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 zero-trust 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

INDOOR						
AP MODEL	WI-FI GENERATION	DESCRIPTION	BLE SUPPORT	USB SUPPORT	POE BUDGET	LIGHTWEIGHT UTP
FAP-441K	Wi-Fi 7	4×4 Indoor quad-radio 11be 6Ghz Capable APs	5.1	⊘	802.3bt	⊘
FAP-443K	Wi-Fi 7	4×4 Indoor quad-radio 11be 6Ghz Capable APs	5.1	⊘	802.3bt	⊘
FAP-241K	Wi-Fi 7	2×2 Indoor quad-radio 11be 6Ghz Capable APs	5.1	⊘	802.3bt	⊘
FAP-243K	Wi-Fi 7	2×2 Indoor quad-radio 11be 6Ghz Capable APs	5.1	⊘	802.3bt	⊘
FAP-231K	Wi-Fi 7	2×2 Indoor Tri-radio 11be 6Ghz Capable APs	5.2	—	802.3at	—
FAP-23JK	Wi-Fi 7	2×2 Indoor Tri-radio 11be 6Ghz Desktop , LAN, PSE Capable APs	5.2	—	802.3bt	⊘
FAP-431G	Wi-Fi 6E	4×4 Indoor Tri-radio 11ax 6Ghz / Dual 5Ghz Capable APs	5.2	⊘	802.3bt	⊘
FAP-831F	Wi-Fi 6	4×4 Indoor Tri-radio 11ax APs	5.2	⊘	802.3at	—
FAP-23JF	Wi-Fi 6	2×2 Indoor Tri-radio 11ax Desktop, LAN, PSE Capable APs	5.2	⊘	802.3at	—

OUTDOOR						
AP MODEL	WI-FI GENERATION	DESCRIPTION	BLE SUPPORT	C1D2/ATEX	POE BUDGET	LIGHTWEIGHT UTP
FAP-244K	Wi-Fi 7	2×2 outdoor quad-radio 11be 6Ghz , SFP+ Capable APs	5.1	In Process	802.3bt	⊘
FAP-222KL	Wi-Fi 7	2×2 outdoor Dual-radio 11be, LoRaWAN, LTE, PSE Capable APs	NA	In Process	802.3bt	—
FAP-432G	Wi-Fi 6E	4×4 Ruggedized Tri-radio outdoor 11ax 6Ghz/ Dual 5Ghz Capable APs	5.1	In Process	802.3bt	⊘
FAP-234G	Wi-Fi 6E	2×2 Ruggedized Tri-radio outdoor 11ax 6Ghz/ Dual 5Ghz Capable APs	5.1	C1D2/ ATEX	802.3at	⊘
FAP-432FR	Wi-Fi 6	4×4 Ruggedized Tri-radio outdoor 11ax APs	5.2	C1D2	802.3at	—
FAP-234F	Wi-Fi 6	2×2 Ruggedized Tri-radio outdoor 11ax APs	5.2	—	802.3bt	—

Use Cases

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

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 AIOps 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

*FortiGate-managed installations only.

Highlights

FortiAP 443K and 441K

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

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

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

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

FAP-441K

FAP-443K

Specifications

	FortiAP 441K	FortiAP 443K
Hardware		
Type	Indoor AP	
Number of Radios	4 + 1 BLE	
Number of Antennas	Internal: x4 dual band WIFI + x4 6GHz WIFI + x2 Tri-band scanning + x1 2.4GHz BLE/ZigBee + x1 GPS	External: x4 dual band WIFI + x4 6GHz WIFI + x2 Tri-band scanning
		Internal: x1 2.4GHz BLE/ZigBee + x1 GPS
Antenna Type Support		RP-SMA (10 total): Dual Band Antenna (4) 6Ghz Antenna (4) Triband Antenna (2)
Antenna Type and Peak Gain	Omni Directional Antenna	Omni Directional Antenna
	Dual band antenna: 4.0 dBi for 2.4GHz 5.6 dBi for 5 GHz	Dual band antenna: 5.0 dBi for 2.4GHz 5.0 dBi for 5 GHz
	6GHz antenna: 5.4dBi for 6GHz band	6GHz antenna: 5.8dBi for 6GHz band
	Tri-band antenna: 4.0 dBi for 2.4 GHz, 6.0 dBi for 5 GHz and 5.7 dBi for 6 GHz band	Tri-band antenna: 5.0 dBi for 2.4 GHz, 5.0 dBi for 5 GHz and 4.0 dBi for 6 GHz band
	BLE antenna: 5.1 dBi for 2.4GHz	BLE antenna: 5.1 dBi for 2.4GHz
	GPS active antenna: 2.2 dBi antenna	GPS active antenna: 2.2 dBi antenna
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 5.850-5.925 GHz · U-NII-5 5.925-6.425 GHz · U-NII-6 6.425-6.525 GHz · U-NII-7 6.525-6.875 GHz · U-NII-8 6.875-7.125 GHz
Radio 1 Capabilities	Frequency band: 2.4GHz Channel width: 20/40MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 4×4 Service	
Radio 2 Capabilities	Frequency band: 5.0GHz UNII-1 to UNII-4 Channel width: 20/40/80/160/240MHz Modulation: BPSK, QPSK, 64/256/1024/4096 QAM MIMO Chains: 4×4 Service	
Radio 3 Capabilities	Frequency band: 6.0GHz UNII-5 to UNII-8 Channel width: 20/40/80/160/320MHz Modulation: BPSK, QPSK, 64/256/1024/4096 QAM MIMO Chains: 4×4 Service	
Radio 4 Capabilities	Frequency band: 2.4/5.0/6.0GHz Channel width: 20/40/80/160MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Scanning	
Maximum Data Rate	2.4GHz band: up to 1.148 Gbps 5.0GHz band: up to 8.648 Gbps 6.0GHz band: up to 11.530 Gbps	
Bluetooth Low Energy (BT/BLE) Radio	Bluetooth scanning and iBeacon advertizement @10 dBm max TX power	
Trusted Platform Module (TPM)	Yes	Yes
GNSS	. Supported Bands . Default constallations . Number of Tracking Channels . Number of Concurrent GNSS . SBAS . Sensitivity (@ Default Constallations)	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 GPS + GLONASS + BDS + Galileo + QZSS 47 5 WAAS, EGNOS, MSAS and GAGAN -147dBm
Interfaces	x2 100M/1000M/2.5G/5.0G/10G Multigigabit Ethernet (RJ45) x1 Type 3.0 USB at 4.5W, x1 RS-232 RJ45 Serial Port	
Power over Ethernet (PoE)	LAN1:802.3bt, LAN2:802.3bt	
Hit-less PoE Failover	Yes	

	FortiAP 441K	FortiAP 443K
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, EAP-TTLS/PAP	
User/Device Authentication	WPA™, WPA2™, and WPA3™ with 802.1x or Preshared key, WEP, Web Captive Portal, MAC blacklist and whitelist	
Maximum Tx Power (Conducted)	2.4GHz band: 29 dBm / 794 mW (4 chains combined)* 5.0GHz band: 27.8 dBm / 602 mW (4 chains combined)* 6.0GHz band: 23 dBm / 200 mW (4 chains combined @ 160MHz BW)*	
Kensington Lock		
IEEE Standards	802.11a, 802.11b, 802.11be, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11k, 802.11n, 802.11r, 802.11v, 802.11ac, 802.11ax, 802.11mc, 802.1X, 802.3ad, 802.3at, 802.3bt, 802.3az, 802.1Q, 802.11u, 802.11w, 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	Yes	
Onboard Security Functions		
UTP Capable	Yes	
UTP Features	Application Control, Web Filtering	
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	9.84 × 9.84 × 2.26 inches (250 × 250 × 57.5 mm)	
Weight	4.36 lbs (1.98 kg)	
Package (shipping) Weight	6.9 lbs (3.13 kg)	
Mounting Options	Ceiling, T-Rail, and Wall	
Included Accessories	Standard Mounting Kit for Ceiling, T-Rail, and Wall	
Environment		
CPU/RAM	Quad-core ARM Cortex-A73 2.2GHz / 2 GB	
Power Supply	GPI-145 or SP-FAP250-PA-10	
Power Consumption (Max)	41.7 W	
PoE Mode	Full - 802.3bt or 2×802.3at or DC : Tx Power - Maximum (all radios); # of Chains - 4×4 ; USB - Enabled	
	High - 802.3at or 2×802.3af : R1(2.4GHz), R2(5GHz) and R3 (6GHz) Operation in Low Tx Power 17 dBm, # of Chains - 2×2; R4 operational ; USB - Disabled	
Humidity	5% to 90% non-condensing	
Operating/Storage Temp.	32°F to 122°F (0°C to 50°C)/ -22°F to 158°F (-30°C to 70°C)	
Directives	Low Voltage Directive * RoHS	
UL2043 Plenum Material	Yes	
Mean Time Between Failures	>10 Years	
IP Rating	N/A	
Surge Protection Built In	Yes	
Certifications		
Wi-Fi7 Certified	Certified	
DFS	Europe, FCC, Japan, Australia, Brazil, Taiwan, S. Korea, India	Europe, FCC, Australia, Brazil, Taiwan, S. Korea, India
Warranty		
Limited Lifetime Warranty	Yes	

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

RF Rx/Tx Performance Table

Data rate	2.4 GHz Band Tx power/chain (dBm)	Rx Sensitivity (dBm)	5.0 GHz Band Tx power/chain (dBm)	Rx Sensitivity (dBm)	6.0 GHz Band Tx power/chain (dBm)	Rx Sensitivity (dBm)
FORTIAP 441K / 443K						
802.11b						
1 Mbps	23	-96				
11 Mbps	23	-99				
802.11g			**802.11a**			
6 Mbps	23	-94	23	-90		
54 Mbps	22	-77	20	-73		
802.11n HT20						
MCS0	23	-94	23	-90		
MCS7	21	-77	20	-72		
802.11n HT40						
MCS0	23	-93	23	-89		
MCS7	21	-74	20	-70		
802.11ac VHT20						
MCS0	23	-95	22	-88		
MCS9	21	-73	19	-69		
802.11ac VHT40						
MCS0	22	-92	22	-87		
MCS9	19	-70	19	-64		
802.11ac VHT80						
MCS0			21	-85		
MCS9			18	-62		
802.11ax HE20			**802.11ax HE20 / 802.11be EHT20**			
MCS0	23	-92	22	-88	22	-87
MCS11	18	-70	19	-65	19	-65
802.11ax HE40			**802.11ax HE40 / 802.11be EHT40**			
MCS0	22	-90	22	-87	20	-85
MCS11	17	-61	19	-63	18	-62
802.11ax HE80 / 802.11be EHT80						
MCS0			21	-85	19	-82
MCS13			18	-61	17	-59
802.11be EHT160			**802.11ax HE80 / 802.11be EHT80**			
MCS0			19	-79	18	-81
MCS13			17	-56	16	-58
802.11be EHT240						
MCS0			17	-79		
MCS13			16	-56		
802.11be EHT320						
MCS0					19	-80
MCS13					15	-58

Antenna Radiation Patterns

FAP-441K

FAP-443K

2.4 GHz Band Wi-Fi - Azimuth

2.4 GHz Band Wi-Fi - Elevation

WiFi 2.4 GHz Band - Azimuth

WiFi 2.4 GHz Band - Elevation

5.0 GHz Band Wi-Fi - Azimuth

5.0 GHz Band Wi-Fi - Elevation

WiFi 5.0 GHz Band - Azimuth

WiFi 5.0 GHz Band - Elevation

6.0 GHz Band Wi-Fi - Azimuth

6.0 GHz Band Wi-Fi - Elevation

6.0 GHz Band Wi-Fi - Azimuth

6.0 GHz Band Wi-Fi - Elevation

BLE & ZigBee 2.4GHz Band - Azimuth

BLE & ZigBee 2.4 GHz Band - Elevation

BLE & ZigBee 2.4GHz Band - Azimuth

BLE & ZigBee 2.4 GHz Band - Elevation

Highlights

FortiAP 241K and 243K

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

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

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

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

FAP-241K

FAP-243K

Specifications

Hardware	FortiAP 241K	FortiAP 243K
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 Alford loop 6GHz antenna: 5.7 dBi for 6GHz band PIFA Tri-band antenna: 5.0 dBi for 2.4GHz, 5.7 dBi for 5.0GHz, and 5.35 dBi for 6GHz band PFA BLE antenna: 4.6 dBi for 2.4GHz	Omni Directional Dual band antenna: 4.5 dBi for 2.4GHz, 5.7 dBi for 5 GHz Omni Directional 6GHz band antenna: 5.25 dBi for 6GHz band Tr-band Omni directional antenna: 3.3 dBi for 2.4GHz, 5.6 dBi for 5GHz, and 5.3 dBi for 6GHz band PIFA BLE antenna: 5.2 dBi for 2.4GHz
Frequency Bands (GHz)	**2.4GHz Band**: ISM 2.4-2.484GHz **5.0GHz Band**: UNII-1 5.15-5.25GHz UNII-2A 5.25-5.35GHz UNII-2C 5.47-5.73GHz UNII-3 5.725-5.85GHz UNII-4 5.85-6.895GHz	**6GHz Band**: UNII-5 5.925-6.425GHz UNII-6 6.425-6.525GHz UNII-7 6.525-6.875GHz UNII-8 6.875-7.125GHz
Radio 1 Capabilities	Frequency band: 2.4GHz Channel width: 20/40MHz Modulation: BPSK, QPSK, 64/256/1024/4096 QAM MIMO Chains: 2×2 Service	
Radio 2 Capabilities	Frequency band: 5.0GHz UNII-1 to UNII-4 Channel width: 20/40/80/160/240MHz Modulation: BPSK, QPSK, 64/256/1024/4096 QAM MIMO Chains: 2×2 Service	
Radio 3 Capabilities	Frequency band: 6.0GHz UNII-5 to UNII-8 Channel width: 20/40/80/160/320MHz Modulation: BPSK, QPSK, 64/256/1024/4096 QAM MIMO Chains: 2×2 Service	
Radio 4 Capabilities	Frequency band: 2.4/5.0/6.0GHz Channel width: 20/40/80/160MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Scanning	
Maximum Data Rate	2.4GHz band: up to 688 Mbps 5.0GHz band: up to 4.324 Gbps 6.0GHz band: up to 5.765 Gbps	
Bluetooth Low Energy (BT/BLE) Radio	Bluetooth scanning and iBeacon advertizement @10 dBm max TX power	
Trusted Platform Module (TPM)	Yes	Yes
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)	LAN1:802.3bt, LAN2: N/A	
Hit-less PoE Failover	N/A	
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, EAP-TTLS/PAP	

