F

FortiAP[™] Series



FortiGate, FortiEdge Cloud, or SASE-managed access points

FortiAP[™] access points are managed centrally by the integrated WLAN controller of any FortiGate[®] 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
802.11be Wi-F	i7			
FAP-441K	4×4 Indoor quad-radio 11be 6Ghz Capable APs	Internal	\bigcirc	
FAP-443K	4×4 Indoor quad-radio 11be 6Ghz Capable APs	External	\bigcirc	
FAP-241K	2×2 Indoor quad-radio 11be 6Ghz Capable APs	Internal	\bigcirc	
FAP-243K	2×2 Indoor quad-radio 11be 6Ghz Capable APs	External	\bigcirc	
802.11ax Wi-F	i 6E			
FAP-431G	4×4 Indoor tri-radio 11ax 6Ghz Capable APs	Internal	\bigcirc	
FAP-432G	4×4 Ruggedized Tri-radio indoor/outdoor 11ax (6Ghz) Capable APs	External	\bigcirc	\bigcirc
FAP-433G	4×4 Indoor tri-radio 11ax 6Ghz Capable APs	External	\bigcirc	
FAP-231G	2×2 Indoor tri-radio 11ax 6Ghz Capable APs	Internal	\bigcirc	
FAP-233G	2×2 Indoor tri-radio 11ax 6Ghz Capable APs	External	\bigcirc	
FAP-234G	2×2 Ruggedized Tri-radio indoor/outdoor 11ax (6Ghz) Capable APs	Internal	\bigcirc	\bigcirc
802.11ax Wi-F	i 6			
FAP-831F	8×8 Indoor tri-radio 11ax AP	Internal	\bigcirc	
FAP-433F	4×4 Indoor tri-radio 11ax APs	External	\bigcirc	
FAP-432F	4×4 Ruggedized indoor/outdoor tri-radio 11ax AP	External	\bigcirc	\bigcirc
FAP-432FR	4×4 C1D2 Certified tri-radio 11ax AP	External	\bigcirc	\bigcirc
FAP-431F	4×4 Indoor tri-radio 11ax APs	Internal	\bigcirc	
FAP-234F	2×2 Ruggedized indoor/outdoor tri-radio 11ax AP	Internal	\bigcirc	\bigcirc
FAP-23JF	2×2 Wall-mount tri-radio AP	Internal	\bigcirc	
802.11ac (Way	re 2) Wi-Fi 5			
FAP-223E	2×2 Indoor dual-radio APs	External	\bigcirc	
FAP-221E	2×2 Indoor dual-radio APs	Internal	\bigcirc	

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



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.



 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

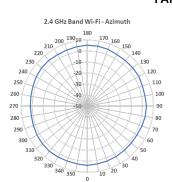
Hardware		FortiAP 443K			
Туре	Indoor AP				
Number of Radios	4 + 1				
Number of Antennas	Internal: x4 dual band WIFI + x4 6GHz WIFI + x2 Tri-band	External: x4 dual band WIFI + x4 6GHz WIFI +			
	scanning + x1 2.4GHz BLE/ ZigBee + x1 GPS	x2 Tri-band scanning Internal: x1 2.4GHz BLE/ ZigBee + x1 GPS			
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	Omni Directional Antenna			
	Dual band antenna: 4.0 dBi for 2.4GHz 5.6 dBi for 5 GHz 6GHz antenna:	Dual band antenna: 5.0 dBi for 2.4GHz 5.0 dBi for 5 GHz 6GHz antenna:			
	5.4dBi for 6GHz band Tri-band antenna:	5.8dBi for 6GHz band			
	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:	BLE antenna: 5.1 dBi for 2.4GHz GPS active antenna: 2.2 dBi antenna			
Frequency Bands (GHz)	2.2 dBi antenna . ISM 2.4-2.484 GHz	2.2 dBi antenna · U-NII-4 5.850-5.925 GH			
Frequency bands (GHZ)	.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 5.830-5.925 GF · U-NII-5 5.925-6.425 GF · U-NII-6 6.425-6.525 GF · U-NII-7 6.525-6.875 GF · U-NII-8 6.875-7.125 GF			
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: 2	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 i @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			
	. SBAS . Sensitivity (@ Default	GPS + GLONASS + BDS + Galileo + QZSS			
	Constallations)	47 5 WAAS, EGNOS, MSAS and GAGAN -147dBm			
Interfaces	x2 100M/1000M/2.5G/5.0G/ (RJ4	15)			
Power over Ethernet (Dec)	x1 Type 3.0 USB at 4.5W, x1 x1 802.3bt Pe				
Power over Ethernet (PoE)	x2 802.3at PoE (Dual	PoE current sharing)			
Simultaneous SSIDs	Up to	24			

	FortiAP 441K	FortiAP 443K			
EAP Type(s)	EAP-TLS, EAP-TTLS/MSCHAPv2, PE PEAPv1/EAP-GTC, EAP-SIM, EA				
User/Device Authentication	WPA™, WPA2™, and WPA3™ with 802 WEP, Web Captive Portal, MAC bla				
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, 802.11 802.11i, 802.11j, 802.11k, 802.11n 802.11ac, 802.11ax, 802.1X, 802.3a 802.3az	, 802.11r, 802.11v,			
SSID Types Supported	Local-Bridge, Mesh, an	d Tunnel			
Per Radio Client Capacity	Up to 512 clients per (Radio1, Radio2 and R				
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, Dedic	ated			
WIPS / WIDS radio modes	Background, Dedicated (red				
Packet Sniffer Mode	Yes				
Spectrum Analyzer	Yes				
Dimensions	100				
Length x Width x Height	9.84 × 9.84 × 2.26 inches (250 :	x 250 x 575 mm			
Weight	4.36 lbs (1.98 kg				
Package (shipping) Weight	6.9 lbs (3.13 kg				
Mounting Options	Ceiling, T-Rail, and				
Included Accessories	Standard Mounting Kit for Ceiling	y, r-kall, and Wall			
Environment		DA 10			
Power Supply	GPI-145 or SP-FAP250	7-PA-IU			
Power Consumption (Max)	41.7 W	To Davida Martin			
PoE Mode	Full - 802.3bt or 2×802.3at or DC : (all radios); # of Chains - 4×4 ; High - 802.3at or 2×802.3af : R1(2.4	USB - Enabled			
	R3 (6GHz) Operation in Low Tx Powe - 2×2; R4 operational ; USI	er 17 dBm, # of Chains			
Humidity	5% to 90% non-cond	ensing			
Operating/Storage Temp.	32°F to 122°F (0°C to 50°C)/-22°F 70°C)	to 158°F (-30°C to			
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	100				
Wi-Fi Alliance Certified	Certified (Wi-Fi 7 in pr	ogress)			
DFS	No	-9.000			
5.5	INU				
Warranty					
Warranty Limited Lifetime Warranty	Yes				

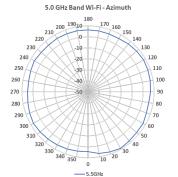
* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

		FORTIAP 441	K / 443K			
	2.4 GH:	2.4 GHz Band		5.0 GHz Band		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	.11a		
Mbps	23	-94	23	-90		
4 Mbps	22	-77	20	-73		
			n HT20			
ICSO	23	-94	23	-90		
ICS7	21	-77	20	-72		
		802.11				
ICSO	23	-93	23	-89		
ICS7	21	-74	20	-70		
		802.11a	vHT20			
ICSO	23	-95	22	-88		
ICS9	21	-73	19	-69		
		802.11a	e VHT40			
ICSO	22	-92	22	-87		
ICS9	19	-70	19	-64		
		802.11a	2 VHT80			
ICSO			21	-85		
ICS9			18	-62		
	802.11a	x HE20		802.11ax HE20 /	802.11be EHT20	
ICSO	23	-92	22	-88	22	-87
ICS11	18	-70	19	-65	19	-65
	802.11a	x HE40		802.11ax HE40 /	802.11be EHT40	
ICSO	22	-90	22	-87	20	-85
ICS11	17	-61	19	-63	18	-62
				802.11ax HE80 /	802.11be EHT80	
1CS0			21	-85	19	-82
1CS13			18	-61	17	-59
			802.11be	EHT160	802.11ax HE80 / 8	302.11be EHT80
ICSO			19	-79	18	-81
ICS13			17	-56	16	-58
			802.11be	EHT240		
ICSO			17	-79		
ICS13			16	-56		
					802.11be	EHT320
ICSO					19	-80
ICS13					15	-58

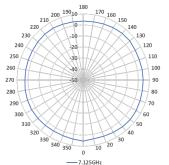
Antenna Radiation Patterns



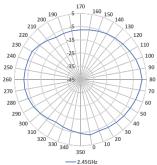
_____2.45GHz

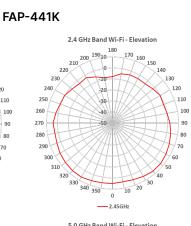


6.0 GHz Band Wi-Fi - Azimuth

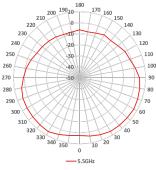




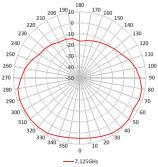




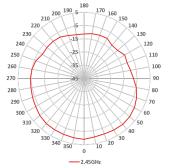
5.0 GHz Band Wi-Fi - Elevation

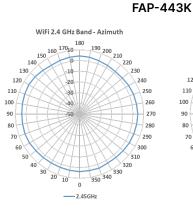


6.0 GHz Band Wi-Fi - Elevation

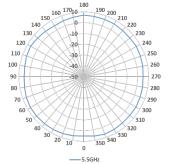


BLE & ZigBee 2.4 GHz Band - Elevation





WiFi 5.0 GHz Band - Azimuth



WiFi 2.4 GHz Band - Elevation

160 17010

-10

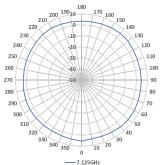
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-30

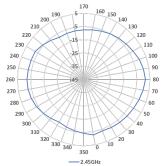
-40

-50



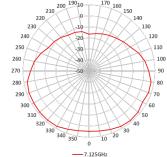


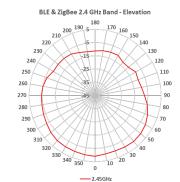






_____5.5GHz







350 340 330

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.



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

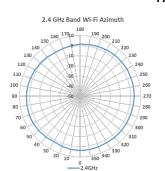
	FortiAP 241K	FortiAP 243K				
Hardware						
Type Indoor AP						
Number of Radios	4-Radio 2.4GHz + 5.0GHz	+ 6GHz + Tri-band scan				
Number of Antennas	6 Internal Wi-Fi antennas: x2 Dual band + x2 6GHz band + x2 Tri-band Scanning 1 Internal 2.4GHz band BLE/ ZigBee antenna	6 External RPSMA antenna connector: 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	Omni Directional 6GHz band antenna: 5.25 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 PFA BLE antenna: 4.6 dBi for 2.4GHz	Tr-band Omni directional antenna: 3.3 dBi for 2.4GHz, 5.6 dBi for 5GHz, and 5.3 dBi for 6GHz band				
	4.0 dB1101 2.40112	PIFA BLE antenna: 5.2 dBi for 2.4GHz				
Frequency Bands (GHz)	2.4GHz Banct ISM 2.4-2.484GHz 5.0GHz Banct UNII-1 5.15-5.25GHz UNII-2 5.25-3.5GHz UNII-2 5.45-7.5GHz UNII-3 5.75-8.5GHz 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 b Channel widt Modulation: BPSK, QP MIMO Chains:	h: 20/40MHz SK, 64/256/1024 QAM				
Radio 2 Capabilities	Frequency band: 5.00 Channel width: 20/ Modulation: BPSK, QPSK, MIMO Chains:	40/80/160/240MHz 64/256/1024/4096 QAM				
Radio 3 Capabilities	Frequency band: 6.00 Channel width: 20/ Modulation: BPSK, QPSK, MIMO Chains:	40/80/160/320MHz 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: u 5.0GHz band: up 6.0GHz band: up	to 4.324 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 (RJ45) 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					
Power over Ethernet (PoE) Simultaneous SSIDs	x1 802.3bt					

