP WITH EXTERNAL ANTENNAS	RECEIVER SENSITIVITY (DBM)
802.11b	25.0	29.0	-90
802.11g	24.0	28.0	-76
802.11n, 2.4 GHz HT20	23.0	28.0	-73
802.11n, 2.4 GHz HT40	23.0	27.0	-70
802.11a	22.0	23.0	-75
802.11n, 5 GHz, HT20	22.0	23.0	-73
802.11n, 5 GHz, HT40	22.0	23.0	-70
802.11ac, 5 GHz, HT20	22.0	23.0	-69
802.11ac, 5 GHz, HT40	22.0	22.0	-64
802.11ac, 5 GHz, VHT80	21.0	21.0	-61

Note: Maximum EIRP is country specific and based on the country regulatory approvals.

Configurable Transmission Power

Transmission power configurable in 1.0 dBm increments

Unused radios can be disabled via software for lower power consumption

Antennas

6 external omnidirectional antennas for 3x3 MIMO with maximum antenna gain of 6 dBi in 2.4 Ghz and 7 dBi in 5 Ghz.

Specifications for OAP832e

PHYSICAL SPECIFICATIONS

Power

Operates at IEEE 802.3at power

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

Other Interfaces

Networks: 1x 10/100/1000 Base-T Ethernet RJ45 uplink (G1),
1x 10/100/1000 Base-T Ethernet RJ45 (G2) for downlink and future expansion purposes,
auto-sensing link speed and MDI/MDX

6 N-Type connectors for external antenna SKU (AP832e)

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

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

1 Kensington security slot

LED Indicators

1 LED for AP Power ON status

2 LEDs for Ethernet activity over two RJ45 ports (LAN1 & LAN2)

2 LEDs for the 2.4 GHz and 5.0 GHz radio status indicator

Mounting

1.5–1.6 inch (5–7.5 cm) diameter pole-mounting kit (included).

Wall-mounting kit (included).

Dimensions

11.0 x 8.54 x 2.0 inches (28.0 x 21.7 x 5.0 cm)

Weight

OAP832e (without mounting bracket): 5 lbs (2.27 kg)

OAP832e (with mounting bracket): 7 lbs (3.18 kg)

Environmental

Operating temperature: -40˚–149°F (-40–65°C)

Operating humidity: 5–95% non-condensing

Storage temperature: -40–158˚F (-40–70°C) ambient

Storage humidity: 5–95% non-condensing

Surge protection built in

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)

IP67

CB Report

WARRANTY

1 year hardware warranty

PART NUMBER

OAP832e

6 extended Type N female connectors

SPECIFICATION OF OPTIONAL EXTERNAL ANTENNAS (SOLD SEPARATELY)

	MODEL NUMBER	DESCRIPTION
1	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 connector
2	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 connector
3	ANT-BG080-NM	2.4 GHz 8 dBi omnidirectional outdoor antenna with 1 N-type male connector
4	ANT-A080-NM-2	5.0 GHz UNII-2 & 3 Band 8 dBi omnidirectional outdoor antenna with 1 N-type male connector
5	ANT-O6ABGN-0606-PN	Dual band panel 6-lead antenna for MIMO applications. Features 3 integrated 2.4 GHz panel antennas and 3 integrated 5 GHz panel antennas. 6 dBi at 2.4 GHz, 6 dBi at 5 GHz.

Please note the range of Fortinet infrastructure access points are supported by a combination of specific controller firmware and hardware and are not designed to function with third-party controllers. Specific supported access point and controller combinations will change from time to time and such changes are detailed in the respective firmware release notes. The Fortinet range of controllers, whether they are infrastructure or integrated into FortiOS, only support Fortinet provided access points. Note that not all access points are supported by all controller types.

Highlights

Fortinet AP122

The AP122 is the first wall plate access point specifically designed to meet the ever-increasing mobile data needs of hotel guests and resident college and university students. With gigabit-data rates, the AP122 is perfectly suited for in-room deployment needs of the hotel, cruise line and higher-education residence-hall markets.