	FortiAP 241K	FortiAP 243K
User/Device Authentication	WPA™, WPA2™, and WPA3™ with 802.1x or Preshared key, WEP, Web Captive Portal, MAC blacklist and whitelist	
Maximum Tx Power (Conducted)	2.4GHz band: 25 dBm/316 mW (2 chains combined)* 5.0GHz band: 26 dBm/400 mW (2 chains combined)* 6.0GHz band: 23 dBm/200 mW (2 chains combined@320MHz BW)*	
Kensington Lock	Yes	
IEEE Standards	802.11a, 802.11b, 802.11be, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11k, 802.11n, 802.11r, 802.11v, 802.11ac, 802.11ax, 802.11mc, 802.1X, 802.3ad, 802.3at, 802.3bt, 802.3az, 802.1Q, 802.11u, 802.11w, 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, Web Filtering	
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	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		
CPU/RAM	Quad-core ARM Cortex-A53 1.5GHz / 2 GB	
Power Supply	802.3bt PoE: GPI-145 or 802.3at PoE: GPI-130 with USB disabled or 12V, 3A, 36 Watt DC power supply SP-FAP400-PA-XX	
Power Consumption (Max)	26.1 W	
PoE Mode	802.3af (low mode) : R1/R2/R3 disabled, only scan supported, No USB. 802.3at (High mode) : R1/R2 Full power + R3 Low 15dBm Tx-power + scan supported, USB Supported. 802.3bt (Full mode) : All radios enabled + scan supported, USB Supported.	
Humidity	5% to 90% non-condensing	
Operating/Storage Temp.	32°F to 122°F (0°C to 50°C)/ -22°F to 158°F (-30°C to 70°C)	
Directives	Low Voltage Directive * RoHS	
UL2043 Plenum Material	Yes	
Mean Time Between Failures	>10 Years	
IP Rating	N/A	
Surge Protection Built In	Yes	
Certifications		
Wi-Fi7 Certified	Certified	
DFS	Europe, FCC, Japan, Australia, Brazil, Taiwan, India	
Warranty		
Limited Lifetime Warranty	Yes	

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

RF Rx/Tx Performance Table

| Data rate	FORTIAP 241K / 243K					
	2.4 GHz Band		5.0 GHz Band		6.0 GHz Band	
	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)
	802.11b					
1 Mbps	22	-99				
11 Mbps	22	-91				
	802.11g		802.11a			
6 Mbps	22	-94	22	-92		
54 Mbps	21	-78	20	-75		
	802.11n HT20					
MCS0	22	-94	22	-91		
MCS7	21	-77	20	-73		
	802.11n HT40					
MCS0	21	-93	22	-89		
MCS7	20	-74	20	-70		
	802.11ac VHT20					
MCS0	22	-95	22	-91		
MCS9	22	-73	20	-70		
	802.11ac VHT40					
MCS0	22	-92	22	-89		
MCS9	21	-70	19	-67		
	802.11ac VHT80					
MCS0			21	-85		
MCS9			19	-62		
	802.11ax/802.11be HE20					
MCS0	22	-94	21	-93	20	-94
MCS11	21	-65	19	-59	20	-60
	802.11ax/802.11be HE40					
MCS0	21	-92	21	-91	20	-91
MCS11	20	-62	18	-59	19	-56
	802.11ax HE80 / 802.11be EHT80					
MCS0			21	-88	19	-86
MCS13			18	-56	18	-58
	802.11be EHT160					
MCS0			19	-87	17	-86
MCS13			16	-55	16	-56
	802.11be EHT240					
MCS0			19	-86		
MCS13			16	-54		
	802.11be EHT360					
MCS0					17	-83
MCS13					15	-55

Antenna Radiation Patterns

FAP-241K   FAP-243K
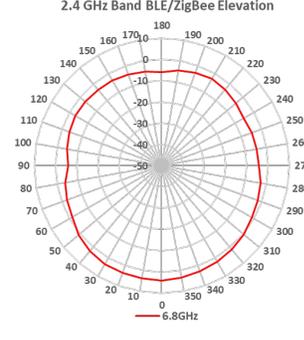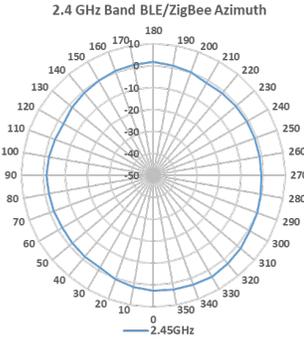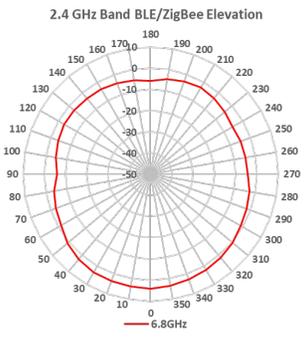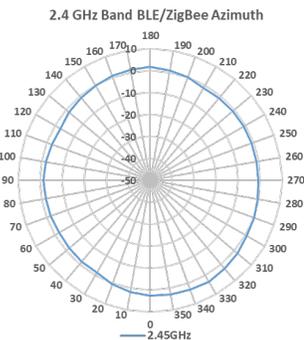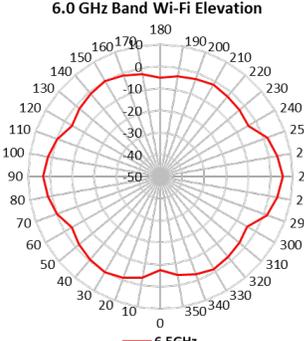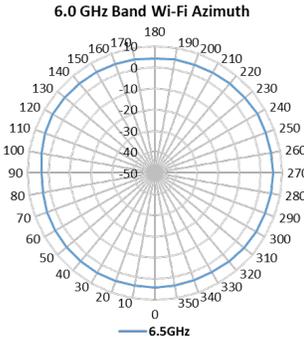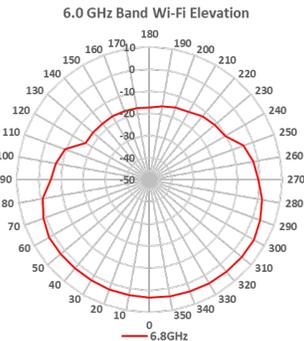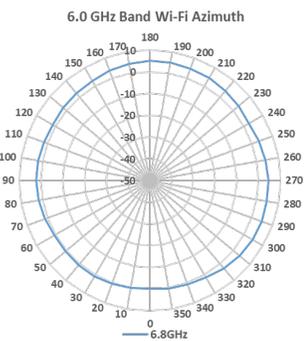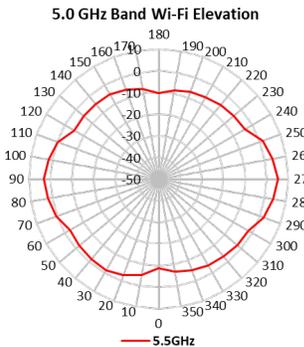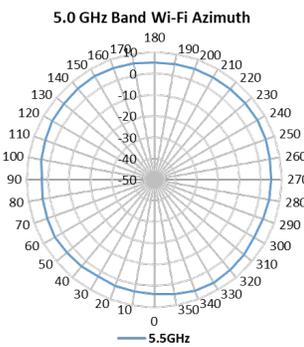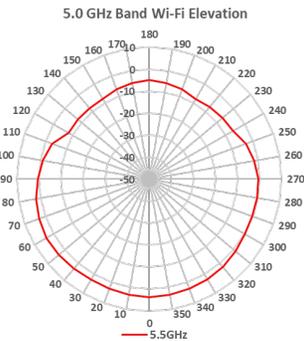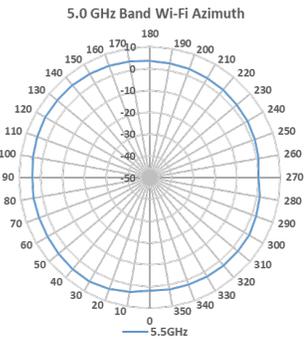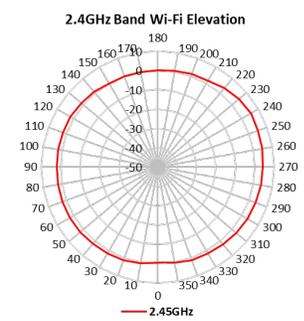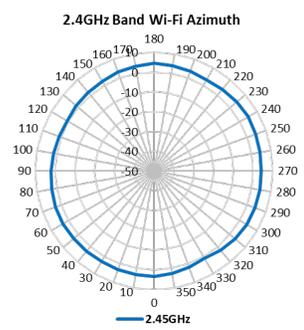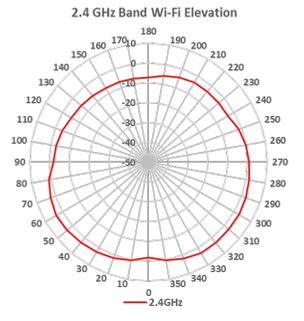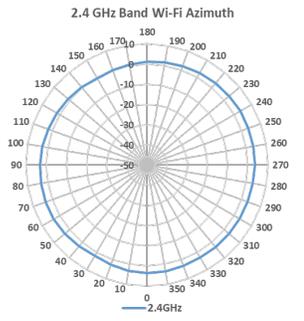
Highlights

FortiAP 231K

These enterprise class Wi-Fi 7 indoor APs provide three radios and two spatial streams. These access points support the 6 GHz band and have one 5 Gigabit Ethernet port. The APs can provide 24/7 background 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 location applications.

Note: For FAP-231K, use of the 6GHz band is subject to regional regulatory authority approval.

Three-Radio 2.4GHz + 5GHz + 6GHz | 4 Wi-Fi Antennas + 1 BLE/Zigbee antenna + 1 GPS antenna

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

FAP-231K

Specifications

FortiAP 231K	
Hardware	
Type	Indoor AP
Number of Radios	3 Wi-Fi + 1 BLE
Number of Antennas	6. x2 Dual band Wi-Fi + x2 6GHz band Wi-Fi + x1 BLE/ZigBee antenna + x1 GPS antenna
Antenna Type Support	N/A
Antenna Type and Peak Gain	PIFA 2.4/5GHz dual band antenna: 4.2 dBi for 2.4GHz, 5.0 dBi for 5 GHz
	PIFA 6GHz antenna: 5.1 dBi for 6GHz band
	PFA BLE antenna: 3.4 dBi for 2.4GHz
Frequency Bands (GHz)	2.4GHz Band: ISM 2.4-2.484GHz
	5.0GHz Band: UNII-1 5.15-5.25GHz, UNII-2A 5.25-5.35GHz, UNII-2C 5.47-5.73GHz, UNII-3 5.725-5.85GHz, UNII-4 5.85-5.895GHz
	6.0GHz Band: UNII-5 5.925-6.425GHz, UNII-6-6.425-6.525GHz, UNII-7 6.525-6.875, UNII-8 6.875-7.125GHz
Radio 1 Capabilities	Frequency band: 2.4GHz Channel width: 20/40MHz Modulation: BPSK, QPSK, 64/256/1024/4096 QAM MIMO Chains: 2×2 Service
Radio 2 Capabilities	Frequency band: 5.0GHz UNII-1 to UNII-4 Channel width: 20/40/80/160MHz Modulation: BPSK, QPSK, 16/64/256/1024/4096 QAM MIMO Chains: 2×2 Service
Radio 3 Capabilities	Frequency band: 6.0GHz UNII-5 to UNII-8 Channel width: 20/40/80/160/320MHz Modulation: BPSK, QPSK, 16/64/256/1024/4096 QAM MIMO Chains: 2×2 Service
Maximum Data Rate	2.4GHz band: up to 688 Mbps 5.0GHz band: up to 2.882 Gbps 6.0GHz band: up to 5.765 Gbps
Bluetooth Low Energy (BT/BLE) Radio	Bluetooth scanning and iBeacon advertizement @10 dBm max TX power
Trusted Platform Module (TPM)	Yes
GNSS	GPS L1 C/A: 1575.42 MHz, GLONASS L1: 1598.0625–1605.375 MHz BeiDou : 1561.098 MHz, Galileo E1: 1575.42 MHz
Interfaces	x1 100M/1000M/2.5G/5.0G Multigigabit Ethernet (RJ45) x1 RS-232 RJ45 Serial Port
Power over Ethernet (PoE)	LAN1:802.3at
Hit-less PoE Failover	N/A
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, EAP-TTLS/PAP
User/Device Authentication	WPA™, WPA2™, and WPA3™ with 802.1x or Preshared key, WEP, Web Captive Portal, MAC blacklist and whitelist
Maximum Tx Power (Conducted)	2.4GHz band: 26 dBm/400 mW (2 chains combined)* 5.0GHz band: 23 dBm/200 mW (2 chains combined)* 6.0GHz band: 22 dBm/158 mW (2 chains combined@320MHz BW)*
Kensington Lock	Yes
IEEE Standards	802.11a, 802.11b, 802.11be, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11k, 802.11n, 802.11r, 802.11v, 802.11ac, 802.11ax, 802.11mc, 802.1X, 802.3af, 802.3at, 802.3bt, 802.3az, 802.1Q, 802.11u, 802.11w, 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

FortiAP 231K	
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
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	6.88 × 6.88 × 2.2 inches (175 × 175 × 56 mm)
Weight	2.22 lbs (1.01 kg)
Package (shipping) Weight	2.85 lbs (1.29 kg)
Mounting Options	Ceiling, T-Rail, and Wall
Included Accessories	Standard Mounting Kit for Ceiling, T-Rail, and Wall
Environment	
CPU/RAM	Quad-core ARM Cortex-A53 1.5GHz / 2 GB
Power Supply	802.3bt PoE: GPI-145 or 802.3at PoE: GPI-130 or 12V, 2.5A, 30 Watt DC power supply SP-FAP200-PA-XX
Power Consumption (Max)	15.2 W - PoE input 14.3 W - 12V DC power supply
PoE Mode	1. 802.3at: Tx Power - Full, 2×2 MIMO 2. 802.3af : Tx Power- Full, 1×1 MIMO
Humidity	5% to 90% non-condensing
Operating/Storage Temp.	32°F to 122°F (0°C to 50°C) / -22°F to 158°F (-30°C to 70°C)
Directives	Low Voltage Directive * RoHS
UL2043 Plenum Material	Yes
Mean Time Between Failures	>10 Years
IP Rating	N/A
Surge Protection Built In	N/A
Certifications	
Wi-Fi7 Certified	Certified
DFS	Europe, FCC, Japan, Australia, N, Taiwan, S. Korea, India
Warranty	
Limited Lifetime Warranty	Yes

* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.
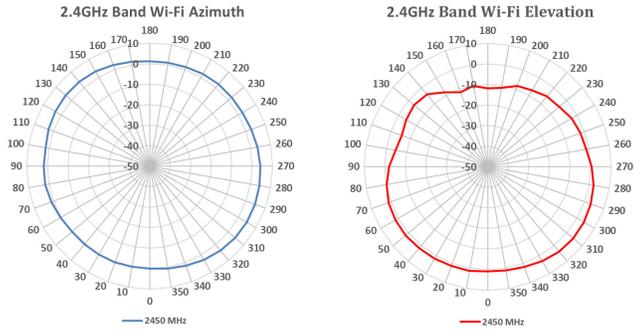
RF Rx/Tx Performance Table