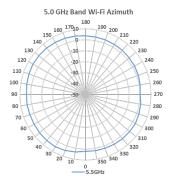
	FortiAP 241K	FortiAP 243K		
User/Device Authentication	WPA™, WPA2™, and WPA3™ with WEP, Web Captive Portal, MA			
Maximum Tx Power (Conducted)	2.4GHz band: 25 dBm/316 mW (5.0GHz band: 26 dBm/400 mW 6.0GHz band: 23 dBm/200 mW	2 chains combined)*		
Kensington Lock	Yes			
IEEE Standards	802.11a, 802.11b, 802.11be, 8 802.11i, 802.11j, 802.11k, 80 802.11ac, 802.11ax, 802.1X, 80 802.3a	2.11n, 802.11r, 802.11v, 2.3ad, 802.3at, 802.3bt,		
SSID Types Supported	Local-Bridge, Mes	h, 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	es			
Rogue Scan radio modes	Background, D	edicated		
WIPS / WIDS radio modes	Background, Dedicated	d (recommended)		
Packet Sniffer Mode	Yes			
Spectrum Analyzer	Yes			
Dimensions				
Length x Width x Height	7.48 × 7.48 × 2.01 inches	(190 × 190 × 51 mm)		
Weight	2.4 lbs (1.09 kg)	2.6 lbs (1.18 kg)		
Package (shipping) Weight	4.4 lbs (2.0 kg)	4.6 lbs (2.09 kg)		
Mounting Options	Ceiling, T-Rail,	and Wall		
Included Accessories	Standard Mounting Kit for Ceiling, T-Rail, and Wall			
Environment				
Power Supply	802.3bt PoE: GPI-145 or 802 USB disabled or 12V, 2.5A, 30 SP-FAP200-) Watt DC power supply		
Power Consumption (Max)	26.1 V	1		
PoE Mode				
Humidity	5% to 90% non-0	0		
Operating/Storage Temp.	32°F to 122°F (0' -22°F to 158°F (-3			
Directives	Low Voltage Direct	ctive * RoHS		
UL2043 Plenum Material	Yes			
Mean Time Between Failures	>10 Yea	irs		
IP Rating	N/A			
Surge Protection Built In	Yes			
Hit-less PoE Failover	N/A			
Certifications				
Wi-Fi Alliance Certified	No			
DFS	No			
Warranty				

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

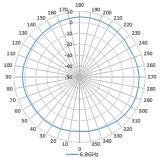
		FORTIAP 241	IK / 243K			
	2.4 GH	2.4 GHz Band 5.0 GHz Band				Band
Data rate	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)
	803	2.11b				
Mbps	22	-99				
1 Mbps	22	-91				
	803	2.11g	802	2.11a		
Mbps	22	-94	22	-92		
4 Mbps	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			
ICS0	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/802	2.11be HE20		
//CS0	22	-94	21	-93	20	-94
ICS11	21	-65	19	-59	20	-60
			802.11ax/802	2.11be HE40		
//CS0	21	-92	21	-91	20	-91
ICS11	20	-62	18	-59	19	-56
				802.11ax HE80 /	802.11be EHT80	
//CS0			21	-88	19	-86
MCS13			18	-56	18	-58
				802.11be	e EHT160	
ICS0			19	-87	17	-86
ICS13			16	-55	16	-56
			802.11be	EHT240		
//CS0			19	-86		
ICS13			16	-54		
					802.11be I	EHT360
1CS0					17	-83
ICS13					15	-55

Antenna Radiation Patterns

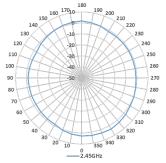


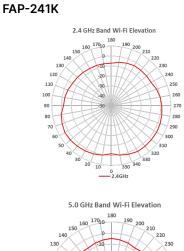


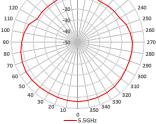
6.0 GHz Band Wi-Fi Azimuth



2.4 GHz Band BLE/ZigBee Azimuth

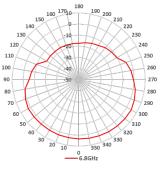




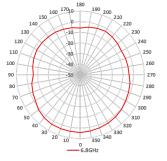


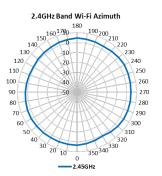
90

6.0 GHz Band Wi-Fi Elevation

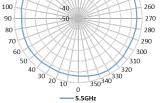


2.4 GHz Band BLE/ZigBee Elevation

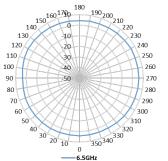




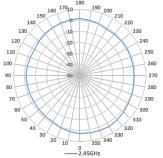
5.0 GHz Band Wi-Fi Azimuth 150 160 1700 180 190₂₀₀210 0 140 220 130 230 -10 120 -20 240 110 250 -30 260 -40

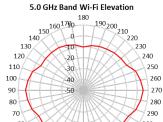


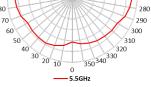
6.0 GHz Band Wi-Fi Azimuth



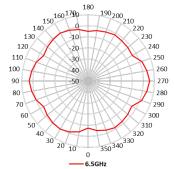
2.4 GHz Band BLE/ZigBee Azimuth 180



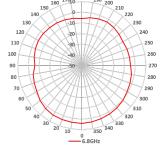




6.0 GHz Band Wi-Fi Elevation









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 Number of Antennas	3 + 1 BLE Internal: x4 Dual band Wi-Fi + x4 Tri-band Wi-Fi and Scanning + 1 2.4GHz BLE/ ZigBee + 1 GPS antenna	3 + 1 BLE 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 5 GHz Tr-band: 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-T RJ45, 1 Type 3.0 USB, 1 RS-232 RJ45 Serial Port		
	Supported Supported			
MDI/MDIX	Supported			
Power over Ethernet (PoE)	1 802.3bt PoE default or x2 80 (Dual PoE current sharing)	Supported 12.3at PoE		
Power over Ethernet (PoE) Simultaneous SSIDs	1 802.3bt PoE default or x2 80 (Dual PoE current sharing) Up to 8 per client serving radio enabled)	Supported 12.3at PoE 9 (7 if background scanning is		
Power over Ethernet (PoE) Simultaneous SSIDs EAP Type(s)	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, EA	Supported 12.3at PoE (7 if background scanning is (2, PEAPv0/EAP-MSCHAPv2, AP-AKA, EAP-FAST		
Power over Ethernet (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 PEAPV1/EAP-GTC, EAP-SIM, E/ WPA ^w , WPA2 ^w , and WPA3 ^w wit WEP, Web Captive Portal, MAC	Supported 12.3at PoE 0 (7 if background scanning is 2, PEAPV0/EAP-MSCHAPv2, AP-AKA, EAP-FAST h 802.1x or Preshared key, blocklist and allowlist		
Power over Ethernet (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 radio enabled) EAP-TLS, EAP-TTLS/MSCHAPQ PEAPv1/EAP-GTC, EAP-SIM, E/ WPA™, WPA2™, and WPA3™ with	Supported 12.3at PoE 12.3at PoE 12.7 if background scanning is 12. PEAPv0/EAP-MSCHAPv2, 14. AP-AKA, EAP-FAST 15. blocklist and allowlist 16. blocklist and allowlist 17. blocklist and allowlist 17. mW (4 chains combined)* 17. mW (4 chains combined)*		
Power over Ethernet (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 [™] , WPA2 [™] , and WPA3 [™] wit 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	Supported 12.3at PoE 12.3at PoE 12.7 if background scanning is 12. PEAPv0/EAP-MSCHAPv2, 14. AP-AKA, EAP-FAST 15. blocklist and allowlist 16. blocklist and allowlist 17. blocklist and		
Power over Ethernet (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 / 500 Radio 2: 5GHz: 26 dBm / 400 r 6GHz: 24 dBm 251 mW (4 ch BW)*	Supported 12.3at PoE 12.3at PoE 12.3at PoE 12.3at PoE 12.3at PoE 12.7at PoE 12.7at Poe 12.7at Poe 12.7at Poe 12.7at Poe 13.7at Poe 14.7at Poe 14.7at Poe 14.7at Poe 15.7at Poe 15.7at Poe 16.7at Poe 17.7at		
Power over Ethernet (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	Supported 22.3at PoE 22.3at PoE 22.7 EAPV0/EAP-MSCHAPV2, 24.7 PAKA, EAP-FAST 25.8 blocklist and allowlist 26.9 mW (4 chains combined)* 27.8 mW (4 cha		
Power over Ethernet (PoE) Simultaneous SSIDs EAP Type(s) User/Device Authentication Maximum Tx Power Maximum Tx Power EEE Standards SSID Types Supported Per Radio Client Capacity	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 Radio 3	Supported 12.3at PoE 12.3at PoE 12.3at PoE 12.3at PoE 12.7 if background scanning is 12.7 PEAPv0/EAP-MSCHAPv2, AP-AKA, EAP-FAST 14.8 blocklist and allowlist 15.8 blocklist and allowlist 16.8 wW (4 chains combined)* 17.8 wW (4 chains combined)* 18.9 wW (4 chains combined)* 19.9 wW (4 chains combined)* 19.9 wW (4 chains combined)* 19.9 wW (4 chains combined)* 19.9 wW (4 chains combined)* 19.0 wW (4 chains combined)* 10.0 wW (4 chains co		
Power over Ethernet (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 [™] , WPA2 [™] , and WPA3 [™] 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 Tunne	Supported 12.3at PoE 12.3at PoE 12.3at PoE 12.3at PoE 12.7eAP-AKA, EAP-MSCHAPv2, AP-AKA, EAP-FAST 14.802.1x or Preshared key, 15.1blocklist and allowlist 15.1mW (4 chains combined)* 16.1mW (4 chains combined)* 16.1mW (4 chains combined)* 17.802.11g, 802.11h, 802.11i, 17.802.11u, 802.11v, 802.11i, 17.802.11u, 802.11v, 802.11i, 17.802.3ad, 802.3at, 19.		