802.11ac Wave 1 | Dual Radio 2.4 GHz and 5 GHz | 4 Internal Antennas

Up to 300 + 867 Mbps

Designed to be placed in any location flush to a wall, the AP122 can be installed by standard service personnel using existing CAT5/6 cabling connected from a standard wall junction box. For wired connectivity, it features two 10/100 BASE-T switch ports to support a range of in-room IP device and user connectivity options. Additionally, one of the wired ports can operate as an IEEE 802.3af-compliant PoE Out port offering up to 13 watts of power, capable of powering devices such as IP telephones. This reduces costs in additional cabling, switch ports, and power sourcing equipment. An additional pass-through port allows connectivity for digital phones and a USB port offers options for future uses.

Like other Fortinet access points, the AP122 integrates seamlessly with our Network Manager, Fortinet Connect, and other application solutions to bring intelligent management and resilient wireless services to your network. The AP122 is ideal for supporting IP-based services such as VoIP, IPTV, high-speed Internet access and in-room device connectivity.

Additionally, Fortinet's Virtual Cell, single-channel option uniquely allows the AP122 to support pervasively, full channel 802.11ac in real-world deployments, which more than double the data rate over legacy 802.11n solutions. This architecture also greatly simplifies RF coverage planning and significantly reduces wireless LAN (WLAN) deployment costs.

Benefits

- Support for in-room, IP-based services such as VoIP, streaming video, and high-speed Internet access
- Support for in-room IP devices and digital phones with native access to in-house PBX system
- Maximizes full-channel 802.11ac throughout the enterprise
- No infrastructure upgrades

Specifications for AP122

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

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

Upgrades and management using System Director/E(z)RF® Network Manager

Support for SNMP

WIRELESS SPECIFICATIONS

Model Introduction

AP122 is at dual-radio architecture with:
– 2.4 GHz Std 802.11b/g/n
– 5.6 GHz 802.11a/n/ac

Supported radio technologies

2x2:2SS (two spatial streams)

Supported transmit beam-forming (TxBF)

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

IEEE Std 802.11ac with 20/40/80 MHz (HT20/HT40/VHT80) channel width

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

IEEE Std 802.11a/g with 20 MHz channel

Supported Modulation

IEEE Std 802.11ac: BPSK, QPS K, 16-QAM, 64-QAM, and 256-QAM

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

IEEE Std 802.11b: BPSK, QPSK, CCK

Supported MCS Index

Supported MCS0 to MCS9 for IEEE Std 802.11ac (NSS=1 to 2)

Supported MCS0 to MCS15 for IEEE Std 802.11n

Supported Frequency Bands

2.400 to 2.4835 GHz (ISM)

5.150 to 5.250 GHz (UNII-1)

5.250 to 5.350 GHz (UNII-2, DFS)

5.470 to 5.725 GHz (UNII-2 Extends, DFS)

DEFAULT TRANSMIT POWER

Default transmit power per antenna	2.4 GHz: 10 dBm	5.2 GHz: 13 dBm
Maximum available transmit power per antenna	2.4 GHz: 20 dBm	5.2 GHz: 20 dBm
Transmit power adjustment	1 dBm increments	
Actual Tx power dependent on national regulatory limits		

RECEIVER SENSITIVITY

Standard	Data rate (Mbps)	Receiver sensitivity (dBm)
2.4 GHz, IEEE 802.11b	1	-97
	11	-89
2.4 GHz, IEEE 802.11g	6	-94
	54	-76
2.4 GHz, IEEE 802.11n HT20	MCS0/8	-93
	MCS7/15	-72
2.4 GHz, IEEE 802.11n HT40	MCS0/8	-91
	MCS7/15	-70
5 GHz, IEEE 802.11a	6	-92
	54	-72
5 GHz, IEEE 802.11n HT20	MCS0/8	-90
	MCS7/15	-72
5 GHz, IEEE 802.11n HT40	MCS0/8	-86
	MCS7/15	-68
5 GHz, IEEE 802.11AC HT20	MCS0NSS1/2	-89
	MCS8NSS1/2	-68
5 GHz,IEEE 802.11AC HT40	MCS8NSS1/2	-88
	MCS8NSS1/2	-62
5 GHz, IEEE 802.11AC HT80	MCS8NSS1/2	-82
	MCS8NSS1/2	-60

Antennas
Four integrated Single band omni-directional antennas for 2x2 MIMO with maximum antenna gain of 3.6 dBi in 2.4 GHz and 5 dBi in 5 GHz. Antennas are optimized for vertical wall-mounted orientation of the AP.

