# F

# FortiAP<sup>™</sup> Series



## FortiGate, FortiEdge Cloud, or SASE-managed access points

FortiAP<sup>™</sup> access points are managed centrally by the integrated WLAN controller of any FortiGate<sup>®</sup> security appliance or through the FortiEdge Cloud provisioning and management portal. With the integration of the wireless controller functionality into the market-leading FortiGate appliance, these APs are perfect for campus and branch deployments. Fortinet's Security Fabric enables you to easily manage wired and wireless security from a Single-pane-of-glass management console and protects your network from the latest security threats.

#### Highlights

- Unified management console simplifies operations, ensuring consistency in effective policy enforcement and compliance
- Built-in foundation for zerotrust network access (ZTNA) and secure access service edge (SASE), allowing you the flexibility to easily deploy microbranches with the security you need at the edge of your network
- Wireless LAN security done right, from the leader in network security. Integrated Firewall, IPS, Application Control, and Web Filter protect the wireless LAN from the latest security threats
- Protects the network from advanced wireless threats and satisfies industry compliance such as PCI DSS

HARDWARE O	FFERINGS	ANTENNA TYPE	INDOOR USE	OUTDOOR USE	BLE SUPPORT
802.11be W#i	-Fi 7				
FAP-441K	4×4 Indoor quad-radio 11be 6Ghz Capable APs	Internal	$\bigcirc$		5.1
FAP-443K	4×4 Indoor quad-radio 11be 6Ghz Capable APs	External	$\bigcirc$		5.1
FAP-241K	2×2 Indoor quad-radio 11be 6Ghz Capable APs	Internal	$\bigcirc$		5.1
FAP-243K	2×2 Indoor quad-radio 11be 6Ghz Capable APs	External	$\bigcirc$		5.1
802.11ax Wi-F	'i 6E				
FAP-431G	4×4 Indoor tri-radio 11ax 6Ghz Capable APs	Internal	$\bigcirc$		5.2
FAP-432G	4×4 Ruggedized Tri-radio indoor/outdoor 11ax (6Ghz) Capable APs	External	$\bigcirc$	$\odot$	5.1
FAP-433G	4×4 Indoor tri-radio 11ax 6Ghz Capable APs	External	$\bigcirc$		5.2
FAP-231G	2×2 Indoor tri-radio 11ax 6Ghz Capable APs	Internal	$\bigcirc$		5.2
FAP-233G	2×2 Indoor tri-radio 11ax 6Ghz Capable APs	External	$\bigcirc$		5.2
FAP-234G	AP-234G 2×2 Ruggedized Tri-radio indoor/outdoor 11ax (6Ghz) Capable APs		$\bigcirc$	$\odot$	5.1
802.11ax Wi-F	ʻi 6				
FAP-831F	8×8 Indoor tri-radio 11ax AP	Internal	$\bigcirc$		5.2
FAP-433F	4×4 Indoor tri-radio 11ax APs	External	$\bigcirc$		5.1
FAP-432F	4×4 Ruggedized indoor/outdoor tri-radio 11ax AP	External	$\bigcirc$	$\bigcirc$	5.2
FAP-432FR	4×4 C1D2 Certified tri-radio 11ax AP	External	$\bigcirc$	$\bigcirc$	5.2
FAP-431F	4×4 Indoor tri-radio 11ax APs	Internal	$\bigcirc$		5.1
FAP-234F	2×2 Ruggedized indoor/outdoor tri-radio 11ax AP	Internal	$\bigcirc$	$\bigcirc$	5.2
FAP-23JF	2×2 Wall-mount tri-radio AP	Internal	$\bigcirc$		5.2
802.11ac (Way	ve 2) Wi-Fi 5				
FAP-223E	2×2 Indoor dual-radio APs	External	$\bigcirc$		5.1
FAP-221E	2×2 Indoor dual-radio APs	Internal	$\bigcirc$		5.1

### **Use Cases**

FortiAPs allow for a versatile collection of installation topologies with options to fit any enterprise.

H	-

#### Campus

A single building with multiple floors, or a corporate or education campus with a group of large buildings.

- High-capacity designs including Dual 5GHz and tri-band with Wi-Fi 6E allow a maximal number of client devices to attach to the network at the same time without over-air congestion
- Complete NOC functionality with network visibility and AlOps simplify a complex network deployment into a solution manageable by IT teams of any size



#### Branch Office / SD-Branch

A highly distributed number of small sites, often with no on-site IT.

- Built in NAC functions\* allow secure onboarding of devices at remote locations where IT doesn't have reliable visibility
- Management orchestration with zero-touch deployment allows for quick and easy rollouts without the need for skilled installers at each site

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#### Micro Branch

Ultra small sites that still fall under IT's responsibility.

- Can act as a SASE endpoint as a foundation for zero-trust network access (ZTNA)
- Simple management and provisioning through FortiSASE interface



#### **Remote Workers**

A remote AP installed at a worker's home or at micro-branch office space.

- Split tunneling allows local traffic to remain local while sending other traffic to the data center for inspection when needed
- Desktop mounting options for wall-plate models allow the use of Ethernet as well as Wi-Fi connectivity while leveraging the same secure tunnel



#### SMB

Single site or small collection of sites with limited IT resources.

- Built-in NAC functions\* bring security to the wireless network with no need to install and manage additional products
- Network and security convergence decreases management overhead while keeping the network secure

#### FortiAP 443K and 441K

These high performance enterprise class Wi-Fi 7 indoor APs provide four radios and four spatial streams. These access points support the 6 GHz band and have 10 Gigabit Ethernet ports. The APs can provide 24/7 scanning across all bands while still providing access on 2.4 GHz, 5 GHz, and 6 GHz bands. The integrated BLE/ ZigBee radio can be used for beacons and locationing applications.

Note: For FAP-443K, use of the 6GHz band is subject to regional regulatory authority approval.

Wi-Fi 7 | Four-Radio 2.4GHz + 5GHz + 6GHz + Scan | 10 Internal Antennas / (4 External RPSMA dual band Connectors + 4 External RPSMA 6Ghz connectors + 2 Tri-band RPSMA connectors) + 1 BLE/Zigbee internal antenna

4×4 MU-MIMO | Up to 1.148 Gbps + 8.648 Gbps + 11.53 Gbps





FAP-441K

FAP-443K

# Specifications

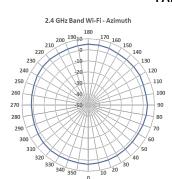
Hardware					
Туре	Indoo	r AP			
Number of Radios	4 + 1	BLE			
Number of Antennas	Internal: x4 dual band WIFI + x4 6GHz WIFI + x2 Tri-band scanning + x1 2.4GHz BLE/ ZigBee + x1 GPS	External: x4 dual band WIFI + x4 6GHz WIFI + x2 Tri-band scanning Internal: x1 2.4GHz BLE/ ZigBee + x1 GPS			
Antenna Type Support		RP-SMA (10 total): Dual Band Antenna (4) 6Ghz Antenna (4) Triband Antenna (2)			
Antenna Type and Peak Gain	Omni Directional Antenna Dual band antenna:	Omni Directional Antenna Dual band antenna:			
	4.0 dBi for 2.4GHz 5.6 dBi for 5 GHz 6GHz antenna: 5.4dBi for 6GHz band	5.0 dBi for 2.4GHz 5.0 dBi for 5 GHz 6GHz antenna: 5.8dBi for 6GHz band			
	Tri-band antenna: 4.0 dBi for 2.4 GHz, 6.0 dBi for 5 GHz and 5.7 dBi for 6 GHz band	Tri-band antenna: 5.0 dBi for 2.4 GHz, 5.0 dBi for 5 GHz and 4.0 dBi for 6 GHz band			
	BLE antenna: 5.1 dBi for 2.4GHz GPS active antenna: 2.2 dBi antenna	BLE antenna: 5.1 dBi for 2.4GHz GPS active antenna: 2.2 dBi antenna			
	. ISM 2.4-2.484 GHz · U-NII-1 5.15-5.25 GHz · U-NII-2A 5.25-5.35 GHz · U-NII-2C 5.47-5.725 GHz · U-NII-3 5.725-5.85 GHz	· U-NII-4 5.850-5.925 GH · U-NII-5 5.925-6.425 GH · U-NII-6 6.425-6.525 GH · U-NII-7 6.525-6.875 GH · U-NII-8 6.875-7.125 GHz			
Radio 1 Capabilities	Frequency band: 2.4GHz Channel width: 20/40MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 4×4 Service				
Radio 2 Capabilities	Frequency band: 5.0GHz UNII-1 to UNII-4 Channel width: 20/40/80/160/240MHz Modulation: BPSK, QPSK, 64/256/1024/4096 QAM MIMO Chains: 4×4 Service				
Radio 3 Capabilities	Frequency band: 6.0GHz UNII-5 to UNII-8 Channel width: 20/40/80/160/320MHz Modulation: BPSK, QPSK, 64/256/1024/4096 QAM MIMO Chains: 4×4 Service				
Radio 4 Capabilities	Frequency band: Channel width: 20 Modulation: BPSK, QPS MIMO Chains: 3	0/40/80/160MHz 5K, 64/256/1024 QAM			
Maximum Data Rate	2.4GHz band: up 5.0GHz band: up 6.0GHz band: up	to 8.648 Gbps			
Bluetooth Low Energy (BT/BLE) Radio	Bluetooth scanning and @10 dBm ma				
GNSS	. Supported Bands . Default constallations	GPS L1 C/A, QZSS L1 C/A: 1575.42 MHz,			
	. Number of Tracking Channels	GLONASS L1: 1598.0625-1605.375 MHz			
	. Number of Concurrent GNSS	BDS B1I : 1561.098 MHz, Galileo E1: 1575.42 MHz GPS + GLONASS + BDS +			
	. SBAS . Sensitivity (@ Default Constallations)	Galileo + QZSS 47 5 WAAS, EGNOS, MSAS and GAGAN -147dBm			
Interfaces	x2 100M/1000M/2.5G/5.0G, (RJ- x1 Type 3.0 USB at 4.5W, x	15)			
Power over Ethernet (PoE)	x1 802.3bt P	oE default or PoE current sharing)			

	FortiAP 441K FortiAP 443K
EAP Type(s)	EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST
User/Device Authentication	WPA™, WPA2™, and WPA3™ with 802.1x or Preshared key, WEP, Web Captive Portal, MAC blacklist and whitelist
Maximum Tx Power (Conducted)	2.4GHz band: 29 dBm / 794 mW (4 chains combined)* 5.0GHz band: 27.8 dBm / 602 mW (4 chains combined)* 6.0GHz band: 23 dBm / 200 mW (4 chains combined @ 160MHz BW)*
Kensington Lock	Yes
IEEE Standards	802.11a, 802.11b, 802.11be, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11k, 802.11n, 802.11r, 802.11v, 802.11ac, 802.11ax, 802.1X, 802.3ad, 802.3at, 802.3bt, 802.3az
SSID Types Supported	Local-Bridge, Mesh, and Tunnel
Per Radio Client Capacity	Up to 512 clients per radio (Radio1, Radio2 and Radio3)
Cellular Co-existence	Yes
LED Off Mode	Yes
Advanced 802.11 Features	
OFDMA	Yes
Spatial Reuse (BSS Coloring)	Yes
UL MU-MIMO	Yes
DL- MU-MIMO	Yes
Enhanced Target Wake Time (TWT)	Yes
ZeroWait DFS	No
Onboard Security Functions	
UTP Capable	No
UTP Features	N/A
Wireless Monitoring Capabiliti	
Rogue Scan radio modes	Background, Dedicated
WIPS / WIDS radio modes	Background, Dedicated (recommended)
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Dimensions	
Length x Width x Height	9.84 × 9.84 × 2.26 inches (250 × 250 × 57.5 mm)
Weight	4.36 lbs (1.98 kg)
Package (shipping) Weight	6.9 lbs (3.13 kg)
Mounting Options	Ceiling, T-Rail, and Wall
Included Accessories	Standard Mounting Kit for Ceiling, T-Rail, and Wall
Environment	
	GPI-145 or SP-FAP250-PA-10
Power Supply Power Consumption (Max)	41.7 W
PoE Mode	41.7 W Full - 802.3bt or 2×802.3at or DC : Tx Power - Maximum
	(all radios); # of Chains - 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : R1(2.4GHz), R2(5GHz) and
	R3 (6GHz) Operation in Low Tx Power 17 dBm, # of Chains - 2×2; R4 operational ; USB - Disabled
Humidity	5% to 90% non-condensing
Operating/Storage Temp.	32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°C)
Directives	Low Voltage Directive * RoHS
UL2043 Plenum Material	Yes
Mean Time Between Failures	>10 Years
IP Rating	N/A
Surge Protection Built In	Yes
Hit-less PoE Failover	Yes
Certifications	
Wi-Fi Alliance Certified	Certified (Wi-Fi 7 in progress)
DFS	No
Warranty	
Limited Lifetime Warranty	Yes
-	and some communication features may be restricted to

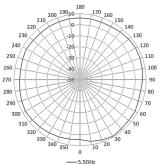
\* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

		FORTIAP 441	K / 443K			
	2.4 GH	z Band	5.0 GHz	z Band	6.0 GHz	Band
Data rate	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)
	802	2.11b				
Mbps	23	-96				
1 Mbps	23	-99				
	802	2.11g	802	2.11a		
Mbps	23	-94	23	-90		
4 Mbps	22	-77	20	-73		
			In HT20			
ICSO	23	-94	23	-90		
ICS7	21	-77	20	-72		
		802.11				
1CS0	23	-93	23	-89		
ICS7	21	-74	20	-70		
		802.11a				
ICS0	23	-95	22	-88		
ICS9	21	-73	19	-69		
			c VHT40			
ICSO	22	-92	22	-87		
ICS9	19	-70	19	-64		
		802.11a	c VHT80			
ICSO			21	-85		
ICS9			18	-62		
	802.11a	x HE20		802.11ax HE20 /	802.11be EHT20	
1CS0	23	-92	22	-88	22	-87
ICS11	18	-70	19	-65	19	-65
	802.11a	x HE40		802.11ax HE40 /	802.11be EHT40	
1CS0	22	-90	22	-87	20	-85
ICS11	17	-61	19	-63	18	-62
				802.11ax HE80 /	802.11be EHT80	
ICS0			21	-85	19	-82
ICS13			18	-61	17	-59
			802.11be	EHT160	802.11ax HE80 / 8	802.11be EHT80
1CS0			19	-79	18	-81
ICS13			17	-56	16	-58
			802.11be	EHT240		
//CS0			17	-79		
ICS13			16	-56		
					802.11be	EHT320
ICSO					19	-80
ICS13					15	-58

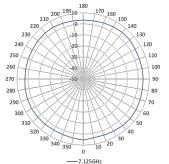
#### **Antenna Radiation Patterns**



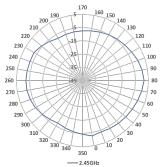
5.0 GHz Band Wi-Fi - Azimuth

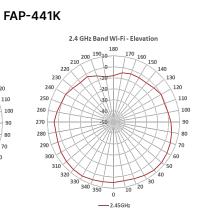


6.0 GHz Band Wi-Fi - Azimuth

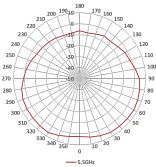


BLE & ZigBee 2.4GHz Band - Azimuth

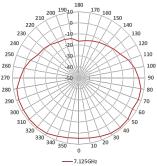




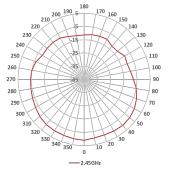
5.0 GHz Band Wi-Fi - Elevation

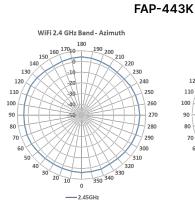


6.0 GHz Band Wi-Fi - Elevation

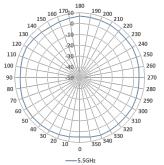


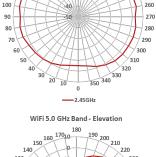
BLE & ZigBee 2.4 GHz Band - Elevation









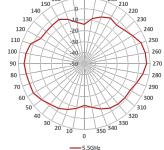


WiFi 2.4 GHz Band - Elevation

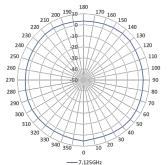
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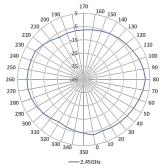
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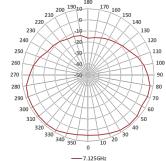
6.0 GHz Band Wi-Fi - Azimuth













-2.45GHz



#### FortiAP 241K and 243K

These enterprise class Wi-Fi 7 indoor APs provide four radios and two spatial streams. These access points support the 6 GHz band and have one 10 Gigabit Ethernet and one 1 Gigabit Ethernet port. The APs can provide 24/7 scanning across all bands while still providing access on 2.4 GHz, 5 GHz, and 6 GHz bands. The integrated BLE/ ZigBee radio can be used for beacons and locationing applications.

Note: For FAP-243K, use of the 6GHz band is subject to regional regulatory authority approval.

 Four-Radio 2.4GHz + 5GHz + 6GHz + Scan | 6 Internal Antennas / (2 External RPSMA dual band Connectors + 2 Tri-band External RPSMA connectors + 2 6Ghz External RPSMA antennas) + 1 BLE/Zigbee internal antenna

2×2 MU-MIMO | Up to 688 Mbps + 2.88 Gbps + 5.76 Gbps





FAP-241K

FAP-243K

# Specifications

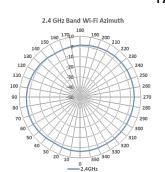
	FortiAP 241K	FortiAP 243K			
Hardware					
Туре	Indoo				
Number of Radios Number of Antennas	4-Radio 2.4GHz + 5.0GHz 6 Internal Wi-Fi antennas: x2 Dual band + x2 6GHz band + x2 Tri-band Scanning 1 Internal 2.4GHz band BLE/ ZigBee antenna	6 External RPSMA antenna connector: x2 Dual band + x2 6GHz band + x2 Tri-band Scanning 1 Internal 2.4GHz band BLE/ZigBee antenna			
Antenna Type Support		RP-SMA (6 total): Dual Band Antenna (2), 6Ghz Antenna (2), Triband Antenna (2)			
Antenna Type and Peak Gain	PIFA 2.4/5GHz dual band antenna: 4.7 dBi for 2.4GHz, 5.4 dBi for 5 GHz	Omni Directional Dual band antenna: 4.5 dBi for 2.4GHz, 5.7 dBi for 5 GHz			
	Alford loop 6GHz antenna: 5.7 dBi for 6GHz band PIFA Tri-band antenna: 5.0 dBi for 2.4GHz, 5.7 dBi for 5.0GHz, and 5.35 dBi for 6GHz band	Omni Directional 6GHz band antenna: 5.25 dBi for 6GHz band Tr-band Omni directional antenna: 3.3 dBi for 2.4GHz, 5.6 dBi for 5GHz, and			
	PFA BLE antenna: 4.6 dBi for 2.4GHz	5.3 dBi for 6GHz band PIFA BLE antenna: 5.2 dBi for 2.4GHz			
Frequency Bands (GHz)	2.4GHz Bant: ISM 2.4-2.484GHz 5.0GHz Bant: UNII-1 5.15-5.25GHz UNII-2A 5.25-3.55GHz UNII-2C 5.47-5.73GHz UNII-3 5.725-5.85GHz UNII-4 5.85-6.895GHz	6GHz Band: UNII-5 5.925-6.425GHz UNII-6 6.425-6.525GHz UNII-7 6.525-6.875GHz UNII-8 6.875-7.125GHz			
Radio 1 Capabilities	Frequency band: 2.4GHz Channel width: 20/40MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Service				
Radio 2 Capabilities	Frequency band: 5.0GHz UNII-1 to UNII-4 Channel width: 20/40/80/160/240MHz Modulation: BPSK, QPSK, 64/256/1024/4096 QAM MIMO Chains: 2×2 Service				
Radio 3 Capabilities	Frequency band: 6.0G Channel width: 20/4 Modulation: BPSK, QPSK, MIMO Chains:	0/80/160/320MHz 64/256/1024/4096 QAM			
Radio 4 Capabilities	Frequency band: 2.4/5.0/6.0GHz Channel width: 20/40/80/160MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Scanning				
Maximum Data Rate	2.4GHz band: up to 688 Mbps 5.0GHz band: up to 4.324 Gbps 6.0GHz band: up to 5.765 Gbps				
Bluetooth Low Energy (BT/BLE) Radio	Bluetooth scanning and @10 dBm ma				
GNSS					
Interfaces	x1 100M/1000M/2.5G/5.0G/10G Multigigabit Ethernet (RJ4 x1 10M/100M/1000M/Ethernet (RJ45) x1 Type 2.0 USB at 2.5W x1 RS-232 RJ45 Serial Port				
Power over Ethernet (PoE)	x1 802.3bt PoE default				
Simultaneous SSIDs	Up to	24			
EAP Type(s)	EAP-TLS, EAP-TTLS/MSCHA PEAPv1/EAP-GTC, EAP-S	Pv2, EAPv0/EAP-MSCHAPv2 SIM, EAP-AKA, EAP-FAST			

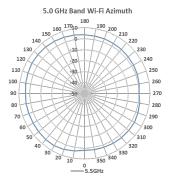
FortiAP 241K	FortiAP 243K
5.0GHz band: 26 dBm/400 mW (2 ch	ains combined)*
Yes	
802.11i, 802.11j, 802.11k, 802.11n	802.11r, 802.11v,
Local-Bridge, Mesh, and	d Tunnel
Yes	
Yes	
Yes	
No	
No	
N/A	
es	
Background, Dedic	ated
Background, Dedicated (rec	ommended)
Yes	
Yes	
7.48 × 7.48 × 2.01 inches (190	× 190 × 51 mm)
	2.6 lbs (1.18 kg)
4.4 lbs (2.0 kg)	4.6 lbs (2.09 kg)
	,,,
USB disabled or 12V, 3A, 36 Watt	DC power supply
26.1 W	
	,
All radios enabled + scan supp	orted, No USB.
	,
5% to 90% non-cond	ensing
Low Voltage Directive	* RoHS
Yes	
>10 Years	
N/A	
Yes	
N/A	
	ogress)
N/A	ogress)
N/A Certified ( Wi-Fi7 in Pr	ogress)
	WPA", WPA2", and WPA3" with 802         WPP, Web Captive Portal, MAC bia         2.4GHz band: 25 dBm/316 mW (2 chai         6.0GHz band: 25 dBm/400 mW (2 chai         6.0GHz band: 25 dBm/200 mW (2 chai         6.0GHz band: 23 dBm/200 mW (2 chai         802.11a, 802.11b, 802.11be, 802.11a,         802.11a, 802.11a, 802.11a         Yes         Yes         Yes         Yes         Yes         No         No         Yes         Seckground, Dedicated (rec         Yes         Yes         Yes         Sectore         Seckground, Dedicated (rec         Yes         Sectore         Sectore         Sectore         Sectore         Sectore         Sectore<

\* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

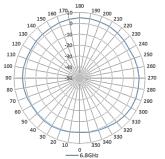
		FORTIAP 241	IK / 243K			
	2.4 GH		5.0 GH:	z Band	6.0 GHz	Band
Data rate	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)
	803	2.11b				
Mbps	22	-99				
1 Mbps	22	-91				
	803	2.11g	802	2.11a		
Mbps	22	-94	22	-92		
4 Mbps	21	-78	20	-75		
		802.11	In HT20			
//CS0	22	-94	22	-91		
ICS7	21	-77	20	-73		
		802.11	n HT40			
ICS0	21	-93	22	-89		
ICS7	20	-74	20	-70		
		802.11a	c VHT20			
//CS0	22	-95	22	-91		
ICS9	22	-73	20	-70		
		802.11a	c VHT40			
1CS0	22	-92	22	-89		
1CS9	21	-70	19	-67		
		802.11a	c VHT80			
ICS0			21	-85		
ICS9			19	-62		
			802.11ax/80	2.11be HE20		
ICS0	22	-94	21	-93	20	-94
ICS11	21	-65	19	-59	20	-60
			802.11ax/802	2.11be HE40		
ACS0	21	-92	21	-91	20	-91
ICS11	20	-62	18	-59	19	-56
				802.11ax HE80 /	802.11be EHT80	
ACS0			21	-88	19	-86
ACS13			18	-56	18	-58
				802.11be	e EHT160	
//CS0			19	-87	17	-86
//CS13			16	-55	16	-56
			802.11be	EHT240		
MCSO			19	-86		
MCS13			16	-54		
					802.11be	EHT360
//CS0					17	-83
MCS13					15	-55

#### **Antenna Radiation Patterns**

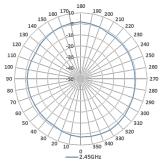


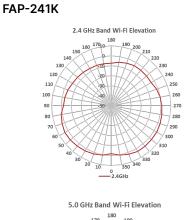


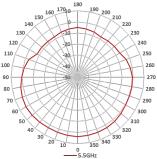
6.0 GHz Band Wi-Fi Azimuth



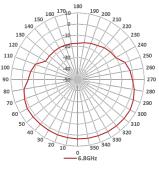
2.4 GHz Band BLE/ZigBee Azimuth



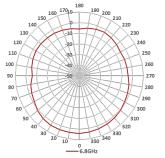


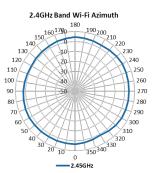


6.0 GHz Band Wi-Fi Elevation

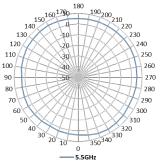


2.4 GHz Band BLE/ZigBee Elevation

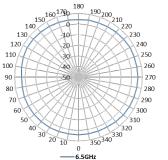




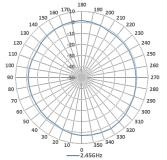
5.0 GHz Band Wi-Fi Azimuth



6.0 GHz Band Wi-Fi Azimuth



2.4 GHz Band BLE/ZigBee Azimuth

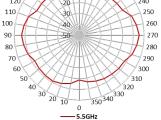


2.4GHz Band Wi-Fi Elevation 180 150 160 1700 140 130 120 20 240 110 250 βÓ 100 260 40 90 270 80 280 70 290 60 300 310 320 330 350 3403 20 10

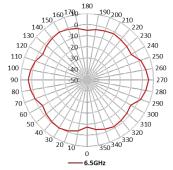


0

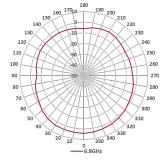
\_\_\_\_\_ 2.45GHz



6.0 GHz Band Wi-Fi Elevation



2.4 GHz Band BLE/ZigBee Elevation



FAP-243K

#### FortiAP 431G and 433G

These high performing enterprise class extended frequency band Wi-Fi 6E indoor APs provide three radios and four spatial streams. These access points support the 6 GHz band, OFDMA, and a 5 Gigabit Ethernet port. The APs can provide 24/7 scanning across all bands while still providing access on both the 2.4 GHz and 5 GHz bands or 2.4 GHz and dual 5 GHz service or the AP can be configured to provide simultaneous access on 2.4 GHz, 5 GHz, and the 6 GHz bands. The integrated BLE/ ZigBee radio can be used for beacons and locationing applications.