Advanced 802.11 FeaturesOFDMAYesYesSpatial Reuse (BSS)YesYesDL MU-MIMOYesYesDL-MU-MIMOYesYesDL-MU-MIMOYesYesConced Target WaleYesYesZeroWait DFSNoNoOtheraced Target MaleYesYesZeroWait DFSNoNoOtheraced Target MaleYesYesUTP CapableYesYesUTP FacturesApplication control and Web filterWIPS (MIDS Radio Background, Dedicated (recordent)YesSpectrum AnalyzerYesYesPacket Sniffer ModeYesYesSpectrum AnalyzerYesYesPacket Sniffer ModeSets Ibs (2.4 kg)YesPackage (shipping)Sib (3.4 kg)YesPackage (shipping)Sib (2.4 kg)YesPackage (shipping)Sib (3.4 kg)YesPackage (shipping)Sib (3.4 kg)YesPackage (shipping)Sib (3.4 kg)YesPack		FortiAP 431G	FortiAP 433G		
SoloringYesYesColoringYesYesUL MU-MIMOYesYesDL-MU-MIMOYesYesEnhanced Target WakeYesYesEnhanced Target WakeYesYesCorovait DFSNoNoOnboard Security FunctionsYesYesUTP CapableYesYesMireless Monitoring CapabilityYesYesWireless Monitoring CapabilitySecurity CapabilityWireless Monitoring CapabilitySecurity CapabilityPacket Shiffer ModeYesYesSpectrum AnalyzerYesYesPacket Shiffer ModeYesYesVirelength X Width X HeighS45× 8.85 × 2.12 Inches (22.50 × 54.0 mm)Weight3.05 Ibs (1.4 kg)YesPackage (shipping)S25 Ibs (2.4 kg)YesWeightS.05 Ibs (1.4 kg)YesRounting OptionsCelling, T-Rail, and WallIncluded AccessoriesStandard Mounting kit for Celling, T-Rail and WallRounding OptionsCelling, T-Rail, and WallPower Consumption31.7 WattsStandard Mounting kit for Celling, T-Rail and WallYesPower ConsumptionS2.50 × 54.0 sonco-condensigHigh + 802.3at or 2×802.3af : All Radio Operation in Low TxPower Consump	Advanced 802.11 Features				
Yes	OFDMA	Yes	Yes		
DL- MU-MIMOYesYesEnhanced Target Wake Fime (NYT)YesNoSeroWait DFSNoNoOrboard Security FunctionYesYesUTP CapableYesYesUTP FeaturesApplication control and Web /iller/IgWireless Monitoring CapabilityBackground, DedicatedWireless Monitoring CapabilityBackground, Dedicated (recommended)Packet Sniffer ModeYesYesPacket Sniffer ModeYesYesSpectrum AnalyzerYesYesPacket Sniffer ModeSeb Sk		Yes	Yes		
Phanced Target Wake Time (TVT)YesYesSecond Discourd DecisionNoOnboard Security FunctionYesYesOnboard Security FunctionApplication control and Web filter//JUTP CapableYesYesUTP CapableBackground, DedicatedYesWireless Monitoring CapableBackground, Dedicated (recomended)Wireless Monitoring CapableYesYesPacket Shiffer ModeYesYesPacket Shiffer ModeYesYes <td< th=""><th>UL MU-MIMO</th><th>Yes</th><th>Yes</th></td<>	UL MU-MIMO	Yes	Yes		
Time (TWT) ofZeroWait DFSNoNoOnboard Security FunctionYesYesUTP CapableYesYesWireless Monitoring CapableBackground, DedicatedYesWireless Monitoring CapableBackground, Dedicated (recommended)YesPacket Sniffer ModeYesYesPacket Sniffer ModeYesYesSpectrum AnalyzerYesYesPacket Sniffer ModeSes Xes Xes Xes Xes Xes Xes Xes Xes Xes X	DL- MU-MIMO	Yes	Yes		
Onboard Security FunctionUTP CapableYe'sVB PeaturesApplication control and Web filteringWireless Monitoring CapableBackground, DedicatedWireless Monitoring CapableBackground, Dedicated (recombination of the combination of the combi		Yes	Yes		
UPP CapableYeisYeisUPP FeaturesApplication control and Web filteringWireless Monitoring CapableBackground, DedicatedWireless Monitoring CapableBackground, Dedicated (recombed)Wireless MichaelBackground, Dedicated (recombed)Wireless MichaelYeisPacket Sniffer ModeYeisPacket Sniffer ModeYeisSpectrum AnalyzerYeisVireling Michael8.85×8.85×2.12 inches (225.0×54.0 mm)Meight3.05 lbs (1.4 kg)Veright3.05 lbs (2.4 kg)WeightS.25 lbs (2.4 kg)Mounting OptionsCelling, T-Rail, and WallIncluded AccessoriesStandard Mounting kit for Celling, T-Rail and WallPower SupplySp-FAP250-PA-10 or SP-FAP4V-PA-XX or 302.3bt PoE(GPI-145)Power Consumption3.17 WattsAffinde ModeYeisPower Consumption1.17 WattsAffinde ModeYeisPower ConsumptionSile 10.22*F (0°C to 50°C) - 22*F to 158°F (-30°C to 70°C)Pomer AdageYeisPorting / StorageSile To 122*F (0°C to 50°C) - 22*F to 158°F (-30°C to 70°C)Pomer To HillyYeisVictage Directive - RelingNiAIntendel KereenYeisPorting Potection BuiltyNiANicher Specer SpecificationNiAMitter Specer SpecificationNiAPorting Potection BuiltyYeis (Includes Paspoint)Poter Specer SpecificationNiAPoter Specer SpecificationYeis (Includes Paspoint)Poter	ZeroWait DFS	No	No		
UPT PeaturesApplication control and Web filteringWireless Monitoring CapabilitiesRogue Scan Radio ModesBackground, Dedicated (recommended)Packet Sniffer ModeYesPacket Sniffer ModeYesSpectrum AnalyzerYesVesYesDimensionsJess 8.85 × 2.12 inches (225.0× 25.0× 54.0 mm)Weight3.05 los (1.4 kg)Package (shipping)2.52 los (2.4 kg)Package (shipping)Celling, T-Rail, and WallPower SupplySet-AP250-PA-10 or SP-FAP400-PA-XX or sology 3.05 los (2.5 los (2.3 kg)Power SupplySet-AP250-PA-10 or SP-FAP400-PA-XX or sology 3.05 los (2.5 los (2.3 kg)Power SupplySet-AP250-PA-10 or SP-FAP400-PA-XX or sology 3.05 lob (201-145)Power SupplySet to SOX or sology 3.05 lob (201-145)Power SupplySet to SOX or sology 3.05 lob (201-14	Onboard Security Function	IS			
Wireless Monitoring CapabilitiesRogue Scan Radio ModeeBackground, Dedicated (recommended)Wireless Monitoring CapabilitiesBackground, Dedicated (recommended)Packet Sniffer ModeYesYesPacket Sniffer ModeYesYesSpectrum AnalyzerYesYesDimensionsUULength x Width x Height8.85× 8.85 × 2.12 inches (22.5.> × 25.0. × 54.0 mm)WeightMeight3.05 lbs (1.4 kg)UPackage (shipping)5.25 lbs (2.4 kg)UWeightGelling, T-Rail, and WallUIncluded AccessoriesStandard Mounting klt for Celling, T-Rail and WallPower SupplySp-FAP250-PA-10 or SP-FAP400-PA-XX or asoly 2.30 tPoE(GPI-145)Power Supply31.7 Watts31.7 WattsPower Consumption31.7 Watts31.7 WattsPower ConsumptionSi to 90% non-condensingPower 17 dBm; Chain 4×4 ; USB - EnabledHigh = 802.3at or 2×802.3at or DC : TX Power - Full ; Chain 4×4 ; USB - EnabledHigh = 802.3bt or 2×802.3at or DC : TX Power - Full ; Chain 4×4 ; USB - EnabledHigh = 802.3at or 2×802.3at	UTP Capable	Yes	Yes		
Rogue Scan Radio ModeeBackground, Dedicated (recommended)WiDS / WIDS RadioBackground, Dedicated (recommended)Packet Sniffer ModeYesSpectrum AnalyzerYesVesYesDimensionsStass 8.85 × 2.12 inches (225.0 × 25.0 × 54.0 mm)Weight3.05 lbs (1.4 kg)Packed Snipping)5.25 lbs (2.4 kg)WeightScar Stass 8.85 × 2.12 inches (225.0 × 25.0 × 54.0 mm)Mounting Options5.25 lbs (2.4 kg)AccessoriesCelling, T-Rail, and WallIncluded AccessoriesStandard Mounting kit for Celling, T-Rail and WallPower SupplySp-FAP250-PA-10 or SP-FAP4-0 - PA-XX or 802.3bt OPE (GPI-145)Spere Consumption31.7 WattsName31.7 WattsPower Consumption31.7 WattsSpere ConsumptionSta 090% non-condensingOperating / StorageS ² F to 122°F (0°C to 50°C) / -22°F to 158°F (-30°C to 70°C)DirectivesLow Voltage Directive - RoH2U2043 Plenum MaterialYesN/AN/ASurge Protection Built InNoNoNoHit-less PoE FailoverYes (includes Passpoint)PireAtingN/ANiFi Alliance CertifiedYes (includes Passpoint)PireAtingCE, FCC, SingaporeOperating LifetimeYes (includes Passpoint)	UTP Features	Application control and Web fil	tering		
WiPS / WIDS Radio ModesBackground, Dedicated (recommended)Packet Sniffer ModeYesSpectrum AnalyzerYesYesYesDimensionsLength x Width x Height8.85 x 8.85 x 2.12 inches (225.0 × 25.0 × 54.0 mm)Weight3.05 lbs (1.4 kg)Package (shipping)5.25 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 Watts9 Full - 802.3bt or 2×802.3at ir All Radio Operation in Low Tx Power 17 dBm : Chain 4×4 ; USB - DisabledHumidity5% to 90% non-condensingOperating / Storage alluresYesVL2043 Plenum Material i P RatingN/AN/AN/AN/AN/ASurge Protection Built In NoNoHi-Less POE FailoverYesVi-Fi Alliance Certified YesYes (includes Passpoint)PortectionsYesWi-Fi Alliance Certified Yes (includes Passpoint)Yes (includes Passpoint)DirectivesCE, FCC, SingaporeYesWi-Fi Alliance Certified YesYesYesYesYesYes	Wireless Monitoring Capal	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)AccessoriesMounting OptionsCeiling, T-Rail, and WallIncluded AccessoriesStandard Mounting kit for Celling, T-Rail and WallPower SupplySh2-FAP250-PA-10 or SP-FAP4/Der A-XX or S02.3bt PeE(GPI-145)Power SupplySh2-GA2-10 or SP-FAP4/Der A-XX or S02.3bt PeE(GPI-145)Power SupplySh2-GA2-10 or SP-FAP4/Der A-XX or S02.3bt PeE(GPI-145)Power ConsumptionS1.7 WattsBoxer ConsumptionS1.7 WattsS11P WatesS1.7 WattsPower ConsumptionS1.7 WattsPower ConsumptionS1.7 WattsPower 17 dBm : Chain 4×4 ; USB - Enabled High = 802.3at or 2×802.3at r LHunidityS% to 90% non-condensigPower 17 dBm : Chain 4×4 ; USB - Enabled High = 802.3at or 2×802.3at r LPower SupplyS2* to 122*F (0*C to 50*C) / -22*F to 158*F (-30*C to 70*C)Power SupplyN/ASurge Protection Built mNoN/AN/ASurge Protection Built mNoN/AN/ASurge Protection Built mNoN/ANaSurge Protection Built mYes (includes Passpoint)HeraingYes (includes Passpoint)Surge Protectified	Rogue Scan Radio Modes	Background, Dedicated			
Spectrum AnalyzerYesYesDimensionsLength 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)WeightS.25 lbs (2.4 kg)AccessoriesStandard Mounting kit for Ceiling, T-Rail and WallIncluded AccessoriesStandard Mounting kit for Ceiling, T-Rail and WallPower SupplySP-FAP250-PA-10 or SP-FAP4/0-PA-XX or s02.3bt PoE(GPI-145)Power Consumption31.7 WattsMax31.7 WattsPower Consumption31.7 WattsPower Consumption31.7 WattsPower Consumption31.7 WattsPower ConsumptionS* to 90% non-condensingPower 17 dBm ; Chain 4×4 ; USB - EnabledHigh - 802.3at or 2×802.3af : All Radio Operation in Low Tx Power 17 dBm ; Chain 4×4 ; USB - DisabledHumidityS% to 90% non-condensingOperating / Storage32°F to 122°F (0°C to 50°C) / -22°F to 158°F (-30°C to 70°C)PirectivesLow Voltage Directive + RoHSUL2043 Plenum MateriaiYesN/AN/ASurge Protection Built In NoNoN/AN/AHit-less PoE FailoverYes (includes Passpoint)PireficationsYes (includes Pass		Background, Dedicated (recon	nmended)		
Dimensions Length x Width x Height 8.85× 8.85 × 2.12 inches (22.5. × 25.0 × 54.0 mm) Weight 3.05 lbs (1.4 kg) Package (shipping) 5.25 lbs (2.4 kg) Accessories E Mounting Options Ceiling, T-Rail, and Wall Included Accessories Standard Mounting kit for Ceiling, T-Rail and Wall Power Supply S02.3bt PO2FO-PA-10 or SP-FAP260-PA-XX or 802.3bt OC (SPI-145) Environment S02.3bt PO2(SPI-145) Power Consumption 31.7 Watts 31.7 Watts Poef Mode Full - 802.3bt or 2×802.3at or DC : Tx Power - Full ; Chain 4×4 ; USB - Enabled Chain 4×4 ; USB - Enabled SP (SPI) Fumidity 5% to 90% non-condensing Operating / Storage 20°F to 122°F (O°C to 50°C) / -2°F to 158°F (-30°C to 70°C) Directives Low Voltage Directive - RoHS UL2043 Plenum Materia! Yes Yes >10 Years Parting N/A Muit-less PoE Failover Yes VI-Fi Alliance Certified Yes (includes Passpoint) Vi-Fi Alliance Certified Yes (includes Passpoint) Vi-Fi Alliance Certified Yes (includes Passpoint) Vi-Fi Alliance Certified Yes (includ	Packet Sniffer Mode	Yes	Yes		
Length 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)AccessoriesAccessoriesMounting OptionsCeiling, T-Rail, and WallIncluded AccessoriesStandard Mounting kit for Ceiliry, T-Rail and WallPower SupplySP-FAP250-PA-10 or SP-FAP4/000000000000000000000000000000000000	Spectrum Analyzer	Yes	Yes		
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WeightViewAccessoriesMounting OptionsCeiling, T-Rail, and WallIncluded AccessoriesStandard Mounting kit for Ceiling, T-Rail and WallPower SupplyStandard Mounting kit for Ceiling, T-Rail and WallPower SupplySP-FAP250-PA-10 or SP-FAP400-PA-XX or 802.3bt POE(GPI-145)EnvironmentSP-FAP250-PA-10 or SP-FAP400-PA-XX or 802.3bt POE(GPI-145)Power Consumption31.7 Watts31.7 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 - DisabledHumidityS% to 90% non-condensingOperating / Storage28°F to 122°F (0°C to 50°C) / -22°F to 158°F (-30°C to 70°C)DirectivesLow Voltage Directive • ROHSUL2043 Plenum MaterialYesYesN/AN/AN/ABarrine Between Pailures>10 YearsPialuresN/AN/AN/AHit-less PoE FailoverYes (includes Passpoint)PFSCE, FCC, SingaporeVi-Fi Alliance CertifiedYes (includes Passpoint)PFSCE, FCC, SingaporeWarrantyYesLimited LifetimeYesYesYes	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-FAP4∪-PA-XX or 802.3bt POE(GPI-145)EnvironmentSP-FAP250-PA-10 or SP-FAP4U-PA-XX or 802.3bt POE(GPI-145)Power Consumption31.7 WattsMudeSUIL - 802.3bt or 2×802.3at or DC : Tx Power - Full; Chain 4×4; USB - EnabledPoE ModeFull - 802.3bt or 2×802.3af : All Radio Operation in Low Tx Power 17 dBm; Chain 4×4; USB - EnabledHumidityS% to 90% non-condensingPoreating / Storage32°F to 122°F (0°C to 50°C) / -22°F to 158°F (-30°C to 70°C)PremeratureIon You Yoltage Directive · RoHSUL2043 Plenum MaterialYesN/AN/ASurge Protection Built In NoNoN/AN/ASurge Protection Built In NoNoN/Fi Alliance CertifiedYes (includes Passpoint)Yes (includes Passpoint)Yes (includes Passpoint)PFSCE, FCC, SingaporeWarrantyYesLimited LifetimeYesYesYes		5.25 lbs (2.4 kg)			
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B02.3bt PoE(GPI-145) Environment Power Consumption (Max) 31.7 Watts 31.7 Watts PoE Mode 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 - 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°C) Directives Low Voltage Directive · RoHS UL2043 Plenum Material Yes Yes Yes Mean Time Between Failures >10 Years N/A N/A Surge Protection Built In No No Hit-less POE Failover Yes (includes Passpoint) VES Yes (includes Passpoint) DFS CE, FCC, Singapore Vers Yes (includes Passpoint)		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 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 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 YesYesVI2043 Plenum Material FailuresYesN/AN/ASurge Protection Built In NoNoN/AYesCertificationsYes (includes Passpoint)VF-Fi Alliance Certified WarrantyYes (includes Passpoint)PFSCE, FCC, SingaporeCE, FCC, SingaporeUirined LifetimeYesYes	Included Accessories	Standard Mounting kit for Ceili	ng, T-Rail and Wall		
(Max) PoE Mode Full - 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 ; Power 17 dBm ; Chain 4×4 ; 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°C) Directives Low Voltage Directive · RoHS UL2043 Plenum Material Yes Yes Yes Mean Time Between Failures >10 Years N/A N/A Surge Protection Built In No N/Fi Alliance Certified Yes (includes Passpoint) Yes (includes Passpoint) Yes (includes Passpoint) DFS CE, FCC, Singapore CE, FCC, Singapore Warranty Yes Yes		SP-FAP250-PA-10 or SP-FAP4			
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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 Wi-Fi Alliance Certified Yes (includes Passpoint) Yes (includes Passpoint) DFS CE, FCC, Singapore CE, FCC, Singapore Warranty Yes Yes	Power Supply Environment Power Consumption (Max)	SP-FAP250-PA-10 or SP-FAP4 802.3bt PoE(GPI-145) 31.7 Watts Full - 802.3bt or 2×802.3at or	31.7 Watts		
Temperature Directives Low Voltage Directive • RoHS UL2043 Plenum Material Yes Wes Yes Mean Time Between Failures >10 Years IP Rating N/A N/A N/A Surge Protection Built In Hit-less PoE Failover Yes Verifications Yes Wi-Fi Alliance Certified Yes (includes Passpoint) PFS CE, FCC, Singapore Warranty Yes	Power Supply Environment Power Consumption (Max)	SP-FAP250-PA-10 or SP-FAP4 802.3bt PoE(GPI-145) 31.7 Watts Full - 802.3bt or 2×802.3at or Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : ,	20-PA-XX or 31.7 Watts DC : Tx Power - Full ; All Radio Operation in Low Tx		
UL2043 Plenum Material Yes Yes Mean Time Between Failures >10 Years >10 Years IP Rating N/A N/A Surge Protection Built In No No Hit-less PoE Failover Yes Yes Wi-Fi Alliance Certified Yes (includes Passpoint) Yes (includes Passpoint) DFS CE, FCC, Singapore CE, FCC, Singapore Warranty Yes Yes	Power Supply Environment Power Consumption (Max) PoE Mode	SP-FAP250-PA-10 or SP-FAP4 802.3bt PoE(GPI-145) 31.7 Watts Full - 802.3bt or 2×802.3at or Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : , Power 17 dBm ; Chain 4×4 ; USB	20-PA-XX or 31.7 Watts DC : Tx Power - Full ; All Radio Operation in Low Tx		
Mean Time Between Failures >10 Years >10 Years 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 Warranty Yes Yes	Power Supply Environment Power Consumption (Max) PoE Mode Humidity Operating / Storage	SP-FAP250-PA-10 or SP-FAP4 802.3bt PoE(GPI-145) 31.7 Watts Full - 802.3bt or 2×802.3at or Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3at ; Power 17 dBm ; Chain 4×4 ; US 5% to 90% non-condensing	20-PA-XX or 31.7 Watts DC : Tx Power - Full ; All Radio Operation in Low Tx SB - Disabled		
Failures IP Rating N/A Surge Protection Built In No Hit-less PoE Failover Yes Certifications Yes Wi-Fi Alliance Certified Yes (includes Passpoint) PFS CE, FCC, Singapore Warranty Yes	Power Supply Environment Power Consumption (Max) PoE Mode Humidity Operating / Storage Temperature	SP-FAP250-PA-10 or SP-FAP4 802.3bt PoE(GPI-145) 31.7 Watts Full - 802.3bt or 2×802.3at or Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : Power 17 dBm ; Chain 4×4 ; US 5% to 90% non-condensing 32°F to 122°F (0°C to 50°C) /	20-PA-XX or 31.7 Watts DC : Tx Power - Full ; All Radio Operation in Low Tx SB - Disabled		
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 Warranty Ves Ves	Power Supply Environment Power Consumption (Max) PoE Mode Humidity Operating / Storage Temperature Directives	SP-FAP250-PA-10 or SP-FAP4 802.3bt PoE(GPI-145) 31.7 Watts Full - 802.3bt or 2×802.3at or Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3at ; Power 17 dBm ; Chain 4×4 ; US 5% to 90% non-condensing 32°F to 122°F (0°C to 50°C) / Low Voltage Directive • RoHS	20-PA-XX or 31.7 Watts DC : Tx Power - Full ; All Radio Operation in Low Tx SB - Disabled -22°F to 158°F (-30°C to 70°C)		
Hit-less PoE Failover Yes Yes Certifications Yes (includes Passpoint) Yes (includes Passpoint) DFS CE, FCC, Singapore CE, FCC, Singapore Warranty Yes Yes	Power Supply Environment Power Consumption (Max) PoE Mode Humidity Operating / Storage Temperature Directives UL2043 Plenum Material Mean Time Between	SP-FAP250-PA-10 or SP-FAP4 802.3bt PoE(GPI-145) 31.7 Watts Full - 802.3bt or 2×802.3at or Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : Power 17 dBm ; Chain 4×4 ; US 5% to 90% non-condensing 32°F to 122°F (0°C to 50°C) / Low Voltage Directive • RoHS Yes	20-PA-XX or 31.7 Watts DC : Tx Power - Full ; All Radio Operation in Low Tx SB - Disabled -22°F to 158°F (-30°C to 70°C) Yes		
Certifications Wi-Fi Alliance Certified Yes (includes Passpoint) DFS CE, FCC, Singapore Warranty Limited Lifetime Yes	Power Supply Environment Power Consumption (Max) PoE Mode PoE Mode Uumidity Humidity Perating / Storage Pemperature Directives UL2043 Plenum Material Mean Time Between Failures	SP-FAP250-PA-10 or SP-FAP4 802.3bt PoE(GPI-145) 31.7 Watts Full - 802.3bt or 2×802.3at or Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3at ; Power 17 dBm ; Chain 4×4 ; US 5% to 90% non-condensing 32°F to 122°F (0°C to 50°C) / Low Voltage Directive • RoHS Yes >10 Years	20-PA-XX or 31.7 Watts DC : Tx Power - Full ; All Radio Operation in Low Tx SB - Disabled -22°F to 158°F (-30°C to 70°C) Yes >10 Years		
Wi-Fi Alliance Certified Yes (includes Passpoint) Yes (includes Passpoint) DFS CE, FCC, Singapore CE, FCC, Singapore Warranty Yes Yes	Power Supply Environment Power Consumption (Max) PoE Mode PoE Mode Humidity Operating / Storage Temperature Directives UL2043 Plenum Material Mean Time Between Failures	SP-FAP250-PA-10 or SP-FAP4 802.3bt PoE(GPI-145) 31.7 Watts Full - 802.3bt or 2×802.3at or Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : Power 17 dBm ; Chain 4×4 ; US 5% to 90% non-condensing 32°F to 122°F (0°C to 50°C) / Low Voltage Directive • RoHS Yes >10 Years N/A	20-PA-XX or 31.7 Watts DC : Tx Power - Full ; All Radio Operation in Low Tx SB - Disabled -22°F to 158°F (-30°C to 70°C) Yes >10 Years N/A		
DFS CE, FCC, Singapore CE, FCC, Singapore Warranty Yes Yes	Power Supply Environment Power Consumption (Max) PoE Mode PoE Mode ULU Humidity Operating / Storage Temperature Directives UL2043 Plenum Material UL2043 Plenum Material Mean Time Between Failures IP Rating Surge Protection Built In	SP-FAP250-PA-10 or SP-FAP4 802.3bt POE(GPI-145) 31.7 Watts Full - 802.3bt or 2×802.3at or Chain 4×4 ; USB - Enabled High - 802.3bt or 2×802.3af : , Power 17 dBm ; Chain 4×4 ; US 5% to 90% non-condensing 32°F to 122°F (0°C to 50°C) / Low Voltage Directive • RoHS Yes >10 Years N/A No	20-PA-XX or 31.7 Watts DC : Tx Power - Full ; All Radio Operation in Low Tx B - Disabled -22°F to 158°F (-30°C to 70°C) Yes >10 Years N/A No		
Warranty Yes Yes	Power Supply Environment Power Consumption (Max) PoE Mode PoE Mode UL2043 Plenum Material UL2043 Plenum Material Mean Time Between Pailures IP Rating Surge Protection Built In Hit-less PoE Failover	SP-FAP250-PA-10 or SP-FAP4 802.3bt POE(GPI-145) 31.7 Watts Full - 802.3bt or 2×802.3at or Chain 4×4 ; USB - Enabled High - 802.3bt or 2×802.3af : , Power 17 dBm ; Chain 4×4 ; US 5% to 90% non-condensing 32°F to 122°F (0°C to 50°C) / Low Voltage Directive • RoHS Yes >10 Years N/A No	20-PA-XX or 31.7 Watts DC : Tx Power - Full ; All Radio Operation in Low Tx B - Disabled -22°F to 158°F (-30°C to 70°C) Yes >10 Years N/A No		
Limited Lifetime Yes Yes	Power Supply Environment Power Consumption (Max) PoE Mode PoE Mode UL2043 Plenum Material UL2043 Plenum Material UL2043 Plenum Material IP Rating Surge Protection Built In Hit-less PoE Failover Certifications	SP-FAP250-PA-10 or SP-FAP4 802.3bt POE(GPI-145) 31.7 Watts Full - 802.3bt or 2×802.3at or Chain 4×4 ; USB - Enabled High - 802.3bt or 2×802.3af : Power 17 dBm ; Chain 4×4 ; US 5% to 90% non-condensing 32°F to 122°F (0°C to 50°C) / Low Voltage Directive • RoHS Yes >10 Years N/A No Yes	200-PA-XX or 31.7 Watts DC : Tx Power - Full ; All Radio Operation in Low Tx SB - Disabled -22°F to 158°F (-30°C to 70°C) Yes >10 Years N/A No Yes		
	Power Supply Environment Power Consumption (Max) PoE Mode PoE Mode Humidity Operating / Storage Temperature Directives UL2043 Plenum Material VL2043 Plenum Material Mean Time Between Failures IP Rating Surge Protection Built In Hit-less PoE Failover Hit-less PoE Failover	SP-FAP250-PA-10 or SP-FAP4 802.3bt PoE(GPI-145) 31.7 Watts Full - 802.3bt or 2×802.3at or Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : Power 17 dBm ; Chain 4×4 ; US 5% to 90% non-condensing 32°F to 122°F (0°C to 50°C) / Low Voltage Directive • RoHS Yes >10 Years N/A No Yes Yes (includes Passpoint)	20-PA-XX or 31.7 Watts DC : Tx Power - Full ; All Radio Operation in Low Tx SB - Disabled -22°F to 158°F (-30°C to 70°C) Yes >10 Years N/A No Yes Yes (includes Passpoint)		
Warranty	Power Supply Environment Power Consumption (Max) PoE Mode PoE Mode UL2043 Plenum Material Directives UL2043 Plenum Material Mean Time Between Failures IP Rating Surge Protection Built In Hit-less PoE Failover Certifications Wi-Fi Alliance Certified DFS	SP-FAP250-PA-10 or SP-FAP4 802.3bt PoE(GPI-145) 31.7 Watts Full - 802.3bt or 2×802.3at or Chain 4×4 ; USB - Enabled High - 802.3at or 2×802.3af : Power 17 dBm ; Chain 4×4 ; US 5% to 90% non-condensing 32°F to 122°F (0°C to 50°C) / Low Voltage Directive • RoHS Yes >10 Years N/A No Yes Yes (includes Passpoint)	20-PA-XX or 31.7 Watts DC : Tx Power - Full ; All Radio Operation in Low Tx SB - Disabled -22°F to 158°F (-30°C to 70°C) Yes >10 Years N/A No Yes Yes (includes Passpoint)		