Data rate	2.4 GHz Band		5.0 GHz Band		6.0 GHz Band	
	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)
	FORTIAP 231K					
	802.11b					
1 Mbps	23	-98				
11 Mbps	23	-91				
	802.11g		**802.11a**			
6 Mbps	23	-96	22	-96		
54 Mbps	22	-78	20	-77		
	802.11n HT20					
MCS0	23	-96	22	-96		
MCS7	20	-78	19	-77		
	802.11n HT40					
MCS0	23	-94	22	-91		
MCS7	20	-75	19	-75		
	802.11ac VHT20					
MCS0	23	-98	22	-96		
MCS9	18	-74	19	-71		
	802.11ac VHT40					
MCS0	23	-94	22	-93		
MCS9	18	-69	18	-69		
	802.11ac VHT80					
MCS0			22	-90		
MCS9			18	-68		
	802.11ax HE20 / 802.11be EHT20					
MCS0	23	-96	22	-96	18	-87
MCS11	17	-67	17	-67	17	-65
	802.11ax HE40 / 802.11be EHT40					
MCS0	23	-94	22	-92	18	-85
MCS11	17	-64	17	-64	17	-62
	802.11ax HE80 / 802.11be EHT80					
MCS0			22	-90	20	-82
MCS13			17	-62	18	-59
	802.11be EHT160					
MCS0			22	-88	21	-81
MCS13			17	-55	19	-58
	802.11be EHT320					
MCS0					22	-80
MCS13					18	-58

Antenna Radiation Patterns

FAP-231K

Wi-Fi 2.5GHz Plot

2.4GHz Band Wi-Fi Azimuth

2.4GHz Band Wi-Fi Elevation

2450 MHz

2450 MHz

Wi-Fi 5.0GHz Plot

5.0GHz Band Wi-Fi Azimuth

5.0 GHz Band Wi-Fi Elevation

5250MHz

5250MHz

Wi-Fi 6.0GHz Plot

6.0GHz Band Wi-Fi Azimuth

6.0 GHz Band Wi-Fi Elevation

6500MHz

6500MHz

BLE/ZigBee Plot

BLE/ZigBee Azimuth

BLE/ZigBee Elevation

2450MHz

2450MHz
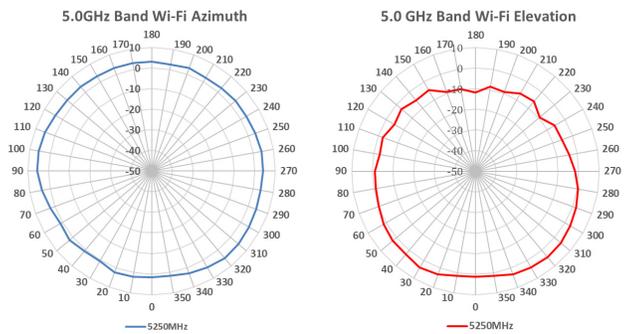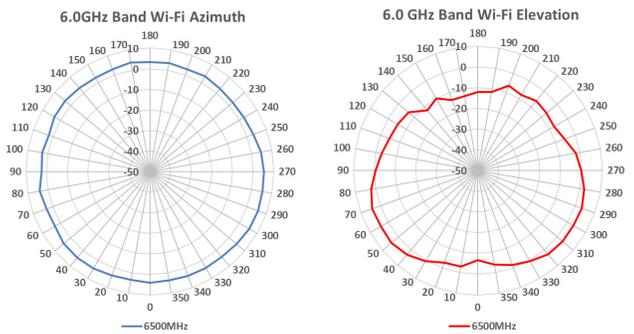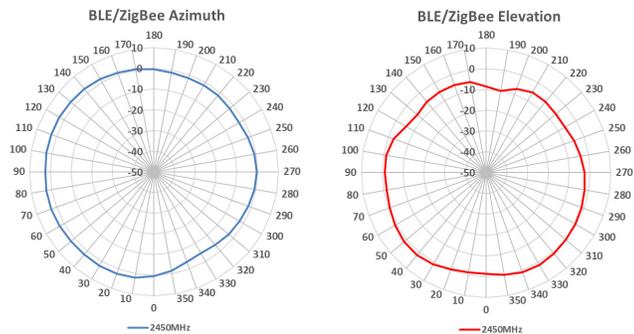
Highlights

FortiAP 23JK

These enterprise class Wi-Fi 7 indoor wall plate AP provide three radios and two spatial streams. These access points support the 6 GHz band and have one 10 Gigabit Ethernet and three 1 Gigabit Ethernet ports and one port supports the PSE OUT. The APs can provide 24/7 background 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 location applications.

Note: For FAP-23JK, use of the 6GHz band is subject to regional regulatory authority approval.

Three-Radio 2.4GHz + 5GHz + 6GHz + Scan | 4 Wi-Fi Antennas + 1 BLE/ZigBee antenna

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

Specifications

FortiAP 23JK	
Hardware	
Type	Indoor AP
Number of Radios	3 Wi-Fi + 1 BLE
Number of Antennas	5.x2 Dual band Wi-Fi + x2 6GHz band Wi-Fi + x1 BLE/ZigBee antenna
Antenna Type Support	N/A
Antenna Type and Peak Gain	PCB 2.4/5GHz dual band antenna: 4.0 dBi for 2.4GHz, 4.4 dBi for 5 GHz
	PCB 6GHz antenna: 3.6 dBi for 6GHz band
	PCB BLE antenna: 3.7 dBi for 2.4GHz
Frequency Bands (GHz)	2.4GHz Band: ISM 2.4-2.484GHz
	5.0GHz Band: UNII-1 5.15-5.25GHz, UNII-2A 5.25-5.35GHz, UNII-2C 5.47-5.73GHz, UNII-3 5.725-5.85GHz, UNII-4 5.85-5.895GHz
	6.0GHz Band: UNII-5 5.925-6.425GHz, UNII-6-6.425-6.525GHz, UNII-7 6.525-6.875, UNII-8 6.875-7.125GHz
Radio 1 Capabilities	Frequency band: 2.4GHz Channel width: 20/40MHz Modulation: BPSK, QPSK, 64/256/1024/4096 QAM MIMO Chains: 2×2 Service
Radio 2 Capabilities	Frequency band: 5.0GHz UNII-1 to UNII-4 Channel width: 20/40/80/160MHz Modulation: BPSK, QPSK, 16/64/256/1024/4096 QAM MIMO Chains: 2×2 Service
Radio 3 Capabilities	Frequency band: 6.0GHz UNII-5 to UNII-8 Channel width: 20/40/80/160/320MHz Modulation: BPSK, QPSK, 16/64/256/1024/4096 QAM MIMO Chains: 2×2 Service
Maximum Data Rate	2.4GHz band: up to 688 Mbps 5.0GHz band: up to 2.882 Gbps 6.0GHz band: up to 5.765 Gbps
Bluetooth Low Energy (BT/BLE) Radio	Bluetooth scanning and iBeacon advertizement @10 dBm max TX power
Trusted Platform Module (TPM)	Yes
GNSS	N/A
Interfaces	WAN1: x1 100M/1000M/2.5G/5.0G/10G Multigigabit Ethernet (RJ45), 802.3bt PoE(PD)
	LAN ports: x3 10M/100M/1000M Gigabit Ethernet (RJ45), LAN3 802.3af PoE (PSE)
	RJ-45 Ports (1xPass-through in, 1xPass-through out)
	x1 RS-232 RJ45 Serial Port
Power over Ethernet (PoE)	WAN1: 802.3bt
Hit-less PoE Failover	N/A
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, EAP-TTLS/PAP
User/Device Authentication	WPA™, WPA2™, and WPA3™ with 802.1x or Preshared key, WEP, Web Captive Portal, MAC blacklist and whitelist
Maximum Tx Power (Conducted)	2.4GHz band: 25 dBm/316 mW (2 chains combined)* 5.0GHz band: 22 dBm/158 mW (2 chains combined)* 6.0GHz band: 21 dBm/125 mW (2 chains combined@320MHz BW)*
Kensington Lock	Yes

FortiAP 23JK	
IEEE Standards	802.11a, 802.11b, 802.11be, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11k, 802.11n, 802.11r, 802.11v, 802.11ac, 802.11ax, 802.11mc, 802.1X, 802.3ad, 802.3af, 802.3at, 802.3bt, 802.3az, 802.1Q, 802.11u, 802.11w, 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, Web Filtering
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	7.08 × 4.72 × 1.57 inches (180 × 120 × 40 mm)
Weight	1.15 lbs (0.52 kg)
Package (shipping) Weight	1.85 lbs (0.84 kg)
Mounting Options	Wall mount default option and Table top stand option
Included Accessories	Standard Wall Mounting Kit
Environment	
CPU/RAM	Quad-core ARM Cortex-A53 1.5GHz / 2 GB
Power Supply	802.3bt PoE (GPI-145) or 802.3at PoE (GPI-130) without PSE OUT 48V 1A DC power supply (SP-FAP23J-PA-10)
Power Consumption (Max)	31 W - PoE input 19 W - PoE input (without PSE OUT) 27.25 W - 54V DC power supply
Power Sourcing Equipment (PSE)	802.3af PSE OUT on LAN3 port
PoE Mode	802.3bt: R1(2.4GHz) + R2(5GHz) + R3(6GHz) + PSE-OUT
	802.3at: R1(2.4GHz) + R2(5GHz) + R3(6GHz) without PSE-OUT
Humidity	5% to 90% non-condensing
Operating/Storage Temp.	32°F to 113°F (0°C to 45°C) / -22°F to 158°F (-30°C to 70°C)
Directives	Low Voltage Directive * RoHS
UL2043 Plenum Material	Yes
Mean Time Between Failures	>10 Years
IP Rating	N/A
Surge Protection Built In	N/A
Certifications	
Wi-Fi7 Certified	Certified
DFS	Europe, FCC, Japan, Australia, N
Warranty	
Limited Lifetime Warranty	Yes

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

RF Rx/Tx Performance Table

Data rate	2.4 GHz Band		5.0 GHz Band		6.0 GHz Band	
	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)
FORTIAP 23JK						
802.11b						
1 Mbps	24	-98				
11 Mbps	23	-91				
802.11g / **802.11a**						
6 Mbps	24	-96	22	-96		
54 Mbps	22	-78	20	-77		
802.11n HT20						
MCS0	24	-96	22	-96		
MCS7	20	-78	19	-77		
802.11n HT40						
MCS0	23	-94	20	-91		
MCS7	20	-75	19	-75		
802.11ac VHT20						
MCS0	23	-98	21	-96		
MCS9	18	-74	19	-71		
802.11ac VHT40						
MCS0	23	-94	20	-93		
MCS9	18	-69	18	-69		
802.11ac VHT80						
MCS0			22	-90		
MCS9			18	-68		
802.11ax HE20 / 802.11be EHT20						
MCS0	23	-95	21	-96	14	-96
MCS11	17	-66	17	-60	14	-61
802.11ax HE40 / 802.11be EHT40						
MCS0	21	-93	20	-93	18	-93
MCS11	17	-63	17	-59	17	-60
802.11ax HE80 / 802.11be EHT80						
MCS0			18	-90	19	-91
MCS13			17	-56	18	-57
802.11be EHT160						
MCS0			18	-87	21	-88
MCS13			17	-54	19	-55
802.11be EHT320						
MCS0					22	-85
MCS13					18	-55

Antenna Radiation Patterns

FAP-23JK

Wi-Fi 2.5GHz Plot
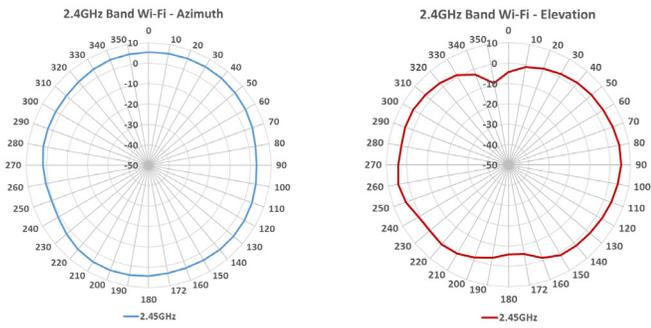
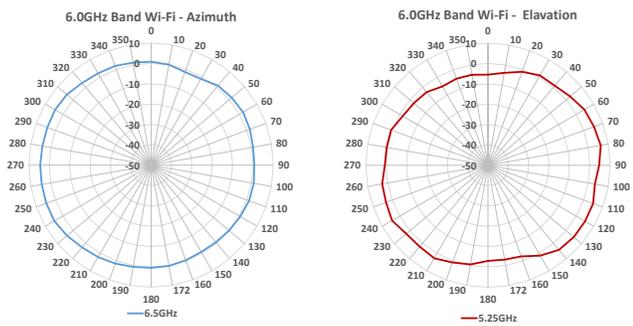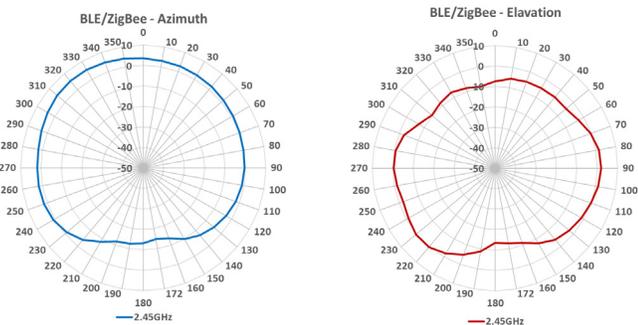### Wi-Fi 5.0GHz Plot
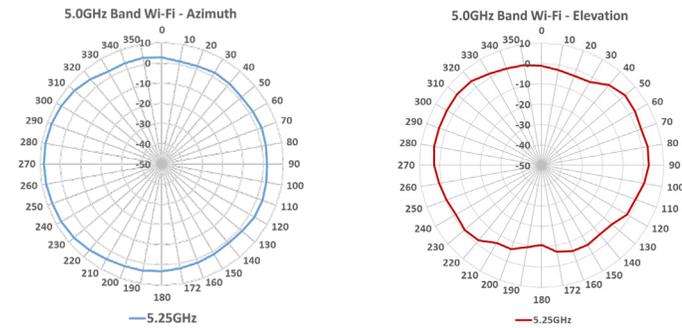
Wi-Fi 6.0GHz Plot

BLE/ZigBee Plot

Highlights

FortiAP 244K

This enterprise class Wi-Fi 7 ruggedized outdoor AP provides four radios with internal antennas and two spatial streams. This access point supports the 6 GHz band, OFDMA, a 10 Gbps SFP+ port, plus an additional 5 Gbps RJ45 Ethernet port for PoE. The AP can provide 24/7 scanning across all bands on a dedicated radio while still providing access on all the 2.4 GHz, 5 GHz, and 6 GHz bands. The integrated BLE radio can be used for beacons and locationing applications.

Note: For FAP-244K, use of the 6 GHz band is subject to regional regulatory authority approval.