4×4 MU-MIMO | Up to 1148 Mbps + 2402 Mbps + 4804 Mbps



FAP-431G

FAP-433G

# Specifications

	FortiAP 431G	FortiAP 433G			
Hardware					
Hardware Type	Indoor AP	Indoor AP			
Number of Radios	3 + 1 BLE	3 + 1 BLE			
Number of Antennas	Internal: x4 Dual band Wi-Fi + x4 Tri-band Wi-Fi and Scanning + 1 2.4GHz BLE/ ZigBee + 1 GPS antenna	External: x4 Dual band Wi-Fi + x4 Tri-band Wi-Fi and Scanning (permanently attached) Internal: 1 2.4GHz BLE/ ZigBee +1 GPS antenna			
Antenna Type Support		RP-SMA (4 total): Dual Band Antenna (4)			
Antenna Type and Peak Gain	Omni Directional antenna. Dual band: 4.0 dBi for 2.4GHz, 5.6 dBi for 5 GHz Tr-band: 4.0 dBi for 2.4GHz, 6.0 dBi for 5 GHz and 5.7dBi for 6GHz band BLE antenna: 5.1dBi for 2.4Ghz	Omni Directional antenna. Dual band: 5.0 dBi for 2.4GHz, 5.0 dBi for 5 GHz Tr-band: 5.0 dBi for 2.4GHz, 5.0 dBi for 5 GHz and 4.0dBi for 6GHz band BLE Omni Directional antenna Single band: 4.0dBi for 2.4GHz			
Frequency Bands (GHz)*	2.400–2.4835, 5.150–5.250, 5. 5.470–5.725, 5.725–5.850, 5.92 5.925–6.875, 6.875–7.125	250–5.350, 5.350-5.470m 25–6.425, 6.425–6.525, 6.525–7,			
Radio 1 Capabilities	Frequency band: 2.4GHz Channel width: 20/40MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 4×4 Service				
Radio 2 Capabilities	Frequency band: 5.0GHz Channel width: 20/40/80/80+80MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 4×4 Service				
Radio 3 Capabilities	Frequency band: 2.4GHz, 5.0GHz, and 6.0GHz Channel width: 20/40/80/160MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 4X4 Service (2×2 when Scanning)				
Maximum Data Rate	Radio 1: up to 1148 Mbps Radio 2: up to 2402 Mbps Radio 3: Up to 4804 Mbps				
Bluetooth Low Energy Radio	Bluetooth scanning and iBeaco @10 dBm max TX power	on advertizement			
Trusted Platform Module (TPM)	Yes	Yes			
Interfaces	x2 100/1000/2500/5000 Base- 1 Type 3.0 USB, 1 RS-232 RJ45				
MDI/MDIX					
	Supported	Supported			
Power over Ethernet (PoE)	1 802.3bt PoE default or x2 80 (Dual PoE current sharing)	12.3at PoE			
	1 802.3bt PoE default or x2 80 (Dual PoE current sharing) Up to 8 per client serving radio enabled)	)2.3at PoE ) (7 if background scanning is			
(PoE)	1 802.3bt POE default or x2 80 (Dual PoE current sharing) Up to 8 per client serving radic enabled) EAP-TLS, EAP-TTLS/MSCHAPV PEAPv1/EAP-GTC, EAP-SIM, EA	2.3at PoE (7 if background scanning is 2, PEAPv0/EAP-MSCHAPv2, AP-AKA, EAP-FAST			
(PoE) Simultaneous SSIDs EAP Type(s) User/Device Authentication	1 802.3bt PoE default or x2 80 (Dual PoE current sharing) Up to 8 per client serving radic enabled) EAP-TLS, EAP-TTLS/MSCHAPV	12.3at PoE (7 if background scanning is (2, PEAPv0/EAP-MSCHAPv2, AP-AKA, EAP-FAST h 802.1x or Preshared key,			
(PoE) Simultaneous SSIDs EAP Type(s) User/Device	1 802.3bt PoE default or x2 80 (Dual PoE current sharing) Up to 8 per client serving radic enabled) EAP-TLS, EAP-TTLS/MSCHAPQ PEAPv1/EAP-GTC, EAP-SIM, E/ WPA™, WPA2™, and WPA3™ with	12.3at PoE (7 if background scanning is (2, PEAPv0/EAP-MSCHAPv2, AP-AKA, EAP-FAST h 802.1x or Preshared key, blocklist and allowlist mW (4 chains combined)* mW (4 chains combined)* mW (4 chains combined)*			
(PoE) Simultaneous SSIDs EAP Type(s) User/Device Authentication	1 802.3bt PoE default or x2 80 (Dual PoE current sharing) Up to 8 per client serving radic enabled) EAP-TLS, EAP-TTLS/MSCHAPA PEAPv1/EAP-GTC, EAP-SIM, E/ WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> witt WEP, Web Captive Portal, MAC Radio 1: 2.4GHz: 27 dBm / 400 Radio 2: 5GHz: 26 dBm / 400 r 6GHz: 24 dBm 251 mW (4 ch	12.3at PoE (7 if background scanning is (2, PEAPv0/EAP-MSCHAPv2, AP-AKA, EAP-FAST h 802.1x or Preshared key, blocklist and allowlist mW (4 chains combined)* mW (4 chains combined)* mW (4 chains combined)*			
(PoE) Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power	1 802.3bt PoE default or x2 80 (Dual PoE current sharing) Up to 8 per client serving radic enabled) EAP-TLS, EAP-TTLS/MSCHAP, PEAPv1/EAP-GTC, EAP-SIM, E/ WPA™, WPA2™, and WPA3™ wit WEP, Web Captive Portal, MAC Radio 1: 2.4GHz: 27 dBm / 50' Radio 2: 5GHz: 26 dBm / 400 r 6GHz: 24 dBm 251 mW (4 ch BW)*	22.3at PoE 22.3at PoE 22.3at PoE 22.7 EAPv0/EAP-MSCHAPv2, AP-AKA, EAP-FAST h 802.1x or Preshared key, blocklist and allowlist mW (4 chains combined)* mW (4 chains			
(PoE) Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power Kensington Lock	1 802.3bt PoE default or x2 80 (Dual PoE current sharing) Up to 8 per client serving radic enabled) EAP-TLS, EAP-TTLS/MSCHAPQ PEAPv1/EAP-GTC, EAP-SIM, E/ WPA™, WPA2™, and WPA3™ wit WEP, Web Captive Portal, MAC Radio 1: 2.4GHz: 27 dBm / 400 Radio 2: 5GHz: 26 dBm / 400 Radio 3: 5GHz: 26 dBm / 400 r6GHz: 24 dBm 251 mW (4 ch BW)* Yes 802.11a, 802.11b, 802.11d, 802. 802.11a, 802.11a, 802.11a, 802.10, 802	22.3at PoE 22.3at PoE 22.3at PoE 22.7 EAPv0/EAP-MSCHAPv2, AP-AKA, EAP-FAST h 802.1x or Preshared key, blocklist and allowlist mW (4 chains combined)* mW (4 chains			
(PoE) Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power Kensington Lock IEEE Standards	1 802.3bt PoE default or x2 80 (Dual PoE current sharing) Up to 8 per client serving radic enabled) EAP-TLS, EAP-TTLS/MSCHAPQ PEAPv1/EAP-GTC, EAP-SIM, E/ WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> wit WEP, Web Captive Portal, MAC Radio 1: 2.4GHz: 27 dBm / 400 Radio 2: 5GHz: 26 dBm / 400 Radio 3: 5GHz: 26 dBm / 400 Radio 3	22.3at PoE 22.3at PoE 22.3at PoE 22.3at PoE 23.3at PoE 24.7at 24.7at 24.7a			
(PoE) Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power Kensington Lock IEEE Standards SSID Types Supported	1 802.3bt PoE default or x2 80 (Dual PoE current sharing) Up to 8 per client serving radic enabled) EAP-TLS, EAP-TTLS/MSCHAPQ PEAPv1/EAP-GTC, EAP-SIM, E/ WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> wit WEP, Web Captive Portal, MAC Radio 1: 2.4GHz: 27 dBm / 400 Radio 2: 5CHz: 26 dBm / 400 Radio 3: 5GHz: 26 dBm / 400 Radio 3: 5GHz: 26 dBm / 400 r 6GHz: 24 dBm 251 mW (4 ch BW)* Yes 802.11a, 802.11b, 802.11d, 802. 802.11a, 802.11b, 802.11d, 802. 802.11a, 802.11ax, 802.10, 80 802.3bt, 802.3az, 802.3bz Local-Bridge, Mesh, and Tunna	22.3at PoE 22.3at PoE 22.3at PoE 22.7 EAPv0/EAP-MSCHAPv2, AP-AKA, EAP-FAST h 802.1x or Preshared key, blocklist and allowlist mW (4 chains combined)* mW (4 chains			

Advanced 802.11 FeatureOFDMAYesYesSpatial Reuse (BSS Coloring)YesYesUL MU-MIMOYesYesDL-MU-MIMOYesYesDL-MU-MIMOYesYesDL-MU-MIMOYesYesDraced Target WalkeYesYesTre OpableNoNoOnboard Security FunctionYesYesUTP CapableYesYesUTP CapableYesYesWireless Monitoring AdvanceBackground, Dedicated (Terrettrettrettrettrettrettrettrettrettr		FortiAP 431G	FortiAP 433G				
Soloring)YesYesSoloring)YesYesUL MU-MIMOYesYesDL-MU-MIMOYesYesDL-MU-MIMOYesYesEnhanced Target WakeYesNoOnboard Security FunctionYesNoOthoard Security FunctionYesYesUTP CapableYesYesUTP CapableApplication control and Web III-ITGWireless Monitoring CapableBackground, DedicatedWireless Monitoring CapableBackground, Dedicated (recourse)Wireless Monitoring CapableYesWireless Monitoring CapableYesPacket Sniffer ModeYesYesYesPacket Sniffer ModeYesYesYesSpectrum AnalyzerYesYesYesPacket Sniffer ModeSis St 8.85 × 2.12 inches (22.50 × 54.0 mm)Wieght3.05 lbs (1.4 kg)Paceg (shipping)Siz Ibs (2.4 kg)VergingSiz Ibs (2.4 kg)Paceg (shipping)Siz Ibs (2.4 kg)Siz Ibs (2.4 kg)YesPaced SourceSiz Ibs (2.4 kg)Paced SourceSiz Ibs (2.4 kg)Paceg (shipping)Siz Ibs (2.4 kg)Siz Ibs (2.4 kg)YesPaced SourceSiz Ibs (2.4 kg)Paced SourceSiz Ibs (2.4 k	Advanced 802.11 Features						
Coloring)UL MU-MIMOYesYesDL-MU-MIMOYesYesDL-MU-MIMOYesYesErhanced Target WakeYesYesToroad Security FurtherYesYesOnboard Security FurtherYesYesUTP CapableYesYesUTP FaturesApplication control and Web TiturtyWireless Monitoring CapableBackground, Dedicated (recorrect)Wireless Monitoring CapableYesYesPacket Sniffer ModeYesYesPacket Sniffer ModeYesYesPacket Sniffer ModeYesYesPacket Sniffer ModeYesYesYeight3.55 Ibs (1.4 kg)YesPacket Sniffer ModeYesYesPacket Sniffer ModeYesYesPacket Sniffer ModeYesYesYeight3.55 Ibs (2.4 kg)YesPacket Sniffer ModeYesYesPacket Sniffer M	OFDMA	Yes	Yes				
DI- MU-MIMOYesYesEnhanced Target WakeYesYesEnhanced Target WakeYesNoCaroWait DFSNoNoOnboard Security FunctionYesYesUTP CapaleYesYesUTP CapaleSackground, DedicatedYesWireless Monitoring CapalicBackground, Dedicated (recorrection)Wireless Monitoring CapalicYesYesPacket Sniffer ModeYesYesPacket Sniffer ModeYesYesPacket Sniffer ModeSes X 8.8 × 2.12 inches (225.0 × 25.0 × 54.0 mm)Packet Sniffer ModeSes X 8.8 × 2.12 inches (225.0 × 25.0 × 54.0 mm)Wieght3.05 lbs (1.4 kg)Packet Sniffer ModeSes X 8.8 × 2.12 inches (225.0 × 25.0 × 54.0 mm)Weight3.05 lbs (1.4 kg)Packet Sniffer ModeSes X 8.8 × 2.12 inches (225.0 × 25.0 × 54.0 mm)Weight3.05 lbs (1.4 kg)Packet Sniffer ModeSes X 8.8 × 2.12 inches (225.0 × 25.0 × 54.0 mm)WeightSo Iso (1.4 kg)Packet Sniffer ModeSes X 8.8 × 2.12 inches (225.0 × 25.0 × 54.0 mm)Monting OptionsCelling, T-Rail, and WallForeight Sniffer ModeSes X 8.8 × 2.12 inches (225.0 × 25.0 × 54.0 mm)Packet Sniffer ModeSes X 8.8 × 2.12 inches (225.0 × 25.0 × 54.0 mm)Packet Sniffer ModeSes X 8.8 × 2.12 inches (225.0 × 25.0 × 54.0 mm)Packet Sniffer ModeSes X 8.8 × 2.12 inches (225.0 × 25.0 × 54.0 mm)Packet Sniffer ModeSes X 8.8 × 2.12 inches (225.0 × 25.0 × 54.0 mm)Packet Sniffer ModeSes		Yes	Yes				
Enhanced Target WakeYesYesCaroWait DFSNoNoOnboard Security FurtherYesYesUTP CapableYesYesUTP FeaturesApplication control and Web filturingWireless Monitoring CapableBackground, DedicatedWireless Monitoring CapableBackground, Dedicated (recommended)Packet Sniffer ModeYesPacket Sniffer ModeYesPacket Sniffer ModeYesSpectrum AnalyzerYesPacket Sniffer ModeSes X8.55 × 2.12 inches (225.0× 54.0 mm)Packet Sniffer ModeS.55 lbs (2.4 kg)Weight3.05 lbs (1.4 kg)Packet Sniffer ModeSes X8.55 × 2.12 inches (225.0× 54.0 mm)Monting OptionsCeiling, T-Rail, and WallRocessoriesStandard Mounting kit for Ceiling, T-Rail and WallPower SupplySp-FAP250-PA-10 or SP-FAP4U-V-PA-XX or 802.38 tr PoE(CePI-145)Power SupplySp-FAP250-PA-10 or SP-FAP4U-V-PA-XX or 802.38 tr PoE(CePI-145)Power Consumption3.17 WattsPacket Sniffer ModeYes YesHunditySX to 90% non-condensingHumiditySX to 90% non-condensingPign-Packating Chain 4x4 ; USB - Enabled High - 802.38 to 72 ×802.38 tr J Radio Operation in Low Tx Power 17 dBm; Chain 4x4 ; USB - Enabled High - 802.38 to 72 ×802.38 tr J Radio Operation in Low Tx Power 17 dBm; Chain 4x4 ; USB - Enabled High - 802.38 to 72 ×802.38 tr J Radio Operation in Low Tx Power 17 dBm; Chain 4x4 ; USB - Enabled High - 802.38 to 72 ×802.38 tr J Radio Operation in Low Tx Power 17 dBm; Chain 4x4 ; USB - Enabled High - 802.38 to 72 ×802	UL MU-MIMO	Yes	Yes				
Time (TWT)NoZeroWait DFSNoNoOnboard Security FunctionYesYesUTP CapableYesYesWireless Monitoring CabilitiesRogue Scan Radio ModeBackgroud, DedicatedKogue Scan Radio ModeBackgroud, Dedicated (recorrent of the scan Radio Mode)YesMireless Monitoring CabilitiesYesYesKogue Scan Radio ModeBackgroud, Dedicated (recorrent of the scan Radio Mode)YesModeYesYesSpectrum AnalyzerYesYesPacket Sniffer ModeSes Xes X : 12 inches (22.5 v 54.0 mm)Meight3.05 lbs (1.4 kg)YesPackage (shipping)S.25 lbs (2.4 kg)YesPackage (shipping)Ses Xes Xes Xes Xes Xes Xes Xes Xes Xes X	DL- MU-MIMO	Yes	Yes				
Ohooard Security FunctionUTP CapableYesVapil cation control and Web FilterUTP FeaturesApplication control and Web FilterWireless Monitoring CapableBackground, DedicatedWireless Monitoring CapableBackground, Dedicated (recommended)Wireless Monitoring CapableYesMy CapableYesMy CapableYesPacket Sniffer ModeYesYesYesSpectrum AnalyzerYesActess Staffer ModeSa5x 8.85 x 2.12 inches (225.x 25.0 x 54.0 mm)Packet Sniffer ModeSa5x 8.85 x 2.12 inches (25.5 x 25.0 x 54.0 mm)Weight3.05 lbs (1.4 kg)WeightS.25 lbs (2.4 kg)WeightSa5x 8.85 x 2.12 inches (25.5 x 25.0 x 54.0 mm)AccessoriesCeiling, T-Rail, and WallIncluded AccessoriesSandard Mounting kit for C=III: T, Fail and WallPower SupplyShP-FAP2So-Pach on Sop-FA-X x or So2.30 tr DefCeIP1-455NormonentVerson Sub Capable (20.1 x 28.0 x 31.7 Watts)Packed ConsumptionSit 10.2 x 60.0 x 31.7 Watts)Parting PotorsSit 0.90% non-condensimpPower ConsumptionSit 0.90% non-condensimpPower TdBm; chail at 41; USB - EnabledVerson Conson F-Full;Power TdBm; Chail x 44; USB - EnabledNoPower TdBm; Chail x 44; USB - EnabledVerson Conson F-Full;Power TdBm; Chail x 44; USB - EnabledNoPower TdBm; Chail x 44; USB - EnabledNoPower TdBm; Chail x 44; USB - EnabledNoPower TdBm; Chail x 44; USB - Enabled		Yes	Yes				
UTP CapableYesYesUTP FeaturesApplication control and Web filterWireless Monitoring CapabilityBackground, DedicatedRogue Scan Radio ModesBackground, Dedicated (recommended)Wolfs / WIDS RadioBackground, Dedicated (recommended)Packet Sniffer ModeYesSpectrum AnalyzerYesVesYesDimensionsYesUengts X Width X Heigh8.55 × 8.55 × 2.12 inches (22.5.0 × 54.0 mm)Weight3.05 lbs (1.4 kg)Package (shipping)5.25 lbs (2.4 kg)Package (shipping)5.25 lbs (2.4 kg)Power SupplyCeiling, T-Rail, and WallIncluded AccessoriesStandard Mounting klt for Celling, T-Rail and WallPower SupplySP-FAP250-PA-10 or SP-FAP4 u- PA-XX or 30.2 sto PE(GPI-145)Power SupplyS1.7 WattsShift + X4, USB - Enabled High + 802.3 sto r2×802.3 sto r1 - T x Power - Full ; Chain 4×4 ; USB - EnabledPower ConsumptionS1.7 WattsStudie y Chain 4×4 ; USB - EnabledHumidityS% to 90% non-condensing Power 7 dBm; Chain 4×4 ; USB - EnabledPore ToderYesUL2043 Plenum MateriYesVier to 120°F (10°C to 50°C) - 22°F to 158°F (-30°C to 70°C)Pomer ToderYesIndia 4×1 ; USB - EnabledHumidityS4 to 90% non-condensingPower Toder; Toder Consore) - Josef (-30°C to 70°C)Pore Toder (Store) - S1°C to 50°C) - 22°F to 158°F (-30°C to 70°C)Pore Toder (Store) - S1°C to 50°C) - 22°F to 158°F (-30°C to 70°C)Pore Toder (Store) - S1°C to 50	ZeroWait DFS	No	No				
UTP FeaturesApplication control and Web filteringWireless Monitoring CapabilitiesRogue Scan Radio ModeeBackground, DedicatedRogue Scan Radio ModeeBackground, Dedicated (recommended)Wireless Monitoring CapabilityBackground, Dedicated (recommended)Packet Sniffer ModeYesPacket Sniffer ModeYesSpectrum AnalyzerYesVesYesDimensionsUUengh x Width x Height8.85× 8.85 × 2.12 inches (225.0 × 54.0 mm)Weight3.05 lbs (1.4 kg)Package (shipping)5.25 lbs (2.4 kg)WeightCelling, T-Rail, and WallIncluded AccessoriesStandard Mounting kit for Celling, T-Rail and WallPower SupplySp-FAP250-PA-10 or SP-FAP40-PA-XX or 802.3bt DeE(OPI-145)Power SupplySp-FAP250-PA-10 or SP-FAP40-PA-XX or 802.3bt DeE(OPI-145)Power Consumption (Max)3.17 WattsPower Consumption (Max)3.17 WattsPot Mode Porentif dem ; Chain 4x4 ; USB - Enabled High- 802.3at or 2x802.3af : II Radio Operation in Low Tx Power17 dem ; Chain 4x4 ; USB - Enabled High- 802.3at or 2x802.3af : II Radio Operation in Low Tx Power17 dem ; Chain 4x4 ; USB - Enabled High- 802.3at or 2x802.3af : II Radio Operation in Low Tx Power17 dem ; Chain 4x4 ; USB - Enabled High- 802.3at or 2x802.3af : II Radio Operation in Low Tx Power17 dem ; Chain 4x4 ; USB - Enabled High- 802.3at or 2x802.3af : II Radio Operation in Low Tx Power17 dem ; Chain 4x4 ; USB - Enabled High- 802.3at or 2x802.3af : II Radio Operation in Low Tx Power17 dem ; Chain 4x4 ; USB - Enabled High- 802.3at or 2x802.3af : II Radio Operation in Low TX 	<b>Onboard Security Function</b>	IS					
Wireless Monitoring CapabilitiesRogue Scan Radio ModesBackground, DedicatedWireless Monitoring CapabilitiesBackground, Dedicated (recommeded)Packet Sniffer ModeYesYesPacket Sniffer ModeYesYesSpectrum AnalyzerYesYesDimensionsUYesLength x Width x Height8.85 × 8.85 × 2.12 inches (225.0× 25.0 × 54.0 mm)YeightWeight3.05 lbs (1.4 kg)YesPackage (shipping)5.25 lbs (2.4 kg)YesMounting OptionsCeiling, T-Rail, and WallTexal and WallIncluded AccessoriesSachard Mounting kit for Ceiling, T-Rail and WallYesPower SupplySp-FAP250-PA-10 or SP-FAP-X or s0: 3bt PoE (CPI-145)31.7 Watts31.7 WattsPower Consumption31.7 Watts31.7 Watts31.7 WattsPower ConsumptionSit 0.90% non-condensing Power 17 dBm; Chain 4*4; USB - EnabledHigh - 802.3bt or 2×802.3af : All Radio Operation in Low Tx Power 17 dBm; Chain 4*4; USB - DisabledHumidityS% to 90% non-condensingYesYesOperating / Storage32°F to 122°F (0°C to SO°C) / -2°F to 158°F (-30°C to 70°C)Pireting Storage10 YearsYesPildensN/AN/AManager ConsumptionN/AOrgen ConsumptionN/AOperating / Storage10 YearsPildensSystem ConsumptionDirectivesYesYesDirectiveSYesPildensN/APildens <t< th=""><th>UTP Capable</th><th>Yes</th><th>Yes</th></t<>	UTP Capable	Yes	Yes				
Rogue Scan Radio ModesBackground, Dedicated (recover ded)WiPS / WIDS RadioBackground, Dedicated (recover ded)Packet Sniffer ModeYesYesSpectrum AnalyzerYesYesDimensionsUYesLength x Width x Height8.85× 8.85× 2.12 inches (225.0× 54.0 mm)XeightWeight3.05 lbs (1.4 kg)YesPackeg (shipping)5.25 lbs (2.4 kg)YesAccessoriesCelling, T-Rail, and WallYesAccessoriesStandard Mounting kit for Celling, T-Rail and WallYesPower SupplySh-FAP250-PA-10 or SP-FAP4X or SP-FAP250-PA-10 or SP-FAP3X or S0:2014 POE(CPI-143)Standard Mounting kit for Celling, T-Rail and WallPower SupplySh-FAP250-PA-10 or SP-FAP4X or S0:2014 POE(CPI-143)Standard Mounting kit for Celling, T-Rail and WallPower ConsumptionS1.7 WattsS1.7 WattsPower ConsumptionS1.7 WattsS1.7 WattsPower ConsumptionS1.7 WattsS1.7 WattsPower 17 dBm; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : II Radio Operation In Low Tx Power17 dBm; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : II Radio Operation In Low Tx Power17 dBm; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : II Radio Operation In Low Tx Power17 dBm; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : II Radio Operation In Low Tx Power17 dBm; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : II Radio Operation In Low Tx Power17 dBm; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : II Radio Operation In Low Tx Power17 dBm; Chain 4×4 ; USB - Enabled High - 802.3dt or 2×802.3af : II Radio Operation In Lo	UTP Features	Application control and Web fil	tering				
WiPS / WIDS Radio ModesBackground, Dedicated (recorrended)Packet Sniffer ModeYesYesSpectrum AnalyzerYesYesDimensionsLength x Width x Height8.85 × 8.85 × 2.12 inches (225.0 × 225.0 × 54.0 mm)Weight3.05 lbs (1.4 kg)Package (shipping) Weight5.25 lbs (2.4 kg)AccessoriesMounting OptionsCeiling, T-Rail, and WallIncluded AccessoriesStandard Mounting kit for Ceiling, T-Rail and WallPower SupplySP-FAP250-PA-10 or SP-FAP400-PA-XX or 802.3bt POE(GPI-145)Power Consumption31.7 Watts31.7 WattsPower ConsumptionS1.7 Watts31.7 WattsPoef ModeFull - 802.3bt or 2 × 802.3at or DC : Tx Power - Full ; Chain 4 × 4 ; USB - Enabled High - 802.3at or 2 × 802.3at ir All Radio Operation in Low Tx Power 17 dBm; Chain 4 × 4 ; USB - DisabledHumidity5% to 90% non-condensingOperating / Storage32°F to 122°F (0°C to 50°C) / -22°F to 158°F (-30°C to 70°C)DirectivesLow Voltage Directive • RoHSUL2043 Plenum Material PailuresYesViange Protection Built In NoNoN/AN/ASurge Protection Built In NoNoNires PoE FailoverYesYesYesPailinges Pote FullowerYes (Includes Passpoint)Pote Surge Protecting Certified Yes (Includes Passpoint)Yes (Includes Passpoint)Pote Surge Protecting SurgeYes (Includes Passpoint)Pote Surge Protecting Surge<	Wireless Monitoring Capat	pilities					
NodesYesYesPacket Sniffer ModeYesYesSpectrum AnalyzerYesYesDimensionsLength x Width x Height8.85× 8.85× 2.12 inches (225.0× 225.0 × 54.0 mm)Weight3.05 lbs (1.4 kg)Package (shipping)5.25 lbs (2.4 kg)WeightS.25 lbs (2.4 kg)Mounting OptionsCeiling, T-Rail, and WallIncluded AccessoriesStandard Mounting kit for Ceiling, T-Rail and WallPower SupplySP-FAP250-PA-10 or SP-FAP400-PA-XX or 802.30t PCE(GPI-145)Power SupplySP-FAP250-PA-10 or SP-FAP400-PA-XX or 802.30t PCE(GPI-145)Power Consumption31.7 WattsPoef ModeFull - 802.30t or 2×802.3at or DC : TX Power - Full ; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3at i All Radio Operation in Low TX Power 17 dBm; Chain 4×4 ; USB - EnabledPoef ModeS% to 90% non-condensingOperating / Storage2% to 90% non-condensingUL2043 Plenum MateriaYesYesYesMainress PoE FailoverYesVilage Directive • RoHSYesIP RatingN/AN/AN/ASurge Protection Built InNoNoNoHit-less PoE FailoverYes (Includes Passpoint)YesYes (Includes Passpoint)Yes (Includes Passpoint)Yes (Includes Passpoint)PortificationsYes (Includes Passpoint)YesYes (Includes Passpoint)YesYes (Includes Passpoint)YesYes (Includes Passpoint)YesYes (	Rogue Scan Radio Modes	Background, Dedicated					
Spectrum AnalyzerYesYesDimensionsLength x Width x Height8.85× 8.85 × 2.12 inches (22.5. × 22.5.0 × 54.0 mm)Weight3.05 lbs (1.4 kg)Weight3.05 lbs (1.4 kg)Package (shipping)5.25 lbs (2.4 kg)AccessoriesEMounting OptionsCeiling, T-Rail, and WallIncluded AccessoriesStandard Mounting kit for Ceiling, T-Rail and WallPower SupplySp-FAP250-PA-10 or SP-FAP210 PA-XX or 802.3bt PCE(PI-1455)Power SupplySp-FAP250-PA-10 or SP-FAP2XO PA-XX or 802.3bt rDPower Supply31.7 WattsPower Consumption31.7 WattsPigh = 802.3bt or 2×802.3at or DTx Power - Full ; Chain 4×4 ; USB - EnabledPower ConsumptionS× to 90% non-condensingHumidityS% to 90% non-condensingPoresting / StorageS2°F to 122°F (0°C to 50°C) / -2°F to 158°F (-30°C to 70°C)Poresting / StorageS2°F to 122°F (0°C to 50°C) / -2°F to 158°F (-30°C to 70°C)Poresting / StorageS10 YearsPoresting / StorageS10 YearsPinettivesN/AN/AN/APoresting Protection Built InNoNoNoPoresting Protection Built InNi/APoresting Protection Built InNi/APoresting ProtectifiedYes (includes Passpoint)Pif-Halliance CertifiedYes (includes Passpoint)Poresting ProtectifiedYes (includes Passpoint)Poresting / StorageCertificationsPoresting ProtectifiedYes (includes Passpoint)P		Background, Dedicated (recom	nmended)				
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Weight3.05 lbs (1.4 kg)Package (shipping)5.25 lbs (2.4 kg)AccessoriesMounting OptionsCeiling, T-Rail, and WallIncluded AccessoriesStandard Mounting kit for Ceilir, T-Rail and WallPower SupplySP-FAP250-PA-10 or SP-FAP400-PA-XX or 802.3bt PoE(GPI-145)EnvironmentPower Consumption31.7 Watts31.7 WattsPoE ModeFull - 802.3bt or 2×802.3at : All Radio Operation in Low TX Power 17 dBm ; Chain 4×4 ; USB - EnabledHigh - 802.3at or 2×802.3at : All Radio Operation in Low TX Power 17 dBm ; Chain 4×4 ; USB - DisabledHumidity5% to 90% non-condensingQperating / Storage Failures22°F to 122°F (0°C to 50°C) / -22°F to 158°F (-30°C to 70°C)DirectivesLow Voltage Directive • RoHSUL2043 Plenum Material FailuresYesN/AN/ASurge Protection Built In NoNoN/AN/ASurge Protection Built In Wi-Fi Alliance CertifiedYes (includes Passpoint)YesYes (includes Passpoint)Diff CertificationsYes (includes Passpoint)Wi-Fi Alliance CertifiedYes (includes Passpoint)DiffCertificationsWi-Fi Alliance CertifiedYes (includes Passpoint)PisCer, Singapore	Dimensions						
Package (shipping) Weight5.25 lbs (2.4 kg)AccessoriesMounting OptionsCeiling, T-Rail, and WallIncluded AccessoriesStandard Mounting kit for Ceiling, T-Rail and WallPower SupplySP-FAP250-PA-10 or SP-FAP400-PA-XX or 802.3bt POE(GPI-145)EnvironmentPower Consumption (Max)31.7 WattsPoE ModeFull - 802.3bt or 2×802.3at or DC : Tx Power - Full ; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3at or DC : Tx Power - Full ; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3at or DC : Tx Power - Full ; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3at or DC : Tx Power - Full ; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3at or DC : Tx Power - Full ; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3at or DC : Tx Power - Full ; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3at or 2×802.3at or DC : Tx Power - Full ; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3at or 2×	Length x Width x Height	8.85× 8.85 × 2.12 inches (225.0	0× 225.0 × 54.0 mm)				
WeightAccessoriesAccessoriesCeiling, T-Rail, and WallIncluded AccessoriesStandard Mounting kit for Ceiling, T-Rail and WallPower SupplySP-FAP250-PA-10 or SP-FAP4∪0-PA-XX or 802.3bt POE(GPI-145)EnvironmentSP-FAP250-PA-10 or SP-FAP4∪0-PA-XX or 802.3bt POE(GPI-145)Power Consumption31.7 WattsMaxiS1.7 WattsPoe ModeFull - 802.3bt or 2×802.3at or C : Tx Power - Full ; Chain 4×4 ; USB - EnabledHigh - 802.3bt or 2×802.3af : All Radio Operation in Low Tx Power 17 dBm ; Chain 4×4 ; USB - DisabledHumidity5% to 90% non-condensingOperating / StorageS2°F to 122°F (0°C to 50°C) / -22°F to 158°F (-30°C to 70°C)DirectivesLow Voltage Directive • RoHSUL2043 Plenum MaterialYesN/AN/ASurge Protection Built InNoN/AN/AHit-less POE FailoverYes (includes Passpoint)Wi-Fi Alliance CertifiedYes (includes Passpoint)Yes (includes Passpoint)Yes (includes Passpoint)	Weight	3.05 lbs (1.4 kg)					
Mounting OptionsCeiling, T-Rail, and WallIncluded AccessoriesStandard Mounting kit for Ceiling, T-Rail and WallPower SupplySP-FAP250-PA-10 or SP-FAP4U-PA-XX or 802.3bt POE(GPI-145)FnvironmentFullPower Consumption (Max)31.7 Watts31.7 WattsPoE ModeFull - 802.3bt or 2×802.3at or DC : TX Power - Full ; Chain 4×4 ; USB - EnabledFull - 802.3at or 2×802.3af : All Radio Operation in Low TX Power 17 dBm ; Chain 4×4 ; USB - EnabledHumidity5% to 90% non-condensingFullPoreating / Storage Operating / Storage20° For 122°F (0°C to 50°C) / - 22°F to 158°F (-30°C to 70°C)DirectivesLow Voltage Directive • RoHS10 YearsUL2043 Plenum MateriaYesYesN/AN/ASurge Protection Built In NiNoNoHuriless PoE FailoverYesYesWi-Fi Alliance CertifiedYes (includes Passpoint)Yes (includes Passpoint)DirectivesCE, FCC, SingaporeCE, FCC, Singapore		5.25 lbs (2.4 kg)					
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Power SupplySP-FAP250-PA-10 or SP-FAP400-PA-XX or 802.3bt PoE(GPI-145)EnvironmentPower Consumption (Max)31.7 Watts31.7 WattsPoE ModeFull - 802.3bt or 2×802.3at or DC : Tx Power - Full ; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : All Radio Operation in Low Tx Power 17 dBm ; Chain 4×4 ; USB - EnabledHumidity5% to 90% non-condensingOperating / Storage remperature20% Power 17 dBm ; Chain 4×4 ; USB - InabledJurce Voltage Directive • RoHSVesUL2043 Plenum Material PailuresYesN/AN/ASurge Protection Built In NiNoNi/ANoHit-less PoE FailoverYes (includes Passpoint)Vi-Fi Alliance Certified PFSYes (includes Passpoint)CertificationsCE, FCC, Singapore	Mounting Options	Ceiling, T-Rail, and Wall					
EnvironmentFower Consumption (Max)31.7 Watts31.7 WattsPoet Mode (Max)Full - 802.3bt or 2×802.3at or DC : Tx Power - Full ; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : All Radio Operation in Low Tx Power 17 dBm ; Chain 4×4 ; USB - DisabledHumidity5% to 90% non-condensingOperating / Storage Pemperature20°F to 122°F (0°C to 50°C) / -22°F to 158°F (-30°C to 70°C)DirectivesLow Voltage Directive · RoHSUL2043 Plenum Material PailuresYesYesIP RatingN/AN/ASurge Protection Built In Hit-less PoE FailoverNoNoHurless PoE FailoverYes (includes Passpoint)Yes (includes Passpoint)PFSCE, FCC, SingaporeCE, FCC, Singapore	Included Accessories	Standard Mounting kit for Ceiling, T-Rail and Wall					
Power Consumption (Max)31.7 Watts31.7 WattsPoE ModeFull - 802.3bt or 2×802.3at or C × Tx Power - Full ; Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : All Radio Operation in Low Tx Power 17 dBm ; Chain 4×4 ; USB - DisabledHumidity5% to 90% non-condensingOperating / Storage Temperature32°F to 122°F (0°C to 50°C) / -22°F to 158°F (-30°C to 70°C)DirectivesLow Voltage Directive · RoHSUL2043 Plenum Material MainYesVI2043 Plenum Material FailuresYesN/AN/ASurge Protection Built In NiNoNoNoHit-less PoE FailoverYes (includes Passpoint)VI-Fi Alliance CertifiedYes (includes Passpoint)PSCE, FCC, Singapore	Power Supply		00-PA-XX or				
(Max)PoE ModeFull - 802.3bt or 2×802.3at or DC : Tx Power - Full ; Chain 4×4 ; USB - EnabledHigh - 802.3at or 2×802.3at ir Avad ; USB - DisabledHumidity5% to 90% non-condensingPower 17 dBm ; Chain 4×4 ; USB - DisabledHumidity5% to 90% non-condensingOperating / Storage Pemperature32°F to 122°F (0°C to 50°C) / -22°F to 158°F (-30°C to 70°C)DirectivesLow Voltage Directive · RoHSUL2043 Plenum Material PailuresYesMean Time Between Failures>10 YearsIP RatingN/AN/AN/ASurge Protection Built In NiNoNi-Fi Alliance Certified PSYes (includes Passpoint)PSCE, FCC, Singapore	Environment						
Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : All Radio Operation in Low Tx Power 17 dBm ; Chain 4×4 ; USB - DisabledHumidity5% to 90% non-condensingGperating / Storage32°F to 122°F (0°C to 50°C) / -22°F to 158°F (-30°C to 70°C)DirectivesLow Voltage Directive • RoHSUL2043 Plenum MaterialYesMean Time Between Pailures>10 YearsIP RatingN/ASurge Protection Built In Hit-less POE FailoverNoVierYesWi-Fi Alliance CertifiedYes (includes Passpoint)PSCE, FCC, Singapore		31.7 Watts	31.7 Watts				
Power 17 dBm ; Chain 4×4 ; USB - DisabledHumidity5% to 90% non-condensingGperating / Storage32°F to 122°F (0°C to 50°C) / -22°F to 158°F (-30°C to 70°C)DirectivesLow Voltage Directive • RoHSUL2043 Plenum MaterialYesMean Time Between Pailures>10 YearsIP RatingN/ASurge Protection Built In Hit-less POE FailoverNoWi-Fi Alliance Certificat PSYes (includes Passpoint)Yes (includes Passpoint)DFSCE, FCC, SingaporeCE, FCC, Singapore	PoE Mode		DC : Tx Power - Full ;				
Operating / Storage Temperature     32°F to 122°F (0°C to 50°C) / -22°F to 158°F (-30°C to 70°C)       Directives     Low Voltage Directive • RoHS       UL2043 Plenum Material     Yes       Yes     Yes       Mean Time Between Failures     >10 Years       IP Rating     N/A       Surge Protection Built In Hit-less PoE Failover     No       Ves     Yes       Certifications     Yes (includes Passpoint)       Wi-Fi Alliance Certified     Yes (includes Passpoint)       DFS     CE, FCC, Singapore							
Temperature       Temperature         Directives       Low Voltage Directive • RoHS         UL2043 Plenum Material       Yes         Mean Time Between Failures       >10 Years         IP Rating       N/A         Surge Protection Built In       No         Hit-less PoE Failover       Yes         Certifications       Yes (includes Passpoint)         Wi-Fi Alliance Certified       Yes (includes Passpoint)         DFS       CE, FCC, Singapore	Humidity	5% to 90% non-condensing					
UL2043 Plenum MaterialYesYesMean Time Between Failures>10 Years>10 YearsIP RatingN/AN/ASurge Protection Built In Hit-less PoE FailoverNoNoHit-less PoE FailoverYesYesCertificationsYes (includes Passpoint)Yes (includes Passpoint)DFSCE, FCC, SingaporeCE, FCC, Singapore		32°F to 122°F (0°C to 50°C) / -	-22°F to 158°F (-30°C to 70°C)				
Mean Time Between Failures>10 Years>10 YearsIP RatingN/AN/ASurge Protection Built In Hit-less PoE FailoverNoNoHit-less PoE FailoverYesYesCertificationsYesYesWi-Fi Alliance CertifiedYes (includes Passpoint)Yes (includes Passpoint)DFSCE, FCC, SingaporeCE, FCC, Singapore	Directives	Low Voltage Directive • RoHS					
Failures       IP Rating     N/A     N/A       Surge Protection Built In     No     No       Hit-less PoE Failover     Yes     Yes       Certifications     Yes     Yes       Wi-Fi Alliance Certified     Yes (includes Passpoint)     Yes (includes Passpoint)       DFS     CE, FCC, Singapore     CE, FCC, Singapore	UL2043 Plenum Material	Yes	Yes				
Surge Protection Built In     No     No       Hit-less PoE Failover     Yes     Yes       Certifications     Ves (includes Passpoint)     Yes (includes Passpoint)       DFS     CE, FCC, Singapore     CE, FCC, Singapore		>10 Years	>10 Years				
Hit-less PoE Failover     Yes     Yes       Certifications     Yes (includes Passpoint)     Yes (includes Passpoint)       DFS     CE, FCC, Singapore     CE, FCC, Singapore	IP Rating	N/A	N/A				
Certifications       Wi-Fi Alliance Certified     Yes (includes Passpoint)       DFS     CE, FCC, Singapore       CE, FCC, Singapore	Surge Protection Built In	No	No				
Wi-Fi Alliance Certified         Yes (includes Passpoint)         Yes (includes Passpoint)           DFS         CE, FCC, Singapore         CE, FCC, Singapore	Hit-less PoE Failover	Yes	Yes				
DFS CE, FCC, Singapore CE, FCC, Singapore	Certifications						
	Wi-Fi Alliance Certified	Yes (includes Passpoint)	Yes (includes Passpoint)				
	DFS	CE, FCC, Singapore	CE, FCC, Singapore				
Warranty	Warranty						
Limited Lifetime Yes Yes Yes							

\* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

	Rad 802.11a		Rad 802.11		Rad 4×4 Tri band	
					2×2 Scanr	ning radio
Data rate	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)
.4GHz, 802.11b						
Mbps	21	-99				-99
1 Mbps	21	-91				-91
.4GHz, 802.11g						
Mbps	21	-93				-95
4 Mbps	21	-77				-78
.4GHz, 802.11n HT20						
1CS0	21	-95				-92
1CS7	19	-77				-74
.4GHz, 802.11n HT40						
1CS0	20	-92				-90
ICS7	18	-74				-72
.4GHz, 802.11ax HE20						
ICSO	21	-94				-90
ICS11	19	-64				-71
.4GHz, 802.11ax HE40						
1CS0	21	-91				-91
ICS11	19	-62				-72
.0GHz, 802.11a	10	52				12
Mbps			23	-93	22	-93
4 Mbps			21	-76	21	-76
.0GHz, 802.11n HT20						
ICS0			22	-93	21	-93
ICS7			20	-75	18	-73
.0GHz, 802.11n HT40						
1CS0			21	-93	21	-90
1CS7			18	-78	18	-71
.0GHz, 802.11ac VHT20						
			00	0.0	01	00
1CS0 1CS9			22	-93	21	-93
			20	=7 Z	10	-09
.0GHz, 802.11ac VHT40 //CS0			22	-91	21	-90
1059			19	-70	18	-64
.0GHz, 802.11ac VHT80			19	-70	10	-04
ACS0			20	-86	19	-88
1CS9			18	-65	16	-61
.0GHz, 802.11ax HE20			10	00	10	01
ICS0			22	-93	22	-92
ICS11			19	-63	19	-65
.0GHz, 802.11ax HE40			10		10	00
ICS0			21	-90	22	-88
ICS11			19	-70	19	-61
0GHz, 802.11ax HE80			10		10	01
ICS0			18	-86	20	-85
CS11			16	-59	17	-58
.0GHz, 802.11ax HE160			10	55	17	50
1CS0					19	-82
ICS11					16	-57
.0GHz, 802.11ax HE160					10	57
ICS0					17	-82
					17	02

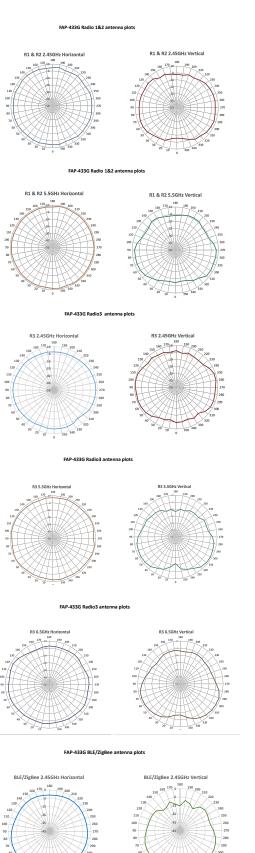
Maximum capability of the Hardware provided (Excluding antenna gain)

#### **Data Sheet**

#### Antenna Radiation Patterns FAP-431G

#### FAP-433G







20 10 0

350

#### FortiAP 432G

This enterprise class 802.11ax ruggedized indoor/outdoor AP provides three radios for tri-band access on radio capable of four spatial streams. As a Wi-Fi 6E access point it provides 6GHz band operation, OFDMA, a 10 Gigabit Ethernet port, plus an additional 1 Gbps Ethernet port with PoE out. The integrated BLE radio can be used for beacons and locationing applications.

Note: For FAP-432G, use of the 6GHz band is subject to regional regulatory authority approval.



802.11ax | Tri-Radio 2.4 GHz + 5 GHz + 6 GHz | 8 External Antennas

4×4 MU-MIMO Up to 1148 Mbps + 2402 Mbps + 4804 Mbps



FAP-432G



FAP-432G **Pole/Wall Mounting** 

# Specifications

	E			
	FortiAP 432G			
Hardware				
Hardware Type	Wi-Fi 6E 4×4 MIMO Outdoor AP			
Number of Radios	3 + 1 BLE			
Number of Antennas	External: x4 Dual band WiFi + x4 Tri-band WiFi and Scanning + x1 2.4GHz band BLE/ZigBee			
Antenna Type and Peak Gain	Omni Directional antenna. Dual band: 5.1 dBi for 2.4GHz, 6.4 dBi for 5 GHz Tr-band: 4.9 dBi for 2.4GHz, 5.8 dBi for 5 GHz, and 6.0dBi for 6GHz band BLE Antenna: 4.7dBi for 2.4GHz GPS Antenna: ceramic patch circular polarized: 3.0dBi Peak gain			
Antenna Beam width	Wi-Fi: 2.4GHz Band: 360° Horizontal and 65° Vertical 5.0GHz Band: 360° Horizontal and 50° Vertical 6.0GHz Band: 360° Horizontal and 65° Vertical			
	BLE: 2.4GHz Band: 225° Horizontal and 55° Vertical GPS: 1.5-1.6GHz Band: 360° Horizontal and 98° Vertical			
Supported Frequency	2.4-2.484GHz 5.925-6.425GHz			
Bands (GHz)*	5.15         5.25GHz         6.425         6.525GHz           5.15         5.25GHz         6.525         6.525GHz           5.25         5.535GHz         6.525         6.525           5.47         5.725         6.875         7.125GHz           5.725         5.535GHz         6.875         7.125GHz			
Radio 1 Capabilities	Frequency band: 2.4GHz Channel width: 20/40MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 4×4 Service			
Radio 2 Capabilities	Frequency band: 5.0GHz Channel width: 20/40/80MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 4×4 Service			
Radio 3 Capabilities	Frequency band: 2.4GHz, 5.0GHz, and 6.0GHz Channel width: 20/40/80/160MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 4X4 Service (2×2 when Scanning)			
Maximum Data Rate	Radio 1: up to 1182 Mbps Radio 2: up to 2475 Mbps Radio 3: Up to 4804 Mbps			
Bluetooth Low Energy Radio	Bluetooth scanning and iBeacon advertizement @10 dBm max TX power			
GNSS				
Supported Bands	GPS L1 C/A, QZSS L1 C/A: 1575.42 MHz, GLONASS L1: 1598.0625–1605.375 MHz BDS B11: 1561.098 MHz, Galileo E1: 1575.42 MHz			
Default constallations	GPS + GLONASS + BDS + Galileo + QZSS			
Tracking channels	47			
Concurrent GNSS	5			
SBAS	WAAS, EGNOS, MSAS and GAGAN			
Sensitivity (@ default constallations)	Acquisition: -147 dBm   Tracking: -166 dBm   Reacquisition: -159			
Interfaces	x1 10GBASE-T/SGBASE-T/2.5GBASE-T/1000BASE-T/100BASE TX/10BASE-Te RJ45, x1 10/100/1000 Base-T RJ45, x1 RS-232 RJ45 Serial Port			
MDI/MDIX	Supported			
Power over Ethernet (PoE)	802.3bt PoE on LAN1/10G PoE port			
PSE OUT				
Simultaneous SSIDs	802.3af power on LAN2/1G PSE port Up to 8 per client serving radio (7 if background scanning is enabled)			
EAP Type(s)	EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST			
User/Device Authentication	WPA™, WPA2™, and WPA3™ with 802.1x or Preshared key, WEP, Web Captive Portal, MAC blacklist and whitelist			
Maximum Tx Power	Radio 1: 2.4GHz: 29.8 dBm / 955 mW (4 chains combined)* Radio 2: 5GHz: 29.8 dBm / 955 mW (4 chains combined)* Radio 3: 6GHz: 26 dBm / 400 mW (4 chains combined @ 160MHz BW)*			
Kensington Lock	No			

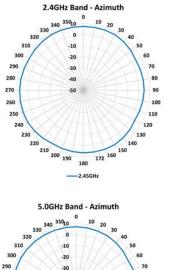
	FortiAP 432G
IEEE Standards	802.11a, 802.11b, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11k, 802.11n, 802.11r, 802.11v, 802.11ac, 802.11ax, 802.1X, 802.3ad, 802.3at, 802.3bt, 802.3az
SSID Types Supported	Local-Bridge, Mesh, and Tunnel
Per Radio Client Capacity	Up to 512 clients per radio (Radio1, Radio2, and Radio3)
Cellular Co-existence	Yes
LED Off Mode	Yes
Advanced 802.11 Features	
OFDMA	Yes
Spatial Reuse (BSS	Yes
Coloring)	
UL MU-MIMO	Yes
DL- MU-MIMO	Yes
Enhanced Target Wake Time (TWT)	Yes
ZeroWait DFS	No
Onboard Security Function	IS
UTP Capable	Yes
UTP Features	Application control and Web filtering
Wireless Monitoring Capat	pilities
Rogue Scan Radio Modes	Background, Dedicated
WIPS / WIDS Radio Modes	Background, Dedicated (recommended)
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Power source and power c	onsumption
PoE	PIN060-54PR 60W PoE with reset switch shipped with the A
Power Consumption (Maximum)	41.2 Watts (Including PSE out of 12.9 watts)
PoE Mode	Full - 802.3bt or Passive (Shipped with unit) : Tx Power - Full Chain 4×4 ; PSE - Enabled
	High - 802.3at or 2×802.3af : All Radio Operation in Low Tx Power 17 dBm ; Chain 4×4 ; PSE - Disabled
Hit-less PoE Failover	N/A
Surge Protection Built In	No
Dimensions	
Length x Width x Height	9.45 × 9.45 × 2.74 inches (240.0 × 240.0 × 69.6 mm)
Weight	7.05 lbs (3.2 kg)
Package (shipping) Weight	13.2 lbs (6.0 kg)
Accessories (included)	
Mounting Accessories	Wall and Pole installation brackets with mounting kits
PoE	PIN060-54PR 60W PoE with reset switch or IEEE 802.3bt Po
Environment	
Humidity	5% to 90% non-condensing
Operating / Storage Temperature	-40°F to 140°F (-40°C to 60°C) /
Directives	-58°F to 158°F (-50°C to 70°C)
UL2043 Plenum Material	Low Voltage Directive • RoHS
Mean Time Between	>10 Years
Failures	
ID Dating	IP67
IP Rating	
Certifications	
-	No
Certifications	No No
Certifications Wi-Fi Alliance Certified	

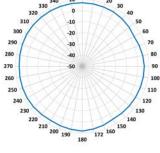
\* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

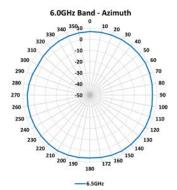
		FORTIAP	432G			
	2.4 GHz Band		5.0 GHz Band		6 GHz Band	
Data rate	Tx power/chain (dBm)	Rz Sensitivity (dBm)	Tx power/chain (dBm)	Rz Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)
802.11b						
1 Mbps	27	-99				-99
i 11 Mbps	27	-91				-91
302.11g/a	802.	.11g		80	2.11a	
6 Mbps	27	-94	25	-92	22	-94
54 Mbps	27	-78	23	-75	21	-77
302.11n HT20						
ACSO	26	-94	25	-91		
ICS7	26	-77	22	-73		
302.11n HT40						
ACS0	25	-93	25	-89		
ACS7	25	-74	22	-70		
302.11ac VHT20						
ACSO	23	-95	25	-91		
ACS9	21	-73	22	-70		
302.11ac VHT40						
ACSO	23	-92	23	-89		
ACS9	20	-70	21	-67		
302.11ac VHT80						
ACS0			23	-85		
ACS9			21	-62		
302.11ax HE20						
MCS0	26	-94	23	-91	22	-91
MCS11	24	-71	21	-63	19	-65
302.11ax HE40						
ИСЅО	25	-92	22	-88	21	-89
MCS11	23	-63	20	-60	19	-61
302.11ax HE80						
ACSO			22	-85	21	-85
MCS11			20	-57	18	-60
302.11ax HE160						
MCSO					20	-85
MCS11					17	-56

Maximum capability of the Hardware provided (Excluding antenna gain)

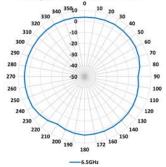
#### Antenna Radiation Patterns FAP-432G



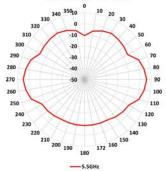


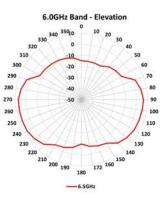


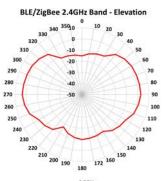
BLE/ZigBee 2.4GHz Band - Azimuth



5.0GHz Band - Elevation







-6.5GHz

#### FortiAP 231G and 233G

These enterprise class extended frequency band Wi-Fi 6E indoor APs provide three radios and two spatial streams. These access points support the 6 GHz band, OFDMA, and a 2.5 Gigabit Ethernet port. The APs can provide 24/7 scanning across all bands while still providing access on both the 2.4 GHz and 5 GHz bands or 2.4 GHz and dual 5 GHz service or the AP can be configured to provide simultaneous access on 2.4 GHz, 5 GHz, and the 6 GHz bands. The integrated BLE/ ZigBee radio can be used for beacons and locationing applications.



