

# FortiAP™ Series



## FortiGate, FortiManagement 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 FortiManagement 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-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    | —               |
| FAP-221K  | Wi-Fi 7          | 2×2 Indoor dual-radio                                             | 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    | —               |

## 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**



**4x4 MU-MIMO | Up to 1.148 Gbps + 8.648 Gbps + 11.53 Gbps**



FAP-441K



FAP-443K

# Specifications

| FortiAP 441K                               |                                                                                                                                                                                                                                                                                                                                        | FortiAP 443K                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hardware</b>                            |                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                        |
| <b>Type</b>                                | Indoor AP                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                        |
| <b>Number of Radios</b>                    | 4 + 1 BLE                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                        |
| <b>Number of Antennas</b>                  | 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<br>Internal: x1 2.4GHz BLE/ ZigBee + x1 GPS                                                                                                                                                                                                                          |
| <b>Antenna Type Support</b>                | RP-SMA (10 total):<br>Dual Band Antenna (4)<br>6GHz Antenna (4)<br>Triband Antenna (2)                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                        |
| <b>Antenna Type and Peak Gain</b>          | Omni Directional Antenna<br><br>Dual band antenna:<br>4.0 dBi for 2.4GHz<br>5.6 dBi for 5 GHz<br><br>6GHz antenna:<br>5.4dBi for 6GHz band<br><br>Tri-band antenna:<br>4.0 dBi for 2.4 GHz,<br>6.0 dBi for 5 GHz and<br>5.7 dBi for 6 GHz band<br><br>BLE antenna:<br>5.1 dBi for 2.4GHz<br><br>GPS active antenna:<br>2.2 dBi antenna | Omni Directional Antenna<br><br>Dual band antenna:<br>5.0 dBi for 2.4GHz<br>5.0 dBi for 5 GHz<br><br>6GHz antenna:<br>5.8dBi for 6GHz band<br><br>Tri-band antenna:<br>5.0 dBi for 2.4 GHz,<br>5.0 dBi for 5 GHz and<br>4.0 dBi for 6 GHz band<br><br>BLE antenna:<br>5.1 dBi for 2.4GHz<br><br>GPS active antenna:<br>2.2 dBi antenna |
| <b>Frequency Bands (GHz)</b>               | . ISM    2.4-2.484 GHz<br>. U-NII-1    5.15-5.25 GHz<br>. U-NII-2A    5.25-5.35 GHz<br>. U-NII-2C    5.47-5.725 GHz<br>. U-NII-3    5.725-5.85 GHz                                                                                                                                                                                     | . U-NII-4    5.850-5.925 GHz<br>. U-NII-5    5.925-6.425 GHz<br>. U-NII-6    6.425-6.525 GHz<br>. U-NII-7    6.525-6.875 GHz<br>. U-NII-8    6.875-7.125 GHz                                                                                                                                                                           |
| <b>Radio 1 Capabilities</b>                | Frequency band: 2.4GHz<br>Channel width: 20/40MHz<br>Modulation: BPSK, QPSK, 64/256/1024 QAM<br>MIMO Chains: 4x4 Service                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                        |
| <b>Radio 2 Capabilities</b>                | Frequency band: 5.0GHz UNII-1 to UNII-4<br>Channel width: 20/40/80/160/240MHz<br>Modulation: BPSK, QPSK, 64/256/1024/4096 QAM<br>MIMO Chains: 4x4 Service                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                        |
| <b>Radio 3 Capabilities</b>                | Frequency band: 6.0GHz UNII-5 to UNII-8<br>Channel width: 20/40/80/160/320MHz<br>Modulation: BPSK, QPSK, 64/256/1024/4096 QAM<br>MIMO Chains: 4x4 Service                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                        |
| <b>Radio 4 Capabilities</b>                | Frequency band: 2.4/5.0/6.0GHz<br>Channel width: 20/40/80/160MHz<br>Modulation: BPSK, QPSK, 64/256/1024 QAM<br>MIMO Chains: 2x2 Scanning                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                        |
| <b>Maximum Data Rate</b>                   | 2.4GHz band: up to 1.148 Gbps<br>5.0GHz band: up to 8.648 Gbps<br>6.0GHz band: up to 11.530 Gbps                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                        |
| <b>Bluetooth Low Energy (BT/BLE) Radio</b> | Bluetooth scanning and iBeacon advertisement<br>@10 dBm max TX power                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                        |
| <b>Trusted Platform Module (TPM)</b>       | Yes                                                                                                                                                                                                                                                                                                                                    | Yes                                                                                                                                                                                                                                                                                                                                    |
| <b>GNSS</b>                                | . Supported Bands<br>. Default constallations<br>. Number of Tracking Channels<br>. Number of Concurrent GNSS<br>. SBAS<br>. Sensitivity (@ Default Constallations)                                                                                                                                                                    | GPS L1 C/A, QZSS L1 C/A:<br>1575.42 MHz,<br>GLONASS L1:<br>1598.0625-1605.375 MHz<br>BDS B1I : 1561.098 MHz,<br>Galileo E1: 1575.42 MHz<br>GPS + GLONASS + BDS + Galileo + QZSS<br>47<br>5<br>WAAS, EGNOS, MSAS and GAGAN<br>-147dBm                                                                                                   |
| <b>Interfaces</b>                          | x2 100M/1000M/2.5G/5.0G/10G Multigigabit Ethernet (RJ45)<br>x1 Type 3.0 USB at 4.5W, x1 RS-232 RJ45 Serial Port                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                        |
| <b>Power over Ethernet (PoE)</b>           | LAN1:802.3bt, LAN2:802.3bt                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                        |
| <b>Hit-less PoE Failover</b>               | 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)*<br>5.0GHz band: 27.8 dBm / 602 mW (4 chains combined)*<br>6.0GHz band: 23 dBm / 200 mW (4 chains combined @ 160MHz BW)*                                                                                            |                                                         |
| Kensington Lock                  | Yes                                                                                                                                                                                                                                                                  |                                                         |
| IEEE Standards                   | 802.11a, 802.11b, 802.11be, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11k, 802.11n, 802.11r, 802.11v, 802.11ac, 802.11ax, 802.11mc, 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                                                                                                                                                                                                                                       |                                                         |
| IPv6 Support                     | Yes                                                                                                                                                                                                                                                                  | —                                                       |
| 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<br><br>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.