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

	Rad 802.11a		Radio 2 802.11ax 4×4		Radio3 4×4 Tri band Service and	
					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
2.4GHz, 802.11g						
Mbps	21	-93				-95
4 Mbps	21	-77				-78
.4GHz, 802.11n HT20						
ICSO	21	-95				-92
1CS7	19	-77				-74
.4GHz, 802.11n HT40						
ICSO	20	-92				-90
ICS7	18	-74				-72
.4GHz, 802.11ax HE20						
ICSO	21	-94				-90
ICS11	19	-64				-71
.4GHz, 802.11ax HE40						
ICSO	21	-91				-91
ICS11	19	-62				-72
.0GHz, 802.11a		52				, <u>_</u>
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						
ICSO			21	-93	21	-90
ICS7			18	-78	18	-71
.0GHz, 802.11ac VHT20						
			00	0.0	01	00
1CS0 1CS9			22	-93	21	-93 -69
			20	=7 Z	10	-09
.0GHz, 802.11ac VHT40 ICS0			22	-91	21	-90
1059			19	-70	18	-64
.0GHz, 802.11ac VHT80			19	-70	10	-04
ICS0			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	51
ICS0			18	-86	20	-85
CS11			16	-59	17	-58
.0GHz, 802.11ax HE160			10	55	17	50
ICS0					19	-82
ICS11					16	-57
.0GHz, 802.11ax HE160					10	57
					17	-82
					17	02