Wi-Fi 6E | Tri-Radio 2.4 GHz + 5 GHz + 5 GHz / 6 GHz / scanning | 4 Internal Antennas / 2 External RPSMA Connectors + 2 External Permanently attached Antennas

2×2 MU-MIMO | Up to 574 Mbps + 1201 Mbps + 2402 Mbps





FAP-231G

FAP-233G

#### **Data Sheet**

	FortiAP 231G	FortiAP 233G			
Hardware					
Hardware Type	Indoor AP	Indoor AP			
Number of Radios	3 + 1 BLE	3 + 1 BLE			
Number of Antennas	Internal External x2 Dual band Wi-Fi + x2 Dual band Wi-Fi + x2 Tri-band Wi-Fi and Sc Scanning + 1 Single band (permanently attached 2.4GHz BLE/ZigBee Internal 1 Single band 2.4GHz BLE/ZigBee				
Antenna Type Support		RP-SMA (2 total): Dual Band Antenna (2)			
Antenna Type and Peak Gain	Omni Directional antenna. Dual band: 4.5 dBi for 2.4GHz, 5.5 dBi for 5 GHz Tr-band: 4.5 dBi for 2.4GHz, 5.5 dBi for 5 GHz and 5.5dBi for 6GHz band BLE antenna: 4.0dBi for 2.4Ghz	Omni Directional antenna. Dual band: 4.5 dBi for 2.4GHz, 4.5 dBi for 5 GHz. Tr-band: 4.5 dBi for 2.4GHz 4.5 dBi for 5 GHz and 4.5dB for 6GHz band BLE Omni Directional antenna. Single band: 4.0dBi for 2.4GHz			
Frequency Bands (GHz)*	2.400-2.4835, 5.150-5.250, 5 5.725-5.850, 5.925-6.425, 6.4 6.875, 6.875-7.125				
Radio 1 Capabilities	Frequency band : 2.4GHz Channel width: 20/40MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Service				
Radio 2 Capabilities	Frequency band: 5.0GHz Channel width: 20/40/80MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Service				
Radio 3 Capabilities	Frequency band: 2.4GHz, 5.0GHz, and 6.0GHz Channel width: 20/40/80/160MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Service and Scanning				
Maximum Data Rate	Radio 1: up to 574 Mbps Radio 2: up to 1201 Mbps Radio 3: Up to 2401 Mbps				
Bluetooth Low Energy Radio	Bluetooth scanning and iBeacon advertizement @10 dBm max TX power				
Trusted Platform Module (TPM)	Yes Yes				
Interfaces	1 100/1000/2500 Base-T RJ45, 1 10/100/1000 Base-T RJ4 1x Type 3.0 USB, 1 RS-232 RJ45 Serial Port				
	Supported Supported				
MDI/MDIX	Supported				
	Supported 1 × 802.3at PoE default				
MDI/MDIX Power over Ethernet (PoE) Simultaneous SSIDs		Supported			
Power over Ethernet (PoE)	1 × 802.3at PoE default Up to 8 per client serving rad	Supported io (7 if background scanning v2, PEAPv0/EAP-MSCHAPv2			
Power over Ethernet (PoE) Simultaneous SSIDs	1 × 802.3at PoE default Up to 8 per client serving rad is enabled) EAP-TLS, EAP-TTLS/MSCHAF	Supported io (7 if background scanning v2, PEAPv0/EAP-MSCHAPv2, AP-AKA, EAP-FAST ith 802.1x or Preshared key,			
Power over Ethernet (PoE) Simultaneous SSIDs EAP Type(s) User/Device Authentication	1 × 802.3at PoE default Up to 8 per client serving rad is enabled) EAP-TLS, EAP-TTLS/MSCHAP PEAPv1/EAP-GTC, EAP-SIM, E WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> w WEP, Web Captive Portal, MA	Supported io (7 if background scanning vv2, PEAPv0/EAP-MSCHAPv2 EAP-AKA, EAP-FAST ith 802.1x or Preshared key, C blocklist and allowlist 200 mW (2 chains combined)* 0 mW (2 chains combined)*			
Power over Ethernet (PoE) Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power	1 × 802.3at PoE default Up to 8 per client serving rad is enabled) EAP-TLS, EAP-TTLS/MSCHAF PEAPv1/EAP-GTC, EAP-SIM, E WPA™, WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> w WEP, Web Captive Portal, MA Radio 1: 2.4GHz: 23 dBm / 20 Radio 2: 5GHz: 23 dBm / 20 GGHz: 21 dBm 126 mW (2 cl	Supported io (7 if background scanning vv2, PEAPv0/EAP-MSCHAPv2, EAP-AKA, EAP-FAST ith 802.1x or Preshared key, C blocklist and allowlist 200 mW (2 chains combined)* 0 mW (2 chains combined)*			
Power over Ethernet (PoE) Simultaneous SSIDs EAP Type(s)	1 × 802.3at POE default Up to 8 per client serving rad is enabled) EAP-TLS, EAP-TTLS/MSCHAF PEAPv1/EAP-GTC, EAP-SIM, E WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> w WEP, Web Captive Portal, MA Radio 1: 2.4GHz: 23 dBm / 20 Radio 2: 5GHz: 23 dBm / 20 GGHz: 21 dBm 126 mW (2 cl BW)* Yes 802.11a, 802.11b, 802.11d, 802	Supported io (7 if background scanning V2, PEAPv0/EAP-MSCHAPv2, EAP-AKA, EAP-FAST ith 802.1x or Preshared key, C blocklist and allowlist 200 mW (2 chains combined) 0 mW (2 chains combined)* 0 mW (2 chains combined)* 0 mW (2 chains combined)* nains combined @ 160MHz Yes 2.11e, 802.11g, 802.11h, 802.11w, 11r, 802.11u, 802.11v, 802.11w,			
Power over Ethernet (PoE) Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power Kensington Lock IEEE Standards SSID Types Supported	1 × 802.3at POE default Up to 8 per client serving rad is enabled) EAP-TLS, EAP-TTLS/MSCHAF PEAPv1/EAP-GTC, EAP-SIM, E WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> w WEP, Web Captive Portal, MA Radio 1: 2.4GHz: 23 dBm / 20 6GHz: 21 dBm 126 mW (2 cl BW)* Yes 802.11a, 802.11b, 802.11d, 802 802.11a, 802.11ax, 802.11a, 802 802.11ax, 802.11ax, 802.10, 81 802.3at, 802.3az, 802.3bz Local-Bridge, Mesh, and Turn	Supported io (7 if background scanning V2, PEAPv0/EAP-MSCHAPv2, EAP-AKA, EAP-FAST ith 802.1x or Preshared key, C blocklist and allowlist 200 mW (2 chains combined)* 0 mW (2 chains combined)* 10 mW (2 chains combined)* 0 mW (2 chains combined)* 0 mW (2 chains combined)* 0 mW (2 chains combined)* 10 mW (2 chains combined)* 0 mW (2			
Power over Ethernet (PoE) Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power Kensington Lock IEEE Standards	1 × 802.3at POE default Up to 8 per client serving rad is enabled) EAP-TLS, EAP-TTLS/MSCHAF PEAPv1/EAP-GTC, EAP-SIM, E WPA™, WPA2™, and WPA3™ w WEP, Web Captive Portal, MA Radio 1: 2.4GHz: 23 dBm / 20 Radio 2: 5GHz: 23 dBm / 20 Radio 3: 5GHz: 23 dBm / 20 GGHz: 21 dBm 126 mW (2 cl BW)* Yes 802.11a, 802.11b, 802.11d, 802 802.11ac, 802.11ac, 802.11ac, 802 802.11ac, 802.11ac, 802.10c, 80 802.3at, 802.3az, 802.3bz	Supported io (7 if background scanning V2, PEAPv0/EAP-MSCHAPv2, EAP-AKA, EAP-FAST ith 802.1x or Preshared key, C blocklist and allowlist 200 mW (2 chains combined)* 0 mW (2 chains combined)* 10 mW (2 chains combined)* 0 mW (2 chains combined)* 0 mW (2 chains combined)* 0 mW (2 chains combined)* 10 mW (2 chains combined)* 0 mW (2			

Tx Power 17 dBm ; Radio3 - Disabled ; USB - Disabled       Humidity     5% to 90% non-condensing		FortiAP 231G	FortiAP 233G			
Spatial Reuse (BSS Coloring)YesYesUL MU-MIMOYesYesDL- MU-MIMOYesYesDL- MU-MIMOYesYesDL- MU-MIMOYesYesCaroWait DFSNoNoOnboard Security FunctionsUTP CapableYesUTP CapableYesYesUTP CapableYesYesUTP CapableYesYesUTP SeaturesApplication control and Web filteringWireless Monitoring CapabilitiesRogue Scan Radio ModesBackground, DedicatedWIPS / WIDS Radio ModesBackground, Dedicated (recommended)Packet Sniffer ModeYesYesYesSpectrum AnalyzerYesYesYesDimensions1.95 lbs (0.8 kg)Length x Width x Height7.18 × 7.18 × 2.12 inches (182.4 × 182.4 × 54.0 mm)Weight1.75 lbs (0.8 kg)1.95 lbs (0.8 kg)1.95 lbs (0.88 kg)Package (shipping) Weight3.05 lbs (1.4 kg)3.05 lbs (1.4 kg)3.35 lbs (1.51 kg)AccessoriesMounting kit for Ceiling, T-Rail and WallPower SupplySP-FAP200-PA-XX or 802.3at PeE (GPI-130)EnvironmentEnvironmentPower Consumption (Maximum)802.3at = 15.4W max 802.3at = 25.5W maxPoE ModeFull - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled Low - 802.3at = 25.5W maxPoer 17 dBm ; Radio3 - Disabled ; USB - Disabled ; USB - Disabled ; USB - Enabled Theower 17 dBm ; Radio3 - Disabled; USB - Disabled ; USB - Disa	Advanced 802.11 Features					
(BSS Coloring)UL MU-MIMOYesYesDL- MU-MIMOYesYesDL- MU-MIMOYesYesEnhanced Target WakeYesYesZeroWait DFSNoNoOnboard Security FunctionsImage: Colspan="2">Colspan="2"Colspan="2">Colspan="2">Colspan="2"Colspan="2"	OFDMA	Yes	Yes			
DL- MU-MIMOYesYesEnhanced Target Wake Time (TWT)YesYesZeroWait DFSNoNoOnboard Security FunctionsVesYesUTP CapableYesYesUTP FeaturesApplication control and Web filteringWireless Monitoring CapabilitiesVesRogue Scan Radio ModesBackground, DedicatedWIPS / WIDS Radio ModesBackground, Dedicated (recommended)Packet Sniffer ModeYesYesYesSpectrum AnalyzerYesYesYesDimensionsJest Night		Yes	Yes			
Enhanced Target Wake Time (TWT)YesYesZeroWait DFSNoNoOnboard Security FunctionsVesYesUTP CapableYesYesUTP FeaturesApplication control and Web filteringWireless Monitoring CapabilitiesRogue Scan Radio ModesBackground, Dedicated (recommended)Packet Sniffer ModeYesYesSpectrum AnalyzerYesYesDimensionsJess (182.4 × 182.4 × 54.0 mm)Weight1.75 lbs (0.8 kg)1.95 lbs (0.88 kg)Package (shipping) Weight3.05 lbs (1.4 kg)3.35 lbs (1.51 kg)AccessoriesStandard Mounting kit for Celling, T-Rail and WallPower SupplySP-FAP200-PA-XX or 802.3at PoE (GPI-130)EnvironmentSu2.3at = 25.5W maxPoer Consumption (Maximum)Based on the PoE standard. 802.3at = 25.5W maxPoE ModeFull - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled Low + 80.2.3af : R1(2.4GHz) and R2(6GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled ; USB - DisabledHumidity5% to 90% non-condensingOperating / Storage Temperature32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°DirectivesLow Voltage Directive • RoHS	UL MU-MIMO	Yes	Yes			
Time (TWT)ZeroWait DFSNoNoOnboard Security FunctionsImage: Security FunctionsUTP CapableYesYesUTP FeaturesApplication control and Web filteringWireless Monitoring CapabilitiesRogue Scan Radio ModesBackground, DedicatedRogue Scan Radio ModesBackground, Dedicated (recommended)Packet Sniffer ModeYesYesSpectrum AnalyzerYesYesDimensionsImage: Security FunctionsLength x Width x Height7.18 × 7.18 × 2.12 inches (182.4 × 182.4 × 54.0 mm)Weight1.75 lbs (0.8 kg)1.95 lbs (0.88 kg)Package (shipping) Weight3.05 lbs (1.4 kg)3.35 lbs (1.51 kg)AccessoriesStandard Mounting kit for Ceiling, T-Rail and WallIncluded AccessoriesStandard Mounting kit for Ceiling, T-Rail and WallPower SupplySP-FAP200-PA-XX or 802.3at PoE (GPI-130)EnvironmentSection the PoE standard. 802.3at = 15.4W max 802.3at = 25.5W maxPoE ModeFull - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2; USB - Enabled Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in I Tx Power 17 dBm ; Radio3 - Disabled ; USB - DisabledHumidity5% to 90% non-condensingOperating / Storage Temperature32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70° TemperatureDirectivesLow Voltage Directive • RoHS	DL- MU-MIMO	Yes	Yes			
Onboard Security FunctionsUTP CapableYesYesUTP FeaturesApplication control and Web filteringWireless Monitoring CapabilitiesRogue Scan Radio ModesBackground, DedicatedWIPS / WIDS Radio ModesBackground, Dedicated (recommended)Packet Sniffer ModeYesYesYesSpectrum AnalyzerYesVieless Month x Height7.18 × 7.18 × 2.12 inches (182.4 × 182.4 × 54.0 mm)Weight1.75 lbs (0.8 kg)1.95 lbs (0.88 kg)Package (shipping) Weight3.05 lbs (1.4 kg)3.35 lbs (1.51 kg)AccessoriesValadard Mounting kit for Ceiling, T-Rail and WallIncluded AccessoriesStandard Mounting kit for Ceiling, T-Rail and WallPower SupplySP-FAP200-PA-XX or 802.3at PoE (GPI-130)EnvironmentSased on the PoE standard. (Maximum)Based on the PoE standard. (Maximum)802.3af = 15.4W max 802.3af = 25.5W maxPoE ModeFull - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled ; USB - DisabledHumidity5% to 90% non-condensingOperating / Storage Temperature32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70° TemperatureDirectivesLow Voltage Directive • RoHS		Yes	Yes			
UTP CapableYesYesUTP FeaturesApplication control and Web filteringWireless Monitoring CapabilitiesRogue Scan Radio ModesBackground, DedicatedWIPS / WIDS Radio ModesBackground, Dedicated (recommended)Packet Sniffer ModeYesYesYesSpectrum AnalyzerYesVireless Month X Height7.18 × 7.18 × 2.12 inches (182.4 × 182.4 × 54.0 mm)Weight1.75 lbs (0.8 kg)1.95 lbs (0.88 kg)Package (shipping) Weight3.05 lbs (1.4 kg)3.35 lbs (1.51 kg)AccessoriesCeiling, T-Rail, and WallIncluded AccessoriesStandard Mounting kit for Ceiling, T-Rail and WallPower SupplySP-FAP200-PA-XX or 802.3at PoE (GPI-130)Environment2.3at = 25.5W maxPoE ModeFull - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled ; USB - DisabledHumidity5% to 90% non-condensingOperating / Storage Temperature32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°DirectivesLow Voltage Directive • RoHS	ZeroWait DFS	No	No			
UTP FeaturesApplication control and Web filteringWireless Monitoring CapabilitiesRogue Scan Radio ModesBackground, DedicatedWIPS / WIDS Radio ModesBackground, Dedicated (recommended)Packet Sniffer ModeYesYesYesSpectrum AnalyzerYesVieght7.18 × 7.18 × 2.12 inches (182.4 × 182.4 × 54.0 mm)Weight1.75 lbs (0.8 kg)1.95 lbs (0.88 kg)Package (shipping) Weight3.05 lbs (1.4 kg)3.35 lbs (1.51 kg)AccessoriesStandard Mounting kit for Ceiling, T-Rail and WallIncluded AccessoriesStandard Mounting kit for Ceiling, T-Rail and WallPower SupplySP-FAP200-PA-XX or 802.3at PoE (GPI-130)EnvironmentBased on the PoE standard. 802.3af = 15.4W max 802.3af = 25.5W maxPoE ModeFull - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled ; USB - DisabledHumidity5% to 90% non-condensingOperating / Storage Temperature32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°DirectivesLow Voltage Directive * RoHS	Onboard Security Functions					
Wireless Monitoring Capabilities         Rogue Scan Radio Modes       Background, Dedicated         WIPS / WIDS Radio Modes       Background, Dedicated (recommended)         Packet Sniffer Mode       Yes         Spectrum Analyzer       Yes         Viels       Yes         Dimensions       Image: Spectrum Analyzer         Length x Width x Height       7.18 × 7.18 × 2.12 inches (182.4 × 182.4 × 54.0 mm)         Weight       1.75 lbs (0.8 kg)       1.95 lbs (0.88 kg)         Package (shipping) Weight       3.05 lbs (1.4 kg)       3.35 lbs (1.51 kg)         Accessories       Mounting Options       Ceiling, T-Rail, and Wall         Included Accessories       Standard Mounting kit for Ceiling, T-Rail and Wall         Power Supply       SP-FAP200-PA-XX or 802.3at PoE (GPI-130)         Environment       Based on the PoE standard.         802.3af = 15.4W max       802.3af = 25.5W max         PoE Mode       Full - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled         Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled ; USB - Disabled         Humidity       5% to 90% non-condensing         Operating / Storage       32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°         Directives       Low Voltage Directive * RoHS <th>UTP Capable</th> <th>Yes</th> <th>Yes</th>	UTP Capable	Yes	Yes			
Rogue Scan Radio ModesBackground, DedicatedWIPS / WIDS Radio ModesBackground, Dedicated (recommended)Packet Sniffer ModeYesYesSpectrum AnalyzerYesYesDimensionsImage: Constraint of the state of	UTP Features	Application control and Web fi	Itering			
WIPS / WIDS Radio ModesBackground, Dedicated (recommended)Packet Sniffer ModeYesYesSpectrum AnalyzerYesYesDimensionsImage: Comparison of the state of the	Wireless Monitoring Capabilit	ies				
Packet Sniffer Mode         Yes         Yes           Spectrum Analyzer         Yes         Yes           Dimensions         Yes         Yes           Length x Width x Height         7.18 × 7.18 × 2.12 inches (182.4 × 182.4 × 54.0 mm)           Weight         1.75 lbs (0.8 kg)         1.95 lbs (0.88 kg)           Package (shipping) Weight         3.05 lbs (1.4 kg)         3.35 lbs (1.51 kg)           Accessories         Ceiling, T-Rail, and Wall         Included Accessories           Mounting Options         Ceiling, T-Rail, and Wall         Included Accessories           Power Supply         SP-FAP200-PA-XX or 802.3at PoE (GPI-130)           Environment         Power Consumption (Maximum)         Based on the PoE standard. 802.3at = 25.5W max           PoE Mode         Full - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled ; USB - Disabled           Humidity         5% to 90% non-condensing           Operating / Storage Temperature         32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°           Directives         Low Voltage Directive • RoHS	Rogue Scan Radio Modes	Background, Dedicated				
Spectrum Analyzer         Yes         Yes           Dimensions         Impose (182.4 × 182.4 × 54.0 mm)         Impose (182.4 × 182.4 × 54.0 mm)           Weight         1.75 lbs (0.8 kg)         1.95 lbs (0.88 kg)           Package (shipping) Weight         3.05 lbs (1.4 kg)         3.35 lbs (1.51 kg)           Accessories         Impose (182.4 × 182.4 × 54.0 mm)         Impose (182.4 × 182.4 × 54.0 mm)           Meight         1.75 lbs (0.8 kg)         1.95 lbs (0.88 kg)           Package (shipping) Weight         3.05 lbs (1.4 kg)         3.35 lbs (1.51 kg)           Accessories         Ceiling, T-Rail, and Wall         Included Accessories         Standard Mounting kit for Ceiling, T-Rail and Wall           Included Accessories         Standard Mounting kit for Ceiling, T-Rail and Wall         SP-FAP200-PA-XX or 802.3at PoE (GPI-130)           Environment         SP         SP-FAP200-PA-XX or 802.3at PoE (GPI-130)           Power Consumption (Maximum)         Based on the PoE standard.         802.3af = 15.4W max 802.3af = 15.4W max 802.3af = 25.5W max           PoE Mode         Full - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm; Radio3 - Disabled ; USB - Disabled in Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm; Radio3 - Disabled ; USB - Disabled in Low - 800% non-condensing           Operating / Storage         S2°F to 122°F (0°C to	WIPS / WIDS Radio Modes	Background, Dedicated (recon	nmended)			
Dimensions           Length x Width x Height         7.18 × 7.18 × 2.12 inches (182.4 × 182.4 × 54.0 mm)           Weight         1.75 lbs (0.8 kg)         1.95 lbs (0.88 kg)           Package (shipping) Weight         3.05 lbs (1.4 kg)         3.35 lbs (1.51 kg)           Accessories             Mounting Options         Ceiling, T-Rail, and Wall            Included Accessories         Standard Mounting kit for Ceiling, T-Rail and Wall           Power Supply         SP-FAP200-PA-XX or 802.3at PoE (GPI-130)           Environment            Power Consumption (Maximum)         Based on the PoE standard.           802.3af = 15.4W max         802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled           Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled ; USB - Disabled           Humidity         5% to 90% non-condensing           Operating / Storage         32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°           Directives         Low Voltage Directive • RoHS	Packet Sniffer Mode	Yes	Yes			
Length x Width x Height         7.18 × 7.18 × 2.12 inches (182.4 × 182.4 × 54.0 mm)           Weight         1.75 lbs (0.8 kg)         1.95 lbs (0.88 kg)           Package (shipping) Weight         3.05 lbs (1.4 kg)         3.35 lbs (1.51 kg)           Accessories             Mounting Options         Ceiling, T-Rail, and Wall            Included Accessories         Standard Mounting kit for Ceiling, T-Rail and Wall            Power Supply         SP-FAP200-PA-XX or 802.3at PoE (GPI-130)            Environment           802.3at = 15.4W max 802.3at = 25.5W max            PoE Mode         Full - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled             Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled ; USB - Disabled             Humidity         5% to 90% non-condensing              Operating / Storage         32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°             Directives         Low Voltage Directive * RoHS	Spectrum Analyzer	Yes	Yes			
Weight         1.75 lbs (0.8 kg)         1.95 lbs (0.88 kg)           Package (shipping) Weight         3.05 lbs (1.4 kg)         3.35 lbs (1.51 kg)           Accessories             Mounting Options         Ceiling, T-Rail, and Wall            Included Accessories         Standard Mounting kit for Ceiling, T-Rail and Wall            Power Supply         SP-FAP200-PA-XX or 802.3at PoE (GPI-130)            Environment              Power Consumption (Maximum)         Based on the PoE standard.             802.3af = 15.4W max               PoE Mode         Full - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled             Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled ; USB - Disabled             Humidity         5% to 90% non-condensing              Operating / Storage         32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°            Directives         Low Voltage Directive * RoHS	Dimensions					
Package (shipping) Weight3.05 lbs (1.4 kg)3.35 lbs (1.51 kg)AccessoriesMounting OptionsCeiling, T-Rail, and WallIncluded AccessoriesStandard Mounting kit for Ceiling, T-Rail and WallPower SupplySP-FAP200-PA-XX or 802.3at POE (GPI-130)EnvironmentBased on the PoE standard.Power Consumption (Maximum)Based on the PoE standard.802.3af = 15.4W max 802.3at = 25.5W maxPoE ModeFull - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled ; USB - DisabledHumidity5% to 90% non-condensingOperating / Storage Temperature32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°DirectivesLow Voltage Directive • RoHS	Length x Width x Height	7.18 × 7.18 × 2.12 inches (182.4	4 × 182.4 × 54.0 mm)			
Accessories         Mounting Options       Ceiling, T-Rail, and Wall         Included Accessories       Standard Mounting kit for Ceiling, T-Rail and Wall         Power Supply       SP-FAP200-PA-XX or 802.3at PoE (GPI-130)         Environment       Based on the PoE standard.         802.3af = 15.4W max       802.3af = 15.4W max         802.3at = 25.5W max       802.3at or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled         Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled ; USB - Disabled         Humidity       5% to 90% non-condensing         Operating / Storage Temperature       32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°         Directives       Low Voltage Directive • RoHS	Weight	1.75 lbs (0.8 kg)	1.95 lbs (0.88 kg)			
Mounting Options       Ceiling, T-Rail, and Wall         Included Accessories       Standard Mounting kit for Ceiling, T-Rail and Wall         Power Supply       SP-FAP200-PA-XX or 802.3at PoE (GPI-130)         Environment       Based on the PoE standard.         Mounting Ximum)       Based on the PoE standard.         802.3af = 15.4W max       802.3at = 25.5W max         PoE Mode       Full - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled         Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled ; USB - Disabled         Humidity       5% to 90% non-condensing         Operating / Storage Temperature       32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°         Directives       Low Voltage Directive • RoHS	Package (shipping) Weight	3.05 lbs (1.4 kg)	3.35 lbs (1.51 kg)			
Included Accessories       Standard Mounting kit for Ceiling, T-Rail and Wall         Power Supply       SP-FAP200-PA-XX or 802.3at PoE (GPI-130)         Environment       Based on the PoE standard.         Power Consumption (Maximum)       Based on the PoE standard.         802.3af = 15.4W max 802.3at = 25.5W max       Boendard.         PoE Mode       Full - 802.3at or 2×802.3af or DC : Tx Power - Full; Chain 2×2; USB - Enabled         Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled; USB - Disabled         Humidity       5% to 90% non-condensing         Operating / Storage Temperature       32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°         Directives       Low Voltage Directive • RoHS	Accessories					
Power Supply       SP-FAP200-PA-XX or 802.3at PoE (GPI-130)         Environment       Based on the PoE standard.         Power Consumption (Maximum)       Based on the PoE standard.         802.3af = 15.4W max       802.3at = 25.5W max         PoE Mode       Full - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled         Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled ; USB - Disabled         Humidity       5% to 90% non-condensing         Operating / Storage Temperature       32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°         Directives       Low Voltage Directive • RoHS	Mounting Options	Ceiling, T-Rail, and Wall				
Environment         Power Consumption (Maximum)       Based on the PoE standard.         802.3af = 15.4W max 802.3at = 25.5W max         PoE Mode       Full - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled ; USB - Disabled         Humidity       5% to 90% non-condensing         Operating / Storage Temperature       32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70° Low Voltage Directive • RoHS	Included Accessories	Standard Mounting kit for Ceiling, T-Rail and Wall				
Power Consumption (Maximum)       Based on the PoE standard.         802.3af = 15.4W max 802.3at = 25.5W max         PoE Mode       Full - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled ; USB - Disabled         Humidity       5% to 90% non-condensing         Operating / Storage Temperature       32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70° Low Voltage Directive • RoHS	Power Supply	SP-FAP200-PA-XX or 802.3at	PoE (GPI-130)			
(Maximum)         802.3af         = 15.4W max           802.3at         = 25.5W max           PoE Mode         Full - 802.3at or 2×802.3af or DC : Tx Power - Full ; Chain 2×2 ; USB - Enabled           Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L Tx Power 17 dBm ; Radio3 - Disabled ; USB - Disabled           Humidity         5% to 90% non-condensing           Operating / Storage Temperature         32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70° Low Voltage Directive • RoHS	Environment					
Chain 2×2; USB - Enabled         Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in L         Tx Power 17 dBm ; Radio3 - Disabled ; USB - Disabled         Humidity       5% to 90% non-condensing         Operating / Storage       32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°         Directives       Low Voltage Directive • RoHS		802.3af = 15.4W max				
Tx Power 17 dBm ; Radio3 - Disabled ; USB - Disabled         Humidity       5% to 90% non-condensing         Operating / Storage Temperature       32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°         Directives       Low Voltage Directive • RoHS	PoE Mode					
Operating / Storage Temperature         32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°           Directives         Low Voltage Directive • RoHS		Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - Disabled ; USB - Disabled				
Temperature       Directives     Low Voltage Directive • RoHS	Humidity	5% to 90% non-condensing				
		32°F to 122°F (0°C to 50°C)/-22°F to 158°F (-30°C to 70°				
UL2043 Plenum Material Yes Yes		Low Voltage Directive • RoHS				
	UL2043 Plenum Material	Yes	Yes			
Mean Time Between         >10 Years         >10 Years           Failures         >10 Years         >10 Years		>10 Years	>10 Years			
IP Rating N/A N/A	IP Rating	N/A	N/A			
Surge Protection Built In No No	Surge Protection Built In	No	No			
Hit-less PoE Failover N/A N/A	Hit-less PoE Failover	N/A	N/A			
Certifications						
Wi-Fi Alliance Certified         Yes (includes Passpoint)         Yes (includes Passpoint)	Wi-Fi Alliance Certified		Yes (includes Passpoint)			
DFS CE, FCC, JP, Indonesia, CE, FCC, JP, Indonesia, Korea, Taiwan Korea, Taiwan	DFS					
Warranty	Warranty					
Limited Lifetime Warranty Yes Yes	Limited Lifetime Warranty	Yes	Yes			

\* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

		FORTIAP 231	IG / 233G			
	Radio 1 802.11ax 4×4		Radio 2 802.11ax 4×4		Radio3 Tri band Service and Scanning radio	
	Tx power/chain	Rx Sensitivity	Tx power/chain	Rx Sensitivity	Tx power/chain	Rx Sensitivity
Data rate	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)
2.4GHz, 802.11b						
Mbps	23	-99				-92
1 Mbps	23	-91				-91
.4GHz, 802.11g						
Mbps	23	-94				-92
4 Mbps	23	-78				-77
.4GHz, 802.11n HT20						
1CS0	23	-94				-92
1CS7	21	-75				-74
.4GHz, 802.11n HT40						
ICS0	22	-92				-90
ICS7	20	-73				-72
4GHz, 802.11ax HE20						
1CS0	23	-90				-90
ICS11	21	-71				-71
.4GHz, 802.11ax HE40						
ICSO	22	-91				-91
ICS11	20	-72				-72
.0GHz, 802.11a						
Mbps			23	-92	19	-93
4 Mbps			23	-76	19	-76
.0GHz, 802.11n HT20						
CS0			23	-93	19	-93
ICS7			21	-74	18	-73
.0GHz, 802.11n HT40						
ICSO			22	-91	21	-90
ICS7			21	-72	18	-71
0GHz, 802.11ac VHT20						
ICS0			23	-91	21	-93
ICS9			21	-72	18	-69
.0GHz, 802.11ac VHT40						
1050			22	-91	21	-90
1000			19	-72	18	-64
.0GHz, 802.11ac VHT80						
ICS0			21	-86	20	-88
1000			18	-62	17	-61
0GHz, 802.11ax HE20				32	• *	01
ICS0			23	-91	19	-91
CS11			20	-72	19	-72
0GHz, 802.11ax HE40			20	12	17	12
CS0			22	-91	21	-91
ICS11			19	-91	18	-91
0GHz, 802.11ax HE80			19	12	10	-/2
			01	-87	01	07
			21		21	-87
CS11			18	-58	17	-58
0GHz, 802.11ax HE160						
ICSO					18	-87

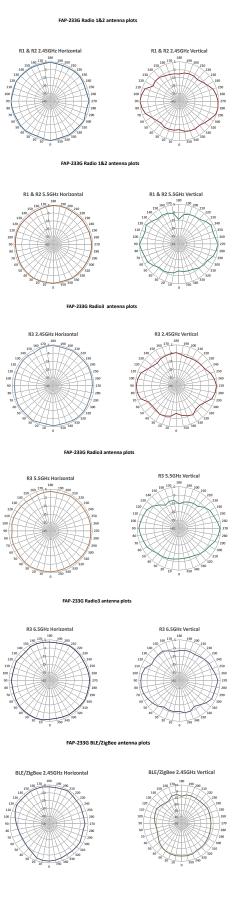
Maximum capability of the Hardware provided (Excluding antenna gain)

#### **Data Sheet**

#### Antenna Radiation Patterns FAP-231G

#### FAP-233G





#### FortiAP 234G

This enterprise class Wi-Fi 6E ruggedized indoor/outdoor AP provides three radios with internal antennas and two spatial streams. This access point supports the 6 GHz band, OFDMA, a 2.5 Gigabit Ethernet port, plus an additional 1 Gbps Ethernet port for PoE diversity. The AP can provide 24/7 scanning across all bands while still providing access on both the 2.4 GHz and 5 GHz bands or 2.4 GHz and dual 5 GHz service or the AP can be configured to provide simultaneous access on 2.4 GHz, 5 GHz, and the 6 GHz bands. The integrated BLE radio can be used for beacons and locationing applications.