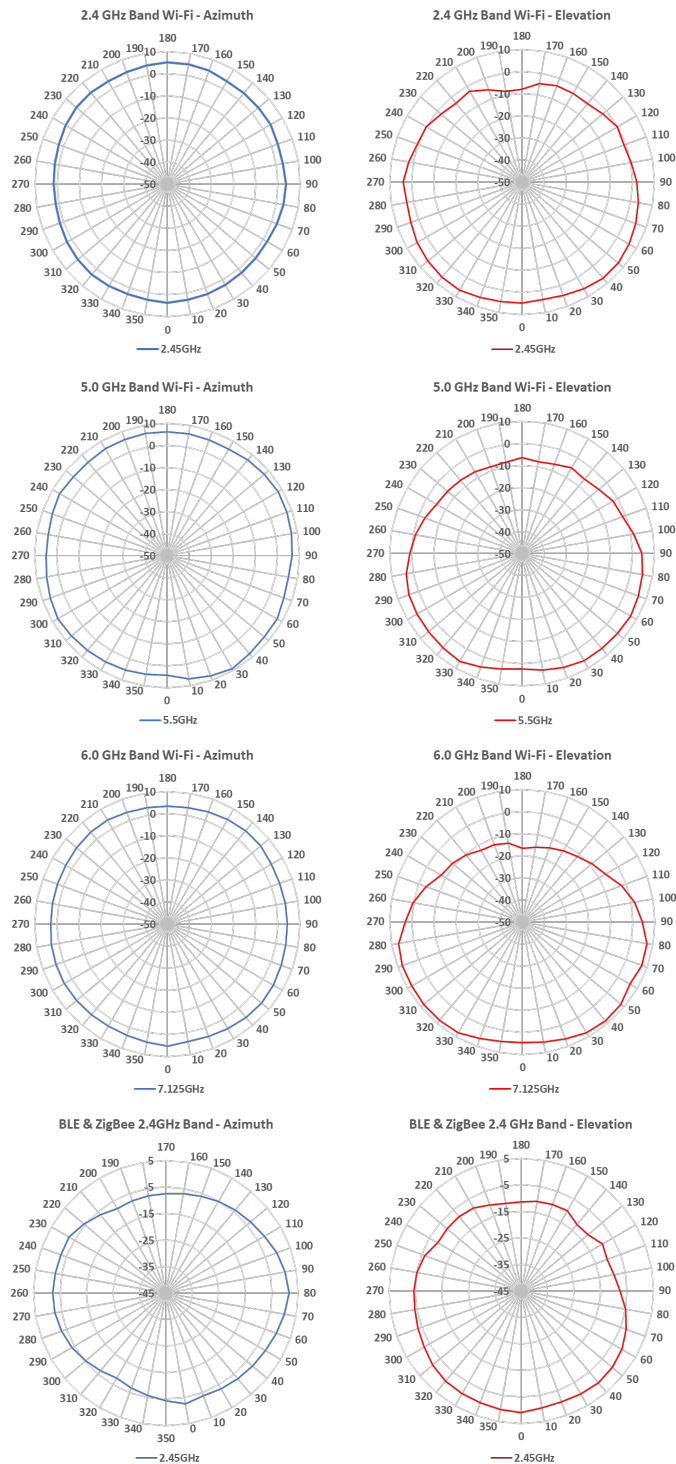
RF Rx/Tx Performance Table

| FORTIAP 441K / 443K |                      |                      |                                |                      |                                |                      |
|---------------------|----------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|
| 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              | 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                  |