Four-Radio 2.4GHz + 5GHz + 6GHz + Scan | 6 Wi-Fi Internal Antennas + 1 BLE/Zigbee internal antenna

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

FAP-244K Side View

FAP-244K Front View

Specifications

FortiAP 244K	
Hardware	
Type	Outdoor
Number of Radios	4 + 1 BLE
Number of Antennas	7 Internal Antennas
Antenna Type and Peak Gain	Directional
	Wi-Fi antennas
	8.8 dBi for 2.4GHz,
	9.4 dBi for 5 GHz, and
	8.5 dBi for 6GHz band
	BLE antenna
	4.6 dBi for 2.4GHz band
Frequency Bands (GHz)	2.4GHz Band: 2.4-2.484GHz
	5GHz Band: 6GHz Band:
	U-NII-1 5.15-5.25GHz U-NII-5 5.925–6.425GHz
	U-NII-2A 5.25-5.35GHz U-NII-6 6.425–6.525GHz
	U-NII-2C 5.47-5.725GHz U-NII-7 6.525–6.875GHz
	U-NII-3 5.725-5.85GHz U-NII-8 6.875–7.125GHz
	U-NII-4 5.85–6.895GHz
Radio 1 Capabilities	Frequency band: 2.4GHz
	Channel width: 20/40MHz
	Modulation: BPSK, QPSK, 64 - 4096 QAM
	MIMO Chains: 2×2 Service
Radio 2 Capabilities	Frequency band: 5.0GHz UNII-1 to UNII-4
	Channel width: 20/40/80/160/240MHz
	Modulation: BPSK, QPSK, 64 - 4096 QAM
	MIMO Chains: 2×2 Service
Radio 3 Capabilities	Frequency band: 6.0GHz UNII-5 to UNII-8
	Channel width: 20/40/80/160/320MHz
	Modulation: BPSK, QPSK, 64 - 4096 QAM
	MIMO Chains: 2×2 Service
Maximum Data Rate	2.4GHz band: up to 688 Mbps
	5.0GHz band: up to 4.324 Gbps
	6.0GHz band: Up to 5.765 Gbps
Bluetooth Low Energy (BT/BLE) Radio	Bluetooth scanning and iBeacon advertisement @10 dBm max TX power
Trusted Platform Module (TPM)	Yes
GNSS	GPS L1 C/A: 1575.42 MHz,
	GLONASS L1: 1598.0625–1605.375 MHz
	BeiDou : 1561.098 MHz, Galileo E1: 1575.42 MHz
	Supports for multi-GNSS including QZSS and SBAS ranging
	Indoor and outdoor multi-path detection and compensation
Interfaces	Port 1: 1× RJ-45 Multi-Gigabit Ethernet (100 M / 1 G / 2.5 G / 5 G), 802.3bt PoE-IN
	Port 2: 1× Fiber optic SFP+ Cage, 1 G / 10 G link speed
	Console: 1× RJ-45 Serial Console (RS-232
Power over Ethernet (PoE)	x1 802.3bt PoE included in the package
Hit-less PoE Failover	
Simultaneous SSIDs	Up to 8 per client serving radio
EAP Type(s)	EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPV0/EAP-MSCHAPv2,
	PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST,
	EAP-TTLS/PAP
User/Device Authentication	WPA™, WPA2™, and WPA3™ with 802.1x or Pre-shared key,
	WEP, Web Captive Portal, MAC blacklist and whitelist
Maximum Tx Power (Conducted)	(two chains combined)
	2.4GHz band: 25 dB/316 mow
	5.0GHz band: 26 dB/400 mow
	6.0GHz band: 23 dB/200 mow
Kensington Lock	No

FortiAP 244K	
IEEE Standards	802.11a, 802.11b, 802.11be, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11k, 802.11mc, 802.11n, 802.11r, 802.11v, 802.11ac, 802.11ax, 802.11u, 802.11w, 802.1Q, 802.1X, 802.3ad, 802.3at, 802.3az, 802.3bt, 802.3bz
SSID Types Supported	Local-Bridge, Mesh, and Tunnel
Per Radio Client Capacity	Up to 512 clients (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, Web Filtering
Wireless Monitoring Capabilities	
Rogue Scan radio modes	Dedicated, Background
WIPS / WIDS radio modes	Background, Dedicated (recommended)
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Dimensions	
Length x Width x Height - Access Point	8.66 × 8.66 × 2.36 inch (220 × 220 × 60 mm)
Length x Width x Height - Package (Shipping)	11.85 × 10.23 × 7.24 inch (301 × 260 × 184 mm)
Weight - Access Point	2.4 kg / 5.29 lbs
Weight - Package (Shipping)	5.6 kg / 12.34 lbs
Mounting Options	Articulating Wall and Pole mounting
Included Accessories	.3bt PoE, Articulating mounting bracket, Grounding cable.
Environment	
CPU/RAM	Quad-core ARM Cortex-A53 1.5GHz / 2 GB
Power Supply	802.3bt PoE: GPI-145 (Included)
Power Consumption (Max)	26 Watts
Power Sourcing Equipment (PSE)	No
PoE Mode	
Humidity	5% to 90% non-condensing
Operating/Storage Temp.	-40°F to 158°F (-40°C to 70°C)
	-58°F to 178°F (-50°C to 80°C)
Operating Altitude	3000 m
Directives	Low Voltage Directive • RoHS
UL2043 Plenum Material	Yes
Mean Time Between Failures	> 10 years
IP Rating	IP67
Surge Protection Built In	No
Certifications	
Wi-Fi7 Certified	Certified
DFS	FCC, IC, and CE
Hazardous Location	In Progress
Warranty	
Limited Lifetime Warranty	Yes

* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.
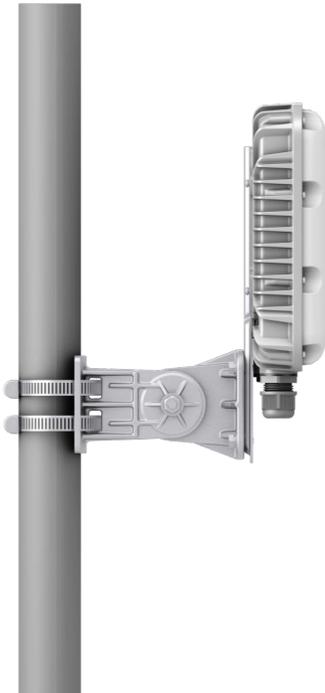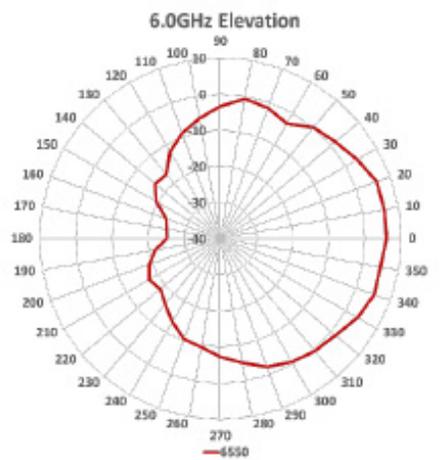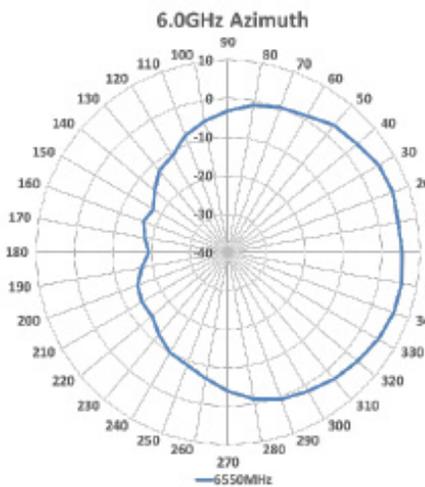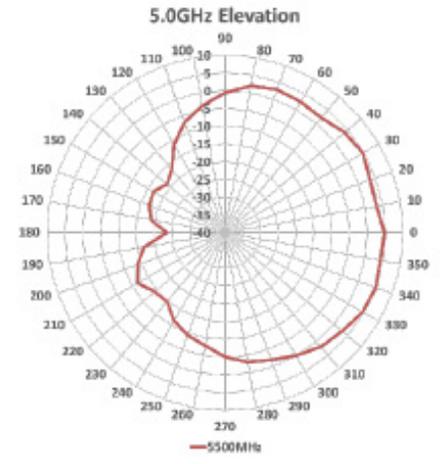
RF Rx/Tx Performance Table

Data rate	2.4 GHz Band		5.0 GHz Band		6.0 GHz Band	
	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)
802.11b						
1 Mbps	24	-99				
11 Mbps	24	-91				
802.11g			**802.11a**			
6 Mbps	24	-97	23	-96		
54 Mbps	23	-79	21	-79		
802.11n HT20						
MCS0	24	-96	23	-96		
MCS7	21	-78	20	-78		
802.11n HT40						
MCS0	24	-95	23	-91		
MCS7	21	-76	20	-75		
802.11ac VHT20						
MCS0	24	-96	23	-93		
MCS9	19	-74	20	-75		
802.11ac VHT40						
MCS0	24	-94	23	-93		
MCS9	19	-70	19	-69		
802.11ac VHT80						
MCS0			23	-91		
MCS9			18	-66		
802.11ax HE20 / 802.11be EHT20						
MCS0	23	-96	23	-96	22	-96
MCS11	17	-67	18	-68	19	-68
802.11ax HE40 / 802.11be EHT40						
MCS0	23	-95	23	-91	22	-94
MCS11	17	-65	18	-64	19	-65
802.11ax HE80 / 802.11be EHT80						
MCS0			23	-91	22	-91
MCS13			18	-62	18	-58
802.11be EHT160						
MCS0			23	-88	22	-88
MCS13			17	-55	18	-56
802.11be EHT320						
MCS0					22	-85
MCS13					17	-55

Antenna Radiation Patterns

FAP-244K

2.4GHz Azimuth

2.4GHz Elevation

5.0GHz Azimuth

5.0GHz Elevation

6.0GHz Azimuth

6.0GHz Elevation
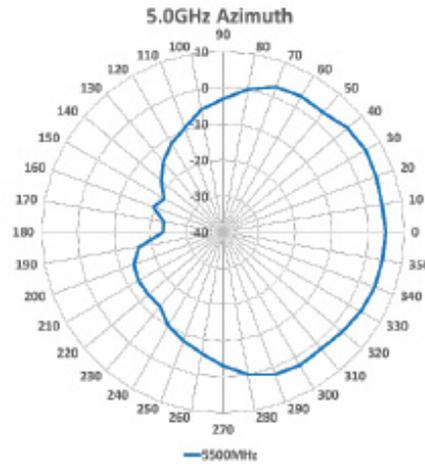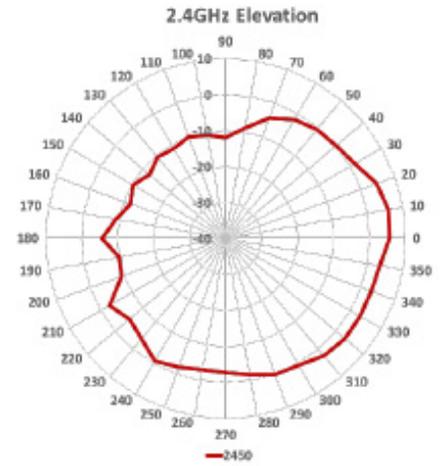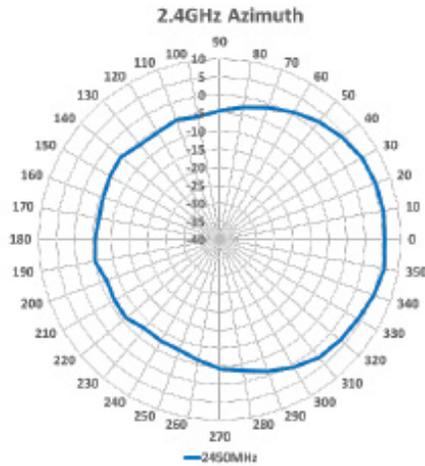
Highlights

FortiAP 222KL

This enterprise class Wi-Fi 7 ruggedized outdoor AP provides two Wi-Fi radios with external antennas and two spatial streams. This access point supports LoRaWAN modules plus LTE Backhaul in addition to 1× 2.5 Gbps PoE and 1× 1 Gbps RJ45 Ethernet port that can also be PSE-PD. The AP can provide background scan across all bands while still providing access on all the 2.4 GHz and 5 GHz bands making it more advanced for IoT applications.

Note: For FAP-222KL, use of the LTE module is subject to country/region of use (Not supported in early release).

Two Radio 2.4 GHz + 5 GHz (2 External dual band Antenna) | LoRaWAN (External Antenna)+ 1 LTE Cat4 (1 External Antenna) + GNSS (1 Internal Antenna)

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

FAP-222KL

Specifications

FortiAP 222KL	
Hardware	
Type	Outdoor
Number of Radios	2 Wi-Fi + LoraWAN + 1 LTE + 1 GNSS
Number of Antennas	6 External Antennas
Antenna Type Support	N Type: 6 Antennas

Antenna Type and Peak Gain	Wi-Fi	LoraWAN	LTE	GNSS
	5 dBi @2.4GHz	Omni Directional	4 dBi	Patch
	6.5 dBi @5GHz	4 dBi		2.7 dBi

Frequency Bands (GHz)	2.4GHz Band: 2.4-2.484GHz	5GHz Band: U-NII-1: 5.15-5.25GHz U-NII-2A: 5.25-5.35GHz U-NII-2C: 5.47-5.725GHz U-NII-3: 5.725-5.85GHz U-NII-4: 5.85–6.895GHz
2.4GHz Wi-Fi Capabilities	Frequency band: 2.4GHz Channel width: 20/40MHz Modulation: BPSK, QPSK, 64 - 4096 QAM MIMO Chains: 2×2 Service Radio	
5.0GHz Wi-Fi Capabilities	Frequency band: 5.0GHz UNII-1 to UNII-4 Channel width: 20/40/80/160/240MHz Modulation: BPSK, QPSK, 64 - 4096 QAM MIMO Chains: 2×2 Service Radio	
WiFi Data Rate	2.4GHz band: up to 688 Mbps	
	5.0GHz band: up to 4.324 Gbps	
Wi-Fi TX Power maximum (2 chains combined)	2.4GHz band: 25 dB/316 mw 5.0GHz band: 26 dB/400 mw	

LoraWAN	US	Europe
Frequency	902–928 MHz	863 – 870 MHz
Channels	8× 125 kHz uplink (902.3–914.9 MHz)	8× 125 kHz uplink (868.1–868.5 MHz)
	1× 500 kHz downlink (923.3–927.5 MHz)	1× 125 kHz downlink (869.525 MHz)
Spreading Factor	SF7 – SF12	SF7 – SF12
TX Power	26 dBm	14 dBm
RX Sensitivity	-139 dBm	-139 dBm

LTE Frequency	Worldwide
4G	B1, B2, B3, B4, B5, B7, B8, B8_US B9, B12, B13, B14, B18, B19, B20, B25, B26, B28
3G	B1, B2, B4, B5, B6, B8, B19
2G	B2, B3, B5, B8
LTE data rate	Down link: 150 Mbps Uplink: 50 Mbps
LTE SIM management	eSIM
Bluetooth Low Energy (BT/BLE) Radio	No
Trusted Platform Module (TPM)	Yes
GNSS	GPS L1 C/A: 1575.42 MHz, GLONASS L1: 1598.0625–1605.375 MHz BeiDou : 1561.098 MHz, Galileo E1: 1575.42 MHz Supports for multi-GNSS including QZSS and SBAS ranging Indoor and outdoor multi-path detection and compensation GNSS sensitivity -165 dBm (Tracking), -148 dBm (acquisition)
Interfaces	Port 1: 1× RJ-45 Multi-Gigabit Ethernet (100 M / 1 G / 2.5 G), 802.3bt PoE-IN
	Port 2: 1× RJ-45 Multi-Gigabit Ethernet (10M / 100 M / 1 G), 802.3af PoE-OUT
	Console: 1× RJ-45 Serial Console (RS-232)
Power over Ethernet (PoE)	x1 802.3bt PoE

FortiAP 222KL	
Simultaneous SSIDs	Up to 8 per client serving radio
EAP Type(s)	EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPV0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST, EAP-TTLS/PAP
User/Device Authentication	WPA™, WPA2™, and WPA3™ with 802.1x or Pre-shared key, WEP, Web Captive Portal, MAC blocklist and allowlist
IEEE Standards	802.11a, 802.11b, 802.11be, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11k, 802.11mc, 802.11n, 802.11r, 802.11u, 802.11v, 802.11w, 802.11ac, 802.11ax, 802.1Q, 802.1X, 802.3ad, 802.3at, 802.3az, 802.3bt, 802.3bz
SSID Types Supported	Local-Bridge, Mesh, and Tunnel
Per Radio Client Capacity	Up to 512 clients (Radio1 and Radio2)
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
Wireless Monitoring Capabilities	
Rogue Scan radio modes	Background
WIPS / WIDS radio modes	Background
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Dimensions	
Device Length x Width x Height	8.66 × 8.66 × 2.36 inch (220 × 220 × 60 mm)
Shipping Length x Width x Height	11.85 × 10.23 × 7.24 inch (301 × 260 × 184 mm)
Device Weight	5.95 lbs (2.7 kg)
Shipping Package Weight	14.3 lbs (6.5 kg)
Mounting Options	Wall and Pole mounting brackets (included)
Included Accessories	802.3bt PoE, Mounting bracket, Grounding cable
Environment	
CPU/RAM	Quad-core ARM Cortex-A53 1.5GHz / 2 GB
Power Supply	802.3bt PoE (Included)
Power Consumption (Max)	26 Watts
PoE Mode	Full - 802.3bt or Passive (Shipped with unit) : Tx Power - Full ; Chain 2×2 ; PSE - Enabled
Humidity	5% to 90% non-condensing
Operating/Storage Temp.	-40°F to 158°F (-40°C to 70°C) -58°F to 178°F (-50°C to 80°C)
Operating Altitude	9842 ft (3000 m)
Mean Time Between Failures	>10 years
IP Rating	IP67
Wind	165 mph (266 km/h)
Certifications	
Regulatory Compliance	FCC/ISED, CE, Class 1 Division 2, ATEX Zone 2
Wi-Fi7 Certified	In Progress
DFS	FCC, IC and CE
Hazardous Location	In Progress
Warranty	
Limited Lifetime Warranty	Yes

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

Highlights

FortiAP 431G

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.