Note: For FAP-234G, use of the 6GHz band is subject to regional regulatory authority approval.

💊 Wi-Fi 6E | Tri-Radio 2.4 GHz + 5 GHz + 5 GHz / 6 GHz / scanning | 8 Internal Antennas

2×2 MU-MIMO | Up to 574 Mbps + 1201 Mbps + 2402 Mbps



FAP-234G

# **Specifications**

	FortiAP 234G
Hardware	
Hardware Type	Outdoor AP
Number of Radios	3 + 1 BLE
	10
Number of Antennas	2*2.4GHz WiFI + 2*5GHz band WiFi + 2*5/6GHz dual band + 2*Tri-band Scanning + 1*Single band 2.4GHz BLE/ ZigBee + 1*GPS antenna
Antenna Type and Peak Gain	Cross dipole 2.4GHz band: 6.8dBi Cross dipole 5.0GHz bamd: 8.4dBi Cross dipole Dual band: 8.1 dBi for 5.0GHz, 5.5 dBi for 6 GHz
	Tr-band: 4.5 dBi for 2.4GHz, 5.5 dBi for 5 GHz and 8.4 dBi for 6GHz band
	BLE antenna: 4.4dBi for 2.4Ghz GPS Circular polarized patch antenna 5.0dBi
Antenna Beam width	Wi-Fi: 2.4GHz Band: 305° Horizontal and 97° Vertical 5.0GHz Band: 337° Horizontal and 122° Vertical 6.0GHz Band: 283° Horizontal and 94° Vertical
	BLE: 2.4GHzGHz Band: 196° Horizontal and 133° Vertical GPS: 1.5-1.6GHz Band: 360° Horizontal and 98° Vertical
Frequency Bands (GHz)*	2.4GHz Band: 2.400–2.4835 5.0GHz Band: 5.150–5.250, 5.250–5.350, 5.470–5.725, 5.725–5.850, 6.0GHz Band: 5.925–6.425, 6.425–6.525, 6.525–7, 5.925–6.875, 6.875–7.125
Radio 1 Capabilities	Frequency band: 2.4GHz Channel width: 20/40MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Service
Radio 2 Capabilities	Frequency band: 5.0GHz Channel width: 20/40/80/80+80MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Service
Radio 3 Capabilities	Frequency band: 2.4GHz, 5.0GHz, and 6.0GHz Channel width: 20/40/80/160MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Service and Scanning
Maximum Data Rate	Radio 1: up to 574 Mbps Radio 2: up to 1201 Mbps Radio 3: Up to 2401 Mbps
Bluetooth Low Energy Radio	Bluetooth scanning and iBeacon advertizement @10 dBm max TX power
GNSS	
Supported Bands	GPS L1 C/A, QZSS L1 C/A: 1575.42 MHz, GLONASS L1: 1598.0625–1605.375 MHz BDS B1I : 1561.098 MHz, Galileo E1: 1575.42 MHz
Default constallations	GPS + GLONASS + BDS + Galileo + QZSS
Tracking channels	47
Concurrent GNSS	5
SBAS	WAAS, EGNOS, MSAS and GAGAN
Sensitivity (@ default constallations)	Acquisition: -147 dBm Tracking: -166 dBm Reacquisition: -159
Interfaces	1*100/1000/2500 Base-T RJ45, 1*10/100/1000 Base-T RJ45, 1*RS-232 RJ45 Serial Port
MDI/MDIX	Supported
Power over Ethernet (PoE)	IEEE 802.at
Simultaneous SSIDs	Up to 24
EAP Type(s)	EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST
User/Device Authentication	WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> with 802.1x or Preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist
Maximum Tx Power	Radio 1: 2.4GHz: 26 dBm / 398 mW (2 chains combined)* Radio 2: 5GHz: 26 dBm / 398 mW (2 chains combined)* Radio 3: 5GHz: 26 dBm / 398 mW (2 chains combined)*, 6GHz: 26dBm/398 mW (2 chians combined EIRP)*

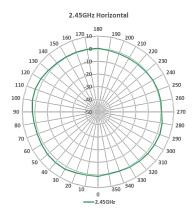
	FortiAP 234G
IEEE Standards	802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11k, 802.11n, 802.11r, 802.11u, 802.11v, 802.11w, 802.11ac, 802.11ax, 802.1Q, 802.1X, 802.3ad, 802.3af, 802.3at, 802.3az, 802.3bz
SSID Types Supported	Local-Bridge, Mesh, and Tunnel
Per Radio Client Capacity	Up to 512 clients per radio (Radio1, Radio2 and Radio3)
Cellular Co-existence	Yes
LED Off Mode	Yes
Advanced 802.11 Features	
OFDMA	Yes
Spatial Reuse (BSS Coloring)	Yes
UL MU-MIMO	Yes
DL- MU-MIMO	Yes
Enhanced Target Wake Time (TWT)	Yes
ZeroWait DFS	No
<b>Onboard Security Functions</b>	
UTP Capable	Yes
UTP Features	Application control and Web filtering
Wireless Monitoring Capabili	ties
Rogue Scan Radio Modes	Background, Dedicated
WIPS / WIDS Radio Modes	Background, Dedicated (recommended)
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Power source and power con	sumption
PoE	PIN060-54PR 60W PoE with reset switch shipped with the AP
Power Consumption (Max)	28 Watts
i ower oonsamption (max)	20 Watta
PoE Mode	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - Disabled
	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in
PoE Mode	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - Disabled
PoE Mode Hit-less PoE Failover	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - Disabled Yes
PoE Mode Hit-less PoE Failover Surge Protection Built In	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - Disabled Yes
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - Disabled Yes No
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions Length x Width x Height	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - Disabled Yes No 10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm)
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions Length x Width x Height Weight	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - Disabled Yes No 10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm) 3.05 lbs (1.38 kg)
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions Length x Width x Height Weight Package (shipping) Weight	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - Disabled Yes No 10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm) 3.05 lbs (1.38 kg)
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions Length x Width x Height Weight Package (shipping) Weight Accessories (included)	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - Disabled Yes No 10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm) 3.05 lbs (1.38 kg) 8.15 lbs (3.7 kg)
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions Length x Width x Height Weight Package (shipping) Weight Accessories (included) Mounting Accessories	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - Disabled Yes No 10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm) 3.05 lbs (1.38 kg) 8.15 lbs (3.7 kg) Wall and Pole installation brackets with mounting kits PIN060-54PR 60W PoE with reset switch or IEEE 802.3bt
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions Length x Width x Height Weight Package (shipping) Weight Accessories (included) Mounting Accessories PoE	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - Disabled Yes No 10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm) 3.05 lbs (1.38 kg) 8.15 lbs (3.7 kg) Wall and Pole installation brackets with mounting kits PIN060-54PR 60W PoE with reset switch or IEEE 802.3bt
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions Length x Width x Height Weight Package (shipping) Weight Accessories (included) Mounting Accessories PoE Environment	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - Disabled Yes No 10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm) 3.05 lbs (1.38 kg) 8.15 lbs (3.7 kg) Wall and Pole installation brackets with mounting kits PIN060-54PR 60W PoE with reset switch or IEEE 802.3bt PoE
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions Length x Width x Height Weight Package (shipping) Weight Accessories (included) Mounting Accessories PoE Environment Humidity Operating / Storage	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - DisabledYesNo10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm)3.05 lbs (1.38 kg)8.15 lbs (3.7 kg)Wall and Pole installation brackets with mounting kitsPIN060-54PR 60W PoE with reset switch or IEEE 802.3bt PoE5% to 90% non-condensing-40°F to 140°F (-40°C to 60°C) /
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions Length x Width x Height Weight Package (shipping) Weight Accessories (included) Mounting Accessories PoE Environment Humidity Operating / Storage Temperature	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - DisabledYesNo10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm)3.05 lbs (1.38 kg)8.15 lbs (3.7 kg)Wall and Pole installation brackets with mounting kitsPIN060-54PR 60W PoE with reset switch or IEEE 802.3bt Poe5% to 90% non-condensing-40°F to 140°F (-40°C to 60°C) / -58°F to 158°F (-50°C to 70°C)
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions Length x Width x Height Weight Package (shipping) Weight Accessories (included) Mounting Accessories PoE Environment Humidity Operating / Storage Temperature	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - DisabledYesNo10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm)3.05 lbs (1.38 kg)8.15 lbs (3.7 kg)Wall and Pole installation brackets with mounting kitsPIN060-54PR 60W PoE with reset switch or IEEE 802.3bt PoE5% to 90% non-condensing-40°F to 140°F (-40°C to 60°C) / -58°F to 158°F (-50°C to 70°C)Low Voltage Directive • RoHS
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions Length x Width x Height Weight Package (shipping) Weight Accessories (included) Mounting Accessories PoE Environment Humidity Operating / Storage Temperature Directives UL2043 Plenum Material Mean Time Between	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - DisabledYesNo10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm)3.05 lbs (1.38 kg)8.15 lbs (3.7 kg)Wall and Pole installation brackets with mounting kitsPIN060-54PR 60W PoE with reset switch or IEEE 802.3bt PoE5% to 90% non-condensing-40°F to 140°F (-40°C to 60°C) / -58°F to 158°F (-50°C to 70°C)Low Voltage Directive • RoHSYes
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions Length x Width x Height Weight Package (shipping) Weight Accessories (included) Mounting Accessories PoE Environment Humidity Operating / Storage Temperature Directives UL2043 Plenum Material Mean Time Between Failures	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - DisabledYesNo10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm)3.05 lbs (1.38 kg)8.15 lbs (3.7 kg)Wall and Pole installation brackets with mounting kitsPIN060-54PR 60W PoE with reset switch or IEEE 802.3bt PoE5% to 90% non-condensing-40°F to 140°F (-40°C to 60°C) / -58°F to 158°F (-50°C to 70°C)Low Voltage Directive • RoHSYes> 10 Years
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions Length x Width x Height Weight Package (shipping) Weight Accessories (included) Mounting Accessories PoE Environment Humidity Operating / Storage Temperature Directives UL2043 Plenum Material Mean Time Between Failures IP Rating	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - DisabledYesNo10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm)3.05 lbs (1.38 kg)8.15 lbs (3.7 kg)Wall and Pole installation brackets with mounting kitsPIN060-54PR 60W PoE with reset switch or IEEE 802.3bt PoE5% to 90% non-condensing-40°F to 140°F (-40°C to 60°C) / -58°F to 158°F (-50°C to 70°C)Low Voltage Directive • RoHSYes> 10 Years
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions Length x Width x Height Weight Package (shipping) Weight Accessories (included) Mounting Accessories PoE Environment Humidity Operating / Storage Temperature Directives UL2043 Plenum Material Mean Time Between Failures IP Rating Certifications	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - DisabledYesNo10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm)3.05 lbs (1.38 kg)8.15 lbs (3.7 kg)Wall and Pole installation brackets with mounting kitsPIN060-54PR 60W PoE with reset switch or IEEE 802.3bt PoE5% to 90% non-condensing -40°F to 140°F (-40°C to 60°C) / -58°F to 158°F (-50°C to 70°C)Low Voltage Directive • RoHS YesPIP67
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions Length x Width x Height Weight Package (shipping) Weight Accessories (included) Mounting Accessories PoE Environment Humidity Operating / Storage Temperature Directives UL2043 Plenum Material Mean Time Between Failures IP Rating Certifications Wi-Fi Alliance Certified	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - DisabledYesNo10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm)3.05 lbs (1.38 kg)8.15 lbs (3.7 kg)Wall and Pole installation brackets with mounting kitsPIN060-54PR 60W PoE with reset switch or IEEE 802.3bt PoE5% to 90% non-condensing-40°F to 140°F (-40°C to 60°C) / -58°F to 158°F (-50°C to 70°C)Low Voltage Directive • RoHSYes> 10 YearsINO
PoE Mode Hit-less PoE Failover Surge Protection Built In Dimensions Length x Width x Height Weight Package (shipping) Weight Accessories (included) Mounting Accessories PoE Environment Humidity Operating / Storage Temperature Directives UL2043 Plenum Material Directives UL2043 Plenum Material Pailures IP Rating Certifications Wi-Fi Alliance Certified	Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2×2 Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - DisabledYesNo10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm)3.05 lbs (1.38 kg)8.15 lbs (3.7 kg)Wall and Pole installation brackets with mounting kitsPIN060-54PR 60W PoE with reset switch or IEEE 802.3bt PoE5% to 90% non-condensing-40°F to 140°F (-40°C to 60°C) / -58°F to 158°F (-50°C to 70°C)Low Voltage Directive • RoHSYes> 10 YearsINO

\* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

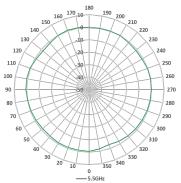
		FORTIAP	234G				
	Radio1 2.4	Radio1 2.4GHz Band		Radio2 5.0GHz Band		Radio3 6GHz Band	
Data rate	Tx power/chain (dBm)	Rz Sensitivity (dBm)	Tx power/chain (dBm)	Rz Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)	
302.11b	. ,	. ,	. ,	. ,	. ,	. ,	
Mbps	23	-99					
1 Mbps	23	-91					
02.11g/a	802.11g		802.11a				
Mbps	23	-94	23	-92	17	-94	
4 Mbps	23	-78	22	-75	17	-77	
02.11n HT20							
1CS0	23	-94	23	-91			
ICS7	21	-77	21	-73			
02.11n HT40							
ICSO	23	-93	23	-89			
ICS7	21	-74	21	-70			
02.11ac VHT20							
ICSO	23	-95	23	-91			
1CS9	21	-73	21	-70			
02.11ac VHT40							
ICSO	23	-92	23	-89			
ICS9	20	-70	20	-67			
02.11ac VHT80							
ICSO			22	-85			
1CS9			19	-62			
02.11ax HE20							
ICSO	23	-94	22	-91	17	-94	
ICS11	20	-71	19	-63	15	-67	
02.11ax HE40							
1CS0	20	-92	22	-88	16	-91	
ICS11	17	-63	19	-60	14	-63	
02.11ax HE80							
ICSO			21	-85	16	-88	
ICS11			18	-57	13	-61	
02.11ax HE160							
1CS0					15	-85	

### Antenna Radiation Patterns

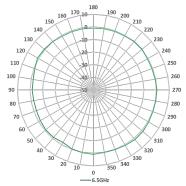
#### FAP-234G



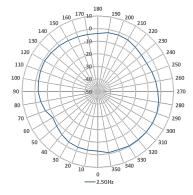


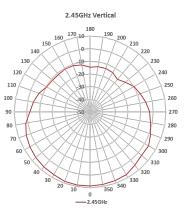


6.5GHz Horizontal

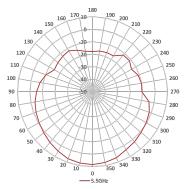


BLE Horizontal

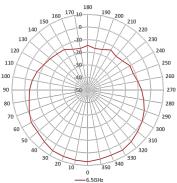




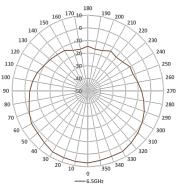
5.5GHz Vertical







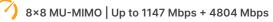
**BLE Vertical** 



#### FortiAP 831F

This high throughput enterprise class 802.11ax indoor AP provides three radios and 8 spatial streams. This top-of-the line access point supports OFDMA, a 5.0 Gigabit Ethernet port, plus an additional 1 Gbps Ethernet port for PoE diversity. The AP can provide 24/7 scanning across both bands while still providing access on both the 2.4 GHz and 5 GHz bands. The integrated BLE radio can be used for beacons and locationing applications.







FAP-831F

# Specifications

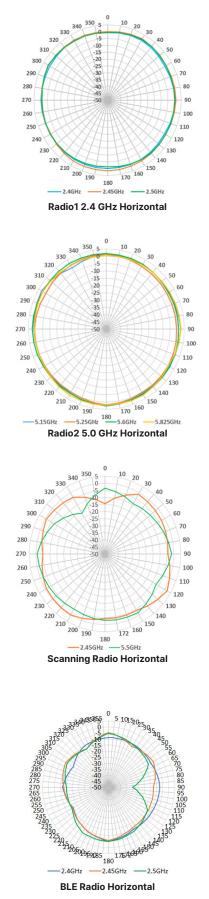
	FortiAP 831F			
Hardware				
Hardware Type	Indoor AP			
Number of Radios	3 + 1 BLE			
Number of Antennas	4 2.4GHz band WiFi + 8 5GHz band WiFi + I Dual band Scanning + 1 2.4GHz band BLE			
Antenna Type and Peak Gain	PIFA: 4.0 dBi for 2.4 GHz band WiFi antennas 6.0 dBi for 5.0 GHz band WiFi antennas 4.0 dBi for dual band Scanning radio antenna 4.5 dBi for 2.4 GHz band BLE antenna			
Frequency Bands (GHz)*	2.400-2.4835, 5.150-5.250, 5.250-5.350, 5.470-5.725, 5.725-5.850			
Radio 1 Capabilities	Frequency Band: 2.4 GHz Channel width: 20/40 MHz Modulation: BPSK, QPSK, QAM64 MIMO chains: 4×4 service			
Radio 2 Capabilities	Frequency Band: 5.0 GHz Channel width: 20/40/80/80+80/160MHz Modulation: BPSK, QPSK, QAM64, QAM256, and QAM1024 Mimo chains: 8×8 service in mode 1 or 4×4+4×4 service in mode 2			
Radio 3 Capabilities	Frequency band: 2.4/5.0 GHz MIMO chains: 1×1 frequency scanning			
Maximum Data Rate	802.11AX features: PHY data rates up to 5.95 Gbps			
	802.11AC features: PHY data rates up to 3.4 Gbps			
	802.11n features: PHY data rates up to 1.5 Gbps			
Bluetooth Low Energy Radio	Bluetooth scanning and iBeacon advertisement @ 10 dBm max TX power			
Interfaces	1× 100/1000/2500/5000 Base-T RJ45 1 × 10/100/1000 Base-T RJ45 1x Type 3.0 USB, 1x RS-232 RJ45 Serial Port			
MDI/MDIX	Supported Supported			
Power over Ethernet (PoE)	2× 802.3at/bt/30W Passive PoE in (Full function) 1× 802.3at PoE in (USB3.1 disabled)			
Simultaneous SSIDs	Up to 8 per client serving radio (7 if background			
EAP Type(s)	scanning is enabled) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP- MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST			
User/Device Authentication	WPA™, WPA2™, and WPA3™ with 802.1x or Preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist			
Maximum Tx Power (Conducted)	Radio 1: 2.4 GHz 27 dBm / 500 mW (4 chains combined)* Radio 2: 5 GHz 25.5 dBm / 354 mW (4 chains combined)* Radio 3: NA			
Kensington Lock	Yes			
IEEE Standards	802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i,802.11j, 802.11k, 802.11n, 802.11r, 802.11u, 802.11v, 802.11ac, 802.11ax (Wi-Fi 6), 802.1Q, 802.1X, 802.3ad, 802.3af, 802.3at, 802.3az, 802.3bz			
SSID Types Supported	Local-Bridge, Mesh, Tunnel			
Per Radio Client Capacity	up to 512 clients per radio (Radio1 and Radio2)			
Cellular Co-existence	Yes			
LED Off Mode	Yes			

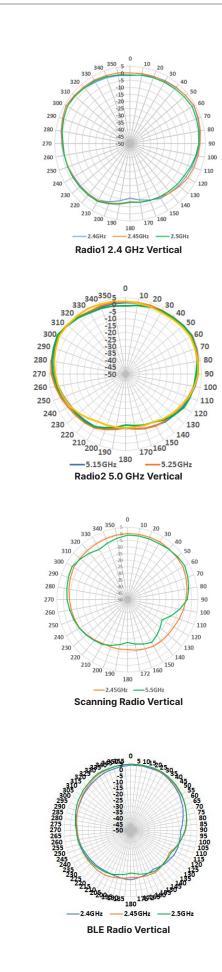
	FortiAP-831F
Advanced 802.11 Features	
OFDMA	Yes (UL and DL)
Spatial Reuse (BSS Coloring)	Yes
UL-MU-MIMO 802.11ax mode	Yes
DL-MU-MIMO	Yes
Enhanced Target Wake Time (TWT)	Yes
ZeroWait DFS /Agile DFS	No
Onboard Security Functions	
UTP Capable	No
UTP Features	N/A
Wireless Monitoring Capabilities	
Rogue Scan Radio Mode	Dedicated
WIPS / WIDS RAdio Modes	Dedicated
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Dimensions	
Length x Width x Height	9.05 × 89.05 × 2.15 inches (230 × 230 × 55 mm)
Weight	2.25 lbs (1.02 kg)
Package (shipping) Weight	4.2 lbs (1.9 kg)
Accessories	
Mounting Options	Ceiling, T-Rail, and Wall
Included Accessories	Mount kit for Ceiling, T-Rail, and Wall
Power Supply	SP-FAP400-PA-XX or GPI-130
Environment	
PSE Functionality	No
Power Consumption (Max)	33 W
PoE Mode	
Single 5G	DC/2at → Full Mode ; Radios will be in (8×8 4×4) and USB Enabled 1at/2af → High Mode ; Radios will be in (8×8 4×4) and USB Disabled 1af → Low Mode ; Radios will be $[2\times2 2\times2]$ , Tx Power 10 dBm and USB Disabled
Dual 5G	$\begin{array}{l} {\sf DC/2at} \rightarrow {\sf Full Mode} \ ; {\sf Radios will be in } [4{\times}4 4{\times}4] \\ {\sf and USB Enabled} \\ {\sf 1at/2af} \rightarrow {\sf High Mode} \ ; {\sf Radios will be in} \\ [4{\times}4 4{\times}4 4{\times}4] \\ {\sf and USB Disabled} \\ {\sf 1af} \rightarrow {\sf Low Mode} \ ; {\sf Radios will be } [2{\times}2 2{\times}2 2{\times}2], {\sf Tx} \\ {\sf Power 10 dBm and USB Disabled} \end{array}$
Humidity	5% to 90% Non-Condensing
Operating / Storage Temp.	32°F to 122°F(0°C to 50°C) / -22°F to 158°F(-30°C to 70°C)
Directives	Low Voltage Directive • RoHS
UL2043 Plenum Material	No
Mean Time Betw. Failures	>10 Years
Surge Protection Built In	No
Certifications	
Wi-Fi Alliance Certified	Yes (includes Passpoint)
DFS	FCC, IC, CE, Brazil and Taiwan
Warranty	
Limited Lifetime Warranty	Yes
•	

\* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

			FortiAP 831F					
	Radio 1		Radio 2			Radio 3		
Data rate	2.4 GHz Tx Power per chain (dBm)	Rx Sensitivity (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity(dBm)	2.4 GHz Tx Power per chain (dBm)	Rx Sensitivity (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity (dBm)
302.11b	per chain (abin)	(ubiii)	per onain (ubiii)	Sensitivity (dbin)	per chain (dbin)	(abiii)	per onani (ubiii)	(dbiii)
I Mbps	21	-98	_	_	21	-96	_	_
1 Mbps	23	-89	_		18	-87		_
802.11g								
6 Mbps	20	-94	_	_	20	-92	_	_
54 Mbps	22	-75	_	_	18	-73	_	_
802.11n HT20								
MCS0	20	-93	_	_	20	-91	_	_
MCS0 MCS7	20	-74			17	-72		_
	20	/ 4			17	12		
802.11n HT40	17	00			10	00		
MCS0	17	-92 -73		_	19	-90		_
MCS7	10	-/3	_	_	17	-/1	_	_
802.11ax HE20	04							
MCS0	21	-90	_	_	_	_	—	—
MCS11	17	-71	—	_	—	_	—	-
802.11ax HE40								
MCS0	17	-88	—	—	—	—	—	
MCS11	17	-68	—	—	—	—	—	-
802.11a								
6 Mbps	_	_	20	-92	_	_	20	-90
54 Mbps	_	_	20	-72	—	_	17.5	-72
802.11n HT20								
MCS0	—	—	20	-91	—	—	20	-90
MCS7	—	—	19	-72	—	—	17.5	-71
802.11n HT40								
MCS0	—	_	20	-88	_	_	19	-88
MCS7	_	_	18	-69	—	_	16.5	-69
802.11ac VHT20								
MCS0	_	_	20	-91	_	-	19	-90
MCS9	_	_	19	-67	_	_	17.5	-67
802.11ac VHT40								
MCS0	_	_	20	-88	_	_	19	-88
MCS9	_	_	18	-62	_	_	16	-62
802.11ac VHT80								
MCS0	_	_	18	-85	_	_	18	-85
MCS9	_		17	-59	_	_	16	-58
802.11ax HE20								
MCS0	_	_	20	-90	_	_	_	_
MCSU MCS11			18	-90				
			10					_
802.11ax HE40			00	07				
MCS0		_	20	-87	_	—	_	
MCS11	_	_	18	-61	-	-	_	_
802.11ax HE80								
VICS0	—	—	18	-94	—	—	—	—
MCS11	—		17	-58	—	—	—	_

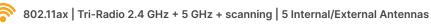
#### FAP 831F Antenna Radiation Patterns





#### FortiAP 431F and 433F

These enterprise class 802.11ax indoor APs provide three radios and four spacial streams. These top-of-the-line access points provide OFDMA, a 2.5 Gigabit Ethernet port, plus an additional 1 Gbps Ethernet port for PoE diversity. The APs can provide 24/7 scanning across both bands while still providing access on both the 2.4 GHz and 5 GHz bands. The integrated BLE radio can be used for beacons and locationing applications.