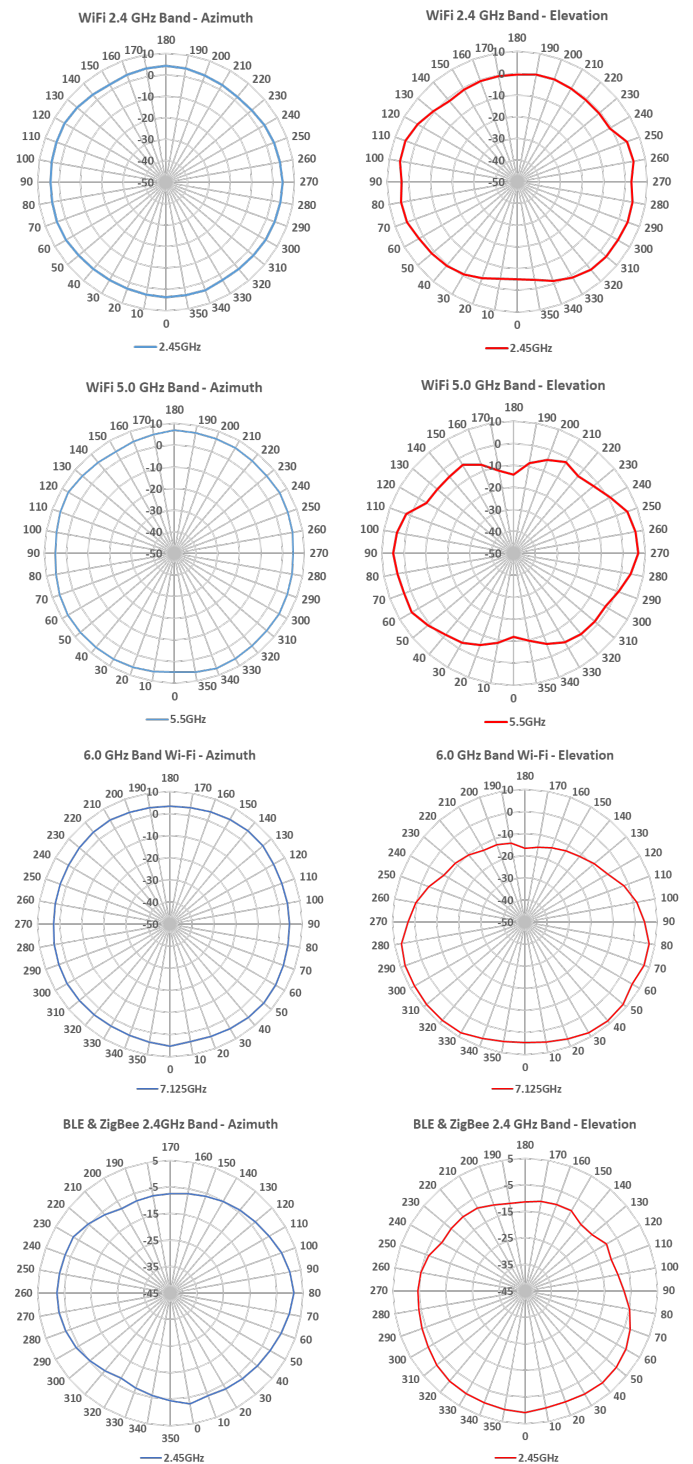


## Antenna Radiation Patterns

FAP-441K



FAP-443K



## 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**



**2x2 MU-MIMO | Up to 688 Mbps + 4.3 Gbps + 5.76 Gbps**



FAP-241K



FAP-243K

# Specifications

|                                     | FortiAP 241K                                                                                                                                                                                                                                                                                   | FortiAP 243K                                                                                                                                                                                                                                                                                                          |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hardware</b>                     |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                       |
| Type                                | Indoor AP                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                       |
| Number of Radios                    | 4-Radio 2.4GHz + 5.0GHz + 6GHz + Tri-band scan                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                       |
| Number of Antennas                  | 6 Internal Wi-Fi antennas:<br>x2 Dual band + x2 6GHz band + x2 Tri-band Scanning<br>1 Internal 2.4GHz band BLE/ZigBee antenna                                                                                                                                                                  | 6 External RPSMA antenna connector:<br>x2 Dual band + x2 6GHz band + x2 Tri-band Scanning<br>1 Internal 2.4GHz band BLE/ZigBee antenna                                                                                                                                                                                |
| Antenna Type Support                | RP-SMA (6 total):<br>Dual Band Antenna (2),<br>6Ghz Antenna (2),<br>Triband Antenna (2)                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                       |
| Antenna Type and Peak Gain          | PIFA 2.4/5GHz dual band antenna:<br>4.7 dBi for 2.4GHz,<br>5.4 dBi for 5 GHz<br><br>Alford loop 6GHz antenna:<br>5.7 dBi for 6GHz band<br><br>PIFA Tri-band antenna:<br>5.0 dBi for 2.4GHz,<br>5.7 dBi for 5.0GHz, and<br>5.35 dBi for 6GHz band<br><br>PFA BLE antenna:<br>4.6 dBi for 2.4GHz | Omni Directional Dual band antenna:<br>4.5 dBi for 2.4GHz,<br>5.7 dBi for 5 GHz<br><br>Omni Directional 6GHz band antenna:<br>5.25 dBi for 6GHz band<br><br>Tr-band Omni directional antenna:<br>3.3 dBi for 2.4GHz,<br>5.6 dBi for 5GHz, and<br>5.3 dBi for 6GHz band<br><br>PIFA BLE antenna:<br>5.2 dBi for 2.4GHz |
| Frequency Bands (GHz)               | <b>2.4GHz Band:</b><br>ISM 2.4-2.484GHz<br><br><b>5.0GHz Band:</b><br>UNII-1 5.15-5.25GHz<br>UNII-2A 5.25-5.35GHz<br>UNII-2C 5.47-5.73GHz<br>UNII-3 5.725-5.85GHz<br>UNII-4 5.85-6.895GHz                                                                                                      | <b>6GHz Band:</b><br>UNII-5 5.925-6.425GHz<br>UNII-6 6.425-6.525GHz<br>UNII-7 6.525-6.875GHz<br>UNII-8 6.875-7.125GHz                                                                                                                                                                                                 |
| Radio 1 Capabilities                | Frequency band: 2.4GHz<br>Channel width: 20/40MHz<br>Modulation: BPSK, QPSK, 64/256/1024/4096 QAM<br>MIMO Chains: 2x2 Service                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                       |
| Radio 2 Capabilities                | Frequency band: 5.0GHz UNII-1 to UNII-4<br>Channel width: 20/40/80/160/240MHz<br>Modulation: BPSK, QPSK, 64/256/1024/4096 QAM<br>MIMO Chains: 2x2 Service                                                                                                                                      |                                                                                                                                                                                                                                                                                                                       |
| Radio 3 Capabilities                | Frequency band: 6.0GHz UNII-5 to UNII-8<br>Channel width: 20/40/80/160/320MHz<br>Modulation: BPSK, QPSK, 64/256/1024/4096 QAM<br>MIMO Chains: 2x2 Service                                                                                                                                      |                                                                                                                                                                                                                                                                                                                       |
| Radio 4 Capabilities                | Frequency band: 2.4/5.0/6.0GHz<br>Channel width: 20/40/80/160MHz<br>Modulation: BPSK, QPSK, 64/256/1024 QAM<br>MIMO Chains: 2x2 Scanning                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                       |
| Maximum Data Rate                   | 2.4GHz band: up to 688 Mbps<br>5.0GHz band: up to 4.324 Gbps<br>6.0GHz band: up to 5.765 Gbps                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                       |
| Bluetooth Low Energy (BT/BLE) Radio | Bluetooth scanning and iBeacon advertisement<br>@10 dBm max TX power                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                       |
| Trusted Platform Module (TPM)       | Yes                                                                                                                                                                                                                                                                                            | Yes                                                                                                                                                                                                                                                                                                                   |
| <b>GNSS</b>                         |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                       |
| Interfaces                          | x1 100M/1000M/2.5G/5.0G/10G Multigigabit Ethernet (RJ45)<br>x1 10M/100M/1000M/Ethernet (RJ45)<br>x1 Type 2.0 USB at 2.5W<br>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<br>(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)*<br>5.0GHz band: 26 dBm/400 mW (2 chains combined)*<br>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) :<br>R1/R2/R3 disabled, only scan supported, No USB.<br><br>802.3at (High mode) :<br>R1/R2 Full power + R3 Low 15dBm Tx-power + scan supported, USB Supported.<br><br>802.3bt (Full mode) :<br>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)/<br>-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