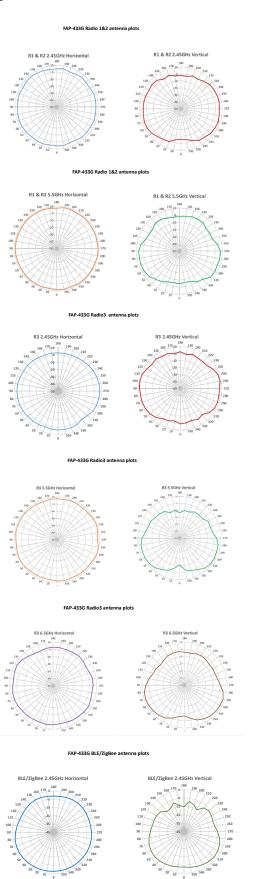
Maximum capability of the Hardware provided (Excluding antenna gain)

Data Sheet

Antenna Radiation Patterns FAP-431G

FAP-433G





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.

💊 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

	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				
Antenna Type and Peak	+ x1 2.4GHz band BLE/ZigBee				
Gain	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 Bands (GHz)*	2.4-2.484GHz 5.925-6.425GHz 5.15-5.25GHz 6.425-6.525GHz 5.25-5.35GHz 6.525-6.875GHz 5.47-5.725GHz 6.875-7.125GHz 5.725-5.85GHz 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 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	x1 10GBASE-T/5GBASE-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	802.3af power on LAN2/1G PSE port				
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™, 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				
-					

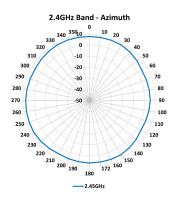
	FortiAP 432G
IEEE Standards	802.11a, 802.11b, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11k, 802.11n, 802.11r, 802.11v, 802.11ac, 802.11ax, 802.1X, 802.3ad, 802.3at, 802.3bt, 802.3az
SSID Types Supported	Local-Bridge, Mesh, and Tunnel
Per Radio Client Capacity	Up to 512 clients per radio (Radio1, Radio2, and Radio3)
Cellular Co-existence	Yes
LED Off Mode	Yes
Advanced 802.11 Features	
OFDMA	Yes
Spatial Reuse (BSS Coloring)	Yes
UL MU-MIMO	Yes
DL- MU-MIMO	Yes
Enhanced Target Wake Time (TWT)	Yes
ZeroWait DFS	No
Onboard Security Function	S
UTP Capable	Yes
UTP Features	Application control and Web filtering
Wireless Monitoring Capat	
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	$9.45 \times 9.45 \times 2.74$ 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) / -58°F to 158°F (-50°C to 70°C)
Directives	Low Voltage Directive • RoHS
UL2043 Plenum Material	No
Mean Time Between Failures	>10 Years
IP Rating	IP67
Certifications	
Wi-Fi Alliance Certified	No
DFS	No
14/	
Warranty	

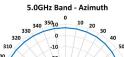
* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

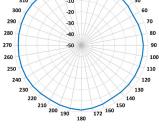
		FORTIAP	432G			
	2.4 GHz	Band	5.0 GH	z Band	6 GHz	
Data rate	Tx power/chain (dBm)	Rz Sensitivity (dBm)	Tx power/chain (dBm)	Rz Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)
802.11b						
1 Mbps	27	-99				-99
i 11 Mbps	27	-91				-91
302.11g/a	802.	11g		80:	2.11a	
6 Mbps	27	-94	25	-92	22	-94
54 Mbps	27	-78	23	-75	21	-77
302.11n HT20						
ACSO	26	-94	25	-91		
1CS7	26	-77	22	-73		
302.11n HT40						
ACS0	25	-93	25	-89		
ACS7	25	-74	22	-70		
302.11ac VHT20						
ИСЅО	23	-95	25	-91		
ACS9	21	-73	22	-70		
302.11ac VHT40						
ACS0	23	-92	23	-89		
ICS9	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
//CS11	23	-63	20	-60	19	-61
302.11ax HE80						
ACSO			22	-85	21	-85
MCS11			20	-57	18	-60
302.11ax HE160						
ACS0					20	-85
MCS11					17	-56

Maximum capability of the Hardware provided (Excluding antenna gain)

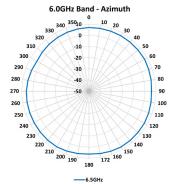
Antenna Radiation Patterns FAP-432G



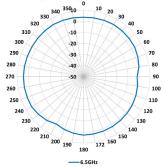




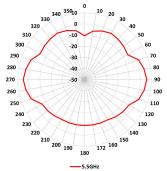
—— 5.5GHz

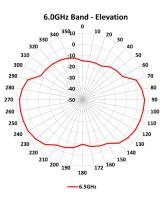


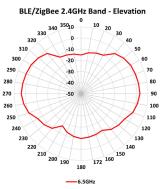
BLE/ZigBee 2.4GHz Band - Azimuth



5.0GHz Band - Elevation







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

S	b	e	С	if	i	С	a	ti	0	n	S
-	Μ	-	-			-			-		

	FortiAP 231G	FortiAP 233G			
Hardware					
Hardware Type	Indoor AP	Indoor AP			
Number of Radios	3 + 1 BLE	3 + 1 BLE			
Number of Antennas	Internal x2 Dual band Wi-Fi + x2 Tri-band Wi-Fi and Scanning + 1 Single band 2.4GHz BLE/ZigBee	External x2 Dual band Wi-Fi + x2 Tri-band Wi-Fi and Scanning (permanently attached) + 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 4.5dBi 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/ MIMO Chains: 2×2 Service	256/1024 QAM			
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 iBeac max TX power	con advertizement @10 dBm			
Trusted Platform Module (TPM)	Yes	Yes			
Interfaces	1 100/1000/2500 Base-T RJ4 1x Type 3.0 USB, 1 RS-232 RJ	5, 1 10/100/1000 Base-T RJ45, 145 Serial Port			
MDI/MDIX	Supported	Supported			
Power over Ethernet (PoE)	1 × 802.3at PoE default				
Simultaneous SSIDs	Up to 8 per client serving rad is enabled)				
EAP Type(s)	PEAPv1/EAP-GTC, EAP-SIM, E				
User/Device Authentication	WPA™, WPA2™, and WPA3™ w WEP, Web Captive Portal, MA	C blocklist and allowlist			
Maximum Tx Power	Radio 1: 2.4GHz: 23 dBm / 200 mW (2 chains combined)* Radio 2: 5GHz: 23 dBm / 200 mW (2 chains combined)* Radio 3: 5GHz: 23 dBm / 200 mW (2 chains combined)* 6GHz: 21 dBm 126 mW (2 chains combined @ 160MHz BW)*				
Kensington Lock	Yes	Yes			
IEEE Standards	802.11j, 802.11k, 802.11n, 802 802.11ac, 802.11ax, 802.1Q, 80 802.3at, 802.3az, 802.3bz				
SSID Types Supported	Local-Bridge, Mesh, and Tunr				
Per Radio Client Capacity	Up to 512 clients per radio (R				
Cellular Co-existence	Yes	Yes			
LED Off Mode	Yes	Yes			

	FortiAP 231G	FortiAP 233G				
Advanced 802.11 Features						
OFDMA	Yes	Yes				
Spatial Reuse (BSS Coloring)	Yes	Yes				
UL MU-MIMO	Yes	Yes				
DL- MU-MIMO	Yes	Yes				
Enhanced Target Wake Time (TWT)	Yes	Yes				
ZeroWait DFS	No	No				
Onboard Security Functions						
UTP Capable	Yes	Yes				
UTP Features	Application control and Web f	iltering				
Wireless Monitoring Capabili	ties					
Rogue Scan Radio Modes	Background, Dedicated					
WIPS / WIDS Radio Modes	Background, Dedicated (reco	mmended)				
Packet Sniffer Mode	Yes	Yes				
Spectrum Analyzer	Yes	Yes				
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 = 25.5W max					
PoE Mode	Full - 802.3at or 2×802.3af or Chain 2×2 ; USB - Enabled	DC : Tx Power - Full ;				
	Low - 802.3af : R1(2.4GHz) ar Tx Power 17 dBm ; Radio3 - D	nd R2(5GHz) Operation in Low isabled ; 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°C)				
Directives	Low Voltage Directive • RoHS	;				
UL2043 Plenum Material	Yes	Yes				
Mean Time Between Failures	>10 Years	>10 Years				
IP Rating	N/A	N/A				
Surge Protection Built In	No	No				
Hit-less PoE Failover	N/A	N/A				
Certifications						
Wi-Fi Alliance Certified	Yes (includes Passpoint)	Yes (includes Passpoint)				
DFS	CE, FCC, JP, Indonesia, Korea, Taiwan	CE, FCC, JP, Indonesia, Korea, Taiwan				
Warranty						
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			
		dio 1 1ax 4×4	Radi 802.11		Rad Tri band Service ar	
	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
2.4GHz, 802.11g						
Mbps	23	-94				-92
i4 Mbps	23	-78				-77
2.4GHz, 802.11n HT20						
//CSO	23	-94				-92
1CS7	21	-75				-74
.4GHz, 802.11n HT40						
ICSO	22	-92				-90
ICS7	20	-73				-72
.4GHz, 802.11ax HE20						
ICSO	23	-90				-90
ICS11	21	-71				-71
.4GHz, 802.11ax HE40						
1CS0	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						
ICSO			23	-93	19	-93
ICS7			21	-74	18	-73
.0GHz, 802.11n HT40						
1CS0			22	-91	21	-90
ICS7			21	-72	18	-71
.0GHz, 802.11ac VHT20			21	12	10	7.1
1CS0			23	-91	21	-93
1CS9			21	-72	18	-69
.0GHz, 802.11ac VHT40			21	12	10	00
10012,002.1180 01140			22	-91	21	-90
1059			19	-72	18	-64
.0GHz, 802.11ac VHT80			10	· 2	10	04
1CS0			21	-86	20	-88
100			18	-62	17	-61
.0GHz, 802.11ax HE20			10	52	17	01
1CS0			23	-91	19	-91
ICS11			23	-91	19	
			20	= / ∠	17	-72
.0GHz, 802.11ax HE40			22	-01	01	01
CS0			22	-91 -72	21	-91 -72
			19	-/2	IÖ	-/2
.0GHz, 802.11ax HE80			01	07	04	~7
			21	-87	21	-87
			18	-58	17	-58
.0GHz, 802.11ax HE160 ICS0					18	-87

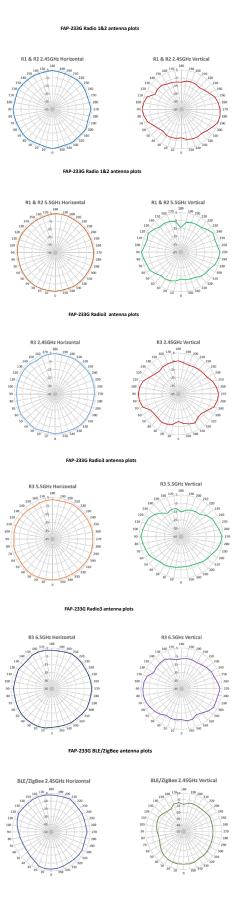
Maximum capability of the Hardware provided (Excluding antenna gain)

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.



