

FortiAP-221B QuickStart Guide



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Package Contents



Fortinet's FortiAP wireless thin access points deliver secure, identity-driven WiFi client access that creates a fortified WLAN network that is centrally managed by a FortiGate or FortiWiFi platform.

Your box contains the following:

FortiAP-221B

QuickStart Guide (with Mounting Template)

Mounting Bracket

T-Rail Mounting Hardware Kit

Wall/Ceiling Mounting Hardware Kit







T-Rail Mounting Hardware Kit



Wall/Ceiling Mounting Hardware Kit





QuickStart Guide

2. Mounting Your FortiAP Unit

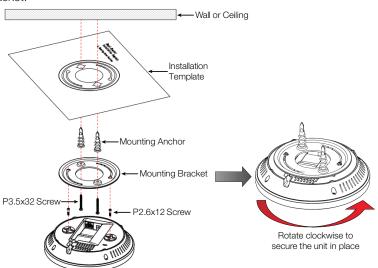


Using the provided hardware, the FortiAP unit can be attached to a ceiling or wall.

To attach the unit to a ceiling or wall using the mounting bracket:

- 1. Attach the mounting bracket to the wall or ceiling using the mounting template and the provided wall/ceiling mounting hardware kit.
- Insert the provided short screws into the bottom cover of the FortiAP unit.
 Leave enough of the screws exposed to ensure that the unit can be attached to the mounting bracket.

If extra space is required, use the provided spacers and long screws from the T-Rail mounting hardware kit to increase the space between the unit and the mounting bracket.

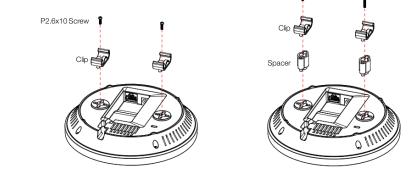


3. Mount the FortiAP unit on the mounting bracket by rotating the unit clockwise about 90 degrees to secure it in place.

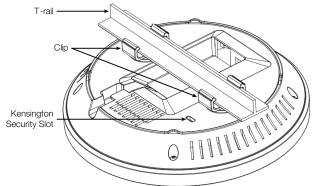
To attach the unit to a ceiling using the provided T-rail connectors:

- 1. Attach the T-rail connectors to the bottom cover of the FortiAP unit using the provided short screws.
 - Two sizes of T-rail connectors are included in the mounting hardware kit: 15/16in (2.38cm) and 9/16in (1.43cm).
 - If extra space is required to accommodate drop ceiling tiles, use the provided spacers and long screws.

P2.6x25 Screw



2. Line up the connected T-rail connectors with an appropriately sized rail and press the unit onto the rail until it snaps into place.



Note: To protect your FortiAP unit, use the Kensington security slot to attach a cable lock (cable lock is not included).

3. Connecting Your FortiAP Unit



The FortiAP unit can be powered using Power over Ethernet (PoE) or with the optional AC power adapter. Please order either the Fortinet Gigabit PoE Injector (SKU: GPI-115) or the 12V AC power adapter (SKU: SP-FAP221B-PA)

Caution: This device complies with IEEE 802.3af PoE specification. Do not use any PoE injectors that are not IEEE 802.3af compliant as they may damage your device.

To connect the FortiAP unit:

- 1. Insert an Ethernet cable into the Ethernet port of the FortiAP unit.
- 2. Insert the other end of the Ethernet cable into your FortiGate or FortiWifi unit. If you are using PoE, ensure that the Ethernet cable is connected to an applicable port on your FortiGate unit, FortiSwitch unit, or PoE injector.
- 3. If you are not using PoE, connect a region-specific AC plug adapter to the optional power adapter by inserting the round disk into the adapter and rotating clockwise until you hear the disk lock in place. Then insert the DC plug of the power adapter into the DC power jack on the FortiAP unit.

Note: For FortiWifi units, the wireless controller feature is only supported on units running FortiOS 4.0 MR3 and higher.

Caution: This equipment is to be connected only to PoE networks without routing to the outside plant.

4. Configuring Your FortiAP Unit



The FortiAP unit is designed to require no configuration in most networks. *Zero Configuration* mode works if the unit is directly connected to the FortiGate or FortiWifi performing the Wireless LAN Controller (WLC) functions, or on the same layer-2 network and subnet as the FortiGate or FortiWifi unit.