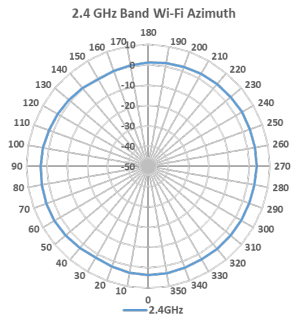
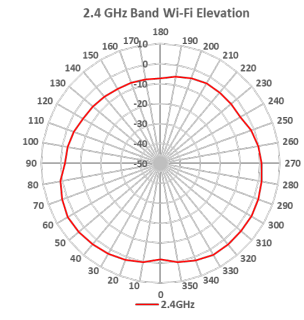
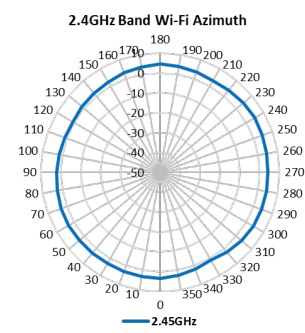
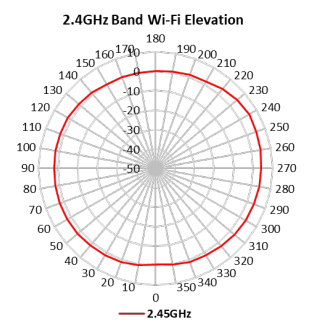
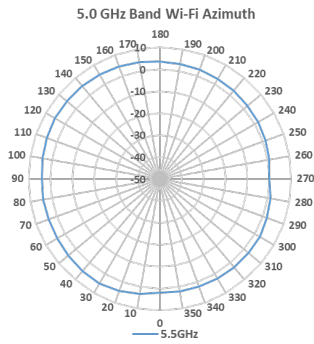
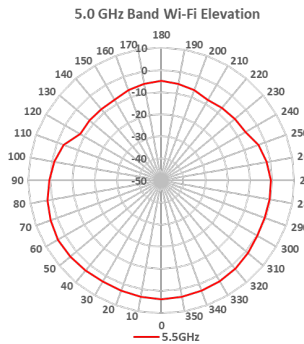
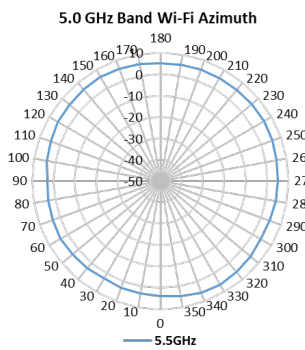
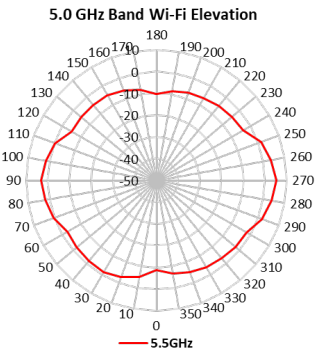
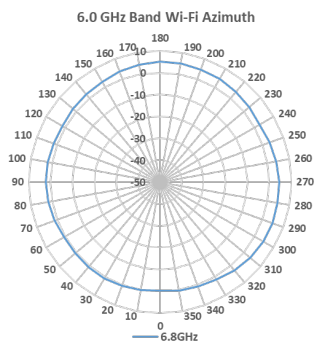
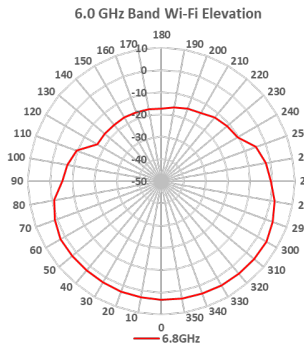
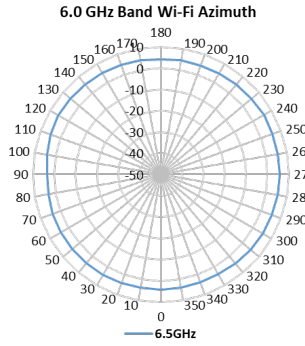
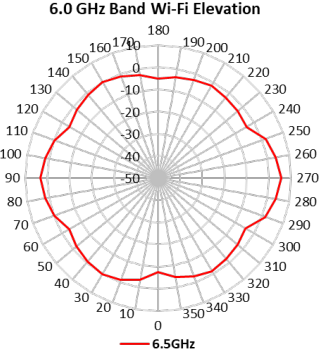
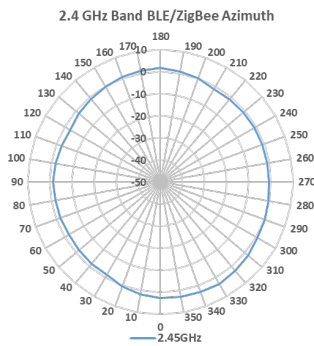
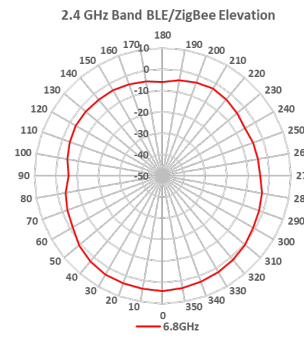
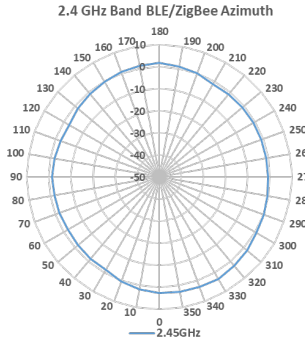
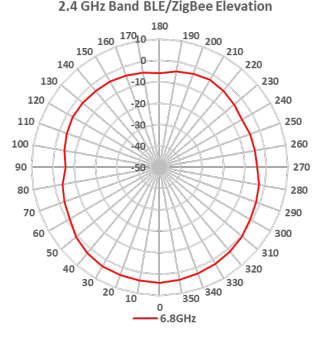
| FORTIAP 241K / 243K |                                |                      |                      |                      |                      |                      |
|---------------------|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 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              | 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



2x2 MU-MIMO | Up to 688 Mbps + 2.88 Gbps + 5.76 Gbps data rate



FAP-231K

# Specifications

| FortiAP 231K                        |                                                                                                                                                                                                                                                                                                         |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hardware</b>                     |                                                                                                                                                                                                                                                                                                         |
| 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/<br>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,<br>5.0 dBi for 5 GHz<br><br>PIFA 6GHz antenna: 5.1 dBi for 6GHz band<br><br>PFA BLE antenna: 3.4 dBi for 2.4GHz                                                                                                                                    |
| Frequency Bands (GHz)               | 2.4GHz Band:<br>ISM 2.4-2.484GHz<br><br>5.0GHz Band:<br>UNII-1 5.15-5.25GHz,<br>UNII-2A 5.25-5.35GHz,<br>UNII-2C 5.47-5.73GHz,<br>UNII-3 5.725-5.85GHz,<br>UNII-4 5.85-5.895GHz<br><br>6.0GHz Band:<br>UNII-5 5.925-6.425GHz,<br>UNII-6 6.425-6.525GHz,<br>UNII-7 6.525-6.875,<br>UNII-8 6.875-7.125GHz |
| Radio 1 Capabilities                | Frequency band: 2.4GHz<br>Channel width: 20/40MHz<br>Modulation: BPSK, QPSK, 64/256/1024/4096 QAM<br>MIMO Chains: 2x2 Service                                                                                                                                                                           |
| Radio 2 Capabilities                | Frequency band: 5.0GHz UNII-1 to UNII-4<br>Channel width: 20/40/80/160MHz<br>Modulation: BPSK, QPSK, 16/64/256/1024/4096 QAM<br>MIMO Chains: 2x2 Service                                                                                                                                                |
| Radio 3 Capabilities                | Frequency band: 6.0GHz UNII-5 to UNII-8<br>Channel width: 20/40/80/160/320MHz<br>Modulation: BPSK, QPSK, 16/64/256/1024/4096 QAM<br>MIMO Chains: 2x2 Service                                                                                                                                            |
| Maximum Data Rate                   | 2.4GHz band: up to 688 Mbps<br>5.0GHz band: up to 2.882 Gbps<br>6.0GHz band: up to 5.765 Gbps                                                                                                                                                                                                           |
| Bluetooth Low Energy (BT/BLE) Radio | Bluetooth scanning and iBeacon advertisement<br>@10 dBm max TX power                                                                                                                                                                                                                                    |
| Trusted Platform Module (TPM)       | Yes                                                                                                                                                                                                                                                                                                     |
| GNSS                                | GPS L1 C/A: 1575.42 MHz,<br>GLONASS L1: 1598.0625-1605.375 MHz<br>BeiDou : 1561.098 MHz, Galileo E1: 1575.42 MHz                                                                                                                                                                                        |
| Interfaces                          | x1 100M/1000M/2.5G/5.0G Multigigabit Ethernet (RJ45)<br>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,<br>PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST,<br>EAP-TTLS/PAP                                                                                                                                                                                         |
| User/Device Authentication          | WPA™, WPA2™, and WPA3™ with 802.1x or Preshared key,<br>WEP, Web Captive Portal, MAC blacklist and whitelist                                                                                                                                                                                            |
| Maximum Tx Power (Conducted)        | 2.4GHz band: 26 dBm/400 mW (2 chains combined)*<br>5.0GHz band: 23 dBm/200 mW (2 chains combined)*<br>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,<br>802.11i, 802.11j, 802.11k, 802.11n, 802.11r, 802.11v,<br>802.11ac, 802.11ax, 802.11mc, 802.1X, 802.3af, 802.3at,<br>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 256 clients per radio (Radio1, Radio2, and Radio3)                                                                                                                                                                                                                                                |
| Cellular Co-existence               | Yes                                                                                                                                                                                                                                                                                                     |