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
Number of Antennas	10 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
Frequency Bands (GHz)*	GPS: 1.5-1.6GHz Band: 360° Horizontal and 98° Vertical 2.4GHz Band: 2.400–2.4835 5.0CHz Band: 5.150–5.250, 5.250–5.350, 5.470–5.725, 5.725–5.850, 6.0CHz 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 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	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 802.3bt
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™, WPA2™, and WPA3™ 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)*

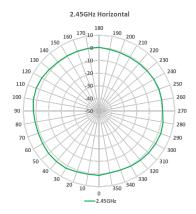
	FortiAP 234G
IEEE Standards	802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11k, 802.11n, 802.11r, 802.11u, 802.11v, 802.11w, 802.11ac, 802.11ax, 802.1Q, 802.1X, 802.3ad, 802.3af, 802.3at, 802.3az, 802.3bz
SSID Types Supported	Local-Bridge, Mesh, and Tunnel
Per Radio Client Capacity	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
Onboard Security Functions	
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
	20 11010
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(2.4GH2) and R2(5GH2) 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(2.4GH2) and R2(5GH2) 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 UL2043 Plenum Material Mean Time Between Failures IP Rating Certifications Wi-Fi Alliance Certified DFS	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 YearsIP67No
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 DFS	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 YearsIP67No

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

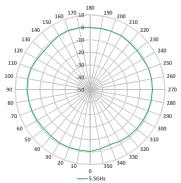
FORTIAP 234G								
	Radio1 2.4	GHz Band	Radio2 5.0	GHz Band	Radio3 60	Hz Band		
Data rate	Tx power/chain (dBm)	Rz Sensitivity (dBm)	Tx power/chain (dBm)	Rz Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)		
02.11b								
Mbps	23	-99						
1 Mbps	23	-91						
302.11g/a	802.11g		802.11a					
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								
1CS0	23	-93	23	-89				
1CS7	21	-74	21	-70				
02.11ac VHT20								
ICSO	23	-95	23	-91				
ICS9	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								
1CS0	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

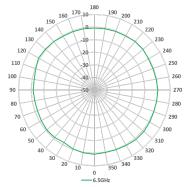
FAP-234G



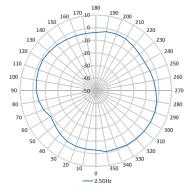


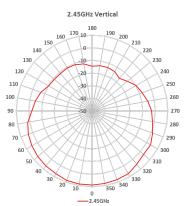


6.5GHz Horizontal

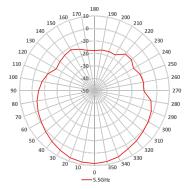


BLE Horizontal

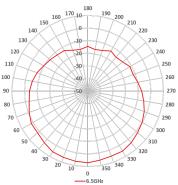




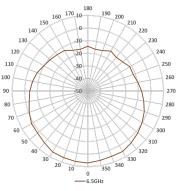








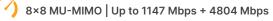
BLE Vertical



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	Radio 1: up to 1147.5 Mbps Radio 2: up to 4.804 Gbps in 8×8 MIMO and in 4×4 + 4×4 MIMO modes				
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				
	scanning is enabled)				
EAP Type(s)	scanning is enabled) EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP- MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST				
EAP Type(s) User/Device Authentication	EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP- MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA,				
	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,				
User/Device Authentication Maximum Tx Power	EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP- MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST WPA ^w , WPA2 ^m , and WPA3 ^m with 802.1x or Preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist Radio 1: 2.4 GHz 27 dBm / 500 mW (4 chains combined)* Radio 2: 5 GHz 25.5 dBm / 354 mW (4 chains combined)*				
User/Device Authentication Maximum Tx Power (Conducted)	EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP- MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST WPA ^w , WPA2 ^w , and WPA3 ^w with 802.1x or Preshared key, WEP, Web Captive Portal, MAC blocklist and allowlist 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				
User/Device Authentication Maximum Tx Power (Conducted) Kensington Lock	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 27 dBm / 500 mW (4 chains combined)* Radio 2: 5 GHz 25.5 dBm / 354 mW (4 chains combined)* Radio 3: NA Yes 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i,802.11b, 802.11k, 802.11r, 802.11g, 802.11h, 802.11v, 802.11ac, 802.11ax (Wi-Fi 6), 802.1Q, 802.1X,				
User/Device Authentication Maximum Tx Power (Conducted) Kensington Lock IEEE Standards	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 27 dBm / 500 mW (4 chains combined)* Radio 2: 5 GHz 25.5 dBm / 354 mW (4 chains combined)* Radio 3: NA Yes 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i,802.11j, 802.11k, 802.11e, 802.11g, 802.11h, 802.11v, 802.11ac, 802.11ax (Wi-Fi 6), 802.1Q, 802.1X, 802.3ad, 802.3af, 802.3at, 802.3az, 802.3az				
User/Device Authentication Maximum Tx Power (Conducted) Kensington Lock IEEE Standards SSID Types Supported	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 27 dBm / 500 mW (4 chains combined)* Radio 2: 5 GHz 25.5 dBm / 354 mW (4 chains combined)* Radio 3: NA Yes 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i,802.11j, 802.11k, 802.11e, 802.11g, 802.11h, 802.11v, 802.11ac, 802.11ax (Wi-Fi 6), 802.10g, 802.1X, 802.3ad, 802.3af, 802.3at, 802.3az, 802.3bz Local-Bridge, Mesh, Tunnel				

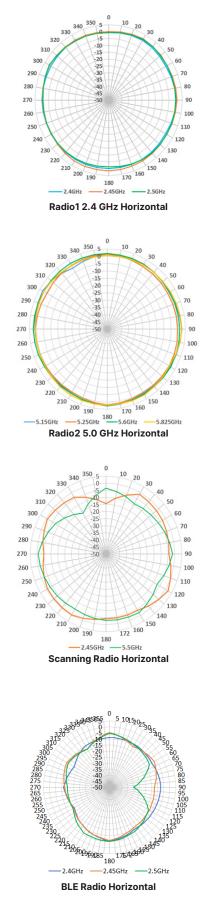
	FortiAP-831F
Advanced 802.11 Features	
OFDMA	Yes (UL and DL)
Spatial Reuse (BSS Coloring)	Yes
UL-MU-MIMO 802.11ax mode	Yes
DL-MU-MIMO	Yes
Enhanced Target Wake Time (TWT)	Yes
ZeroWait DFS /Agile DFS	No
Onboard Security Functions	
UTP Capable	No
UTP Features	N/A
Wireless Monitoring Capabilities	
Rogue 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 [2×2 2×2], Tx Power 10 dBm and USB Disabled
Dual 5G	$\begin{array}{l} {\sf DC}/2at \rightarrow {\sf Full Mode ; Radios will be in [4\times4 4\times4 4\times4]} \\ {\sf and USB Enabled} \\ {\sf 1at}/2af \rightarrow {\sf High Mode ; Radios will be in} \\ [4\times4 4\times4 4\times4] {\sf and USB Disabled} \\ {\sf 1af } \rightarrow {\sf Low Mode ; Radios will be [2\times2 2\times2 2\times2], Tx} \\ {\sf Power 10 dBm and USB Disabled} \end{array}$
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
-	

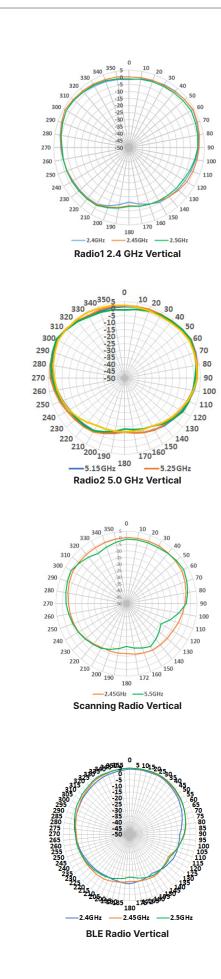
* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

Data Sheet

				FortiAP 831F				
	Radi	o 1	Rad	dio 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	por onani (azin)	(02)	por onani (abiii)	cononing (april)	por onani (abiii)	(02)	por onani (abiii)	(0.2)
l Mbps	21	-98	_	_	21	-96	_	_
11 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	_	_
MCS7	20	-74	_	_	17	-72	_	_
802.11n HT40								
MCS0	17	-92	_	_	19	-90	_	_
MCS7	18	-73	_	_	17	-71	_	_
802.11ax HE20	-	-						
MCS0	21	-90	_	_	_	_	_	_
MCS11	17	-71	_	_	_		_	_
802.11ax HE40								
MCS0	17	-88	_	_	_	_	_	_
MCS11	17	-68						_
	17	00						
802.11a 6 Mbps	_	_	20	-92	_	_	20	-90
54 Mbps			20	-72			17.5	-72
			20	12			17.5	12
802.11n HT20 MCS0	_	_	20	-91			20	-90
MCS0 MCS7		_	19	-72			17.5	-90
			19	12			17.5	71
802.11n HT40			20	20			10	00
MCS0 MCS7			20	-88			19 16.5	-88
	—	_	18	-09	—	_	10.5	-09
802.11ac VHT20							10	
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			_	
MCS11	—	—	18	-66	—	—	—	-
802.11ax HE40								
MCS0	—	_	20	-87	_	_	_	_
MCS11	—	—	18	-61	—	—	—	—
802.11ax HE80								
MCS0	—	—	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 :			
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™, 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 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, 802 802.11i,802.11j, 802.11k, 802.1 802.11w, 802.11ac, 802.11ax (\ 802.3ad, 802.3af, 802.3at, 80	1n, 802.11r, 802.11u, 802.11v, Wi-Fi 6), 802.1Q, 802.1X,		
SSID Types Supported	Local-Bridge, Mesh, Tunnel	Local-Bridge, Mesh, Tunne		
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			
ZeroWait DFS /Agile DFS	No	No		

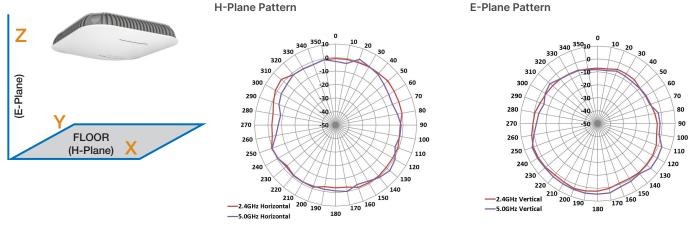
	FortiAP-431F	FortiAP-433F		
Onboard Security Functions				
UTP Capable	No	No		
UTP Features	N/A	N/A		
Wireless Monitoring Capabil	•			
Rogue Scan Radio Mode	Background, Dedicated Background, Dedicated			
WIPS / WIDS RAdio Modes	Background, Dedicated (recommended)			
Packet Sniffer Mode	Yes	Yes		
Spectrum 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 802.3a Full System functionality + USB support			
	1 port is connected to 802.3a in 2×2 mode with reduced po			
Humidity	5% to 90% Non-Condensing	5% to 90% Non-Condensing		
Operating / Storage Temperature	32°F to 113°F (0°C to 45°C)/	-31°F to 94°F (-35°C to 70°C)		
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 Passpo			
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.

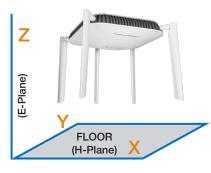
** Refer to the Fortinet Antenna datasheet here.

				FortiAP 431F / 433				
	Radio 1		Rad	io 2		Ra	dio 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)
802.11b								
1 Mbps	23	-98	—	—	20	-96	—	_
11 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	30
802.11n HT20			20	12			17.5	
MCS0	_	_	20	-91	_	_	20	-90
MCS0 MCS7			19	-72			17.5	-90
			15	12			17.5	71
802.11n HT40			00	20			40	00
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	—	—	—	_
MCS11	—	_	18	-66	—	_	—	_
802.11ax HE40								
MCS0	_	_	20	-87	_	_	_	_
MCS11	_	_	18	-61	_	_	_	_
802.11ax HE80								
MCS0	_	_	18	-94	_	_	_	_
MCS11	_		17	-58	_		_	_