Wi-Fi 6E | Tri-Radio 2.4 + 5GHz + 5GHz / 6GHz / Scanning | 8 Internal Antennas / 4 External RPSMA Connectors + 4 External Permanently attached Antennas

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

FAP-431G

Specifications

FortiAP 431G	
Hardware	
Hardware Type	Indoor AP
Number of Radios	3 + 1 BLE
Number of Antennas	Internal: x4 Dual band Wi-Fi + x4 Tri-band Wi-Fi and Scanning + 1 2.4GHz BLE/ZigBee + 1 GPS antenna
Antenna Type Support	
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
Frequency Bands (GHz)*	2.4-2.484GHz; 5.15-5.25GHz; 5.25-5.35GHz; 5.35-5.47GHz; 5.47-5.725GHz; 5.725-5.85GHz; 5.925–6.425GHz; 6.425-6.525GHz; 6.525–6.875GHz; 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: 20/40/80/80+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 iBeacon advertizement @10 dBm max TX power
Trusted Platform Module (TPM)	Yes
Interfaces	x2 100/1000/2500/5000 Base-T RJ45, 1 Type 3.0 USB, 1 RS-232 RJ45 Serial Port
MDI/MDIX	Supported
Power over Ethernet (PoE)	1 802.3bt PoE default or x2 802.3at PoE (Dual PoE current sharing)
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, EAP-TTLS/PAP
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: 27 dBm / 501 mW (4 chains combined)* Radio 2: 5GHz: 26 dBm / 400 mW (4 chains combined)*
	Radio 3: 5GHz: 26 dBm / 400 mW (4 chains combined)* 6GHz: 24 dBm 251 mW (4 chains combined @ 160MHz BW)*
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, 802.11mc, 802.1Q, 802.1X, 802.3ad, 802.3at, 802.3bt, 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

FortiAP 431G	
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	Yes
Onboard Security Functions	
UTP Capable	Yes
UTP Features	Application control and Web filtering
Wireless Monitoring Capabilities	
Rogue Scan Radio Modes	Background, Dedicated
WIPS / WIDS Radio Modes	Background, Dedicated (recommended)
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Dimensions	
Length x Width x Height	8.85× 8.85 × 2.12 inches (225.0× 225.0 × 54.0 mm)
Weight	3.05 lbs (1.4 kg)
Package (shipping) Weight	5.25 lbs (2.4 kg)
Accessories	
Mounting Options	Ceiling, T-Rail, and Wall
Included Accessories	Standard Mounting kit for Ceiling, T-Rail and Wall
Power Supply	SP-FAP250-PA-10 or SP-FAP400-PA-XX or 802.3bt PoE(GPI-145)
Environment	
CPU/RAM	Quad-core ARM Cortex-A53 2.2GHz / 1 GB
Power Consumption (Max)	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
Mean Time Between Failures	>10 Years
IP Rating	N/A
Surge Protection Built In	No
Hit-less PoE Failover	Yes
Certifications	
Wi-Fi Alliance Certified	Yes (includes Passpoint)
DFS	Europe , FCC, Japan, N, Brazil, Taiwan, Korea
Warranty	
Limited Lifetime Warranty	Yes

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

RF Rx/Tx Performance Table

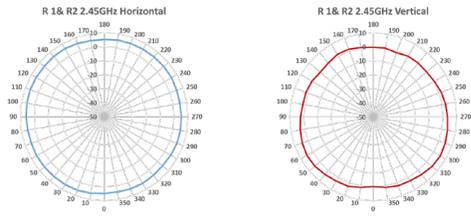| Data rate	FORTIAP 431G					
	Radio 1 802.11ax 4×4		Radio 2 802.11ax 4×4		Radio3 4×4 Tri band Service and 2×2 Scanning radio	
	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)
2.4GHz, 802.11b						
1 Mbps	21	-99				-99
11 Mbps	21	-91				-91
2.4GHz, 802.11g						
6 Mbps	21	-93				-95
54 Mbps	21	-77				-78
2.4GHz, 802.11n HT20						
MCS0	21	-95				-92
MCS7	19	-77				-74
2.4GHz, 802.11n HT40						
MCS0	20	-92				-90
MCS7	18	-74				-72
2.4GHz, 802.11ax HE20						
MCS0	21	-94				-90
MCS11	19	-64				-71
2.4GHz, 802.11ax HE40						
MCS0	21	-91				-91
MCS11	19	-62				-72
5.0GHz, 802.11a						
6 Mbps			23	-93	22	-93
54 Mbps			21	-76	21	-76
5.0GHz, 802.11n HT20						
MCS0			22	-93	21	-93
MCS7			20	-75	18	-73
5.0GHz, 802.11n HT40						
MCS0			21	-93	21	-90
MCS7			18	-78	18	-71
5.0GHz, 802.11ac VHT20						
MCS0			22	-93	21	-93
MCS9			20	-72	18	-69
5.0GHz, 802.11ac VHT40						
MCS0			22	-91	21	-90
MCS9			19	-70	18	-64
5.0GHz, 802.11ac VHT80						
MCS0			20	-86	19	-88
MCS9			18	-65	16	-61
5.0GHz, 802.11ax HE20						
MCS0			22	-93	22	-92
MCS11			19	-63	19	-65
5.0GHz, 802.11ax HE40						
MCS0			21	-90	22	-88
MCS11			19	-70	19	-61
5.0GHz, 802.11ax HE80						
MCS0			18	-86	20	-85
MCS11			16	-59	17	-58
5.0GHz, 802.11ax HE160						
MCS0					19	-82
MCS11					16	-57
6.0GHz, 802.11ax HE160						
MCS0					17	-82
MCS11					14	-56

Maximum capability of the Hardware provided (Excluding antenna gain)

Antenna Radiation Patterns

FAP-431G

Radio1 and Radio2 2.45GHz plots

R 1& R2 2.45GHz Horizontal   R 1& R2 2.45GHz Vertical

Radio1 and Radio2 5.5GHz plots

R 1& R2 5.5GHz Horizontal   R 1& R2 5.5GHz Vertical

Radio3 2.45GHz plots

R3 2.45GHz Horizontal   R3 2.45GHz Vertical

Radio3 5.5GHz plots

R3 5.5GHz Horizontal   R3 5.5GHz Vertical

Radio3 6.5GHz plots

R3 6.5GHz Horizontal   R3 6.5GHz Vertical
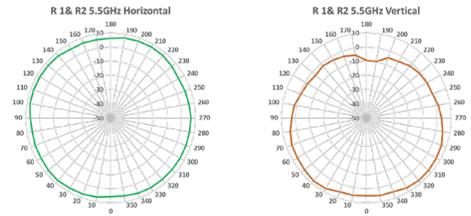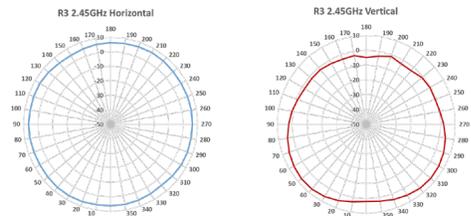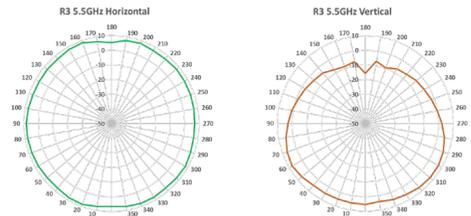
BLE/ZigBee 2.45GHz plots

BLE/ZigBee 2.45GHz Horizontal   BLE/ZigBee 2.45GHz Vertical
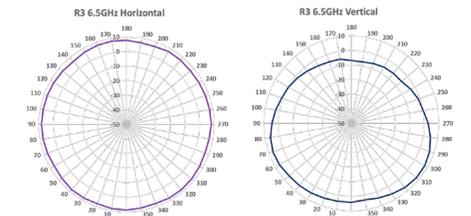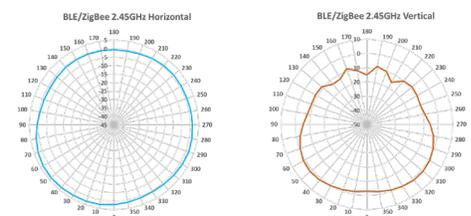
Highlights

FortiAP 432G

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

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

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

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

FAP-432G

FAP-432G
Pole/Wall Mounting

Specifications

FortiAP 432G	
Hardware	
Hardware Type	Wi-Fi 6E 4×4 MIMO Outdoor AP
Number of Radios	3 + 1 BLE
Number of Antennas	External: x4 Dual band WiFi + x4 Tri-band WiFi and Scanning + x1 2.4GHz band BLE/ZigBee
Antenna Type Support	N-Type (9 total): Dual Band Antenna (4); Tri Band Antenna (4); BLE/Scan antenna (1)
Antenna Type and Peak Gain	Omni Directional antenna. Dual band: 5.1 dBi for 2.4GHz, 6.4 dBi for 5 GHz Tr-band: 4.9 dBi for 2.4GHz, 5.8 dBi for 5 GHz, and 6.0dBi for 6GHz band BLE Antenna: 4.7dBi for 2.4GHz GPS Antenna: ceramic patch circular polarized: 3.0dBi Peak gain
Antenna Beam width	Wi-Fi: 2.4GHz Band: 360° Horizontal and 65° Vertical 5.0GHz Band: 360° Horizontal and 50° Vertical 6.0GHz Band: 360° Horizontal and 65° Vertical BLE: 2.4GHz Band: 225° Horizontal and 55° Vertical GPS: 1.5-1.6GHz Band: 360° Horizontal and 98° Vertical
Supported Frequency 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
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
Trusted Platform Module (TPM)	Yes
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 constellations	GPS + GLONASS + BDS + Galileo + QZSS
Tracking channels	47
Concurrent GNSS	5
SBAS	WAAS, EGNOS, MSAS and GAGAN
Sensitivity (@ default constellations)	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, EAP-TTLS/PAP
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)*

FortiAP 432G	
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, 802.11mc, 802.1Q, 802.1X, 802.3ad, 802.3at, 802.3bt, 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	Yes
Onboard Security Functions	
UTP Capable	Yes
UTP Features	Application control and Web filtering
Wireless Monitoring Capabilities	
Rogue Scan Radio Modes	Background, Dedicated
WIPS / WIDS Radio Modes	Background, Dedicated (recommended)
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Power source and power consumption	
PoE	PIN060-54PR 60W PoE with reset switch shipped with the AP
Power Consumption (Maximum)	41.2 Watts (Including PSE out of 12.9 watts)
PoE Mode	Full - 802.3bt or Passive (Shipped with unit) : Tx Power - Full ; Chain 4×4 ; PSE - Enabled High - 802.3at or 2×802.3af : All Radio Operation in Low Tx Power 17 dBm ; Chain 4×4 ; PSE - Disabled
Hit-less PoE Failover	N/A
Surge Protection Built In	No
Dimensions	
Length x Width x Height	9.45 × 9.45 × 2.74 inches (240.0 × 240.0 × 69.6 mm)
Weight	7.05 lbs (3.2 kg)
Package (shipping) Weight	13.2 lbs (6.0 kg)
Accessories (included)	
Mounting Accessories	Wall and Pole installation brackets with mounting kits
PoE	PIN060-54PR 60W PoE with reset switch or IEEE 802.3bt PoE
Environment	
CPU/RAM	Quad-core ARM Cortex-A53 2.2GHz / 1 GB
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	Certified
DFS	Europe, FCC, N, Brazil, Taiwan
Hazardous Location	In Progress
Warranty	
Limited Lifetime Warranty	Yes

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

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RF Rx/Tx Performance Table

| FORTIAP 432G						
	2.4 GHz Band		5.0 GHz Band		6 GHz Band	
Data rate	Tx power/chain (dBm)	Rz Sensitivity (dBm)	Tx power/chain (dBm)	Rz Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)
802.11b						
1 Mbps	27	-99				-99
11 Mbps	27	-91				-91
802.11g/a		802.11g		802.11a		
6 Mbps	27	-94	25	-92	22	-94
54 Mbps	27	-78	23	-75	21	-77
802.11n HT20						
MCS0	26	-94	25	-91		
MCS7	26	-77	22	-73		
802.11n HT40						
MCS0	25	-93	25	-89		
MCS7	25	-74	22	-70		
802.11ac VHT20						
MCS0	23	-95	25	-91		
MCS9	21	-73	22	-70		
802.11ac VHT40						
MCS0	23	-92	23	-89		
MCS9	20	-70	21	-67		
802.11ac VHT80						
MCS0			23	-85		
MCS9			21	-62		
802.11ax HE20						
MCS0	26	-94	23	-91	22	-91
MCS11	24	-71	21	-63	19	-65
802.11ax HE40						
MCS0	25	-92	22	-88	21	-89
MCS11	23	-63	20	-60	19	-61
802.11ax HE80						
MCS0			22	-85	21	-85
MCS11			20	-57	18	-60
802.11ax HE160						
MCS0					20	-85
MCS11					17	-56