| FortiAP 231K                            |                                                                                                       |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------|
| LED Off Mode                            | Yes                                                                                                   |
| <b>Advanced 802.11 Features</b>         |                                                                                                       |
| OFDMA                                   | Yes                                                                                                   |
| Spatial Reuse (BSS Coloring)            | Yes                                                                                                   |
| UL MU-MIMO                              | Yes                                                                                                   |
| DL- MU-MIMO                             | Yes                                                                                                   |
| Enhanced Target Wake Time (TWT)         | Yes                                                                                                   |
| ZeroWait DFS                            | No                                                                                                    |
| <b>Onboard Security Functions</b>       |                                                                                                       |
| UTP Capable                             | No                                                                                                    |
| <b>Wireless Monitoring Capabilities</b> |                                                                                                       |
| Rogue Scan radio modes                  | Background, Dedicated                                                                                 |
| WIPS / WIDS radio modes                 | Background, Dedicated (Recommended)                                                                   |
| Packet Sniffer Mode                     | Yes                                                                                                   |
| Spectrum Analyzer                       | Yes                                                                                                   |
| <b>Dimensions</b>                       |                                                                                                       |
| 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                                                   |
| <b>Environment</b>                      |                                                                                                       |
| 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,<br>2.5A, 30 Watt DC power supply SP-FAP200-PA-XX |
| Power Consumption (Max)                 | 15.2 W - PoE input<br>14.3 W - 12V DC power supply                                                    |
| PoE Mode                                | 1. 802.3at: Tx Power - Full, 2x2 MIMO<br>2. 802.3af : Tx Power- Full, 1x1 MIMO                        |
| Humidity                                | 5% to 90% non-condensing                                                                              |
| Operating/Storage Temp.                 | 32°F to 122°F (0°C to 50°C) /<br>-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                                                                                                   |
| <b>Certifications</b>                   |                                                                                                       |
| Wi-Fi7 Certified                        | Certified                                                                                             |
| DFS                                     | Europe, FCC, Japan, Australia, N, Taiwan, S. Korea, India                                             |
| <b>Warranty</b>                         |                                                                                                       |
| 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

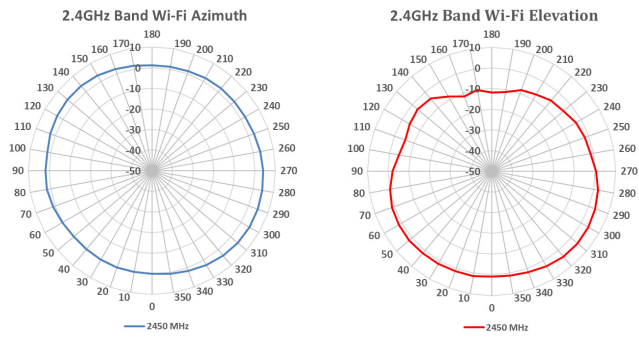
| FORTIAP 231K |                                |                      |                      |                      |                      |                      |
|--------------|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 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       | 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                  |



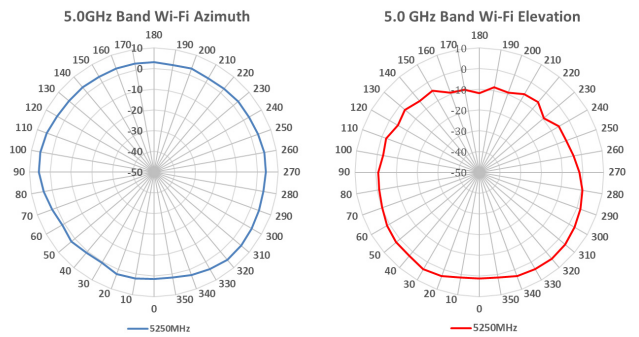
## Antenna Radiation Patterns

### FAP-231K

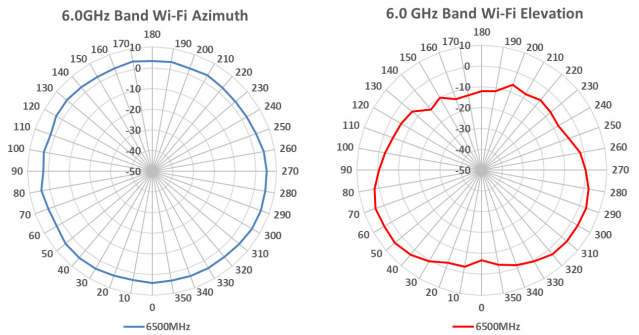
#### Wi-Fi 2.4GHz Plot



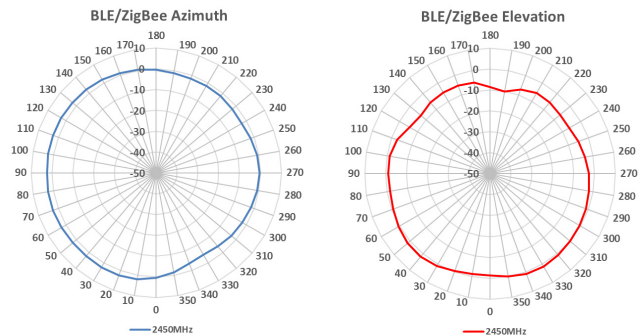
#### Wi-Fi 5.0GHz Plot



#### Wi-Fi 6.0GHz Plot



#### BLE/ZigBee Plot



## Highlights

### FortiAP 221K

The FortiAP-221K is a retail grade indoor Wi-Fi 7 dual-band access point designed for enterprise environments. It features two radios and two spatial streams (2x2) across the 2.4 GHz and 5 GHz bands, delivering reliable wireless connectivity for modern workplaces.

Integrated BLE location services and Zigbee support for IoT applications extend visibility beyond traditional endpoints, while a 2.5 Gigabit Ethernet uplink supports higher throughput requirements. The AP also enables continuous 24x7 background scanning across all bands, maintaining security monitoring without interrupting client connectivity.