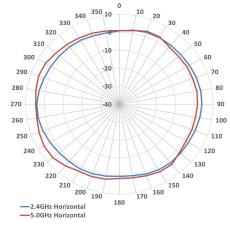
FAP-431F



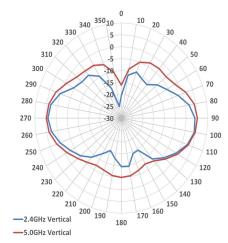
FAP-433F



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)	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,	
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 ^w , WPA2 ^w , and WPA3 ^w 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)	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 ^w , WPA2 ^w , and WPA3 ^w 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	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, 802.11a, 802.11r, 802.11u, 802.11v, 802.11aw, 802.11aw, 802.11aw, Wi-Fi 6), 802.10w, 802.11w,	
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™, 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, 802.11a, 802.11e, 802.11g, 802.11h, 802.11i,802.11b, 802.11a, 802.11r, 802.11v, 802.11v, 802.11a, 802.11ac, 802.11ax (Wi-Fi 6), 802.1Q, 802.1X, 802.3ad, 802.3af, 802.3at, 802.3az, 802.3bt, 802.3bz	
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 ^w , WPA2 ^w , and WPA3 ^w 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, 802.11h, 802.11r, 802.11u, 802.11v, 802.11w, 802.11ac, 802.11ax (Wi-Fi 6), 802.10, 802.10, 802.3ad, 802.3af, 802.3at, 802.3az, 802.3bt, 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	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, 802.11k, 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	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 ^w , WPA2 ^w , and WPA3 ^w 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, 802.11k, 802.11r, 802.11u, 802.11v, 802.11i, 802.11a, 802.11a, 802.11r, 802.11u, 802.11v, 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	
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, 802.11k, 802.11r, 802.11r, 802.11h, 802.11i, 802.11k, 802.11r, 802.11r, 802.11v, 802.11w, 802.11ac, 802.11ax (Wi-Fi 6), 802.10, 802.11x, 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	
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	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 ^w , WPA2 ^w , and WPA3 ^w 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, 802.11u, 802.11v, 802.11a, 802.11a, 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	
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 ^w , WPA2 ^w , and WPA3 ^w 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 (UL and DL)	
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 ^w , WPA2 ^w , and WPA3 ^w 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, 802.11g, 802.11h, 802.13i,802.11a, 802.11a, 802.11r, 802.11u, 802.11v, 802.13ad, 802.3at, 802.3at, 802.3az, 802.3bt, 802.3bz Local-Bridge, Tunnel, and Mesh Up to 512 clients per radio (Radio1 and Radio2) Yes Yes	
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Optional Antennas** (Professional Installer Required for FCC domains)FANT-04ABGN-0606-0-N FANT-04ABGN-1414-P-N FANT-04ABGN-8065-P-NEnvironmentFANT-04ABGN-8065-P-NPSE functionalityYes (while powered by PoE injector shipped with product)Power Consumption (Maximum)25 W without PSE out and 37.9 W with PSE outPoE Mode802.3bt 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.Humidity10% to 90% non condensingOperating / Storage Temperature-40°F to 140°F (-40°C to 60°C) / -40°F to 176°F (-40°C to 80°C)DirectivesLow Voltage Directive • RoHSUL2043 Plenum MaterialNoMean Time Between Failures> 10 YearsBurge Protection Built In YesYesHit-less PoE FailoverN/ACertificationsYes (includes Passpoint)DFSFCC, IC, CE, Japan, Brazil and TaiwanWarrantyYes	Included Accessories	Wall and Pole mounting kit
KProfessional Installer Required for FCC domainsFANT-04ABGN-1414-P-N FANT-04ABGN-8065-P-NEnvironmentPSE functionalityYes (while powered by POE injector shipped with product)Power Consumption (Maximum)25 W without PSE out and 37.9 W with PSE out POE ModePoE Mode802.3bt 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.Humidity10% to 90% non condensingOperating / Storage Temperature-40°F to 140°F (-40°C to 60°C) / -40°F to 176°F (-40°C to 80°C)DirectivesLow Voltage Directive • RoHSUL2043 Plenum Material BailuresNoIP Rating1967Surge Protection Built In YesYesHit-less POE Failover WiFi Alliance CertifiedYes (includes Passpoint)DFSCC, IC, CE, Japan, Brazil and TaiwanWarrantyYes	Power Supply	802.3bt PoE, ships with PoE injector (reset functionality)
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Power Consumption (Maximum)25 W without PSE out and 37.9 W with PSE outPoE Mode802.3bt 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.Humidity10% to 90% non condensingOperating / Storage Temperature-40°F to 140°F (-40°C to 60°C) / -40°F to 176°F (-40°C to 80°C)DirectivesLow Voltage Directive • RoHSUL2043 Plenum MaterialNoMean Time Between Failures> 10 YearsBurge Protection Built In YesYesHit-less PoE FailoverN/ACertificationsYes (includes Passpoint)DFSFCC, IC, CE, Japan, Brazil and TaiwanWarrantyCertifications	Environment	
(Maximum) 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 	PSE functionality	Yes (while powered by PoE injector shipped with product)
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) / -40°F to 176°F (-40°C to 80°C) Temperature -40°F to 176°F (-40°C to 80°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 Surge Protection Built In Yes Hit-less PoE Failover N/A Certifications Yes (includes Passpoint) DFS FCC, IC, CE, Japan, Brazil and Taiwan Warranty Yes		25 W without PSE out and 37.9 W with PSE out
reduced Tx power Radio1/R2 17dBm This product only supports PSE functionality when it is powered by PoE injector that ships with the product.Humidity10% to 90% non condensingOperating / Storage emperature-40°F to 140°F (-40°C to 60°C) / -40°F to 176°F (-40°C to 80°C)DirectivesLow Voltage Directive • RoHSUL2043 Plenum MaterialNoMean Time Between Failures>10 YearsSurge Protection Built In Ht-less PoE FailoverYesWiFi Alliance CertifiedYes (includes Passpoint)DFSFCC, IC, CE, Japan, Brazil and TaiwanWarrantyFCC	PoE Mode	802.3bt PoE default (ships with Passive PoE injector
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) / -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 Yes (includes Passpoint) DFS FCC, IC, CE, Japan, Brazil and Taiwan Warranty Yes		
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 Hit-less PoE Failover N/A Certifications Yes (includes Passpoint) DFS FCC, IC, CE, Japan, Brazil and Taiwan Warranty Yes		
Temperature -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 JIP Rating IP67 Surge Protection Built In Yes Hit-less PoE Failover N/A Certifications Yes (includes Passpoint) DFS FCC, IC, CE, Japan, Brazil and Taiwan Warranty Yes	Humidity	10% to 90% non condensing
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 Yes (includes Passpoint) DFS FCC, IC, CE, Japan, Brazil and Taiwan Warranty Yes (includes Passpoint)		
Mean Time Between Failures > 10 Years IP Rating IP67 Surge Protection Built In Yes Hit-less PoE Failover N/A Certifications Yes (includes Passpoint) WiFi Alliance Certified Yes (includes Passpoint) DFS FCC, IC, CE, Japan, Brazil and Taiwan Warranty Yes (includes Passpoint)	Directives	Low Voltage Directive • RoHS
Failures IP67 IP Rating IP67 Surge Protection Built In Yes Hit-less PoE Failover N/A Certifications Yes (includes Passpoint) WiFi Alliance Certified Yes (includes Passpoint) DFS FCC, IC, CE, Japan, Brazil and Taiwan Warranty Yes (Yes (Yes (Yes Yes))	UL2043 Plenum Material	No
Surge Protection Built In Yes Hit-less PoE Failover N/A Certifications ViFi Alliance Certified WiFi Alliance Certified Yes (includes Passpoint) DFS FCC, IC, CE, Japan, Brazil and Taiwan Warranty Yes		> 10 Years
Hit-less PoE Failover N/A Certifications ViFi Alliance Certified WiFi Alliance Certified Yes (includes Passpoint) DFS FCC, IC, CE, Japan, Brazil and Taiwan Warranty Versite Certified	IP Rating	IP67
Certifications WiFi Alliance Certified Yes (includes Passpoint) DFS FCC, IC, CE, Japan, Brazil and Taiwan Warranty	Surge Protection Built In	Yes
WiFi Alliance Certified Yes (includes Passpoint) DFS FCC, IC, CE, Japan, Brazil and Taiwan Warranty	Hit-less PoE Failover	N/A
DFS FCC, IC, CE, Japan, Brazil and Taiwan Warranty	Certifications	
Warranty	WiFi Alliance Certified	Yes (includes Passpoint)
	DFS	FCC, IC, CE, Japan, Brazil and Taiwan
	Warranty	
	Limited Lifetime Warranty	Yes

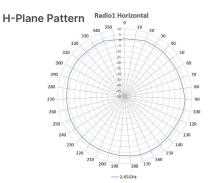
* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

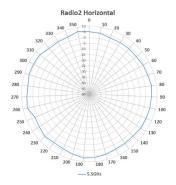
** Refer to the Fortinet Antenna datasheet here.

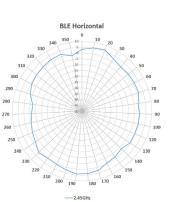
	FortiAP 432F						
	Radio 1		Ra	dio 2		Radio 3 Scanning	
Data rate	2.4 GHz Tx Power per chain (dBm)	Rx Sensitivity (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity (dBm)	2.4 GHz Tx Power per chain (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity (dBm)
802.11b							
1 Mbps	24	-99	_	_	20	_	-92
11 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					.,		, <u> </u>
MCS0	23	-90	_	_	_	_	_
MCS11	23	-71					
	21	71		_	_		_
802.11ax HE40	01	01					
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							
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	_		
			10	12			
802.11ax HE80			20	07			
MCS0			20	-87			
MCS11	—	_	18	-58	_	—	_

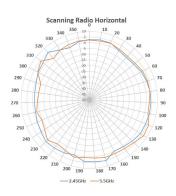
Antenna Radiation Patterns FAP-432F

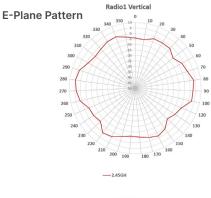


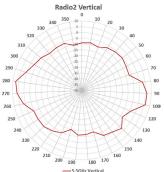


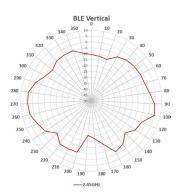


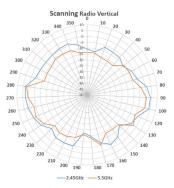












Highlights

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 [™] , WPA2 [™] , and WPA3 [™] 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

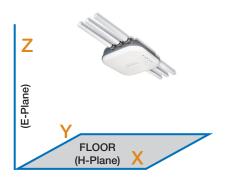
	FortiAP 432FR
Onboard Security Functions	TURIAF 4021 K
-	No
UTP Capable UTP Features	N/A
Wireless Monitoring Capabili	
Rogue Scan radio modes	Background, Dedicated
WIPS / WIDS radio modes	Background, Dedicated (recommended)
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Dimensions	
Length x Width x Height	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 Temperature	-40°F to 140°F (-40°C to 60°C) / -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

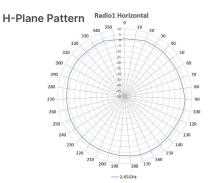
* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

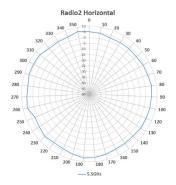
** Refer to the Fortinet Antenna datasheet here.

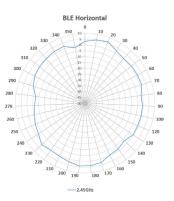
			FortiA	P 432FR			
	Radio 1		Ra	dio 2		Radio 3 Scanning	
Data rate	2.4 GHz Tx Power	Rx Sensitivity (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity (dBm)	2.4 GHz Tx Power	5 GHz Tx Power per	Rx Sensitivity (dBm)
802.11b	per chain (dBm)	KX Sensitivity (ubiii)	Chain (ubin)	RX Sensitivity (ubiii)	per chain (dBm)	Chain (dBm)	RX Sensitivity (ubiii)
1 Mbps	24	-99	_	_	20	_	-92
11 Mbps	24	-91			18		-91
	24	51			10		51
802.11g	0.4	0.4			20		00
6 Mbps	24	-94 -78			20		-92 -77
54 Mbps	23	-78	—	—	10	—	-//
802.11n HT20	0.4	0.4			0.0		00
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							
MCS0	_	_	22	-91	_	19	-90
MCS9			19	-72		16	-64
			10	12		10	0-1
802.11ac VHT80 MCS0	_	_	20	-86	_	17	-88
MCS0 MCS9			17	-86		17	-88
	_	_	17	-02	_	17	10-
802.11ax HE20			<u></u>	<u></u>			
MCS0	—	_	22	-91	—	_	_
MCS11	_	-	19	-72	—	_	—
802.11ax HE40							
MCS0	_	_	22	-91	_	_	_
MCS11	—	_	19	-72	—	_	—
802.11ax HE80							
MCS0	—	—	20	-87	—	—	—
MCS11	_	—	18	-58	—	_	—