4×4 MU-MIMO | Up to 1147 Mbps + 2402 Mbps



FAP-433F

FAP-431F

#### **Data Sheet**

# Specifications

	FortiAP 431F	FortiAP 433F			
Hardware					
Hardware Type	Indoor AP	Indoor AP			
Number of Radios	3 + 1 BLE	3 + 1 BLE			
Number of Antennas	5 Internal + 1 BLE Internal	5 External (RP-SMA) + 1 BL Internal			
Antenna Type Support		RP-SMA (5 total): Dual Band Antenna (5)			
Antenna Type and Peak Gain	PIFA: 4 dBi for 2.4 GHz, 5 dBi for 5 GHz	Omni directional rubber duck antenna: 4 dBi for 2.4 GHz, 6 dBi for 5 GHz			
Frequency Bands (GHz)*	2.400–2.4835, 5.150–5.250, 5.250–5.350, 5.470–5.725, 5.725–5.850				
Radio 1 Capabilities	Frequency Band: 2.4 GHz Channel width: 4×4 20/40 MHz Modulation: BPSK, QPSK, QAM64, QAM256, and QAM1024 MIMO chains: 4×4 service				
Radio 2 Capabilities	Frequency Band: 5.0 GHz Channel width: 4×4 20/40/80MHz and 2×2 160MHz contiguous Modulation: BPSK, QPSK, QAM64, QAM256, and QAM1024 Mimo chains: 4×4 service				
Radio 3 Capabilities	Frequency band: 2.4/5.0 GHz MIMO chains: 1×1 frequency s				
Maximum Data Rate	Radio 1: up to 1147 Mbps Radio 2: up to 2402 Mbps Radio 3: scan only	Radio 1: up to 1147 Mbps Radio 2: up to 2402 Mbps Radio 3: scan only			
Bluetooth Low Energy Radio	Bluetooth scanning and iBeacon advertisement @ 6 dBm max TX power				
Interfaces	1× 100/1000/2500 Base-T RJ45, 1 × 10/100/1000 Base-T RJ45, 1x Type A USB, 1x RS-232 RJ45 Serial Port				
MDI/MDIX	Supported Supported				
Simultaneous SSIDs	Up to 8 per client serving radio (7 if background scanning is enabled)				
EAP Type(s)	EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST				
User/Device Authentication	WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> with 802.1x or Preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist				
Maximum Tx Power (Conducted)	Radio 1: 2.4 GHz 24 dBm / 251 mW (4 chains combined)* Radio 2: 5 GHz 23 dBm / 200 mW (4 chains combined)* Radio 3: NA				
Kensington Lock	Yes	Yes			
IEEE Standards	802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i,802.11j, 802.11k, 802.11n, 802.11r, 802.11u, 802.11v, 802.11w, 802.11ac, 802.11ax (Wi-Fi 6), 802.1Q, 802.1X, 802.3ad, 802.3af, 802.3at, 802.3az, 802.3bz				
SSID Types Supported	Local-Bridge, Mesh, Tunnel	Local-Bridge, Mesh, Tunnel			
Per Radio Client Capacity	512 per Radio1 and Radio2	512 per Radio1 and Radio2			
Cellular Co-existence	Yes	Yes			
Reset Button	Yes	Yes			
LED Off Mode	Yes	Yes			
Advanced 802.11 Features					
OFDMA	Yes (UL and DL)	Yes (UL and DL)			
2.4 GHz OFDMA	Yes	Yes			
Spatial Reuse (BSS Coloring)	Yes	Yes			
HE-MU-MIMO	Yes	Yes			
UL-MU-MIMO 802.11ax mode	Yes	Yes			
DL-MU-MIMO	Yes	Yes			
Enhanced Target Wake Time (TWT)	Yes	Yes			
	No	No			

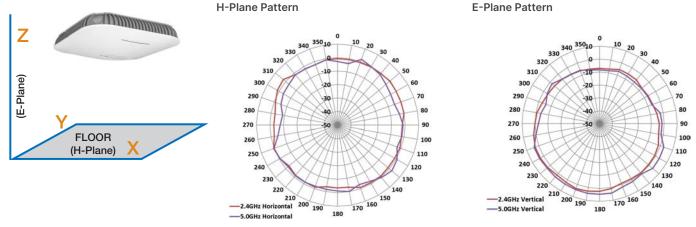
	FortiAP-431F	FortiAP-433F			
Onboard Security Functions					
UTP Capable	No	No			
UTP Features	N/A	N/A			
Wireless Monitoring Capabil	•				
Rogue Scan Radio Mode	Background, Dedicated	Background, Dedicated			
WIPS / WIDS RAdio Modes	Background, Dedicated (reco	0,			
Packet Sniffer Mode	Yes	Yes			
Spectrum Analyzer	Yes	Yes			
	100	100			
Dimensions	/				
Length x Width x Height	8.27 × 8.27 × 2.22 inches (21	,			
Weight	2.16 lbs (0.98 kg)	2.19 lbs (0.995 kg)			
Package (shipping) Weight	3.97 lbs (1.8 kg)	4.4 lbs (2 kg)			
Accessories					
Mounting Options	Ceiling, T-Rail, and Wall	Ceiling, T-Rail, and Wall			
Included Accessories	Mount kit for Ceiling, T-Rail and Wall	Mount kit for Ceiling, T-Rail and Wall. 5 RP-SMA Male dual-band dipole antenna			
Power Supply	SP-FAP400-PA-XX or GPI-130	SP-FAP400-PA-XX or GPI-130			
Optional Antennas** (Professional Installer Required for FCC domains)	N/A	FANT-04ABGN-0606-O-R FANT-04ABGN-0606-P-R			
Environment					
Power Consumption (Max)	24.5 W	24.5 W			
PoE Mode	802.3at PoE default				
	1 port powered by 802.3at or 2 ports powered by 802.3af - Full System functionality + USB support				
	1 port is connected to 802.3af - No USB suppor in 2×2 mode with reduced power R1/R2 17dBm(				
Humidity	5% to 90% Non-Condensing	5% to 90% Non-Condensing			
Operating / Storage Temperature					
Directives	Low Voltage Directive • RoHS	Low Voltage Directive • RoHS			
UL2043 Plenum Material	No	No			
Mean Time Between Failures	>10 Years	>10 Years			
IP Rating	_	_			
Surge Protection Built In	No	No			
Hit-less PoE Failover	Yes	Yes			
Certifications					
Wi-Fi Alliance Certified	Yes (includes Passpoint)	Yes (includes Passpoint)			
DFS	FCC, IC, CE, Japan, Brazil and Taiwan	FCC, IC, CE, Japan, Brazil and Taiwan			
Warranty					
Limited Lifetime Warranty	Yes	Yes			

\* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

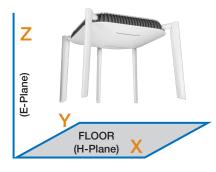
\*\* Refer to the Fortinet Antenna datasheet here.

			FortiAP 431F / 433F					
Data rate	Radio 1		Radio 2			Radio 3		
	2.4 GHz Tx Power per chain (dBm)	Rx Sensitivity (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity (dBm)	2.4 GHz Tx Power per chain (dBm)	Rx Sensitivity (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity (dBm)
802.11b								
l Mbps	23	-98	—	_	20	-96	—	_
I1 Mbps	23	-89	_	_	18	-87	_	_
802.11g								
6 Mbps	23	-94	—	—	20	-92	—	_
54 Mbps	22	-75	_	_	18	-73	_	-
802.11n HT20								
MCS0	22	-93	—	_	20	-91	_	_
MCS7	20	-74	—	_	17	-72	—	_
802.11n HT40								
MCS0	20	-92	_	_	19	-90	_	_
MCS7	18	-73	_	_	17	-71	_	_
802.11ax HE20								
MCS0	22	-90	_	_	_	_	_	_
MCS11	17	-71	_	_	_	_	_	_
802.11ax HE40								
MCS0	19	-88	_	_	_	_	_	_
MCS11	17	-68	_	_	_	_	_	_
802.11a								
6 Mbps	_	_	20	-92	_	_	20	-90
54 Mbps	_	_	20	-72	_	_	17.5	
802.11n HT20								
MCS0	_	_	20	-91	_	_	20	-90
MCS7	_	_	19	-72	_	_	17.5	-71
802.11n HT40								
MCS0	_	_	20	-88	_	_	19	-88
MCS7	_	_	18	-69	_	_	16.5	-69
802.11ac VHT20								
MCS0	_	_	20	-91	_	_	19	-90
MCS9			19	-67			17.5	-67
802.11ac VHT40			10	07			17.0	07
MCS0			20	-88			19	-88
MCS0 MCS9			18	-88		_	19	-88
			10	02			10	02
802.11ac VHT80 MCS0			10	05			10	05
MCS0 MCS9			18	-85			18	-85
	_	_	17	-28	_	_	0	-20
802.11ax HE20			~~~	~~~				
MCS0	—	_	20	-90	—	—		—
MCS11	_	-	18	-66	-	-	-	_
802.11ax HE40								
MCS0	_	_	20	-87	_	_	_	_
MCS11	—	—	18	-61	—	_	—	-
802.11ax HE80								
MCS0	_	_	18	-94	_	_	_	_
MCS11	—	—	17	-58	—	_	—	—

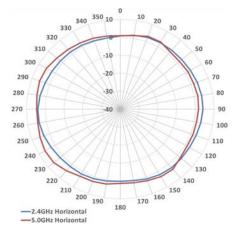
#### FAP-431F



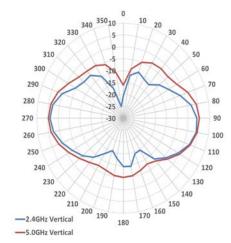
#### FAP-433F



#### **H-Plane Pattern**



#### E-Plane Pattern



#### FortiAP 432F

This enterprise class 802.11ax ruggedized indoor/outdoor AP provides three radios and four spacial streams. As a top-of-the-line Wi-Fi 6 access point it provides OFDMA, a 2.5 Gigabit Ethernet port, plus an additional 1 Gbps Ethernet port with PoE out. The AP can provide 24/7 scanning across both bands while still providing access on both the 2.4 GHz and 5 GHz bands. The integrated BLE radio can be used for beacons and locationing applications.



802.11ax | Tri-Radio 2.4 GHz + 5 GHz + scanning | 6 External Antennas

4×4 MU-MIMO | Up to 1147 Mbps + 2402 Mbps



FAP-432F

# **Specifications**

	FortiAP 432F				
Hardware					
Hardware Type	Ruggedized indoor/outdoor AP				
Number of Radios	3 + 1 BLE				
Number of Antennas	4 dual band WiFi + 1 dual band scanning + 1 single band 2.4 GHz BLE/ZigBee				
Antenna Type Support	N-Type (5 total): Dual Band Antenna (5)				
Antenna Type and Peak Gain	WiFi and scanning radio dual band antenna: 5.5 dBi in 2.4 GHz and 7.2 dBi in 5 GHz band BLE antenna: 5.0 dBi in 2.4 GHz band				
Frequency Bands (GHz)*	2.400-2.4835, 5.150-5.250, 5.250-5.350, 5.470-5.725, 5.725-5.850				
Radio 1 Capabilities	Frequency band: 2.4 GHz Channel width: 20/40MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 4×4 Service				
Radio 2 Capabilities	Frequency band: 5.0 GHz Channel width: 4×4 20/40/80MHz and 2×2 160 MHz contiguous Modulation: BPSK, QPSK, QAM64, QAM256, and QAM1024 MIMO Chains: 4×4 Service				
Radio 3 Capabilities	Frequency bands: 2.4 GHz and 5.0 GHz MIMO Chains: 1×1 Frequency Scanning				
Maximum Data Rate	Radio 1: up to 1147 Mbps Radio 2: up to 2402 Mbps Radio 3: Frequency scanning only				
Bluetooth Low Energy Radio	Bluetooth scanning and iBeacon advertisement @ 10 dBm max TX power				
Interfaces	1× 100/1000/2500 Base-T RJ45, 1 × 10/100/1000 Base-T RJ45 (802.3af PoE PSE), 1x RS-232 RJ45 Serial Port				
MDI/MDIX	Supported Supported				
MDI/MDIX Simultaneous SSIDs	Supported         Supported           Up to 8 per client serving radio (7 if background scanning is enabled)         ••••••••••••••••••••••••••••••••••••				
	Up to 8 per client serving radio (7 if background scanning				
Simultaneous SSIDs	Up to 8 per client serving radio (7 if background scanning is enabled) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2,				
Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power	Up to 8 per client serving radio (7 if background scanning is enabled) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> with 802.1x or preshared key,				
Simultaneous SSIDs EAP Type(s)	Up to 8 per client serving radio (7 if background scanning is enabled) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST WPA™, WPA2™, and WPA3™ with 802.1x or preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist Radio 1: 2.4 GHz 30 dBm / 1000 mW (4 chains combined)* Radio 2: 5 GHz 26 dBm / 398 mW (4 chains combined)*				
Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power (Conducted) Kensington Lock	Up to 8 per client serving radio (7 if background scanning is enabled) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST WPA <sup>w</sup> , WPA2 <sup>w</sup> , and WPA3 <sup>w</sup> with 802.1x or preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist Radio 1: 2.4 GHz 30 dBm / 1000 mW (4 chains combined)* Radio 2: 5 GHz 26 dBm / 398 mW (4 chains combined)* Radio 3: N/A				
Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power (Conducted) Kensington Lock IEEE Standards	Up to 8 per client serving radio (7 if background scanning is enabled) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> with 802.1x or preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist Radio 1: 2.4 GHz 30 dBm / 1000 mW (4 chains combined)* Radio 2: 5 GHz 26 dBm / 398 mW (4 chains combined)* Radio 3: N/A No 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i,802.11j, 802.11a, 802.11a, 802.11v, 802.11v, 802.11ac, 802.11ac, 802.11ax (Wi-Fi 6), 802.10, 802.12x,				
Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power (Conducted) Kensington Lock IEEE Standards SSIDs Supported	Up to 8 per client serving radio (7 if background scanning is enabled) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> with 802.1x or preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist Radio 1: 2.4 GHz 30 dBm / 1000 mW (4 chains combined)* Radio 2: 5 GHz 26 dBm / 398 mW (4 chains combined)* Radio 3: N/A No 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11b, 802.11d, 802.11r, 802.11u, 802.11v, 802.11ac, 802.11ax (Wi-Fi 6), 802.10, 802.11x, 802.3ad, 802.3af, 802.3at, 802.3az, 802.3bt, 802.3bt				
Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power (Conducted) Kensington Lock IEEE Standards SSIDs Supported Per Radio Client Capacity	Up to 8 per client serving radio (7 if background scanning is enabled) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> with 802.1x or preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist Radio 1: 2.4 GHz 30 dBm / 1000 mW (4 chains combined)* Radio 2: 5 GHz 26 dBm / 398 mW (4 chains combined)* Radio 3: N/A No 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11a, 802.11b, 802.11h, 802.11r, 802.11g, 802.11h, 802.11w, 802.11ac, 802.11ax (Wi-Fi 6), 802.10, 802.10x, 802.3ad, 802.3af, 802.3az, 802.3az, 802.3bz Local-Bridge, Tunnel, and Mesh				
Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power (Conducted) Kensington Lock IEEE Standards SSIDs Supported Per Radio Client Capacity Cellular Co-existence	Up to 8 per client serving radio (7 if background scanning is enabled) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST WPA <sup>w</sup> , WPA2 <sup>w</sup> , and WPA3 <sup>w</sup> with 802.1x or preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist Radio 1: 2.4 GHz 30 dBm / 1000 mW (4 chains combined)* Radio 2: 5 GHz 26 dBm / 398 mW (4 chains combined)* Radio 3: N/A No 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11k, 802.11n, 802.11r, 802.11u, 802.11v, 802.11w, 802.11ac, 802.11ax (Wi-Fi 6), 802.1Q, 802.1X, 802.3ad, 802.3af, 802.3at, 802.3az, 802.3bt, 802.3bz Local-Bridge, Tunnel, and Mesh Up to 512 clients per radio (Radio1 and Radio2)				
Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power (Conducted) Kensington Lock IEEE Standards SSIDs Supported Per Radio Client Capacity Cellular Co-existence LED Off Mode	Up to 8 per client serving radio (7 if background scanning is enabled) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> with 802.1x or preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist Radio 1: 2.4 GHz 30 dBm / 1000 mW (4 chains combined)* Radio 2: 5 GHz 26 dBm / 398 mW (4 chains combined)* Radio 3: N/A No 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11k, 802.11a, 802.11r, 802.11h, 802.11i, 802.11k, 802.11a, 802.11r, 802.11h, 802.11w, 802.11ac, 802.11ax (Wi-Fi 6), 802.10, 802.11x, 802.3ad, 802.3at, 802.3az, 802.3abt, 802.3bz Local-Bridge, Tunnel, and Mesh Up to 512 clients per radio (Radio1 and Radio2) Yes				
Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power (Conducted)	Up to 8 per client serving radio (7 if background scanning is enabled) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> with 802.1x or preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist Radio 1: 2.4 GHz 30 dBm / 1000 mW (4 chains combined)* Radio 2: 5 GHz 26 dBm / 398 mW (4 chains combined)* Radio 3: N/A No 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11k, 802.11a, 802.11r, 802.11h, 802.11i, 802.11k, 802.11a, 802.11r, 802.11h, 802.11w, 802.11ac, 802.11ax (Wi-Fi 6), 802.10, 802.11x, 802.3ad, 802.3at, 802.3az, 802.3abt, 802.3bz Local-Bridge, Tunnel, and Mesh Up to 512 clients per radio (Radio1 and Radio2) Yes				
Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power (Conducted) Kensington Lock IEEE Standards SSIDs Supported Per Radio Client Capacity Cellular Co-existence LED Off Mode	Up to 8 per client serving radio (7 if background scanning is enabled) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST WPA", WPA2", and WPA3" with 802.1x or preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist Radio 1: 2.4 GHz 30 dBm / 1000 mW (4 chains combined)* Radio 2: 5 GHz 26 dBm / 398 mW (4 chains combined)* Radio 3: N/A No 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i,802.11j, 802.11k, 802.11r, 802.11g, 802.11h, 802.11a, 802.11a, 802.11a, 802.11r, 802.11v, 802.13ad, 802.3af, 802.3at, 802.3az, 802.3bt, 802.3bz Local-Bridge, Tunnel, and Mesh Up to 512 clients per radio (Radio1 and Radio2) Yes				
Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power (Conducted) Kensington Lock IEEE Standards IEEE Standards SSIDs Supported Per Radio Client Capacity Cellular Co-existence LED Off Mode Advanced 802.11 Features OFDMA Spatial Reuse (BSS	Up to 8 per client serving radio (7 if background scanning is enabled) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST WPA*, WPA2**, and WPA3** with 802.1x or preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist Radio 1: 2.4 GHz 30 dBm / 1000 mW (4 chains combined)* Radio 2: 5 GHz 26 dBm / 398 mW (4 chains combined)* Radio 3: N/A No 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i,802.11b, 802.11h, 802.11r, 802.11u, 802.11v, 802.11w, 802.11ac, 802.11a, 802.11r, 802.11u, 802.11v, 802.13ad, 802.3af, 802.3at, 802.3az, 802.3bt, 802.3bz Local-Bridge, Tunnel, and Mesh Up to 512 clients per radio (Radio1 and Radio2) Yes Yes Yes				
Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power (Conducted) Kensington Lock IEEE Standards SSIDs Supported Per Radio Client Capacity Cellular Co-existence LED Off Mode Advanced 802.11 Features OFDMA Spatial Reuse (BSS Coloring)	Up to 8 per client serving radio (7 if background scanning is enabled) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST WPA", WPA2", and WPA3" with 802.1x or preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist Radio 1: 2.4 GHz 30 dBm / 1000 mW (4 chains combined)* Radio 2: 5 GHz 26 dBm / 398 mW (4 chains combined)* Radio 3: N/A No 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i,802.11j, 802.11k, 802.11n, 802.11r, 802.11v, 802.13a, 802.11ac, 802.11ax (Wi-Fi 6), 802.10, 802.10x, 802.3ad, 802.3af, 802.3at, 802.3az, 802.3bt, 802.3bt Local-Bridge, Tunnel, and Mesh Up to 512 clients per radio (Radio1 and Radio2) Yes Yes				
Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power (Conducted) Kensington Lock IEEE Standards IEEE Standards SSIDs Supported Per Radio Client Capacity Cellular Co-existence IED Off Mode Advanced 802.11 Features OFDMA Spatial Reuse (BSS Coloring) UL MU-MIMO	Up to 8 per client serving radio (7 if background scanning is enabled) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST WPA <sup>w</sup> , WPA2 <sup>m</sup> , and WPA3 <sup>m</sup> with 802.1x or preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist Radio 1: 2.4 GHz 30 dBm / 1000 mW (4 chains combined)* Radio 2: 5 GHz 26 dBm / 398 mW (4 chains combined)* Radio 3: N/A No 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11b, 802.11h, 802.11r, 802.11u, 802.11v, 802.11w, 802.11ac, 802.11ax (WI-Fi 6), 802.10, 802.12x, 802.3ad, 802.3af, 802.3at, 802.3az, 802.3bt, 802.3bz Local-Bridge, Tunnel, and Mesh Up to 512 clients per radio (Radio1 and Radio2) Yes Yes Yes				

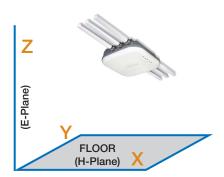
FortiAP 432F						
Onboard Security Functions						
UTP Capable	No					
UTP Features	N/A					
Wireless Monitoring Capabilities						
Rogue Scan radio modes	Background, Dedicated					
WIPS / WIDS radio modes	Background, Dedicated (recommended)					
Packet Sniffer Mode	Yes					
Spectrum Analyzer	Yes					
Dimensions						
Length x Width x Height	8.23 × 8.23 × 2.38 inches (209 × 209 × 60.5 mm)					
Weight	5.12 lbs (2.325 kg)					
Package (shipping) Weight	12.56.93 lbs (5.7 kg)					
Accessories						
Mounting Options	Wall and Pole					
Included Accessories	Wall and Pole mounting kit					
Power Supply	802.3bt PoE, ships with PoE injector (reset functionality)					
Optional Antennas** (Professional Installer Required for FCC domains)	FANT-04ABGN-0606-0-N FANT-04ABGN-1414-P-N FANT-04ABGN-8065-P-N					
Environment						
PSE functionality	Yes (while powered by PoE injector shipped with product)					
Power Consumption (Maximum)	25 W without PSE out and 37.9 W with PSE out					
PoE Mode	802.3bt PoE default (ships with Passive PoE injector					
	Powered by 802.3at PoE - Operate in 4×4 mode with reduced Tx power Radio1/R2 17dBm					
	This product only supports PSE functionality when it is powered by PoE injector that ships with the product.					
Humidity	10% to 90% non condensing					
Operating / Storage Temperature	-40°F to 140°F (-40°C to 60°C) / -40°F to 176°F (-40°C to 80°C)					
Directives	Low Voltage Directive • RoHS					
UL2043 Plenum Material	No					
Mean Time Between Failures	> 10 Years					
IP Rating	IP67					
Surge Protection Built In	Yes					
Hit-less PoE Failover	N/A					
Certifications						
WiFi Alliance Certified	Yes (includes Passpoint)					
DFS	FCC, IC, CE, Japan, Brazil and Taiwan					
Warranty						
Limited Lifetime Warranty	Yes					

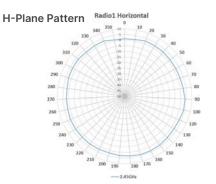
\* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

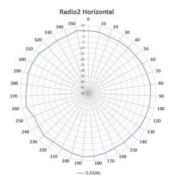
\*\* Refer to the Fortinet Antenna datasheet here.

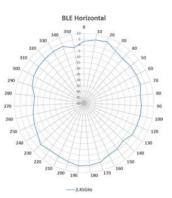
			FortiA	AP 432F			
	Radio 1		Ra	dio 2		Radio 3 Scanning	
Data rate	2.4 GHz Tx Power per chain (dBm)	Rx Sensitivity (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity (dBm)	2.4 GHz Tx Power per chain (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity (dBm)
802.11b							
1 Mbps	24	-99	_	_	20	_	-92
11 Mbps	24	-91	_	_	18	_	-91
802.11g							
6 Mbps	24	-94	_	_	20	_	-92
54 Mbps	23	-78	_	_	18	_	-77
802.11n HT20							
MCS0	24	-94	_	_	20	_	-92
MCS7	23	-75	_	_	17	_	-74
802.11n HT40							
MCS0	23	-92	_	_	19	_	-90
MCS7	22	-73	_	_	17	_	-72
802.11ax HE20							
MCS0	23	-90	_	_	_	_	_
MCS11	23	-71	_		_	_	
802.11ax HE40	21	7.1					
MCS0	21	-91	_	_	_	_	_
MCS11	19	-72					
	13	12					
802.11a			00	00		00	00
6 Mbps			22	-92 -76		20	-93 -76
54 Mbps	_	—	22	-70	_	19	-70
802.11n HT20							
MCS0	—	—	22	-93	—	20	-93
MCS7	_	_	21	-74	_	19	-73
802.11n HT40							
MCS0	—	_	22	-91	—	19	-90
MCS7	—	-	21	-72	_	18	-71
802.11ac VHT20							
MCS0	_	—	22	-91	—	19	-93
MCS9	—	—	20	-72	—	18	-69
802.11ac VHT40							
MCS0	—	_	22	-91	—	19	-90
MCS9	—	_	19	-72	—	16	-64
802.11ac VHT80							
MCS0	_	_	20	-86	_	17	-88
MCS9	—	_	17	-62	—	17	-61
802.11ax HE20							
MCS0	_	_	22	-91	_	_	_
MCS11	_	_	19	-72	_	_	_
802.11ax HE40							
MCS0	_	—	22	-91	_	—	_
MCS11	_	_	19	-72		_	_
802.11ax HE80							
MCS0	_	_	20	-87	_	_	_
MCS11	_	_	18	-58		_	

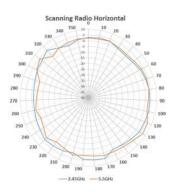
### Antenna Radiation Patterns FAP-432F

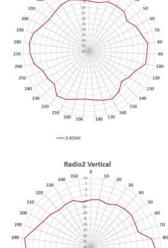








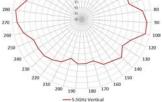


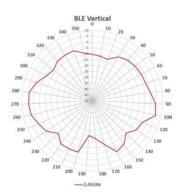


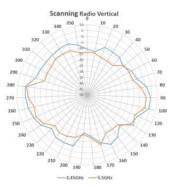
Radio1 Vertical

0

**E-Plane Pattern** 







### Highlights

### FortiAP 432FR

This enterprise class 802.11ax ruggedized indoor/outdoor/industrial AP provides three radios and four spacial streams. As a top-of-the-line Wi-Fi 6 access point it provides OFDMA, a 2.5 Gigabit Ethernet port, plus an additional 1 Gbps Ethernet port with PoE out. The AP can provide 24/7 scanning across both bands while still providing access on both the 2.4 GHz and 5 GHz bands. The integrated BLE radio can be used for beacons and locationing applications.