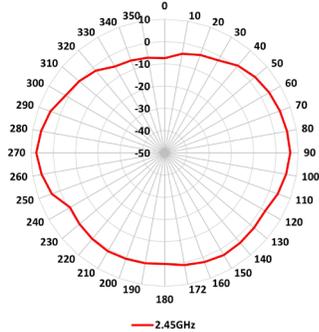Maximum capability of the Hardware provided (Excluding antenna gain)
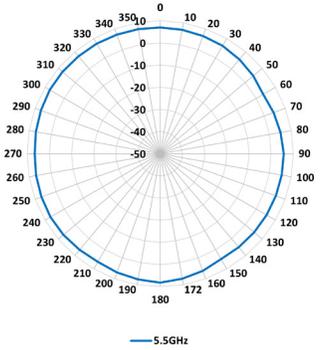
Antenna Radiation Patterns

FAP-432G

2.4GHz Band - Azimuth
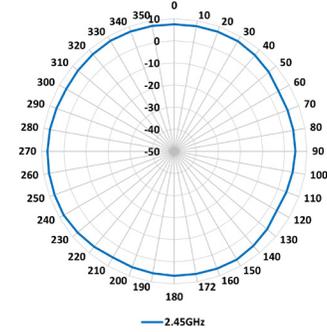
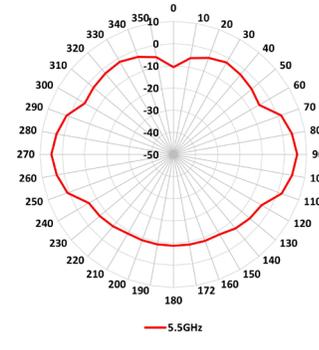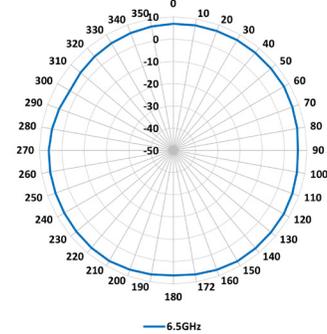**2.4GHz Band - Elevation**

5.0GHz Band - Azimuth

5.0GHz Band - Elevation

6.0GHz Band - Azimuth

6.0GHz Band - Elevation
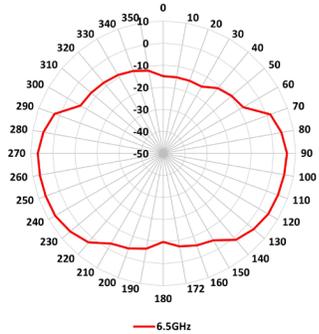
BLE/ZigBee 2.4GHz Band - Azimuth
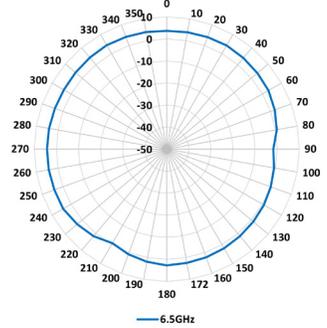
BLE/ZigBee 2.4GHz Band - Elevation
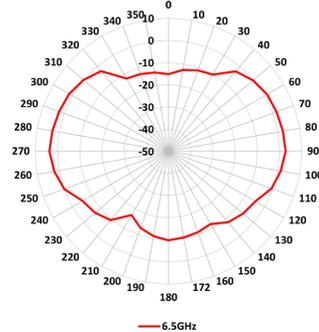
Highlights

FortiAP 234G

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

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

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

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

FAP-234G

Specifications

FortiAP 234G	
Hardware	
Hardware Type	Outdoor AP
Number of Radios	3 + 1 BLE
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 GPS: 1.5-1.6GHz Band: 360° Horizontal and 98° Vertical
Frequency Bands (GHz)*	2.4-2.484GHz; 5.15-5.25GHz; 5.25-5.35GHz; 5.35-5.47GHz; 5.47-5.725GHz; 5.725-5.85GHz; 5.925–6.425GHz; 6.425-6.525GHz; 6.525–6.875GHz; 6.875–7.125GHz
Radio 1 Capabilities	Frequency band: 2.4GHz Channel width: 20/40MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Service
Radio 2 Capabilities	Frequency band: 5.0GHz 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
Trusted Platform Module (TPM)	Yes
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 constellations	GPS + GLONASS + BDS + Galileo + QZSS
Tracking channels	47
Concurrent GNSS	5
SBAS	WAAS, EGNOS, MSAS and GAGAN
Sensitivity (@ default constellations)	Acquisition: -147 dBm Tracking: -166 dBm Reacquisition: -159
Interfaces	1*100/1000/2500 Base-T RJ45, 1*10/100/1000 Base-T RJ45, 1*RS-232 RJ45 Serial Port
MDI/MDIX	Supported
Power over Ethernet (PoE)	IEEE 802.at
Simultaneous SSIDs	Up to 24
EAP Type(s)	EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST, EAP-TTLS/PAP
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, 802.11j, 802.11k, 802.11n, 802.11r, 802.11u, 802.11v, 802.11w, 802.11ac, 802.11ax, 802.11mc,WW 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 Capabilities	
Rogue Scan Radio Modes	Background, Dedicated
WIPS / WIDS Radio Modes	Background, Dedicated (recommended)
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Power source and power consumption	
PoE	PIN060-54PR 60W PoE with reset switch shipped with the AP
Power Consumption (Max)	28 Watts
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
Hit-less PoE Failover	Yes
Surge Protection Built In	No
Dimensions	
Length x Width x Height	10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm)
Weight	3.05 lbs (1.38 kg)
Package (shipping) Weight	8.15 lbs (3.7 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 PoE
Environment	
CPU/RAM	Quad-core ARM Cortex-A53 1.8GHz / 1 GB
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	Yes
Mean Time Between Failures	> 10 Years
IP Rating	IP67
Certifications	
Wi-Fi Alliance Certified	Certified
DFS	Europe, FCC, N, Brazil, Taiwan, India
Hazard Location	C1D2/ATEX Certified
Warranty	
Limited Lifetime Warranty	Yes

* Frequency selection, power, and some communication features may be restricted to abide by regional regulatory compliance laws.
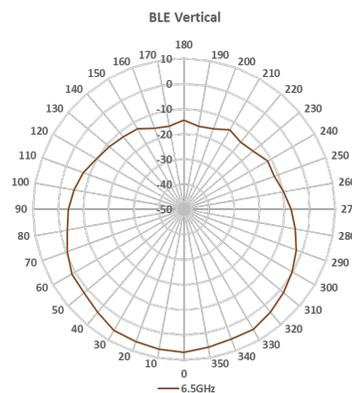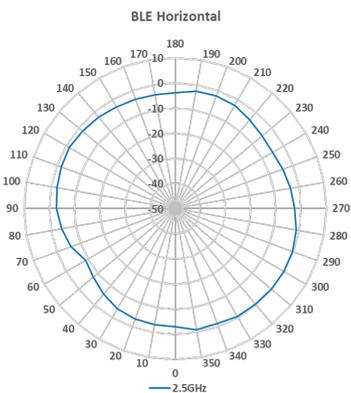
RF Rx/Tx Performance Table

FORTIAP 234G						
	Radio1 2.4GHz Band		Radio2 5.0GHz Band		Radio3 6GHz Band	
Data rate	Tx power/chain (dBm)	Rz Sensitivity (dBm)	Tx power/chain (dBm)	Rz Sensitivity (dBm)	Tx power/chain (dBm)	Rx Sensitivity (dBm)
802.11b						
1 Mbps	23	-99				
11 Mbps	23	-91				
802.11g/a	802.11g		802.11a			
6 Mbps	23	-94	23	-92	17	-94
54 Mbps	23	-78	22	-75	17	-77
802.11n HT20						
MCS0	23	-94	23	-91		
MCS7	21	-77	21	-73		
802.11n HT40						
MCS0	23	-93	23	-89		
MCS7	21	-74	21	-70		
802.11ac VHT20						
MCS0	23	-95	23	-91		
MCS9	21	-73	21	-70		
802.11ac VHT40						
MCS0	23	-92	23	-89		
MCS9	20	-70	20	-67		
802.11ac VHT80						
MCS0			22	-85		
MCS9			19	-62		
802.11ax HE20						
MCS0	23	-94	22	-91	17	-94
MCS11	20	-71	19	-63	15	-67
802.11ax HE40						
MCS0	20	-92	22	-88	16	-91
MCS11	17	-63	19	-60	14	-63
802.11ax HE80						
MCS0			21	-85	16	-88
MCS11			18	-57	13	-61
802.11ax HE160						
MCS0					15	-85
MCS11					12	-58

Antenna Radiation Patterns

FAP-234G

2.45GHz Horizontal

2.45GHz Vertical

5.5GHz Horizontal

5.5GHz Vertical

6.5GHz Horizontal

6.5GHz Vertical

BLE Horizontal

BLE Vertical
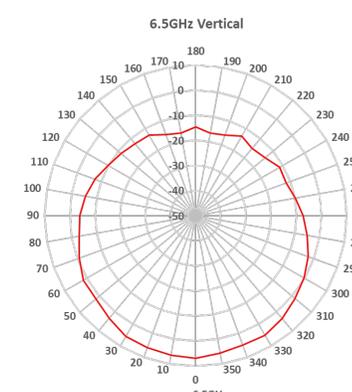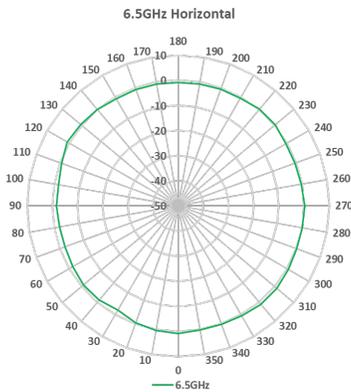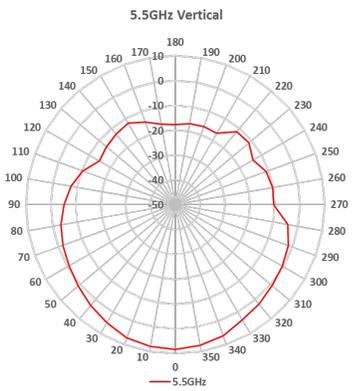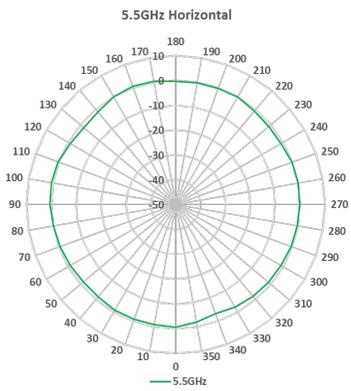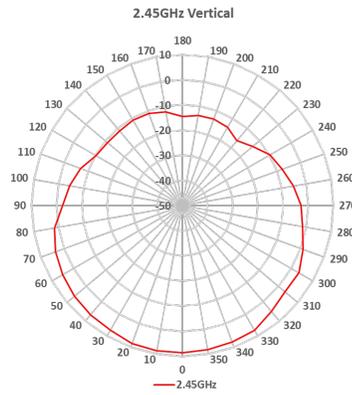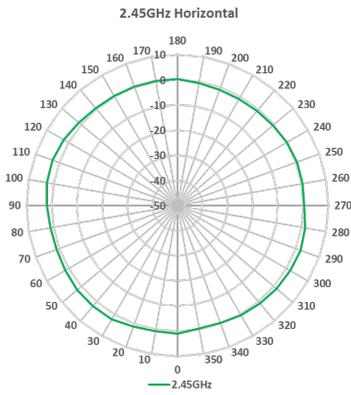
Highlights

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.

802.11ax | Tri-Radio 2.4 GHz + 5 GHz + scanning | 13 Internal Antennas

8×8 MU-MIMO | Up to 1147 Mbps + 4804 Mbps

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

FortiAP-831F	
Advanced 802.11 Features	
OFDMA	Yes (UL and DL)
Spatial Reuse (BSS Coloring)	Yes
UL-MU-MIMO 802.11ax mode	Yes
DL-MU-MIMO	Yes
Enhanced Target Wake Time (TWT)	Yes
ZeroWait DFS /Agile DFS	No
Onboard Security Functions	
UTP Capable	No
UTP Features	N/A
Wireless Monitoring Capabilities	
Rogue Scan Radio Mode	Dedicated
WIPS / WIDS RAdio Modes	Dedicated
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Dimensions	
Length x Width x Height	9.05 × 89.05 × 2.15 inches (230 × 230 × 55 mm)
Weight	2.25 lbs (1.02 kg)
Package (shipping) Weight	4.2 lbs (1.9 kg)
Accessories	
Mounting Options	Ceiling, T-Rail, and Wall
Included Accessories	Mount kit for Ceiling, T-Rail, and Wall
Power Supply	SP-FAP400-PA-XX or GPI-130
Environment	
CPU/RAM	Quad-core ARM Cortex-A53 2.2GHz / 1 GB
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	DC/2at → Full Mode ; Radios will be in [4×4|4×4|4×4] and USB Enabled 1at/2af → High Mode ; Radios will be in [4×4|4×4|4×4] and USB Disabled 1af → Low Mode ; Radios will be [2×2|2×2|2×2], Tx Power 10 dBm and USB Disabled
Humidity	5% to 90% Non-Condensing
Operating / Storage Temp.	32°F to 122°F(0°C to 50°C) / -22°F to 158°F(-30°C to 70°C)
Directives	Low Voltage Directive • RoHS
UL2043 Plenum Material	No
Mean Time Betw. Failures	>10 Years
Surge Protection Built In	No
Certifications	
Wi-Fi Alliance Certified	Yes (includes Passpoint)
DFS	FCC, IC, Europe, 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.
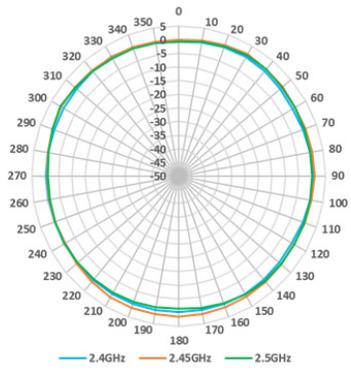
RF Rx/Tx Performance Table

	FortiAP 831F							
	Radio 1		Radio 2		Radio 3			
Data rate	2.4 GHz Tx Power per chain (dBm)	Rx Sensitivity (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity(dBm)	2.4 GHz Tx Power per chain (dBm)	Rx Sensitivity (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity (dBm)
802.11b								
1 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	—	—	—	—	—	—
802.11a								
6 Mbps	—	—	20	-92	—	—	20	-90
54 Mbps	—	—	20	-72	—	—	17.5	-72
802.11n HT20								
MCS0	—	—	20	-91	—	—	20	-90
MCS7	—	—	19	-72	—	—	17.5	-71
802.11n HT40								
MCS0	—	—	20	-88	—	—	19	-88
MCS7	—	—	18	-69	—	—	16.5	-69
802.11ac VHT20								
MCS0	—	—	20	-91	—	—	19	-90
MCS9	—	—	19	-67	—	—	17.5	-67
802.11ac VHT40								
MCS0	—	—	20	-88	—	—	19	-88
MCS9	—	—	18	-62	—	—	16	-62
802.11ac VHT80								
MCS0	—	—	18	-85	—	—	18	-85
MCS9	—	—	17	-59	—	—	16	-58
802.11ax HE20								
MCS0	—	—	20	-90	—	—	—	—
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