Wi-Fi 7 | Dual-Radio 2.4 GHz + 5 GHz | 2 Internal Antennas



2x2 MU-MIMO | Up to 688 Mbps + 2.88 Gbps data rate



# Specifications

| FortiAP 221K                  |                                                                                                                                                                                                                          |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hardware</b>               |                                                                                                                                                                                                                          |
| Hardware Type                 | Indoor AP                                                                                                                                                                                                                |
| Number of Radios              | 2 Wi-Fi + 1 BLE                                                                                                                                                                                                          |
| Number of Antennas            | x2 Dual band Wi-Fi + x1 BLE/ZigBee antenna                                                                                                                                                                               |
| Antenna Type Support          | Internal                                                                                                                                                                                                                 |
| Antenna Type and Peak Gain    | PIFA 2.4/5GHz dual band antenna: 5.7 dBi for 2.4GHz, 5.9 dBi for 5 GHz, PFA BLE antenna: 3.5 dBi for 2.4GHz                                                                                                              |
| Frequency Bands (GHz)*        | 2.4GHz Band: ISM 2.4-2.484GHz<br>5.0GHz Band:<br>UNII-1 5.15-5.25GHz, UNII-2A 5.25-5.35GHz,<br>UNII-2C 5.47-5.73GHz, UNII-3 5.725-5.85GHz,<br>UNII-4 5.85-5.895GHz                                                       |
| Radio 1 Capabilities          | Frequency band: 2.4GHz Channel width: 20/40MHz<br>Modulation: BPSK, QPSK, 64/256/1024/4096 QAM<br>MIMO Chains: 2x2 Service                                                                                               |
| Radio 2 Capabilities          | Frequency band: 5.0GHz UNII-1 to UNII-4<br>Channel width: 20/40/80/160MHz<br>Modulation: BPSK, QPSK, 16/64/256/1024/4096 QAM<br>MIMO Chains: 2x2 Service                                                                 |
| Maximum Data Rate             | 2.4GHz band: up to 688 Mbps<br>5.0GHz band: up to 2.882 Gbps                                                                                                                                                             |
| Bluetooth Low Energy Radio    | Bluetooth scanning and iBeacon advertisement<br>@10 dBm max TX power                                                                                                                                                     |
| Trusted Platform Module (TPM) | No                                                                                                                                                                                                                       |
| GNSS                          | No                                                                                                                                                                                                                       |
| Interfaces                    | x1 100M/1000M/2.5G Multigigabit Ethernet (RJ45)<br>x1 RS-232 RJ45 Serial Port                                                                                                                                            |
| Power over Ethernet (PoE)     | 802.3 at                                                                                                                                                                                                                 |
| Hit-less PoE Failover         | N/A                                                                                                                                                                                                                      |
| Simultaneous SSIDs            | Up to 8 per client serving radio<br>(7 if background scanning is enabled)                                                                                                                                                |
| EAP Type(s)                   | EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2,<br>PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST,<br>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)*<br>5.0GHz band: 23 dBm/200 mW (2 chains combined)*                                                                                                                       |
| 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                                                                                                                                                                                           |
| IPv6 Support                  | Yes                                                                                                                                                                                                                      |
| Per Radio Client Capacity     | Up to 128 clients per radio (Radio1 and Radio2)                                                                                                                                                                          |
| Cellular Co-existence         | No                                                                                                                                                                                                                       |
| LED Off Mode                  | Yes                                                                                                                                                                                                                      |

| FortiAP 221K                            |                                                                     |
|-----------------------------------------|---------------------------------------------------------------------|
| <b>Advanced 802.11 Features</b>         |                                                                     |
| OFDMA                                   | Yes                                                                 |
| Spatial Reuse (BSS Coloring)            | Yes                                                                 |
| UL MU-MIMO                              | Yes                                                                 |
| DL-MU-MIMO                              | Yes                                                                 |
| Enhanced Target Wake Time (TWT)         | Yes                                                                 |
| ZeroWait DFS                            | No                                                                  |
| <b>Onboard Security Functions</b>       |                                                                     |
| UTP Capable                             | No                                                                  |
| UTP Features                            | N/A                                                                 |
| <b>Wireless Monitoring Capabilities</b> |                                                                     |
| Rogue Scan radio modes                  | Background, Dedicated                                               |
| WIPS / WIDS radio modes                 | Background, Dedicated (recommended)                                 |
| Packet Sniffer Mode                     | Yes                                                                 |
| Spectrum Analyzer                       | Yes                                                                 |
| <b>Dimensions</b>                       |                                                                     |
| Length x Width x Height                 | 6.02 × 6.02 × 1.97 inches (153 × 153 × 50 mm)                       |
| Weight                                  | 0.85 lbs (0.385 kg)                                                 |
| Package (shipping) Weight               | 1.5 lbs (0.68 kg)                                                   |
| <b>Accessories</b>                      |                                                                     |
| Mounting Options                        | Ceiling, T-Rail, and Wall                                           |
| Included Accessories                    | Standard Mounting Kit for Ceiling, T-Rail, and Wall                 |
| <b>Environment</b>                      |                                                                     |
| <b>CPU/RAM</b>                          |                                                                     |
| Power Supply                            | 802.3at PoE: GPI-130 or 12V, 1.5A, 18 Watt DC PA or SP-FAP200-PA-XX |
| Power Consumption (Maximum)             | 16.3 Watts                                                          |
| PoE Mode                                | 802.3at: Tx Power - Full, 2x2 MIMO                                  |
| 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               | N/A                                                                 |
| <b>Certifications</b>                   |                                                                     |
| WiFi 7 Certified                        | Certified                                                           |
| DFS                                     | FCC, IC                                                             |
| <b>Warranty</b>                         |                                                                     |
| 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