FAP-432FR is ideal for hazardous environments such as oil rigs, industrial manufacturing, and transportation sites.



### 802.11ax | Tri-Radio 2.4 GHz + 5 GHz + scanning | 6 External Antennas



4×4 MU-MIMO | Up to 1147 Mbps + 2402 Mbps

FAP-432FR

# **Specifications**

	FortiAP 432FR
Hardware	
Hardware Type	Indoor / Outdoor / Industrial AP
Number of Radios	3 + 1 BLE
Number of Antennas	4 dual band WiFi + 1 dual band scanning + 1 single band 2.4 GHz BLE/ZigBee
Antenna Type Support	N-Type (5 total): Dual Band Antenna (5)
Antenna Type and Peak Gain	WiFi and scanning radio dual band antenna: 5.5 dBi in 2.4 GHz and 7.2 dBi in 5 GHz band BLE antenna: 5.0 dBi in 2.4 GHz band
Frequency Bands (GHz)*	2.400–2.4835, 5.150–5.250, 5.250–5.350, 5.470–5.725, 5.725–5.850
Radio 1 Capabilities	Frequency band: 2.4 GHz Channel width: 20/40MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 4×4 Service
Radio 2 Capabilities	Frequency band: 5.0 GHz Channel width: 4×4 20/40/80MHz and 2×2 160 MHz contiguous Modulation: BPSK, QPSK, QAM64, QAM256, and QAM1024 MIMO Chains: 4×4 Service
Radio 3 Capabilities	Frequency bands: 2.4 GHz and 5.0 GHz MIMO Chains: 1×1 Frequency Scanning
Maximum Data Rate	Radio 1: up to 1147 Mbps Radio 2: up to 2402 Mbps Radio 3: Frequency scanning only
Bluetooth Low Energy Radio	Bluetooth scanning and iBeacon advertisement @ 10 dBm max TX power
Interfaces	1× 100/1000/2500 Base-T RJ45, 1 × 10/100/1000 Base-T RJ45 (802.3af PoE PSE), 1x RS-232 RJ45 Serial Port
MDI/MDIX	Supported Supported
Simultaneous SSIDs	Up to 8 per client serving radio (7 if background scanning is enabled)
EAP Type(s)	EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST
User/Device Authentication	WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> with 802.1x or preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist
Maximum Tx Power (Conducted)	Indoor / Outdoor / Industrial: Radio 1: 2.4 GHz 29 dBm / 794 mW (4 chains combined)* Radio 2: 5 GHz 28 dBm / 630 mW (4 chains combined)* Radio 3: N/A
Kensington Lock	No
IEEE Standards	802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i,802.11j, 802.11k, 802.11n, 802.11r, 802.11u, 802.11v, 802.11w, 802.11ac, 802.11ax (Wi-Fi 6), 802.1Q, 802.1X, 802.3ad, 802.3af, 802.3at, 802.3az, 802.3bt, 802.3bz
SSIDs Supported	Local-Bridge, Tunnel, and Mesh
Per Radio Client Capacity	Up to 512 clients per radio (Radio1 and Radio2)
Cellular Co-existence	Yes
LED Off Mode	Yes
Advanced 802.11 Features	
OFDMA	Yes (UL and DL)
Spatial Reuse (BSS Coloring)	Yes
UL MU-MIMO	Yes
DL-MU-MIMO	Yes
Enhanced Target Wake Time (TWT)	Yes
ZeroWait DFS	No

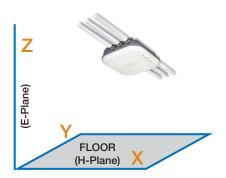
	FortiAP 432FR
Onboard Security Functions	
-	No
UTP Capable UTP Features	N/A
Wireless Monitoring Capabil	
Rogue Scan radio modes	Background, Dedicated
WIPS / WIDS radio modes	Background, Dedicated (recommended)
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Dimensions	
Length x Width x Height	8.23 × 8.23 × 2.38 inches (209 × 209 × 60.5 mm)
Weight	5.12 lbs (2.325 kg)
Package (shipping) Weight	12.56.93 lbs (5.7 kg)
Accessories	
Mounting Options	Wall and Pole
Included Accessories	Wall and Pole mounting kit
Power Supply	802.3bt PoE, ships with PoE injector (reset functionality)
Optional Antennas** (Professional Installer Required for FCC domains)	FANT-04ABGN-0606-O-N FANT-04ABGN-1414-P-N FANT-04ABGN-8065-P-N
Environment	
PSE functionality	Yes (while powered by PoE injector shipped with product)
Power Consumption (Maximum)	25 W without PSE out and 37.9 W with PSE out
PoE Mode	802.3bt PoE default (ships with Passive PoE injector Powered by 802.3at PoE - Operate in 4×4 mode with reduced Tx power Radio1/R2 17dBm This product only supports PSE functionality when it is powered by PoE injector that ships with the product.
Humidity	10% to 90% non condensing
Operating / Storage	-40°F to 140°F (-40°C to 60°C) /
Temperature	-50°F to 176°F (-58°C to 80°C)
Directives	Low Voltage Directive • RoHS
UL2043 Plenum Material	No
Mean Time Between Failures	> 10 Years
IP Rating	IP67
Surge Protection Built In	Yes
Hit-less PoE Failover	N/A
Certifications	
	FCC/ISED CE Marked UKCA Marked AS/NZS Radio Equipment Directive (RED) 2014/53/EU UL/IEC/EN 62368-1 IEC 60529 Class I Division 2 (CID2) EN 50385 EN 62311
Radio Equipment Directive (RED)	2014/53/EU
WiFi Alliance Certified	Yes (includes Pass point)
DFS	In Process
Warranty	
Limited Lifetime Warranty	Yes

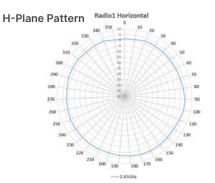
\* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

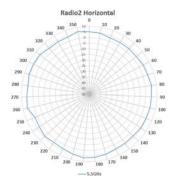
\*\* Refer to the Fortinet Antenna datasheet here.

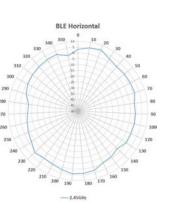
	FortiAP 432FR						
	Radio 1		Ra	dio 2		Radio 3 Scanning	
Data vata	2.4 GHz Tx Power		5 GHz Tx Power per		2.4 GHz Tx Power	5 GHz Tx Power per	Dy Constitution (dDm
Data rate 802.11b	per chain (dBm)	Rx Sensitivity (dBm)	Chain (dBm)	Rx Sensitivity (dBm)	per chain (dBm)	Chain (dBm)	Rx Sensitivity (dBm
1 Mbps	24	-99	_	_	20	_	-92
1 Mbps	24	-99			18		-92
	24	-91	-	_	10		-31
802.11g							
6 Mbps	24	-94	_	_	20	_	-92
54 Mbps	23	-78	-	_	18	-	-77
802.11n HT20							
MCS0	24	-94	—	—	20	—	-92
MCS7	23	-75	-	—	17	—	-74
802.11n HT40							
MCS0	23	-92	_	_	19	_	-90
MCS7	22	-73	_	_	17	_	-72
802.11ax HE20							
MCS0	23	-90	_	—	—	—	—
MCS11	21	-71	—	—	—	—	—
802.11ax HE40							
MCS0	21	-91	—	_	—	—	—
MCS11	19	-72	_	_	_	_	_
802.11a							
6 Mbps	_	_	22	-92	_	20	-93
54 Mbps	—	_	22	-76	—	19	-76
802.11n HT20							
MCS0	_	_	22	-93	_	20	-93
MCS7	_	_	21	-74	_	19	-73
802.11n HT40							
MCS0	_	_	22	-91	_	19	-90
MCS7	_	_	21	-72	_	18	-71
802.11ac VHT20							
MCS0	_	_	22	-91	_	19	-93
MCS9	_	_	20	-72	_	18	-69
802.11ac VHT40			20	1 -		10	
MCS0	_		22	-01	_	10	-90
MCS0 MCS9			19	-91 -72		19 16	-90
	_	_	19	-/ ∠	—	O	-04
802.11ac VHT80			00	00		47	
MCS0	—	—	20	-86	—	17	-88
MCS9	_	_	17	-62	-	17	-61
802.11ax HE20							
MCS0	_	_	22	-91	—	—	—
MCS11	—	-	19	-72	—	—	-
802.11ax HE40							
MCS0	—	—	22	-91	—	—	—
MCS11	—	—	19	-72	—	—	—
802.11ax HE80							
MCS0	_	_	20	-87	_	—	_
MCS11	_	_	18	-58	_	_	_

### **Antenna Radiation Patterns** FAP-432FR





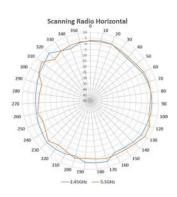


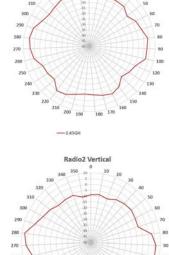


280

270

260

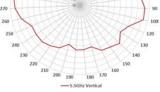


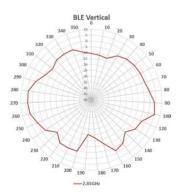


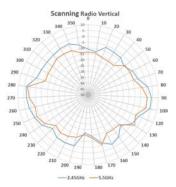
Radio1 Vertical

0

**E-Plane Pattern** 







### Highlights

### FortiAP 234F

This enterprise class Wi-Fi 6 ruggedized indoor/outdoor AP provides three radios with internal antennas and two spacial streams, as well as features such as OFDMA and dual 1 Gbps Ethernet ports. The AP can provide 24/7 scanning across both bands while still providing access on both the 2.4 GHz and 5 GHz bands. The integrated BLE radio can be used for beacons and locationing applications.



802.11ax | Tri-Radio 5 GHz + 2.4 GHz + scanning | 2 5G antenna + 2 2.4G antenna + 1 dual band antenna + 1 single band 2.4 Ghz BLE/Zigbee

2×2 MU-MIMO | Up to 574 Mbps + 1201 Mbps + scanning



FAP-234F

# Specifications

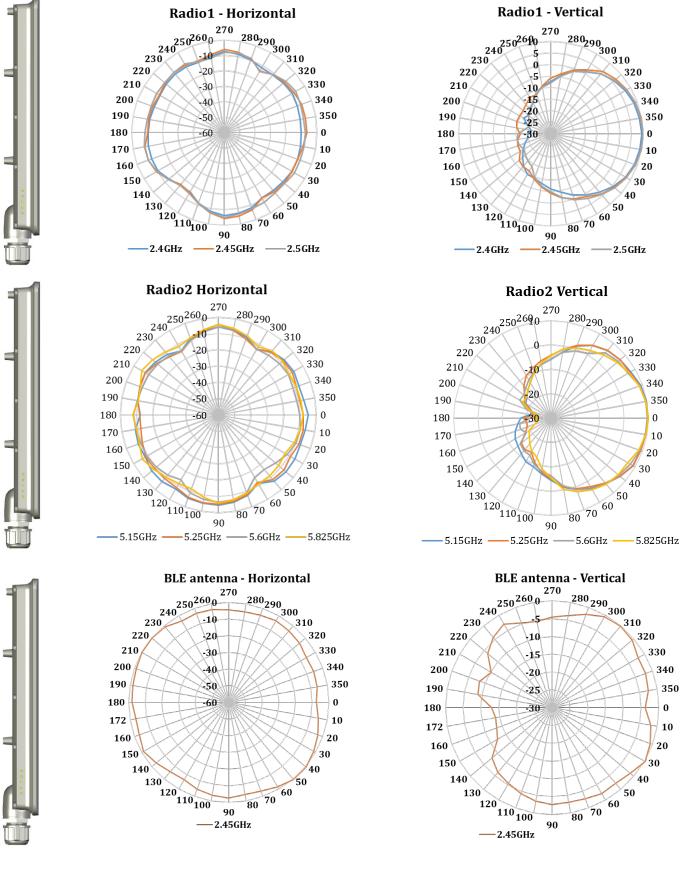
	FortiAP 234F			
Hardware				
Hardware Type	Ruggedized indoor/outdoor AP			
Number of Radios	3 + 1 BLE			
Number of Antennas	2 dual band WiFi + 1 dual band scanning + 1 single band 2.4 GHz BLE/ZigBee			
Antenna Type and Peak Gain	Directional patch antenna Dual band antenna Scanning radio: 3.5 dBi in 2.4 GHz band and 4.5 dBi in 5 GHz band BLE antenna: 3.5 dBi in 2.4 GHz band			
Antenna Beam Width	2.4GHz Horizontal BW 70 degree Vertical BW 30 degree 5.0GHz Horizontal BW 78 degree Vertical BW 25 degree			
Frequency Bands (GHz)*	2.400–2.4835, 5.150–5.250, 5.250–5.350, 5.470–5.725, 5.725–5.850			
Radio 1 Capabilities	Frequency band: 2.4GHz Channel width: 20/40MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Service			
Radio 2 Capabilities	Frequency band: 5.0GHz Channel width: 20/40/80MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Service			
Radio 3 Capabilities	Frequency bands: 2.4 GHz and 5.0 GHz MIMO Chains: 1×1 Frequency Scanning			
Maximum Data Rate	Radio 1: up to 574 Mbps Radio 2: up to 1200 Mbps Radio 3: Frequency scanning only			
Bluetooth Low Energy Radio	Bluetooth scanning and iBeacon advertisement @ 10 dBm max TX power			
Interfaces	2× 10/100/1000 Base-T RJ45, 1x RS-232 RJ45 Serial Port			
MDI/MDIX	Supported Supported			
Simultaneous SSIDs	Up to 8 per client serving radio (7 if background scanning is enabled)			
EAP Type(s)	EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP- MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST			
User/Device Authentication	WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> with 802.1x or Preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist			
Maximum Tx Power (Conducted)	Radio 1: 2.4 GHz: 27 dBm / 500 mW (2 chains combined)* Radio 2: 5 GHz: 25.5 dBm / 354 mW (2 chains combined)* Radio 3: N/A			
Kensington Lock	No			
IEEE Standards	802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11k, 802.11n, 802.11r, 802.11u, 802.11v, 802.11w, 802.11ac, 802.11ax (Wi-Fi 6), 802.1Q, 802.1X, 802.3ad, 802.3af, 802.3at, 802.3az			
SSID Types Supported	Local-Bridge, Tunnel, and Mesh			
Per Radio Client Capacity	Up to 512 clients per radio (Radio1 and Radio2)			
Cellular Co-existence	Yes			
LED Off Mode	Yes			

	FortiAP 234F
Advanced 802.11 Features	
OFDMA	Yes (UL and DL)
Spatial Reuse (BSS Coloring)	Yes
UL MU-MIMO	Yes
DL-MU-MIMO	Yes
Enhanced Target Wake Time (TWT)	Yes
ZeroWait DFS	No
Onboard Security Functions	
UTP Capable	No
UTP Features	N/A
Wireless Monitoring Capabilities	
Rogue Scan radio modes	Background, Dedicated
WIPS / WIDS radio modes	Background, Dedicated (recommended)
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Dimensions	
Length x Width x Height	12.45 × 8.6 × 1.66 inches (316 × 218 × 42 mm)
Weight	2.88 lbs (1.307 kg)
Package (shipping) Weight	7.93 lbs (3.6 kg)
Accessories	
Mounting Options	Wall and Pole
Included Accessories	Wall and Pole mounting kit
Power Supply	802.3at PoE: GPI-130 ; ships with PoE Injector (reset functionality)
Environment	
PSE functionality	No
Power Consumption (Maximum)	15.5 W
PoE Mode	802.3at PoE default( Ships with Passive PoE injector)
	1 port powered by 802.3at or 2 ports powered by 802.3af - Full System functionality
	1 port is connected to 802.3af - No USB support, Operate in 2×2 mode with reduced Tx power R1/R2 17dBm
Humidity	10% to 90% non condensing
Operating / Storage Temperature	-40°F to 140°F (-40°C to 60°C) / -40°F to 176°F (-40°C to 80°C)
Directives	Low Voltage Directive • RoHS
UL2043 Plenum Material	No
Mean Time Between Failures	> 10 Years
IP Rating	IP67
Surge Protection Built In	Yes
Hit-less PoE Failover	N/A
Certifications	
WiFi Alliance Certified	Yes (includes Passpoint)
DFS	FCC, IC, CE, Japan, Brazil, Taiwan and Korea
Warranty	
Limited Lifetime Warranty	Yes
Ennied Enernie Wallanty	100

\* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

			FortiA	P 234F			
	Radio 1		Ra	dio 2		Radio 3 Scanning	
Data rate	2.4 GHz Tx Power per chain (dBm)	Rx Sensitivity (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity (dBm)	2.4 GHz Tx Power per chain (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity (dBm)
802.11b							
1 Mbps	24	-99	_	_	20	_	-92
11 Mbps	24	-91	_	_	18	_	-91
802.11g							
6 Mbps	24	-95	_	_	20	_	-92
54 Mbps	23	-78	_	_	18	_	-77
802.11n HT20							
MCS0	24	-94	_	_	20	_	-92
MCS7	23	-78	_	_	17	_	-74
802.11n HT40							
MCS0	23	-92		_	19	_	-90
MCS7	22	-74		_	17	_	-72
802.11ax HE20	<i>LL</i>	7.7			.,		12
MCS0	23	-90	_	_	_	_	_
MCS0 MCS11	23	-71					
	21	71			_	_	
802.11ax HE40	01	01					
MCS0 MCS11	21	-91 -72					
	19	-72	_	_	_	—	—
802.11a							
6 Mbps	—	_	21	-93	_	20	-93
54 Mbps	_	_	21	-77	_	19	-76
802.11n HT20							
MCS0	—	—	21	-91	—	20	-93
MCS7	—	—	20	-72	—	19	-73
802.11n HT40							
MCS0	_	_	21	-91	_	19	-90
MCS7	_	_	20	-72	_	18	-71
802.11ac VHT20							
MCS0	—	—	20	-91	—	19	-93
MCS9	—	—	18	-72	—	18	-69
802.11ac VHT40							
MCS0	—	_	19	-87	_	19	-90
MCS9	_	_	17	-64	_	16	-64
802.11ac VHT80							
MCS0	_	_	22	-91	_	17	-88
MCS9	_	_	19	-72	—	17	-61
802.11ax HE20							
MCS0	_	_	22	-91	_	_	_
MCS11	_	_	19	-72	_	_	_
802.11ax HE40							
MCS0	_	_	22	-91	_	_	_
MCS11	_	_	19	-72	_		_
802.11ax HE80							
MCS0	_	_	20	-89	_	_	_
MCSU MCS11			18	-59			
			10	33			

### Antenna Radiation Patterns FAP-234F



### Highlights

### FortiAP 23JF

This enterprise class Wi-Fi 6 wall plate AP provides three radios with internal antennas and two spacial streams, as well as features such as OFDMA and is PSE-capable. The AP can provide 24/7 scanning across both bands while still providing access on both the 2.4 GHz and 5 GHz bands. The integrated BLE radio can be used for beacons and locationing applications. Additional features include PoE out for downstream devices and RJ45 passthrough. This access point can be installed in minutes, right over the existing wall plate , or with the optional desk mount, makes a perfect remote / work from home AP.



802.11ax | Tri-Radio 5 GHz + 2.4 GHz + scanning | 3 Antennas

2×2 MU-MIMO | Up to 574 Mbps + 1200 Mbps + scanning



FAP-23JF

# Specifications

	FortiAP 23JF
Hardware	
Hardware Type	Indoor walljack/desktop AP
Number of Radios	3 + 1 BLE
Number of Antennas	3 dual band internal Wi-Fi + 1 single band 2.4 GHz BLE/ZigBee
Antenna Type and Peak Gain	PCB antenna Dual band: 4.0 dBi in 2.4 GHz band and 4.0 dBi in 5 GHz band BLE antenna: 3.5 dBi in 2.4 GHz band
Frequency Bands (GHz)*	2.400-2.4835, 5.150-5.250, 5.250-5.350, 5.470-5.725, 5.725-5.850
Radio 1 Capabilities	Frequency band: 2.4 GHz Channel width: 20/40 MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Service
Radio 2 Capabilities	Frequency band: 5.0 GHz Channel width: 20/40/80 MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Service
Radio 3 Capabilities	Frequency bands: 2.4 GHz and 5.0 GHz MIMO Chains: 1×1 Frequency Scanning
Maximum Data Rate	Radio 1: up to 574 Mbps Radio 2: up to 1200 Mbps Radio 3: Frequency scanning only
Bluetooth Low Energy Radio	Bluetooth scanning and iBeacon advertisement @ 10 dBm max TX power
Interfaces	4× 10/100/1000 Base-T RJ45 Ports (1× 802.3at PoE(PD), 1× 802.3af PoE (PSE), 2x Non-PoE Ports)
	3 RJ-45 Ports (1xPass-through in, 1x Pass-through out, 1x RS-232 Serial Port)
MDI/MDIX	Supported Supported
Simultaneous SSIDs	Up to 8 per client serving radio (7 if background scanning is enabled)
EAP Type(s)	EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP- MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST
User/Device Authentication	WPA <sup>™</sup> , WPA2 <sup>™</sup> , and WPA3 <sup>™</sup> with 802.1x or preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist
Maximum Tx Power (Conducted)	Radio 1: 2.4 GHz: 25 dBm / 158 mW (2 chains combined)* Radio 2: 5 GHz: 21 dBm / 158 mW (2 chains combined)* Radio 3: N/A
Kensington Lock	Yes
IEEE Standards	802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i,802.11j, 802.11k, 802.11n, 802.11r, 802.11u, 802.11v, 802.11w, 802.11ac, 802.11ax (Wi-Fi 6), 802.1Q, 802.1X, 802.3ad, 802.3af, 802.3at, 802.3az
SSID Types Supported	Local-Bridge, Tunnel, and Mesh
Per Radio Client Capacity	Up to 512 clients per radio (Radio1 and Radio2)
Cellular Co-existence	Yes
LED Off Mode	Yes

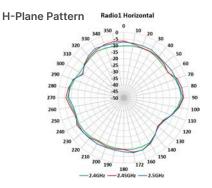
	FortiAP 23JF
Advanced 802.11 Features	
OFDMA	Yes (UL and DL)
Spatial Reuse (BSS Coloring)	Yes
UL MU-MIMO	Yes
DL-MU-MIMO	Yes
Enhanced Target Wake Time (TWT)	Yes
ZeroWait DFS	No
Onboard Security Functions	
UTP Capable	No
UTP Features	N/A
Wireless Monitoring Capabilities	
Rogue Scan radio modes	Background, Dedicated
WIPS / WIDS radio modes	Background, Dedicated (recommended)
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Dimensions	
Length x Width x Height	6.6 × 4.6 × 1.1 inches (168 × 117 × 28 mm)
Weight	0.99 lbs (0.45 kg)
Package (shipping) Weight	1.54 lbs (0.7 kg)
Accessories	1.54 153 (6.7 kg)
	Wall Plata Optional Dock Mount EAD-MNIT-WI-20
Mounting Options Included Accessories	Wall Plate, Optional Desk Mount FAP-MNT-WJ-20
Power Supply	Standard Mount kit for Ceiling, T-Rail, and Wall 802.3at PoE: GPI-130 Optional DC power adaptor SP-FAP23J-PA-10
Environment	
PSE functionality	Yes
Power Consumption (Maximum)	17.5W without PSE out and 31W with PSE out
PoE Mode	802.3at PoE default( optional DC adaptor)
FOL MODE	Powered via DC power supply - Full System functionality + USB + PSE (8023af 15.4W)
	Powered by 802.3af - Only Radio functionality is operational (No USB/PSE supported)
	Powered by 802.3at - Full System functionality+ PSE(7w)
Humidity	10% to 90% non condensing
Operating / Storage Temperature	32°F to 122°F (0°C to 50°C) / -22°F to 158°F (-30°C to 70°C)
Directives	Low Voltage Directive • RoHS
UL2043 Plenum Material	No
Mean Time Between Failures	> 10 Years
IP Rating	N/A
Surge Protection Built In	No
Hit-less PoE Failover	N/A
Certifications	
WiFi Alliance Certified	Yes (includes Passpoint)
DFS	FCC, IC, CE, Japan, Brazil, Taiwan and Korea
Warranty	
Limited Lifetime Warranty	Yes
Line a Line and Wallanty	

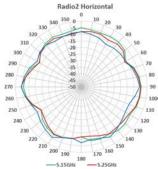
\* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

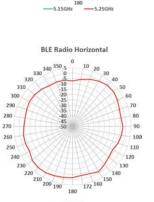
			FortiA	NP 23JF			
	Radio 1		Ra	dio 2		Radio 3 Scanning	
Data rate	2.4 GHz Tx Power	Rx Sensitivity (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity (dBm)	2.4 GHz Tx Power per chain (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity (dBm)
802.11b	per chain (dBm)	KX Sensitivity (ubiii)	Chain (ubin)	RX Sensitivity (ubiii)	per chain (ubin)	Chain (ubin)	KX Sensitivity (ubiii)
1 Mbps	22	-98	_	_	20	_	-92
11 Mbps	20	-90		_	18		-91
802.11g	20				10		01
6 Mbps	22	-93	_	_	20	_	-92
54 Mbps	20	-77		_	18		-77
802.11n HT20	20				10		
MCS0	22	-94	_	_	20	_	-92
MCS7	20	-76			17		-74
802.11n HT40	20	,,,			.,		
MCS0	22	-92	_	_	19	_	-90
MCS7	20	-73			17		-72
	20	75			17		/ 2
802.11ax HE20 MCS0	22	-90	_	_	_	_	_
MCS0 MCS11	22	-90					
802.11ax HE40	20	/ 1					
MCS0	20	-90	_	_	_	_	_
MCS11	20	-70					
	10	70					
802.11a			18	02		20	01
6 Mbps 54 Mbps			18	-93		20	-91 -75
			10			10	75
802.11n HT20 MCS0	_		10	-94	_	20	-90
MCS7			19	-94		20	-72
			15	75		15	12
802.11n HT40 MCS0			21	-91		19	-90
MCS7			20	-72	_	19	-71
	_		20	12	_	10	71
802.11ac VHT20			01	01		10	02
MCS0 MCS9			21	-91		19	-93
	-		20	-72	_	10	-09
802.11ac VHT40			20	01		10	00
MCS0			20	-91	_	19 16	-90
MCS9	_	-	١ð	-/2	_	10	-64
802.11ac VHT80			10	07		17	00
MCS0 MCS9	—	_	19 17	-87		17	-88
	-	-	17	-04	-	17	-01
802.11ax HE20			~~	64			
MCS0	—	—	20	-91	—	_	_
MCS11	_	—	18	-72	_	_	_
802.11ax HE40			10				
MCS0	—	_	19	-91	—	_	—
MCS11	-	—	17	-62	_	-	_
802.11ax HE80							
MCS0	—	—	18	-89	—	—	—
MCS11	—	—	16	-60	—	—	_

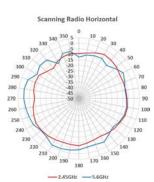
### Antenna Radiation Patterns FAP-23JF



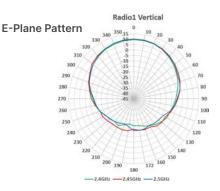


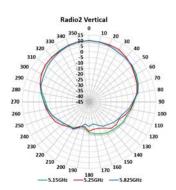


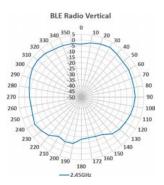




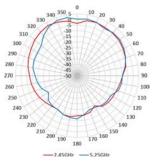
-2.45GHz







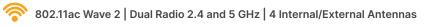
Scanning Radio Vertical



### Highlights

#### FortiAP 221E and 223E

The FortiAP 221E and 223E are medium-density 802.11ac Wave 2 access points and provides two radio and two spacial streams. These enterprise-class access points are ideal for medium-density environments such as an office or classroom with performance throughput of up to 867 Mbps.