Radio1 2.4 GHz Horizontal
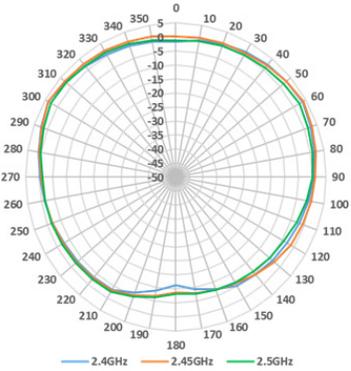
Radio1 2.4 GHz Vertical
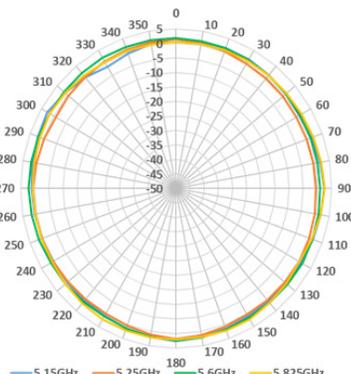
Radio2 5.0 GHz Horizontal
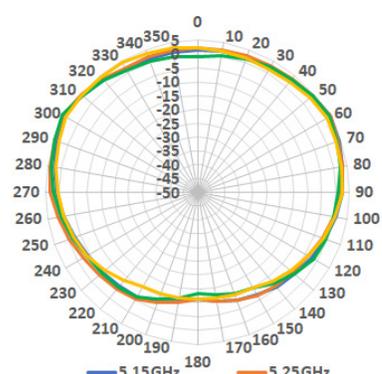
Radio2 5.0 GHz Vertical
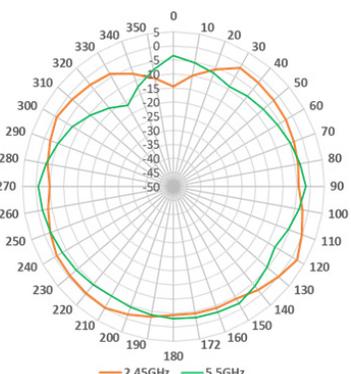
Scanning Radio Horizontal
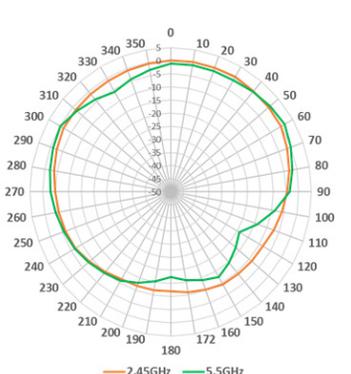
Scanning Radio Vertical
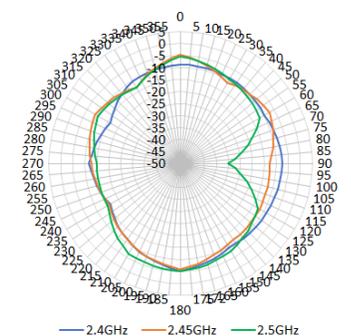
BLE Radio Horizontal
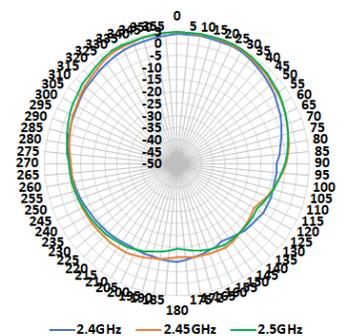
BLE Radio Vertical

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

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, EAP-TTLS/PAP
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	
UTP Capable	No
UTP Features	N/A
Wireless Monitoring Capabilities	
Rogue Scan radio modes	Background, Dedicated
WIPS / WIDS radio modes	Background, Dedicated (recommended)
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Dimensions	
Length x Width x Height	8.23 × 8.23 × 2.38 inches (209 × 209 × 60.5 mm)
Weight	5.12 lbs (2.325 kg)
Package (shipping) Weight	12.56.93 lbs (5.7 kg)
Accessories	
Mounting Options	Wall and Pole
Included Accessories	Wall and Pole mounting kit
Power Supply	802.3bt PoE, ships with PoE injector (reset functionality)
Optional Antennas** (Professional Installer Required for FCC domains)	FANT-04ABGN-0606-O-N FANT-04ABGN-1414-P-N FANT-04ABGN-8065-P-N
Environment	
CPU/RAM	Quad-core ARM Cortex-A53 2.2GHz / 1 GB
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
Hazardous Location	C1D2 Certified
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.

RF Rx/Tx Performance Table

	FortiAP 432FR						
	Radio 1		Radio 2		Radio 3 Scanning		
Data rate	2.4 GHz Tx Power per chain (dBm)	Rx Sensitivity (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity (dBm)	2.4 GHz Tx Power per chain (dBm)	5 GHz Tx Power per Chain (dBm)	Rx Sensitivity (dBm)
802.11b							
1 Mbps	24	-99	—	—	20	—	-92
11 Mbps	24	-91	—	—	18	—	-91
802.11g							
6 Mbps	24	-94	—	—	20	—	-92
54 Mbps	23	-78	—	—	18	—	-77
802.11n HT20							
MCS0	24	-94	—	—	20	—	-92
MCS7	23	-75	—	—	17	—	-74
802.11n HT40							
MCS0	23	-92	—	—	19	—	-90
MCS7	22	-73	—	—	17	—	-72
802.11ax HE20							
MCS0	23	-90	—	—	—	—	—
MCS11	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
802.11ac VHT80							
MCS0	—	—	20	-86	—	17	-88
MCS9	—	—	17	-62	—	17	-61
802.11ax HE20							
MCS0	—	—	22	-91	—	—	—
MCS11	—	—	19	-72	—	—	—
802.11ax HE40							
MCS0	—	—	22	-91	—	—	—
MCS11	—	—	19	-72	—	—	—
802.11ax HE80							
MCS0	—	—	20	-87	—	—	—
MCS11	—	—	18	-58	—	—	—

Antenna Radiation Patterns

FAP-432FR
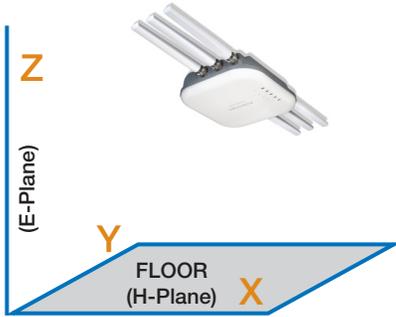
H-Plane Pattern
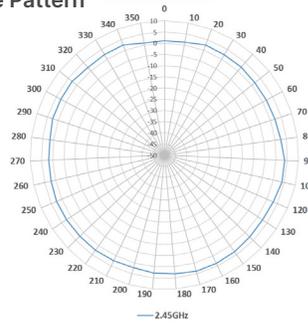
E-Plane Pattern

Radio1 Horizontal
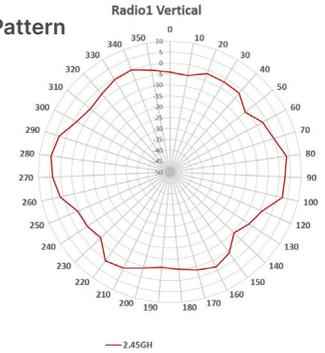
Radio1 Vertical

Radio2 Horizontal
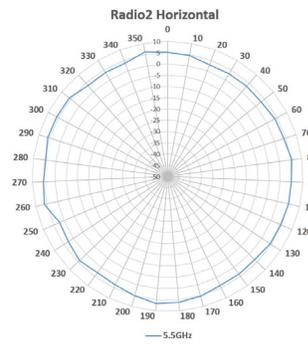
Radio2 Vertical
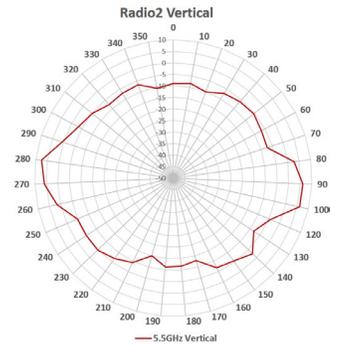
BLE Horizontal
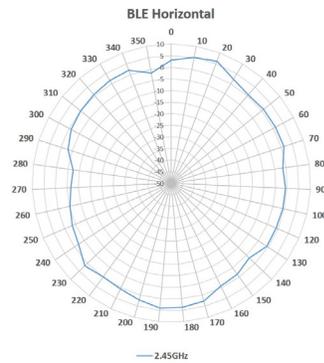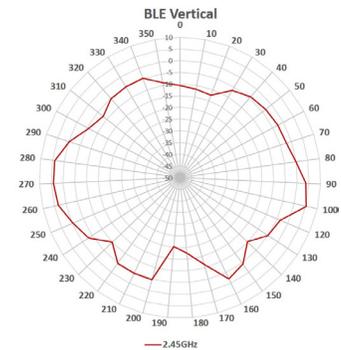
BLE Vertical

Scanning Radio Horizontal
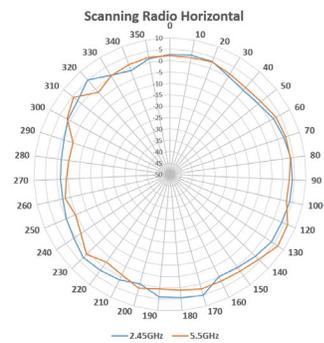
Scanning Radio Vertical
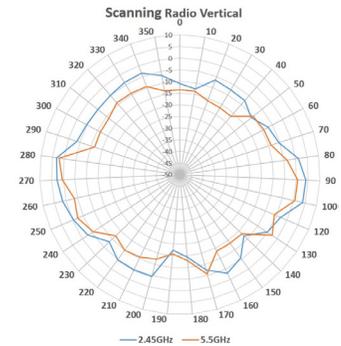
Highlights

FortiAP 234F

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

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

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

FAP-234F

Specifications

FortiAP 234F	
Hardware	
Hardware Type	Ruggedized indoor/outdoor AP
Number of Radios	3 + 1 BLE
Number of Antennas	2 dual band WiFi + 1 dual band scanning + 1 single band 2.4 GHz BLE/ZigBee
Antenna Type and Peak Gain	Directional patch antenna Dual band antenna Scanning radio: 3.5 dBi in 2.4 GHz band and 4.5 dBi in 5 GHz band BLE antenna: 3.5 dBi in 2.4 GHz band
Antenna Beam Width	2.4GHz Horizontal BW 70 degree Vertical BW 30 degree 5.0GHz Horizontal BW 78 degree Vertical BW 25 degree
Frequency Bands (GHz)*	2.400–2.4835, 5.150–5.250, 5.250–5.350, 5.470–5.725, 5.725–5.850
Radio 1 Capabilities	Frequency band: 2.4GHz Channel width: 20/40MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Service
Radio 2 Capabilities	Frequency band: 5.0GHz Channel width: 20/40/80MHz Modulation: BPSK, QPSK, 64/256/1024 QAM MIMO Chains: 2×2 Service
Radio 3 Capabilities	Frequency bands: 2.4 GHz and 5.0 GHz MIMO Chains: 1×1 Frequency Scanning
Maximum Data Rate	Radio 1: up to 574 Mbps Radio 2: up to 1200 Mbps Radio 3: Frequency scanning only
Bluetooth Low Energy Radio	Bluetooth scanning and iBeacon advertisement @ 10 dBm max TX power
Interfaces	2× 10/100/1000 Base-T RJ45, 1x RS-232 RJ45 Serial Port
MDI/MDIX	Supported Supported
Simultaneous SSIDs	Up to 8 per client serving radio (7 if background scanning is enabled)
EAP Type(s)	EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST, EAP-TTLS/PAP
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, 802.3bz
SSID Types Supported	Local-Bridge, Tunnel, and Mesh
Per Radio Client Capacity	Up to 512 clients per radio (Radio1 and Radio2)
Cellular Co-existence	Yes
LED Off Mode	Yes

FortiAP 234F	
Advanced 802.11 Features	
OFDMA	Yes (UL and DL)
Spatial Reuse (BSS Coloring)	Yes
UL MU-MIMO	Yes
DL-MU-MIMO	Yes
Enhanced Target Wake Time (TWT)	Yes
ZeroWait DFS	No
Onboard Security Functions	
UTP Capable	No
UTP Features	N/A
Wireless Monitoring Capabilities	
Rogue Scan radio modes	Background, Dedicated
WIPS / WIDS radio modes	Background, Dedicated (recommended)
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Dimensions	
Length x Width x Height	12.45 × 8.6 × 1.66 inches (316 × 218 × 42 mm)
Weight	2.88 lbs (1.307 kg)
Package (shipping) Weight	7.93 lbs (3.6 kg)
Accessories	
Mounting Options	Wall and Pole
Included Accessories	Wall and Pole mounting kit
Power Supply	802.3at PoE: GPI-130 ; ships with PoE Injector (reset functionality)
Environment	
CPU/RAM	Quad-core ARM Cortex-A53 1.6GHz / 1 GB
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, Europe, Japan, Brazil, Taiwan, and Korea
Hazardous Location	Not supported
Warranty	
Limited Lifetime Warranty	Yes

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

RF Rx/Tx Performance Table

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

Antenna Radiation Patterns

FAP-234F

Radio1 - Horizontal

2.4GHz — 2.45GHz — 2.5GHz

Radio1 - Vertical

2.4GHz — 2.45GHz — 2.5GHz

Radio2 Horizontal

5.15GHz — 5.25GHz — 5.6GHz — 5.825GHz

Radio2 Vertical

5.15GHz — 5.25GHz — 5.6GHz — 5.825GHz

BLE antenna - Horizontal

2.45GHz

BLE antenna - Vertical

2.45GHz
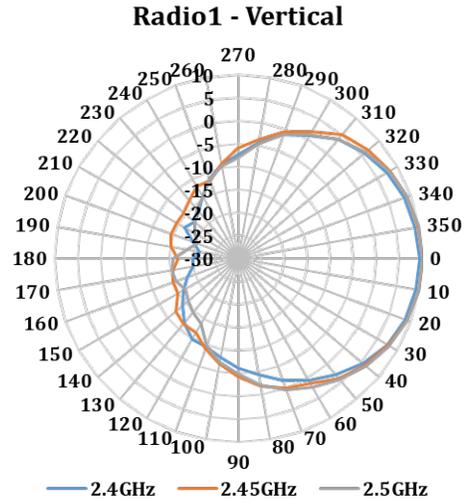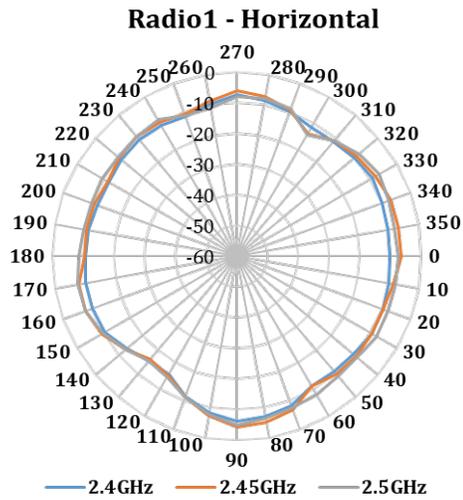
Highlights

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, EAP-TTLS/PAP
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, 802.3bz
SSID Types Supported	Local-Bridge, Tunnel, and Mesh
Per Radio Client Capacity	Up to 512 clients per radio (Radio1 and Radio2)
Cellular Co-existence	Yes
LED Off Mode	Yes