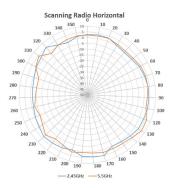
Antenna Radiation Patterns FAP-432FR

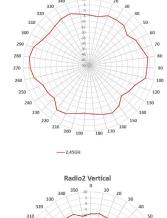








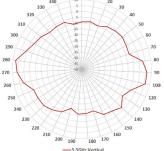


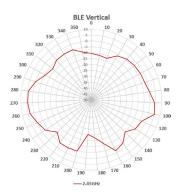


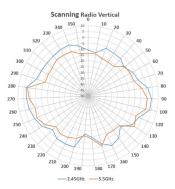
Radio1 Vertical

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

Data Sheet

Specifications

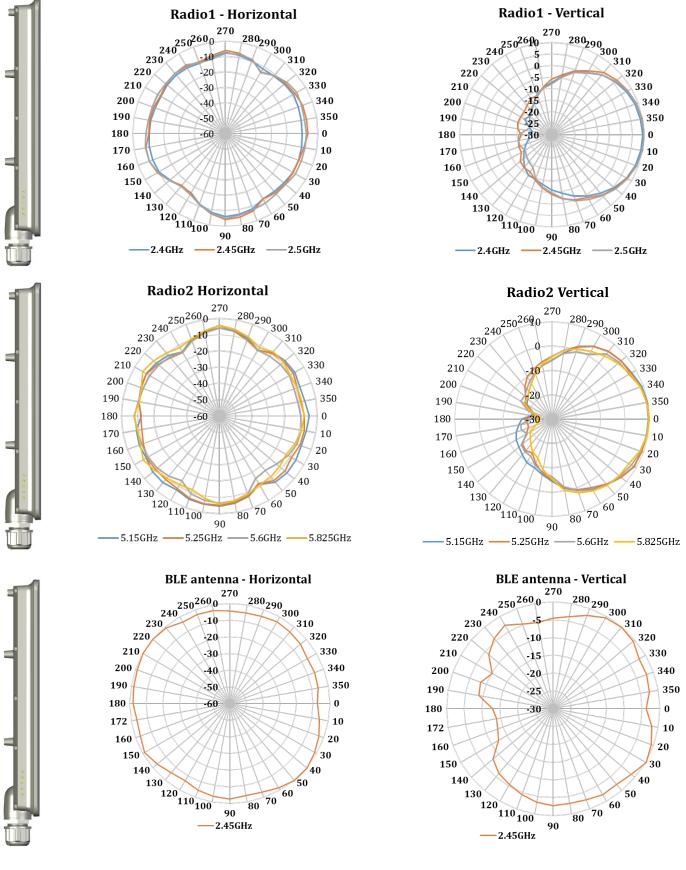
	FortiAP 234F			
Hardware				
Hardware Type	Ruggedized indoor/outdoor AP			
Number of Radios	3 + 1 BLE			
Number of Antennas	2 dual band WiFi + 1 dual band scanning + 1 single band 2.4 GHz BLE/ZigBee			
Antenna Type and Peak Gain	Directional patch antenna Dual band antenna Scanning radio: 3.5 dBi in 2.4 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™, 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 (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	Yes
(TWT)	
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

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

		FortiAP 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
302.11b	por onani (abiii)	in concinny (abii)	enam (azm)		por onam (april)	(u2)	in concinency (abin
I Mbps	24	-99	_	_	20	_	-92
11 Mbps	24	-91	_	_	18	_	-91
302.11g							
6 Mbps	24	-95	_	_	20	_	-92
54 Mbps	24	-78			18		-77
802.11n HT20	20				10		
MCS0	24	-94			20	-	-92
MCS0 MCS7	24	-94			17	_	-74
	23	-70	-	_	17	_	-74
302.11n HT40					10		0.0
MCS0	23	-92	—	—	19	_	-90
MCS7	22	-74	-	-	17	-	-72
302.11ax HE20							
MCS0	23	-90	—	—	—	—	—
MCS11	21	-71	-	—	—	—	—
802.11ax HE40							
MCS0	21	-91	—	—	—	_	_
MCS11	19	-72	—	—	—	—	—
302.11a							
6 Mbps	_	_	21	-93	—	20	-93
54 Mbps	—	—	21	-77	—	19	-76
302.11n HT20							
MCS0	_	—	21	-91	—	20	-93
MCS7	_	_	20	-72	_	19	-73
302.11n 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
MCS0 MCS9			19	-72		17	-61
			10	/ _		17	01
302.11ax HE20			00	-01			
MCS0			22	-91			
MCS11	_	—	19	-/2	—	—	—
302.11ax HE40							
MCSO	—	_	22	-91	—	_	—
MCS11	_	_	19	-72	_	_	_
302.11ax HE80							
MCS0	_	_	20	-89	_	_	_
MCS11	—	—	18	-59	—	—	—

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 [™] , 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: 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

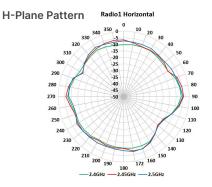
	FortiAP 23JF
Advanced 802.11 Features	
OFDMA	Yes (UL and DL)
Spatial Reuse (BSS Coloring)	Yes
UL MU-MIMO	Yes
DL-MU-MIMO	Yes
Enhanced Target Wake Time	Yes
(TWT)	
ZeroWait DFS	No
Onboard Security Functions	
UTP Capable	No
UTP Features	N/A
Wireless Monitoring Capabilities	
Rogue Scan radio modes	Background, 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	
Mounting Options	Wall Plate, Optional Desk Mount FAP-MNT-WJ-20
Included Accessories	Standard Mount kit for Ceiling, T-Rail, and Wall
Power Supply	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)
	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)
DES	FCC, IC, CE, Japan, Brazil, Taiwan and Korea
510	
Warranty	
Warranty Limited Lifetime Warranty	Yes

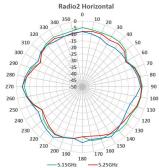
 \ast Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

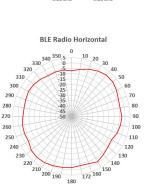
		FortiAP 23JF					
	Radio 1		Radio 2		Radio 3 Scanning		
	2.4 GHz Tx Power		5 GHz Tx Power per		2.4 GHz Tx Power	5 GHz Tx Power per	
Data rate 802.11b	per chain (dBm)	Rx Sensitivity (dBm)	Chain (dBm)	Rx Sensitivity (dBm)	per chain (dBm)	Chain (dBm)	Rx Sensitivity (dBm)
1 Mbps	22	-98		_	20		-92
11 Mbps	20	-90		_	18		-92
	20	30			10		31
802.11g	20	00			20		00
6 Mbps 54 Mbps	22 20	-93 -77		_	20		-92
	20	-//		_	10		-//
802.11n HT20	00	0.4			00		0.0
MCS0	22	-94	_	_	20	_	-92 -74
MCS7	20	-76	-	-	17	—	-/4
802.11n HT40							
MCS0	22	-92	_	_	19	—	-90
MCS7	20	-73	_	-	17	—	-72
802.11ax HE20							
MCS0	22	-90	_	—	—	_	—
MCS11	20	-71	—	—	—	—	—
802.11ax HE40							
MCS0	20	-90	_	_	_	_	_
MCS11	18	-70	—	—	—	—	—
802.11a							
6 Mbps	_	—	18	-93	—	20	-91
54 Mbps	_	_	18	-77	_	19	-75
802.11n HT20							
MCS0	—	—	19	-94	—	20	-90
MCS7	—	—	19	-75	—	19	-72
802.11n HT40							
MCS0	_	_	21	-91	_	19	-90
MCS7	—	—	20	-72	—	18	-71
802.11ac VHT20							
MCS0	_	—	21	-91	—	19	-93
MCS9	—	_	20	-72	—	18	-69
802.11ac VHT40							
MCS0	_	_	20	-91	_	19	-90
MCS9	_	_	18	-72	—	16	-64
802.11ac VHT80							
MCS0	-	-	19	-87	_	17	-88
MCS9	_	_	17	-64	_	17	-61
802.11ax HE20							
MCS0	_	_	20	-91	_	_	_
MCS11	_	_	18	-72	_	_	_
802.11ax HE40							
MCS0	_	_	19	-91	_	_	_
MCS11	_	_	17	-62	_	_	_
802.11ax HE80							
MCS0	_	_	18	-89	_	_	_
MCS11			16	-60			
			10	00			

Antenna Radiation Patterns FAP-23JF





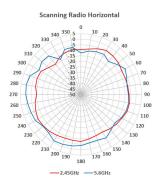


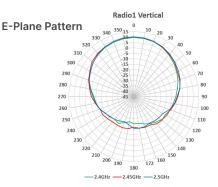


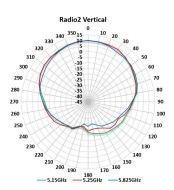
-2.45GHz

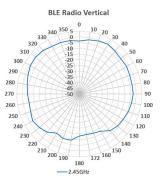
270

260

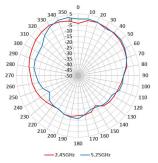








Scanning Radio Vertical



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 BLF	4 External + 1 Internal BLE				
Antenna Type Support		RP-SMA (4 total):				
functional ()po cuppert		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. 5.725–5.850	250–5.350, 5.470–5.725,				
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 (7 if background scannin 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 blocklist and allowlist					
Maximum Tx Power	2.4 GHz: 23 dBm / 200 mW (2 chains combined)* 5 GHz: 24 dBm / 251 mW (2 chains combined)*					
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.	1r, 802.11u, 802.11v, 802.11w,				
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	6				
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			

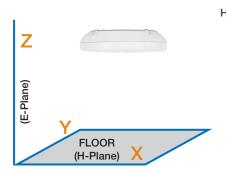
* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.

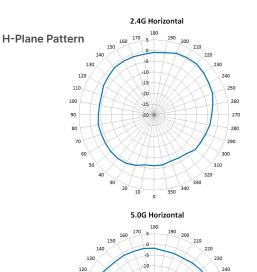
Data rate	2.4 GHz Tx Power	DIO 1		DIO 2
Data rate	Tx Power			
	(dBm)	Rx Sensitivity (dBm)	5 GHz Tx Power (dBm)	Rx Sensitivity (dBm)
802.11 a/g				
6 Mbps	20	-93	21	-91
9 Mbps	20	-91	21	-90
12 Mbps	20	-90	21	-89
18 Mbps	19	-88	21	-86
24 Mbps	19	-85	21	-83
36 Mbps	18	-82	21	-80
48 Mbps	18	-77	19	-76
54 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

		E		
		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





-15

-20

-25

260

270

280

290

300

310

320

330

350 340

110

100

90

80

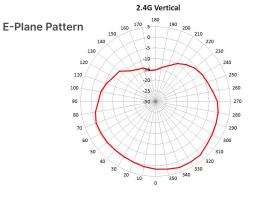
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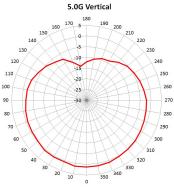
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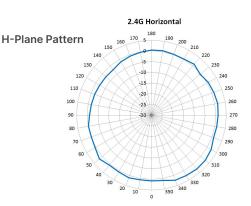
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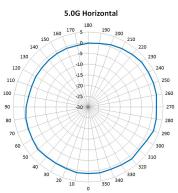


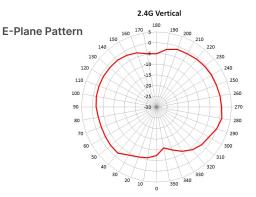


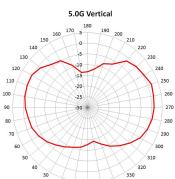
Z (event H-Plane) X

FAP-223E









350 340

10

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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.
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/BLE, 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.
FortiAP-241K	FAP-241K	
		FortiCare Premium Support.
		FortiCare Elite Support.
FortiAP-243K	FAP-243K	
		FortiCare Premium Support.
		FortiCare Elite Support.
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-DD	FortiCare Premium Support.
	FC-10-PG431-284-02-DD	FortiCare Elite Support.
	FC-10-PG431-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.
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-DD	FortiCare Premium Support.
	FC-10-P432G-284-02-DD	FortiCare Elite Support.
	FC-10-P432G-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.
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-DD	FortiCare Premium Support.
	FC-10-PG433-284-02-DD	FortiCare Elite Support.
	FC-10-PG433-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.
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 mount 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-DD	FortiCare Elite Support.
	FC-10-PG231-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.
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. Fo power order: 802.3at PoE injector GPI-130 or AC adapter SP-FAP200-PA.
	FC-10-PG233-247-02-DD	FortiCare Premium Support.
	FC-10-PG233-284-02-DD	FortiCare Elite Support.
	FC-10-PG233-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.
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.
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 Wave 2 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-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-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.

Ordering Information

Product	SKU	Description	
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 ki 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.	
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.	
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 kit 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.	
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.	
FortiAP 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.	
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 (1xPass-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.	
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 modul 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.	
Gigabit PoE Injector	GPI-115 GPI-130	1-port Gigabit PoE power injector, 802.3af 15.4 W, 10/100/1000. 1-port Gigabit PoE power injector, 802.3at up to 30 W.	

Ordering Information

Product	SKU	Description	
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.

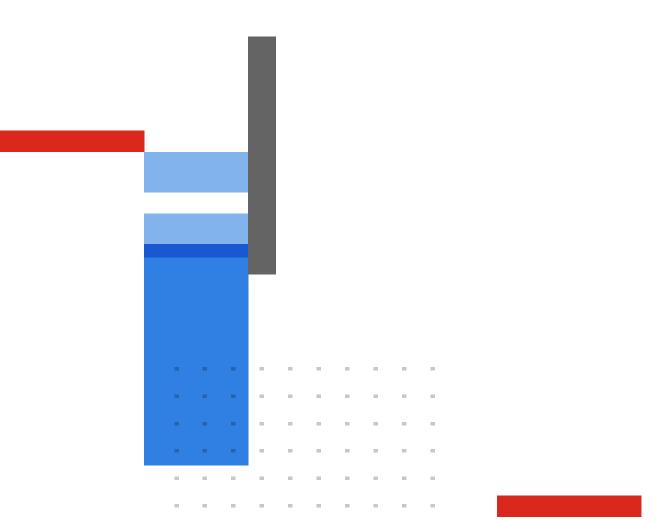
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For more information on Support levels, please reference FortiCare Services here.

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

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