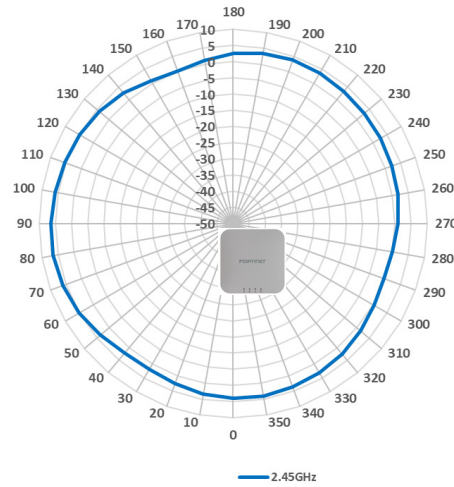
| FortiAP 221K                   |                          |                      |                          |                      |
|--------------------------------|--------------------------|----------------------|--------------------------|----------------------|
| Data rate                      | Radio 1<br>2.4 GHz Band  |                      | Radio 2<br>5 GHz Band    |                      |
|                                | Tx Power per chain (dBm) | Rx Sensitivity (dBm) | Tx Power per Chain (dBm) | Rx Sensitivity (dBm) |
| 802.11b                        |                          |                      |                          |                      |
| 1 Mbps                         | 24                       | -98                  |                          |                      |
| 11 Mbps                        | 23                       | -91                  |                          |                      |
| 802.11g/a                      |                          |                      |                          |                      |
|                                | 802.11g                  |                      | 802.11a                  |                      |
| 6 Mbps                         | 23                       | -96                  | 22                       | -96                  |
| 54 Mbps                        | 22                       | -78                  | 20                       | -78                  |
| 802.11n HT20                   |                          |                      |                          |                      |
| MCS0                           | 23                       | -96                  | 22                       | -98                  |
| MCS7                           | 20                       | -78                  | 19                       | -78                  |
| 802.11n HT40                   |                          |                      |                          |                      |
| MCS0                           | 22                       | -94                  | 22                       | -92                  |
| MCS7                           | 19                       | -75                  | 19                       | -73                  |
| 802.11ac VHT20                 |                          |                      |                          |                      |
| MCS0                           | 23                       | -98                  | 22                       | -98                  |
| MCS9                           | 19                       | -74                  | 19                       | -78                  |
| 802.11ac VHT40                 |                          |                      |                          |                      |
| MCS0                           | 22                       | -94                  | 22                       | -92                  |
| MCS9                           | 18                       | -69                  | 18                       | -73                  |
| 802.11ac VHT80                 |                          |                      |                          |                      |
| MCS0                           |                          |                      | 22                       | -91                  |
| MCS9                           |                          |                      | 18                       | -65                  |
| 802.11ax HE20 / 802.11be EHT20 |                          |                      |                          |                      |
| MCS0                           | 23                       | -96                  | 22                       | -97                  |
| MCS11                          | 18                       | -67                  | 17                       | -70                  |
| 802.11ax HE40 / 802.11be EHT40 |                          |                      |                          |                      |
| MCS0                           | 22                       | -94                  | 20                       | -94                  |
| MCS11                          | 18                       | -64                  | 17                       | -70                  |
| 802.11ax HE80 / 802.11be EHT80 |                          |                      |                          |                      |
| MCS0                           |                          |                      | 20                       | -90                  |
| MCS13                          |                          |                      | 17                       | -56                  |
| 802.11be EHT160                |                          |                      |                          |                      |
| MCS0                           |                          |                      | 18                       | -88                  |
| MCS13                          |                          |                      | 16                       | -55                  |