PHYSICAL SPECIFICATIONS

Power

IEEE PoE (Power over Ethernet) 802.3af/802.3at injector or switch

48V external power adapter (sold separately)

Other Interfaces

One 10/100/1000 Mbps BASE-T Ethernet RJ45 for Data uplink (G1)

One 10/100 Mbps BASE-T Ethernet RJ45 port with PoE Out support.

One 10/100 Mbps BASE-T Ethernet RJ45 port

One USB 2.0 port (Type-A)

One reset button

One RJ45 Passthrough port: RJ45 to RJ45

LED Indicators

One tri-color LED for AP status

Mounting

Wall mount: junction box wall mount bracket included

Dimensions

5.51 x 5.35 x 1.18 inches (14.0 x 13.6 x 3.0 cm)

Environmental

Operating temperature: 32–104°F (0–40°C)

Operating humidity: 5–95% non-condensing

Storage temperature: -40–158°F (-40–70°C) ambient

Storage humidity: 5–95% non-condensing

Specifications for AP122

REGULATORY COMPLIANCE

Unintentional Radiation Compliance Requirements

FCC Part 15.107 – 47CFR15.107 October 1, 2008 Class B
FCC Part 15.109 – 47CFR15.109 October 1, 2008 Class B
ICES-003 Class B – issue 4, February 2004
EN 301 489-1
EN 301 489-17
EN55022 Class B – 2006
EN55024 / AS/NZS CISPR 24 / Immunity
EN61000-4-2,3,4,5,6
Japan VCCI Class B
EN60601-1-2

Radio Compliance Requirements

FCC Part 15.247 – 47 CFR Ch. I (10–1–00 Edition)
FCC Part 15.407 – 47 CFR15.407 October 1, 2008
RSS-210 Issue 8, December 2010
RSS-210 W52, W53 and W56
EN 300 328 v1.7.1 (2006-05)
EN 301 893 V1.7.1 (2008-12)
Japan Radio Law 38-24-1 (Ninsho) – WW 2.4 GHz band
Japan Radio Law 38-24-1 (Ninsho) – XW 5.3 GHz band and YX 5.6 GHz band

Safety Compliance Requirements

UL 60950-1, 2nd Edition, 2011-12-19
CSA C22.2 No. 60950-1-07, 2nd Edition, 2011-12
EN 60950-1:2006+A11:2009+A1:2010+A12:2011
IEC 60950-1(ed. 2), IEC 60950-1(ed. 2);am1

Environmental Compliance Requirements

ROHS, Directive 2011/65/EU (RoHS 2)
WEEE, Directive 2012/19/EU
REACH, Regulation (EC) No 1907/2006

Ethernet Standards

Ethernet IEEE 802.3
Power Over Ethernet IEEE 802.3at PD
Power Over Ethernet IEEE 802.3af PSE
Wireless IEEE 802.11a/b/g/n/ac

CERTIFICATION

WiFi Certified — IEEE Std 802.11a/b/g/n/ac

WARRANTY

Limited lifetime warranty

PART NUMBER

AP122: 802.11ac 2x2:2 dual radio, dual concurrent wall plate access point

Please note the range of Fortinet controller-managed access points are supported by a combination of specific controller firmware and hardware and are not designed to function with third-party controllers. Specific supported access point and controller combinations will change from time to time and such changes are detailed in the respective firmware release notes. The Fortinet range of controllers, whether they are standalone or integrated into FortiOS, only support Fortinet provided access points. Note that not all access points are supported by all controller types.

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