2×2 MU-MIMO | Up to 400 + 867 Mbps



FAP-221E



FAP-223E

# Specifications

	FortiAP 221E	FortiAP 223E			
Hardware					
Hardware Type	Indoor AP	Indoor AP			
Number of Radios	2 + 1 BLE	2 + 1 BLE			
Number of Antennas	4 Internal + 1 Internal BLE	4 External + 1 Internal BLE			
Antenna Type Support		RP-SMA (4 total): Dual Band Antenna (4)			
Antenna Type and Peak Gain	Patch: 4 dBi for 2.4 GHz, 5 dBi for 5 GHz	Dipole: 4 dBi for 2.4 GHz, 5 dBi for 5 GHz			
Frequency Bands (GHz)*	2.400–2.4835, 5.150–5.250, 5.250–5.350, 5.470–5.725 5.725–5.850				
Radio 1 Capabilities	2.4 GHz b/g/n (2×2:2 stream) 20/40 MHz (256 QAM)	2.4 GHz b/g/n (2×2:2 stream) 20/40 MHz (256 QAM)			
Radio 2 Capabilities	5 GHz a/n/ac (2×2:2 stream) 20/40/80 MHz (256 QAM)	5 GHz a/n/ac (2×2:2 stream) 20/40/80 MHz (256 QAM)			
Maximum Data Rate	Radio 1: up to 400 Mbps Radio 2: up to 867 Mbps	Radio 1: up to 400 Mbps Radio 2: up to 867 Mbps			
Bluetooth Low Energy Radio	Bluetooth scanning and iBeaco max TX power	on advertisement @ 4 dBm			
Interfaces	1× 10/100/1000 Base-T RJ45	1× 10/100/1000 Base-T RJ45			
MDI/MDIX	Supported	Supported			
Power over Ethernet (PoE)	IEEE 802.3af	IEEE 802.3af			
Simultaneous SSIDs	Up to 8 per client serving radio enabled)	o (7 if background scanning is			
EAP Type(s)	EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST				
User/Device Authentication	WPA™, WPA2™, and WPA3™ with 802.1x or preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist				
Maximum Tx Power	2.4 GHz: 23 dBm / 200 mW (2 5 GHz: 24 dBm / 251 mW (2 ch				
Kensington Lock	Yes Yes				
IEEE Standards	802.11a, 802.11b, 802.11d, 802 802.11j, 802.11k, 802.11n, 802.1 802.11ac, 802.1Q, 802.1X, 802.				
SSID Types Supported	Local-Bridge, Tunnel, Mesh	Local-Bridge, Tunnel, Mesh			
Per Radio Client Capacity	Up to 512	Up to 512			
Cellular Co-existence	Yes	Yes			
Reset Button	Yes	Yes			
LED Off Mode	Yes	Yes			
Advanced 802.11 Features					
802.11ac Wave 2 MU- MIMO	Yes	Yes			
Transmit Beam Forming (TxBF)	Yes	Yes			
Low-Density Parity Check (LDPC) Encoding	Yes	Yes			
Maximum Likelihood Demodulation (MLD)	Yes Yes				
Maximum Ratio Combining (MRC)	Yes	Yes			
A-MPDU and A-MSDU Packet Aggregation	Yes	Yes			
MIMO Power Save	Yes	Yes			
Short Guard Interval	Yes	Yes			

	FortiAP 221E	FortiAP 223E			
Onboard Security Functions	5				
UTP Capable	No	No			
UTP Features	N/A	N/A			
Wireless Monitoring Capab	ilities				
Rogue Scan Radio Modes	Background, Dedicated	Background, Dedicated			
WIPS / WIDS Radio Modes	Background, Dedicated	Background, Dedicated			
Packet Sniffer Mode	Yes	Yes			
Spectrum Analyzer	Yes	Yes			
Dimensions					
Length x Width x Height	6.3 × 6.3 × 1.85 inches (160 ×	160 × 47 mm)			
Weight	1.1 lbs (0.5 kg)	1.1 lbs (0.5 kg)			
Package (shipping) Weight	4.95 lbs (2.2 kg)	5.3 lbs (2.4 kg)			
Accessories					
Mounting Options	Ceiling, T-Rail, and Wall	Ceiling, T-Rail, and Wall			
Included Accessories	Mount kits for Ceiling, T-Rail, and Wall	Mount kits for Ceiling, T-Rail, and Wall, 4 dipole antennas			
Power Supply	SP-FAP200-PA-XX, GPI-115, or GPI-130				
Environment					
Power Consumption (Max.)	12.36 W	12.36 W			
Humidity	5% to 90% non-condensing	5% to 90% non-condensing			
Operating / Storage Temperature	-4°F to 113°F (-20°C to 45°C) -40°F to 158°F (-40°C to 70°C				
Directives	Low Voltage Directive • RoHS	Low Voltage Directive • RoHS			
UL2043 Plenum Material	No	No			
Mean Time Between Failures	>30 Years	>30 Years			
IP Rating	_	_			
Surge Protection Built In	_	_			
Hit-less PoE Failover	No	No			
Certifications					
Wi-Fi Alliance Certified	Yes (includes Passpoint)	Yes (includes Passpoint)			
DFS	FCC, IC, CE, Japan, Taiwan, Korea	FCC, IC, CE, Japan, Taiwan. Korea			
Warranty					
Limited Lifetime Warranty	Yes	Yes			

\* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

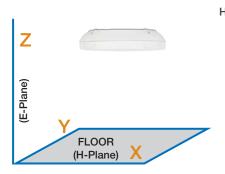
		FortiAP 221E / 223E		
	RADIO 1		RADIO 2	
Data rate	2.4 GHz Tx Power (dBm)	Rx Sensitivity (dBm)	5 GHz Tx Power (dBm)	Rx Sensitivity (dBm)
802.11 a/g	, ,	. ,	. ,	. ,
6 Mbps	20	-93	21	-91
9 Mbps	20	-91	21	-90
12 Mbps	20	-90	21	-89
18 Mbps	19	-88	21	-86
24 Mbps	19	-85	21	-83
36 Mbps	18	-82	21	-80
48 Mbps	18	-77	19	-76
54 Mbps	17	-75	19	-74
802.11n HT20				
MCS 0/8/16	20	-91	21	-91
MCS 1/9/17	19	-89	21	-88
MCS 2/10/18	19	-86	21	-86
MCS 3/11/19	18	-83	21	-83
MCS 4/12/20	18	-80	21	-79
MCS 5/13/21	17	-75	21	-75
MCS 6/14/22	17	-73	19	-74
MCS 7/15/23	16	-71	19	-72
802.11n HT40				
MCS 0/8/16	19	-89	20	-88
MCS 1/9/17	19	-86	20	-85
MCS 2/10/18	18	-84	20	-82
MCS 3/11/19	18	-81	20	-79
MCS 4/12/20	17	-77	20	-76
MCS 5/13/21	17	-73	20	-72
MCS 6/14/22	16	-71	19	-70
MCS 7/15/23	16	-69	19	-69
802.11ac VHT20				
MCS 0	19	-91	21	-91
MCS 1	19	-89	21	-88
MCS 2	19	-86	21	-86
MCS 3	18	-83	21	-83
MCS 4	18	-80	21	-79
MCS 5	18	-76	21	-75
MCS 6	18	-73	19	-74
MCS 7	18	-71	19	-72
MCS 8	18	-68	18	-69

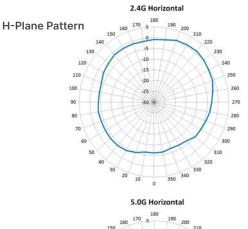
		FortiAP 221E / 223E		
	RADIO 1		RADIO 2	
Data rate	2.4 GHz Tx Power (dBm)	Rx Sensitivity (dBm)	5 GHz Tx Power (dBm)	Rx Sensitivity (dBm)
802.11ac VHT40				
MCS 0	19	-89	20	-88
MCS 1	19	-86	20	-85
MCS 2	19	-84	20	-82
MCS 3	18	-81	20	-79
MCS 4	17	-77	20	-76
MCS 5	17	-73	20	-72
MCS 6	17	-71	19	-70
MCS 7	17	-69	19	-69
MCS 8	17	-68	18	-65
MCS 9	16	-66	17	-64
802.11ac VHT80				
MCS 0	_	_	19	-85
MCS 1	_	_	19	-83
MCS 2	_	_	19	-80
MCS 3	_	_	19	-77
MCS 4	_	_	19	-74
MCS 5	_	_	19	-71
MCS 6	_	_	18	-69
802.11acVHT80				
MCS 7	_	_	18	-68
MCS 8	_	_	17	-63
MCS 9	_	_	17	-61

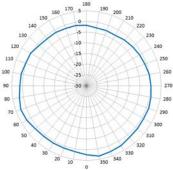
### Antenna Radiation Patterns

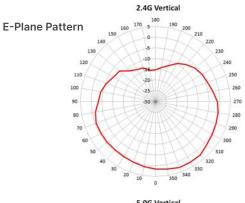
FAP-221E

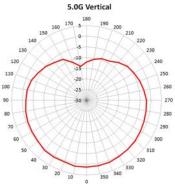
FAP-223E



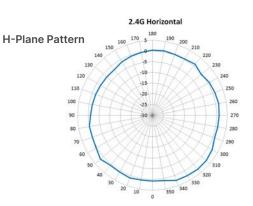




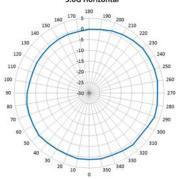


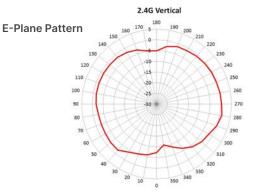


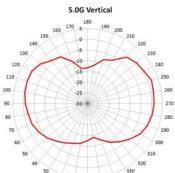
H-Plan











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# **Ordering Information**

Product	SKU	Description	
FortiAP-441K	FAP-441K	Indoor Wireless AP - 4 radios (Wi-Fi-7 Tri-band 2.4/5/6GHz 4+4+4 4 streams 4 radios), internal antennas, 2× 10G Base-T RJ45, BT/BLE 1x Type A USB, 1x RS-232 RJ45 Serial Port. Ceiling/wall mount kit included. For power order: 802.3bt PoE injector.	
	FC-10-FP41K-247-02-DD	FortiCare Premium Support.	
	FC-10-FP41K-284-02-DD	FortiCare Elite Support.	
	FC-10-FP41K-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	
FortiAP-443K	FAP-443K-A	Indoor Wireless AP - 4 radios (Wi-Fi-7 Tri-band 2.4/5/6GHz 4+4+4 4 streams 4 radios), external antennas, 2× 10G Base-T RJ45, BT/BLI 1x Type A USB, 1x RS-232 RJ45 Serial Port. Ceiling/wall mount kit included. For power order: 802.3bt PoE injector. Region Code A.	
	FC-10-FP43K-247-02-DD	FortiCare Premium Support.	
	FC-10-FP43K-284-02-DD	FortiCare Elite Support.	
	FC-10-FP43K-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	
FortiAP-241K	FAP-241K-A	Indoor Wireless AP - (Wi-Fi-7 Tri-band 2.4/5/6GHz 2+2+2 2 streams 4 radios), internal antennas, 1×10/100/1000 RJ45, 1× 100/1000/2500/5000/10000 Base-T RJ45, BT/BLE, 1x Type A USB, 1x RS-232 RJ45 Serial Port. Ceiling/wall mount kit included. For power order: 802.3at PoE injector GPI-130 or AC adapter SP-FAP400-PA. Region Code A	
	FC-10-P241K-247-02-DD	FortiCare Premium Support.	
	FC-10-P241K-284-02-DD	FortiCare Elite Support.	
	FC-10-P241K-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	
FortiAP-243K	FAP-243K-A	Indoor Wireless AP - (Wi-Fi-7 Tri-band 2.4/5/6GHz 2+2+2 2 streams 4 radios), external antennas, 1×10/100/1000 RJ45, 1× 100/1000/2500/5000/10000 Base-T RJ45, BT/BLE, 1x Type A USB, 1x RS-232 RJ45 Serial Port. Ceiling/wall mount kit included. For power order: 802.3at PoE injector GPI-130 or AC adapter SP-FAP400-PA. Region Code A	
	FC-10-P243K-247-02-DD	FortiCare Premium Support.	
	FC-10-P243K-284-02-DE	FortiCare Elite Support.	
	FC-10-P243K-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	
FortiAP 431G	FAP-431G	Indoor Wireless AP - Tri radio (Wi-Fi-6E IEEE 802.11ax Tri-band 2.4/5/6GHz and dual 5G operation 4+4+4 4 streams 3 radios), internal antennas, 2× 5G Base-T RJ45, BT/BLE, 1x Type A USB, 1x RS-232 RJ45 Serial Port. Ceiling/wall mount kit included. For power order: 802.3bt PoE injector or AC adapter SP-FAP400-PA. SP-FAP-250-PA.	
	FC-10-PG431-247-02-DE	FortiCare Premium Support.	
	FC-10-PG431-284-02-DE	FortiCare Elite Support.	
	FC-10-PG431-595-02-DE	FortiSASE subscription for cloud managed FortiAP with bandwidth included.	
	FC-10-PG431-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	
FortiAP 432G	FAP-432G-A	Outdoor Wireless FortiAP - Tri radio (1× 802.11b/g/n/ax 4×4 radio, 1× 802.11a/n/ac/ax 4×4 Radio and 1× 802.11 a/b/g/n/ac/ax 6GHz, 2×2), 1× 10/100/1000/2500/10000 Base-T RJ45, 1× 10/100/1000 Base-T RJ45, BT/BLE + Zigbee, 1x RS-232 RJ45 Serial Port. External Dual Band N-Type Omni Directional antennas, Integrated mounting bracket for Antenna included + Wall/Pole Mount mounting kit. Ships with PoE injector.	
	FC-10-P432G-247-02-DE	PortiCare Premium Support.	
	FC-10-P432G-284-02-DE	> FortiCare Elite Support.	
	FC-10-P432G-595-02-DI	FortiSASE subscription for cloud managed FortiAP with bandwidth included.	
	FC-10-P432G-314-02-DE	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	
FortiAP 433G	FAP-433G	Indoor Wireless AP - Tri radio (Wi-Fi-6E IEEE 802.11ax Tri-band 2.4/5/6GHz and dual 5G operation 4+4+4 4 streams 3 radios), external antennas, 2× 5G Base-T RJ45, BT/BLE, 1x Type A USB, 1x RS-232 RJ45 Serial Port. Ceiling/wall mount kit included. For power order: 802.3bt PoE injector or AC adapter SP-FAP400-PA. SP-FAP-250-PA. Region Code A.	
	FC-10-PG433-247-02-DE	FortiCare Premium Support.	
	FC-10-PG433-284-02-DI	> FortiCare Elite Support.	
	FC-10-PG433-595-02-DI	FortiSASE subscription for cloud managed FortiAP with bandwidth included.	
	FC-10-PG433-314-02-DE	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	
FortiAP 231G	FAP-231G	Indoor Wireless AP - Tri radio (Wi-Fi-6E IEEE 802.11ax Tri-band 2.4/5/6GHz and dual 5G operation 2+2+2 2 streams 3 radios), internal antennas, 1×10/100/1000 RJ45, 1× 100/1000/2500 Base-T RJ45, BT/BLE, 1x Type A USB, 1x RS-232 RJ45 Serial Port. Ceiling/wall moun kit included. For power order: 802.3at PoE injector GPI-130 or AC adapter SP-FAP200-PA.	
	FC-10-PG231-247-02-DD	FortiCare Premium Support.	
	FC-10-PG231-284-02-DE	FortiCare Elite Support.	
	FC-10-PG231-595-02-DE	FortiSASE subscription for cloud managed FortiAP with bandwidth included.	
	FC-10-PG231-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	
FortiAP 233G	FAP-233G	Indoor Wireless AP - Tri radio (Wi-Fi-6E IEEE 802.11ax Tri-band 2.4/5/6GHz and dual 5G operation 2+2+2 2 streams 3 radios), external antennas, 1×10/100/1000 RJ45, 1× 100/1000/2500 Base-T RJ45, BT/BLE, 1x RS-232 RJ45 Serial Port. Ceiling/wall mount kit included. For power order: 802.3at PoE injector GPI-130 or AC adapter SP-FAP200-PA.	
	FC-10-PG233-247-02-DE	FortiCare Premium Support.	
	FC-10-PG233-284-02-DI	> FortiCare Elite Support.	
	FC-10-PG233-595-02-DI	FortiSASE subscription for cloud managed FortiAP with bandwidth included.	
	FC-10-PG233-314-02-DE	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	

# **Ordering Information**

Product	SKU	Description	
FortiAP 234G	FAP-234G	Outdoor Wireless AP - Tri radio, WiFi 6E, included, 2× 2.5G RJ45 port, BT/BLE, 1x Type A USB, 1x RS-232 RJ45 Serial Port. Pole/wall mount kit included. Region Code A. Ships with PoE injector.	
	FC-10-PG234-247-02-DD	FortiCare Premium Support.	
	FC-10-PG234-284-02-DD	FortiCare Elite Support.	
	FC-10-PG234-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.	
	FC-10-P234G-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	
FortiAP 831F	FAP-831F	Indoor Wireless AP - Tri radio (1× 802.11 a/b/g/n/ac/ax 4×4 MIMO, 1× 802.11 a/b/g/n/ac/ax 8×8 MIMO and 1× 802.11 a/b/g/n/ac Wav 1×1 MU-MIMO), internal antennas, 1× 100/1000/5000 Base-T RJ45, 1× 10/100/1000 Base-T RJ45, BT/BLE, 1x Type A USB, 1x RS-23 RJ45 Serial Port. Ceiling/wall mount kit included. For power order 802.3at PoE injector GPI-130 or AC adapter SP-FAP400-PA.	
	FC-10-F831F-247-02-DD	FortiCare Premium Support.	
	FC-10-P831F-284-02-DD	FortiCare Elite Support.	
	FC-10-P831F-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.	
	FC-10-P831F-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	
FortiAP 431F	FAP-431F	Indoor Wireless AP - Tri radio (2× 802.11 a/b/g/n/ac/ax, 4×4 MIMO and 1× 802.11 a/b/g/n/ac Wave 2, 1×1 MU-MIMO), internal antennas, 1× 100/1000/2500 Base-T RJ45, 1× 10/100/1000 Base-T RJ45, BT/BLE, 1x Type A USB, 1x RS-232 RJ45 Serial Port. Ceiling/wall mount kil included. For power order 802.3at PoE injector GPI-130 or AC adapter SP-FAP400-PA.	
	FC-10-F431F-247-02-DD	FortiCare Premium Support.	
	FC-10-F431F-284-02-DD	FortiCare Elite Support.	
	FC-10-F431F-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.	
	FC-10-F431F-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	
FortiAP 433F	FAP-433F	Indoor Wireless AP - Tri radio (2× 802.11 a/b/g/n/ac/ax, 4×4 MIMO and 1× 802.11 a/b/g/n/ac Wave 2, 1×1 MU-MIMO), external antennas included, 1× 100/1000/2500 Base-T RJ45, 1× 10/100/1000 Base-T RJ45, BT/BLE, 1x Type A USB, 1x RS-232 RJ45 Serial Port. Ceiling/wall mount kit included. For power order 802.3at PoE injector GPI-130 or AC adapter SP-FAP400-PA.	
	FC-10-F433F-247-02-DD	FortiCare Premium Support.	
	FC-10-F433F-284-02-DD	FortiCare Elite Support.	
	FC-10-F433F-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.	
	FC-10-F433F-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	
FortiAP 432F	FAP-432F	Ruggedized indoor/outdoor Wireless FortiAP - Tri radio (1× 802.11b/g/n/ax 4×4 radio, 1× 802.11a/n/ac/ax 4×4 Radio and 1× 802.11 a/b/g/n/ac Wave 2, 2×2), 1× 100/1000/2500 Base-T RJ45, 1× 10/100/1000 Base-T RJ45, BT/BLE + Zigbee, 1x RS-232 RJ45 Serial Port. External Dual Band N-Type Omnidirectional antennas, Integrated mounting bracket for Antenna included + Wall/Pole Mount mounting kill Ships with passive PoE injector.	
	FC-10-PF432-247-02-DD	FortiCare Premium Support.	
	FC-10-PF432-284-02-DD	FortiCare Elite Support.	
	FC-10-PF432-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.	
	FC-10-PF432-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	
FortiAP 432FR	FAP-432FR	UL Class 1, Division 2. Outdoor Wireless FortiAP - Tri radio (1× 802.11b/g/n/ax 4×4 radio, 1× 802.11a/n/ac/ax 4×4 Radio and 1× 802.11 a/b/g/n/ac Wave 2, 2×2), 1× 10/100/1000/2500 Base-T RJ45, 1× 10/100/1000 Base-T RJ45, BT/BLE + Zigbee, 1x RS-232 RJ45 Serial Port External Dual Band N-Type Omni Directional antennas, Integrated mounting bracket for Antenna included + Wall/Pole Mount mounting kit. Ships with passive PoE injector.	
	FC-10-FR432-247-02-DD	FortiCare Premium Support.	
	FC-10-FR432-284-02-DD	FortiCare Elite Support.	
	FC-10-FR432-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.	
	FC-10-FR432-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	
ortiAP 234F	FAP-234F	Outdoor Wireless AP - Tri radio (802.11 b/g/n/ax 2×2 MU-MIMO, 802.11 a/n/ac/ax 2×2 MU-MIMO and 1× 802.11 a/b/g/n/ac Wave 2, 1×1 ), internal antennas, 2× 10/100/1000 RJ45 port, BT/BLE, 1x RS-232 RJ45 Serial Port. Pole/wall mount kit and PoE injector included. Region Code A.	
	FC-10-P234F-247-02-DD	FortiCare Premium Support.	
	FC-10-P234F-284-02-DD	FortiCare Elite Support.	
	FC-10-P234F-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.	
	FC-10-P234F-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	
FortiAP 23JF	FAP-23JF	Wall Plate AP - Tri radio (802.11 b/g/n/ax 2×2 MU-MIMO, 802.11 a/n/ac/ax 2×2 MU-MIMO and 1× 802.11 a/b/g/n/ac Wave 2, 1×1), internal antennas, 4× 10/100/1000 RJ45 port (1× 802.3at PoE PD, 1× 802.3af PoE PSE, 2x Non-PoE Ports), 2 RJ-45 Ports (1x Pass-through in, 1x Pass-through out), BT / BLE, 1x RS-232 RJ45 Serial Port. Wall plate mounting kit included. For power order 802.3at PoE injector GPI-130. Optional Accessory AC power adapter SP-FAP23J-PAX-10; Desktop stand FAP-MNT-WJ-20.	
	FC-10-P23JF-247-02-DD	FortiCare Premium Support.	
	FC-10-P23JF-284-02-DD	FortiCare Elite Support.	
	FC-10-P23JF-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.	
	FC-10-P23JF-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.	

### **Ordering Information**

Product	SKU	Description
FortiAP 221E	FAP-221E	Indoor Wireless AP - Dual radio (802.11 b/g/n and 802.11 a/n/ac Wave 2, 2×2 MU-MIMO), internal antennas, 1× 10/100/1000 RJ45 port, BT / BLE. Ceiling/wall mount kit included. For power order 802.3af PoE injector GPI-115 or AC adapter SP-FAP200-PA.
	FC-10-PE221-247-02-DD	FortiCare Premium Support.
	FC-10-PE221-284-02-DD	FortiCare Elite Support.
FortiAP 223E	FAP-223E	Indoor Wireless AP - Dual radio (802.11 b/g/n and 802.11 a/n/ac Wave 2, 2×2 MU-MIMO), external antennas included, 1× 10/100/1000 RJ45 port, BT / BLE. Ceiling/wall mount kit included. For power order 802.3af PoE injector GPI-115 or AC adapter SP-FAP200-PA.
	FC-10-PE223-247-02-DD	FortiCare Premium Support.
	FC-10-PE223-284-02-DD	FortiCare Elite Support.
UTP Services (G Series)	FC-10-APGIS-768-02-DD	FortiAP G Series FortiGuard Universal Threat Protection Subscription Service License for Application control and Web filtering modules. Applicable to FortiGate or FortiCloud managed G-Series or later FortiAP family Access Points.
FortiEdge Cloud	FC-10-90AP1-639-02-DD	FortiEdge Cloud FortiAP Management License Includes: Full suite of FortiAP Management Features, 1 year Log Retention, FortiCare Premium (Note, FortiCare only applicable when used with FortiEdge Cloud).
Gigabit PoE Injector	GPI-115	1-port Gigabit PoE power injector, 802.3af 15.4 W, 10/100/1000.
	GPI-130	1-port Gigabit PoE power injector, 802.3at up to 30 W.
	GPI-145	1-port Multi-Gigabit PoE power injector, 802.3bt up to 60W.
Power Adapter	SP-FAP400-PA	AC power adapter 12v, 3.0A - 36W for FAP-431F, FAP-433F, FAP-431G, FAP-433G, and FAP-831F.
	SP-FAP200-PA	AC power adapter 12v, 2.5A - 30W for FAP-221E, FAP-223E, FAP-231G, and FAP-233G.
	SP-FAP23J-PA-10	AC power adapter 48v, 1.04A - 50W without power cord for FAP-23JF.
	SP-FAP250-PA-10	AC power adapter 12v, 4.0A - 48W with Extended operating temp 0°C - 50°C with US and EU plugs for FAP-231G, FAP-233G, FAP-431G, FAP-433G, FAP-441K, and FAP-443K.
Desktop Stand	FAP-MNT-WJ-20	Desktop stand for FAP/FAP-C/FAP-U wall jack style APs. Converts wall mounting hardware included with unit to desktop mounting - 20 pack.

#### Notes.

1.Additional external antenna options available for some models. See antenna datasheet for details.

2.A country suffix code (-A, -B, -C, -D, -E, -EO, -F, -I, -J, -K, -N, -P, -S, -T, -U, -V, -W, or -Y) applies to all AP models based upon country of deployment.

Work with your local supplier for the correct model in your regulatory domain.

3. Access Points mentioned in this datasheet are covered by a Limited Lifetime Hardware Warranty.

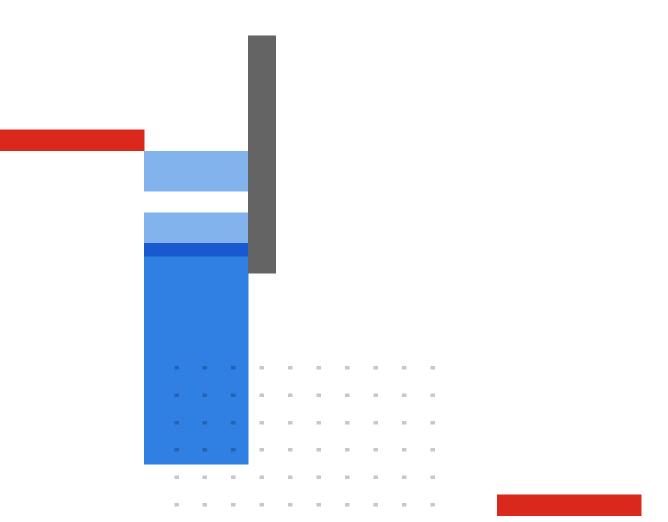
Terms and conditions can be found in the EULA at https://www.fortinet.com/content/dam/fortinet/assets/legal/EULA.pdf

For more information on Support levels, please reference FortiCare Services here.

Visit https://www.fortinet.com/resources/ordering-guides for related ordering guides.

#### Fortinet Corporate Social Responsibility Policy

Fortinet is committed to driving progress and sustainability for all through cybersecurity, with respect for human rights and ethical business practices, making possible a digital world you can always trust. You represent and warrant to Fortinet that you will not use Fortinet's products and services to engage in, or support in any way, violations or abuses of human rights, including those involving illegal censorship, surveillance, detention, or excessive use of force. Users of Fortinet products are required to comply with the Fortinet EULA and report any suspected violations of the EULA via the procedures outlined in the Fortinet Whistleblower Policy.



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