To enable the FortiAP using Zero Configuration:

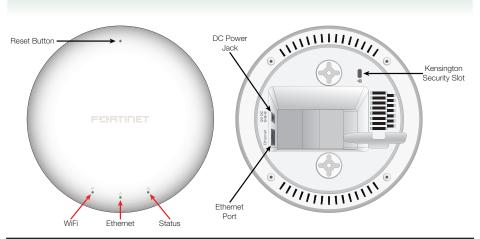
- 1. After connecting the FortiAP unit as described on page 4, the unit goes through its boot procedure and requests an IP address from the DHCP server.
- 2. If the IP address is retrieved successfully, the FortiAP enters discovery mode to locate a FortiGate or FortiWifi wireless controller. The discovery modes are:
 - Broadcast
 - Multicast
 - DHCP option 138
- 3. If this is the first time connecting the FortiAP to the controller, only the power and status LEDs are lit. If the FortiAP has been pre-provisioned in the controller, the WiFi LED is also lit.
- 4. Verify that the FortiAP has successfully connected to the controller. In the FortiGate Web-based Manager, go to WiFi Controller > Managed Access Points > Managed FortiAP. A successfully discovered unit displays a half-filled circle symbol.
- **5.** Select the access point and click *Edit*.
- **6.** In the *Admin* field, select *Enable*.
- 7. In the AP Profile field, select a profile from the list and click OK. The configuration is downloaded from the wireless controller to the FortiAP and the WiFi LED lights up.

For more information, see the Deploying Wireless Networks Guide, available on Fortinet's documentation website, http://docs.fortinet.com.

Technical Specifications

5.



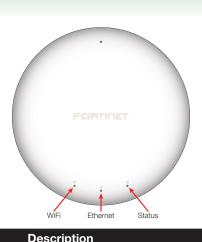


Interface	Type	Protocol	Description
Ethernet Port	RJ-45	Gigabit Ethernet	Ethernet port with PoE support up to 12.9W, IEEE 802.3af.
Reset Button			Hold for 5 seconds to reset the FortiAP unit to its factory defaults.
Hardware Specification		tion Descript	ion
WiFi Radios		One 2.4/5	GHz A/B/G/N and one 2.4GHz B/G/N

Hardware Specification	Description
WiFi Radios	One 2.4/5GHz A/B/G/N and one 2.4GHz B/G/N
Memory	64MB (DDR2)
Flash	16MB
Kensington Security Slot	Anti-theft security slot for attaching a lock-and-cable apparatus.
Optional Power Adapter	Adapter Input: 100-240V, 50/60Hz, 0.6A Output: 12V DC, 1.5A, center positive
Optional PoE Injector	Fortinet Gigabit PoE Injector, GPI-115
Indoor/outdoor Deployment	Indoor only.

6. LED Specifications





LED	State	Description
Ethernet Port	Off	No link established.
	Flashing Green	Link activity.
	Amber	Connected at 10/100 Mbps (fast Ethernet).
	Green	Connected at 1000 Mbps (Gigabit Ethernet).
Status	Off	No power.
	Flashing Green	The unit is on.
	Amber	The FortiAP unit is booting from a factory reset, or the FortiGate wireless controller has been found but this FortiAP unit is not being managed.
	Green	The unit is being managed by a FortiGate wireless controller.
	Flashing Amber	Error or fault in connecting to the FortiGate wireless controller.
Wifi	Off	Wireless interface is disabled or off.
	Green	At least one radio is enabled.
	Flashing Green	Wireless interface is active.

7. Technical Documentation and Links



The following Fortinet web pages provide information and resources for your Fortinet product:

1. Fortinet Customer Support: https://support.fortinet.com

On this page you can create a support account with Fortinet, register and manage your products, download updates, firmware images and release notes, and create technical support tickets.