FortiAP 23JF	
Advanced 802.11 Features	
OFDMA	Yes (UL and DL)
Spatial Reuse (BSS Coloring)	Yes
UL MU-MIMO	Yes
DL-MU-MIMO	Yes
Enhanced Target Wake Time (TWT)	Yes
ZeroWait DFS	No
Onboard Security Functions	
UTP Capable	No
UTP Features	N/A
Wireless Monitoring Capabilities	
Rogue Scan radio modes	Background, Dedicated
WIPS / WIDS radio modes	Background, Dedicated (recommended)
Packet Sniffer Mode	Yes
Spectrum Analyzer	Yes
Dimensions	
Length x Width x Height	6.6 × 4.6 × 1.1 inches (168 × 117 × 28 mm)
Weight	0.99 lbs (0.45 kg)
Package (shipping) Weight	1.54 lbs (0.7 kg)
Accessories	
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	
CPU/RAM	23JF Quad-core ARM Cortex-A53 1.6GHz / 1 GB
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)
DFS	FCC, IC, Europe, 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.
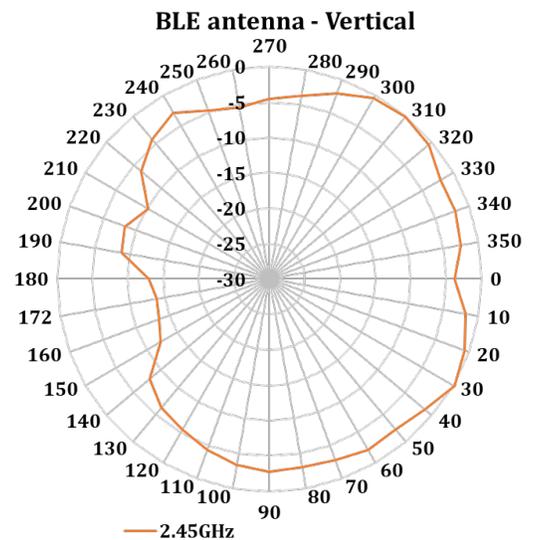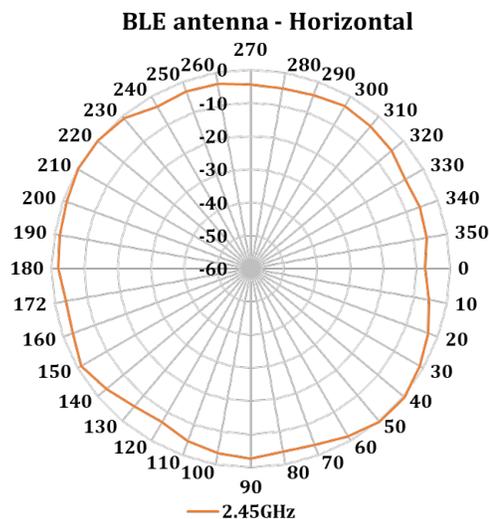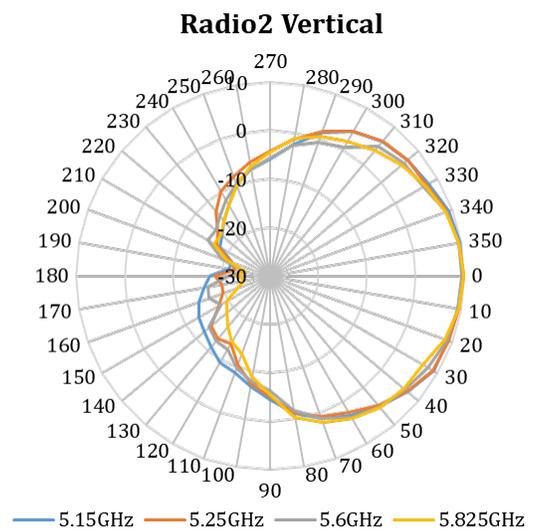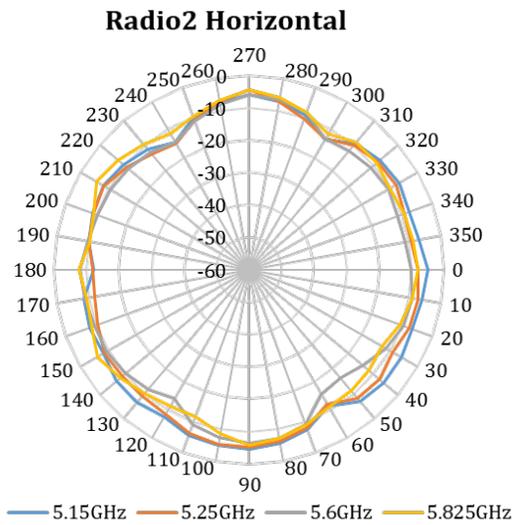
RF Rx/Tx Performance Table

	FortiAP 23JF						
	Radio 1		Radio 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	22	-98	—	—	20	—	-92
11 Mbps	20	-90	—	—	18	—	-91
802.11g							
6 Mbps	22	-93	—	—	20	—	-92
54 Mbps	20	-77	—	—	18	—	-77
802.11n HT20							
MCS0	22	-94	—	—	20	—	-92
MCS7	20	-76	—	—	17	—	-74
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	—	—	—

Antenna Radiation Patterns

FAP-23JF

Z

(E-Plane)

Y

FLOOR
(H-Plane)

X

H-Plane Pattern

E-Plane Pattern

Radio1 Horizontal

2.4GHz — 2.45GHz — 2.5GHz

Radio1 Vertical

2.4GHz — 2.45GHz — 2.5GHz

Radio2 Horizontal

5.15GHz — 5.25GHz

Radio2 Vertical

5.15GHz — 5.25GHz — 5.825GHz

BLE Radio Horizontal

2.45GHz

BLE Radio Vertical

2.45GHz

Scanning Radio Horizontal

2.45GHz — 5.6GHz

Scanning Radio Vertical

2.45GHz — 5.25GHz

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Ordering Information

Product	SKU	Description
FortiAP-443K	FAP-443K-[RC]	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.
	FC-10-FP43K-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.
FortiAP-441K	FAP-441K-[RC]	Indoor Wireless AP - 4 radios (Wi-Fi-7 Tri-band 2.4/5/6GHz 4+4+4 4 streams 4 radios), internal antennas, 2× 10G Base-T RJ45, BT/BLE, 1x Type A USB, 1x RS-232 RJ45 Serial Port. Ceiling/wall mount kit included. For power order: 802.3bt PoE injector.
	FC-10-FP41K-247-02-DD	FortiCare Premium Support.
	FC-10-FP41K-284-02-DD	FortiCare Elite Support.
	FC-10-FP41K-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.
FortiAP-244K	FAP-244K	Outdoor Wireless AP - (Wi-Fi-7 Tri-band 2.4/5/6GHz 2+2+2 2 streams 4 radios), [Note: 6GHz band not available in all regulatory domains. Use of the 6GHz band subjects to regional regulatory authority approval] internal antennas, 1×10/100/1000 RJ45, 1× 100/1000/2500/5000/10000 Base-T RJ45, BT/BLE, 1x Type A USB, 1x RS-232 RJ45 Serial Port. Ceiling/wall mount kit included. PoE injector included.. Region Code A.
	FC-10-F244K-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.
	FC-10-F244K-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.
	FC-10-F244K-247-02-DD	FortiCare Premium Support.
	FC-10-F244K-284-02-DD	FortiCare Elite Support.
FortiAP-243K	FAP-243K-[RC]	Indoor Wireless AP - (Wi-Fi-7 Tri-band 2.4/5/6GHz 2+2+2 2 streams 4 radios), external antennas, 1×10/100/1000 RJ45, 1× 100/1000/2500/5000/10000 Base-T RJ45, BT/BLE, 1x Type A USB, 1x RS-232 RJ45 Serial Port. Ceiling/wall mount kit included. For power order: 802.3at PoE injector GPI-130 or AC adapter SP-FAP400-PA. Region Code A
	FC-10-P243K-247-02-DD	FortiCare Premium Support.
	FC-10-P243K-284-02-DD	FortiCare Elite Support.
	FC-10-P243K-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.
FortiAP-241K	FAP-241K-[RC]	Indoor Wireless AP - (Wi-Fi-7 Tri-band 2.4/5/6GHz 2+2+2 2 streams 4 radios), internal antennas, 1×10/100/1000 RJ45, 1× 100/1000/2500/5000/10000 Base-T RJ45, BT/BLE, 1x Type A USB, 1x RS-232 RJ45 Serial Port. Ceiling/wall mount kit included. For power order: 802.3at PoE injector GPI-130 or AC adapter SP-FAP400-PA. Region Code A
	FC-10-P241K-247-02-DD	FortiCare Premium Support.
	FC-10-P241K-284-02-DD	FortiCare Elite Support.
	FC-10-P241K-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.
FortiAP-231K	FAP-231K-[RC]	Indoor Wireless AP - (Wi-Fi-7 IEEE Tri-band 2.4/5/6GHz 2+2+2 2 streams 3 radios), internal antennas, 100/1000/2500/5000 Base-T RJ45, BT/BLE, 1x RS-232 RJ45 Serial Port. Ceiling/wall mount kit included. For power order: 802.3at PoE injector GPI-130 or AC adapter SP-FAP200-PA-XX.
	FC-10-P231K-247-02-DD	FortiCare Premium Support.
	FC-10-P231K-284-02-DD	FortiCare Elite Support.
	FC-10-P231K-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.
FortiAP-222KL	FAP-222KL	Outdoor Wireless LoRaWAN Gateway + Wireless AP - (Wi-Fi7 IEEE 802.11be Dual band 2.4/5 GHz operation 2+2 2 streams), External antennas (5), LTE, LoRaWAN chipset, 1× 100/1000/2500 Base-T RJ45, 1× 10/100/1000 Base-T RJ45 (PSE 802.3af), Console Port (RJ45). Pole/wall mount kit included. PoE injector included. Region Code A.
	FC-10-F22KL-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.
	FC-10-F22KL-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.
	FC-10-F22KL-247-02-DD	FortiCare Premium Support.
	FC-10-F22KL-284-02-DD	FortiCare Elite Support.
FortiAP 431G	FAP-431G-[RC]	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.
	FC-10-PG431-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.
FortiAP 432G	FAP-432G-[RC]	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.
	FC-10-P432G-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.

Ordering Information

Product	SKU	Description
FortiAP 234G	FAP-234G-[RC]	Outdoor Wireless AP - Tri radio, WiFi 6E, included, 2× 2.5G RJ45 port, BT/BLE, 1x Type A USB, 1x RS-232 RJ45 Serial Port. Pole/wall mount kit included. Region Code A. Ships with PoE injector.
	FC-10-PG234-247-02-DD	FortiCare Premium Support.
	FC-10-PG234-284-02-DD	FortiCare Elite Support.
	FC-10-PG234-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.
	FC-10-P234G-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.
FortiAP 831F	FAP-831F-[RC]	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.
	FC-10-P831F-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.
FortiAP 432FR	FAP-432FR-[RC]	UL Class 1, Division 2 .Outdoor Wireless FortiAP - Tri radio (1× 802.11b/g/n/ax 4×4 radio, 1× 802.11a/n/ac/ax 4×4 Radio and 1× 802.11 a/b/g/n/ac Wave 2, 2×2), 1× 10/100/1000/2500 Base-T RJ45, 1× 10/100/1000 Base-T RJ45, BT/BLE + Zigbee, 1x RS-232 RJ45 Serial Port. External Dual Band N-Type Omni Directional antennas, Integrated mounting bracket for Antenna included + Wall/Pole Mount mounting kit. Ships with passive PoE injector.
	FC-10-FR432-247-02-DD	FortiCare Premium Support.
	FC-10-FR432-284-02-DD	FortiCare Elite Support.
	FC-10-FR432-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.
	FC-10-FR432-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.
FortiAP 234F	FAP-234F-[RC]	Outdoor Wireless AP - Tri radio (802.11 b/g/n/ax 2×2 MU-MIMO, 802.11 a/n/ac/ax 2×2 MU-MIMO and 1× 802.11 a/b/g/n/ac Wave 2, 1×1), internal antennas, 2× 10/100/1000 RJ45 port, BT/BLE, 1x RS-232 RJ45 Serial Port. Pole/wall mount kit and PoE injector included. Region Code A.
	FC-10-P234F-247-02-DD	FortiCare Premium Support.
	FC-10-P234F-284-02-DD	FortiCare Elite Support.
	FC-10-P234F-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.
	FC-10-P234F-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.
FortiAP 23JF	FAP-23JF-[RC]	Wall Plate AP - Tri radio (802.11 b/g/n/ax 2×2 MU-MIMO, 802.11 a/n/ac/ax 2×2 MU-MIMO and 1× 802.11 a/b/g/n/ac Wave 2, 1×1), internal antennas, 4× 10/100/1000 RJ45 port (1× 802.3at PoE PD, 1× 802.3af PoE PSE, 2x Non-PoE Ports), 2 RJ-45 Ports (1x Pass-through in, 1x Pass-through out), BT / BLE, 1x RS-232 RJ45 Serial Port. Wall plate mounting kit included. For power order 802.3at PoE injector GPI-130. Optional Accessory AC power adapter SP-FAP23J-PAX-10; Desktop stand FAP-MNT-WJ-20.
	FC-10-P23JF-247-02-DD	FortiCare Premium Support.
	FC-10-P23JF-284-02-DD	FortiCare Elite Support.
	FC-10-P23JF-595-02-DD	FortiSASE subscription for cloud managed FortiAP with bandwidth included.
	FC-10-P23JF-314-02-DD	Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.
UTP Services (G Series)	FC-10-APGIS-768-02-DD	FortiAP Series UTP Service FortiAP G/K Series FortiGuard Universal Threat Protection Subscription Service License for Application control and Web filtering modules. Applicable to FortiGate or FortiCloud managed G-Series and K Series models FortiAP 241/243K, FortiAP 441/443K, FAP-23JK FortiAP product family.
FortiEdge Cloud	FC-10-90AP1-639-02-DD	FortiEdge Cloud FortiAP Management License Includes: Full suite of FortiAP Management Features, 1 year Log Retention, FortiCare Premium (Note, FortiCare only applicable when used with FortiEdge Cloud).
Gigabit PoE Injector	GPI-115	1-port Gigabit PoE power injector, 802.3af 15.4 W, 10/100/1000.
	GPI-130	1-port Gigabit PoE power injector, 802.3at up to 30 W.
	GPI-145	1-port Multi-Gigabit PoE power injector, 802.3bt up to 60W.
Power Adapter	SP-FAP400-PA	AC power adapter 12v, 3.0A - 36W for FAP-431G, and FAP-831F.
	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-431G, 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.
	FAP-DESK-JK-10pk	Desktop stand for FAP23JK/FAP23JF wall jack style APs. Converts wall mounting hardware included with unit to desktop mounting - 10 pack.

Notes.

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

2. [RC](regional code): A, B, C, D, E, EO, F, I, J, K, N, P, S, T, U, V, W or Y, applies to all AP models based upon country of deployment.
   Work with your local supplier for the correct model in your regulatory domain.

3. Access Points mentioned in this datasheet are covered by a Limited Lifetime Hardware Warranty.
   Terms and conditions can be found in the EULA at https://www.fortinet.com/content/dam/fortinet/assets/legal/EULA.pdf

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

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

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