2. Fortinet Technical Documentation: http://docs.fortinet.com

This page provides the most up-to-date versions of Fortinet publications for the entire family of Fortinet products. The following guides provide more information on the installation and configuration of your FortiAP unit:

- Deploying Wireless Networks: This guide describes how to configure wireless networks with FortiWiFi, FortiGate, and FortiAP units.
- Wireless Starter Kit: This guide provides example configurations of FortiAP thin wireless access
 points managed by a wireless controller running FortiOS 4.3
- PoE Injector QuickStart Guide: This guide describes the Fortinet Gigabit PoE Injector and provides basic installation instructions.

3. Fortinet Knowledge Base: http://kb.fortinet.com

This page provides Fortinet technical documentation, such as troubleshooting, how-to articles, example configurations, FAQs, technical notes, and more.

4. Fortinet Technical Discussion Forums: http://support.fortinet.com/forum

This page allows you to communicate with other customers and Fortinet partners about Fortinet products, services, and configuration issues in a forum environment.

5. Fortinet Training Services: http://training.fortinet.com

This page provides course descriptions, availability, schedules, and locations of training programs in your area.

6. FortiGuard Threat Research and Response: http://www.fortiguard.com

This page provides up-to-date information on vulnerabilities and threats, and includes a virus scanner, Internet Protocol (IP) signature look-up, web filtering tools, and related information.

Fortinet Tools and Documentation CD

The tools and documents on this CD are current as of shipping time.

Comments on Technical Documentation

Please send comments or information about any errors or omissions in this or any Fortinet technical documents to technical documents.com.

8. Cautions and Warnings



Please review the following cautions and warnings.

Environmental specifications

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

If you install your Fortinet product in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient temperature. Therefore, make sure to install the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature.

Storage temperature: -31 to 158°F (-35 to 70°C)

Humidity: 10 to 90% non-condensing

Air flow - For rack installation, make sure that the amount of air flow required for safe operation of the equipment is not compromised.

For free-standing installation, make sure that the appliance has at least 1.5 in. (3.75 cm) of clearance on each side to allow for adequate air flow and cooling.

FCC Compliance

The Fortinet product has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

For operation within $5.15 \sim 5.25 \text{GHz}$ frequency range, this device is restricted to indoor environments. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE: Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for uncontrolled environments. This equipment should be installed and operated with a minimum distance of 21cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. The availability of some specific channels and/or operational frequency bands are country

dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

Industry Canada Statement

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Règlement d'Industry Canada

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Caution: The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems. High-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

Avertissement: Les dispositifs fonctionnant dans la bande 5 150-5 250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux. De plus, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5 250-5 350 MHz et 5 650-5 850 MHz et que ces radars pourraient causer du brouillage et/ ou des dommages aux dispositifs LAN-EL.

Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 21cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 21 cm de distance entre la source de rayonnement et votre corps.

Grounding

Ensure your Fortinet product is connected and properly grounded to a lightning and surge protector. WAN or LAN connections that enter the premises from outside the building should be connected to an Ethernet CAT5 (10/100 Mb/s) surge protector.

Shielded Twisted Pair (STP) Ethernet cables should be used whenever possible rather than Unshielded Twisted Pair (UTP).

Do not connect or disconnect cables during lightning activity to avoid damage to your Fortinet product or personal injury.

Electrostatic discharge (ESD) can damage Fortinet equipment. Only perform the procedures described in this document from an ESD workstation. If no such station is available, you can provide some ESD protection by wearing an anti-static wrist strap and attaching it to an available ESD connector or other bare metal object.

Caution: This equipment is to be connected only to PoE networks without routing to the outside plant.

Caution: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to your local regulations.

9. Register Your Product



If you did not register your Fortinet product, please register your product now.

Register

Register your Fortinet product in order to receive:

• Technical Support • New product features • Protection from new threats

Enregistrer

Vous devez enregistrer le produit pour recevoir:

 Support technique • Nouvelles fonctionnalitées du produit • Protection contre de nouvelles menaces

Registra

La reistrazione ti permette di usufruire di:

• Supporto Tecnico • Nuove funzionalita • Proteezione dalle ultime minaccce

Registrar

Debe registrar el producto para recibir:

• Apoyo técnico • Nuevas funcionalidades del producto • Protección contra ataques

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Web: https://support.fortinet.com/

Toll free: 1 866 648 4638

Phone: 1 408 486 7899

Fax: 1 408 235 7737

Email: register@fortinet.com

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Product License Agreement

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