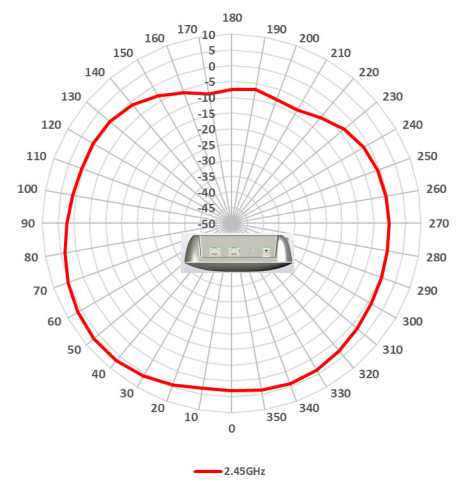
## Antenna Radiation Patterns

## FAP-221K

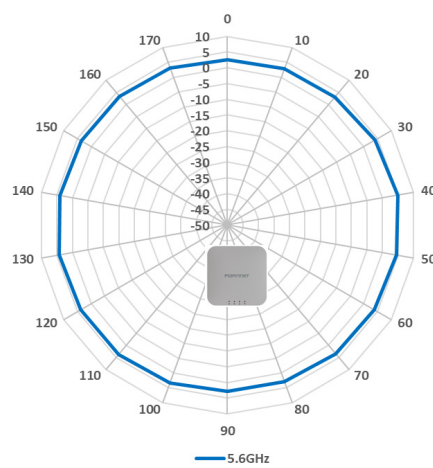
2.4GHz Band- Wi-Fi Aximuth



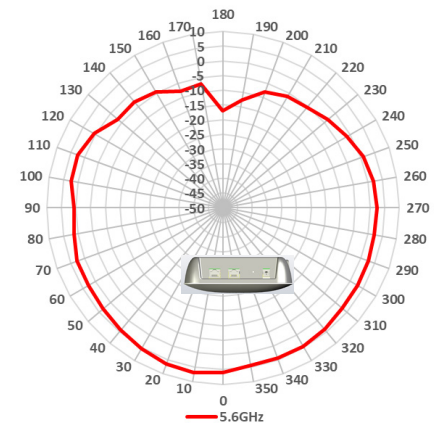
2.4GHz Band - Wi-Fi Elevation



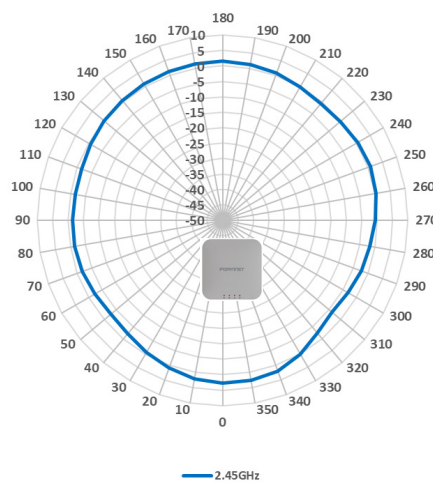
5GHz Band - Wi-Fi Azimuth



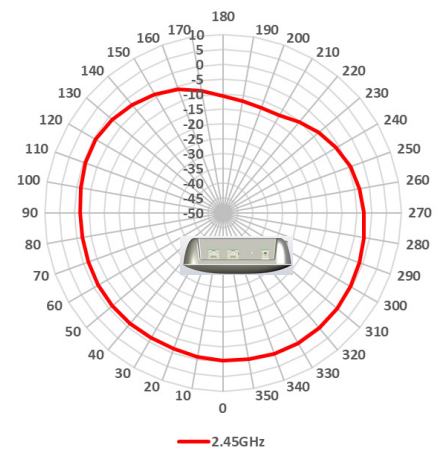
5GHz Band - Wi-Fi Elevation



BLE/ZigBee Azimuth



BLE/ZigBee Elevation



## 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



2x2 MU-MIMO | Up to 688 Mbps + 2.88 Gbps + 5.76 Gbps data rate



# Specifications

| FortiAP 23JK                        |                                                                                                                                                                                                                                                                                                         |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hardware</b>                     |                                                                                                                                                                                                                                                                                                         |
| 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<br>PCB 6GHz antenna: 3.6 dBi for 6GHz band<br>PCB BLE antenna: 3.7 dBi for 2.4GHz                                                                                                                                                 |
| Frequency Bands (GHz)               | 2.4GHz Band:<br>ISM 2.4-2.484GHz<br><br>5.0GHz Band:<br>UNII-1 5.15-5.25GHz,<br>UNII-2A 5.25-5.35GHz,<br>UNII-2C 5.47-5.73GHz,<br>UNII-3 5.725-5.85GHz,<br>UNII-4 5.85-5.895GHz<br><br>6.0GHz Band:<br>UNII-5 5.925-6.425GHz,<br>UNII-6 6.425-6.525GHz,<br>UNII-7 6.525-6.875,<br>UNII-8 6.875-7.125GHz |
| Radio 1 Capabilities                | Frequency band: 2.4GHz<br>Channel width: 20/40MHz<br>Modulation: BPSK, QPSK, 64/256/1024/4096 QAM<br>MIMO Chains: 2x2 Service                                                                                                                                                                           |
| Radio 2 Capabilities                | Frequency band: 5.0GHz UNII-1 to UNII-4<br>Channel width: 20/40/80/160MHz<br>Modulation: BPSK, QPSK, 16/64/256/1024/4096 QAM<br>MIMO Chains: 2x2 Service                                                                                                                                                |
| Radio 3 Capabilities                | Frequency band: 6.0GHz UNII-5 to UNII-8<br>Channel width: 20/40/80/160/320MHz<br>Modulation: BPSK, QPSK, 16/64/256/1024/4096 QAM<br>MIMO Chains: 2x2 Service                                                                                                                                            |
| Maximum Data Rate                   | 2.4GHz band: up to 688 Mbps<br>5.0GHz band: up to 2.882 Gbps<br>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                                | N/A                                                                                                                                                                                                                                                                                                     |
| Interfaces                          | WAN1: x1 100M/1000M/2.5G/5.0G/10G Multigigabit Ethernet (RJ45), 802.3bt PoE(PD)<br><br>LAN ports: x3 10M/100M/1000M Gigabit Ethernet (RJ45), LAN3 802.3af PoE (PSE)<br><br>RJ-45 Ports (1xPass-through in, 1xPass-through out)<br>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)*<br>5.0GHz band: 22 dBm/158 mW (2 chains combined)*<br>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 256 clients per radio (Radio1, Radio2, and Radio3)                                                                                                                                                                          |
| Cellular Co-existence                   | Yes                                                                                                                                                                                                                               |
| LED Off Mode                            | Yes                                                                                                                                                                                                                               |
| <b>Advanced 802.11 Features</b>         |                                                                                                                                                                                                                                   |
| OFDMA                                   | Yes                                                                                                                                                                                                                               |
| Spatial Reuse (BSS Coloring)            | Yes                                                                                                                                                                                                                               |
| UL MU-MIMO                              | Yes                                                                                                                                                                                                                               |
| DL- MU-MIMO                             | Yes                                                                                                                                                                                                                               |
| Enhanced Target Wake Time (TWT)         | Yes                                                                                                                                                                                                                               |
| ZeroWait DFS                            | No                                                                                                                                                                                                                                |
| <b>Onboard Security Functions</b>       |                                                                                                                                                                                                                                   |
| UTP Capable                             | Yes                                                                                                                                                                                                                               |
| UTP Features                            | Application Control, Web Filtering                                                                                                                                                                                                |
| <b>Wireless Monitoring Capabilities</b> |                                                                                                                                                                                                                                   |
| Rogue Scan radio modes                  | Background, Dedicated                                                                                                                                                                                                             |
| WIPS / WIDS radio modes                 | Background, Dedicated (Recommended)                                                                                                                                                                                               |
| Packet Sniffer Mode                     | Yes                                                                                                                                                                                                                               |
| Spectrum Analyzer                       | Yes                                                                                                                                                                                                                               |
| <b>Dimensions</b>                       |                                                                                                                                                                                                                                   |
| 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                                                                                                                                                                                                        |
| <b>Environment</b>                      |                                                                                                                                                                                                                                   |
| CPU/RAM                                 | Quad-core ARM Cortex-A53 1.5GHz / 2 GB                                                                                                                                                                                            |
| Power Supply                            | 802.3bt PoE (GPI-145) or<br>802.3at PoE ( GPI-130) without PSE OUT<br>48V 1A DC power supply (SP-FAP23J-PA-10)                                                                                                                    |
| Power Consumption (Max)                 | 31 W - PoE input<br>19 W - PoE input (without PSE OUT)<br>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<br>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) /<br>-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                                                                                                                                                                                                                               |
| <b>Certifications</b>                   |                                                                                                                                                                                                                                   |
| Wi-Fi7 Certified                        | Certified                                                                                                                                                                                                                         |
| DFS                                     | Europe, FCC, Japan, Australia, N                                                                                                                                                                                                  |
| <b>Warranty</b>                         |                                                                                                                                                                                                                                   |
| 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

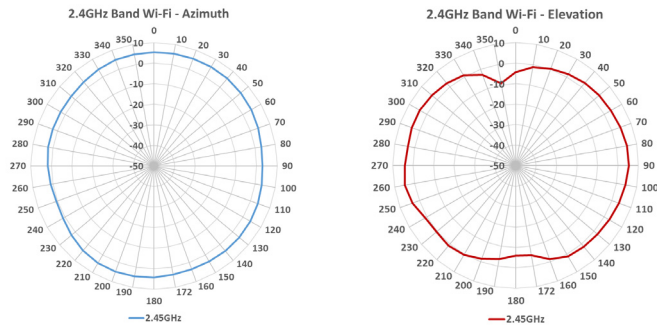
| FORTIAP 23JK |                                |                      |                      |                      |                      |                      |
|--------------|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 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                             | -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                  |



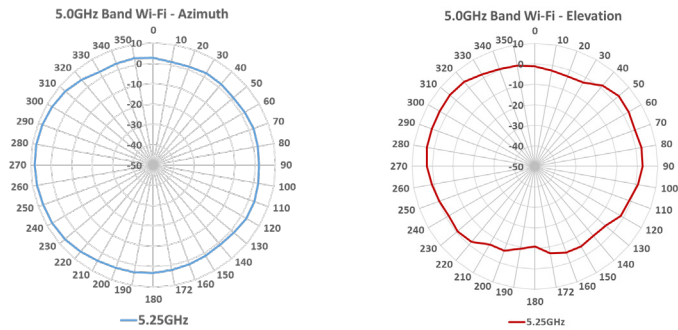
## Antenna Radiation Patterns

### FAP-23JK

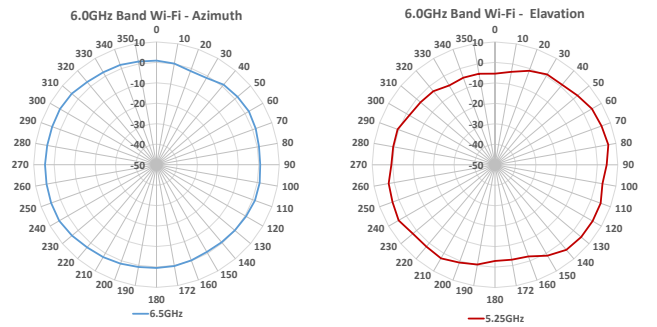
Wi-Fi 2.4GHz Plot



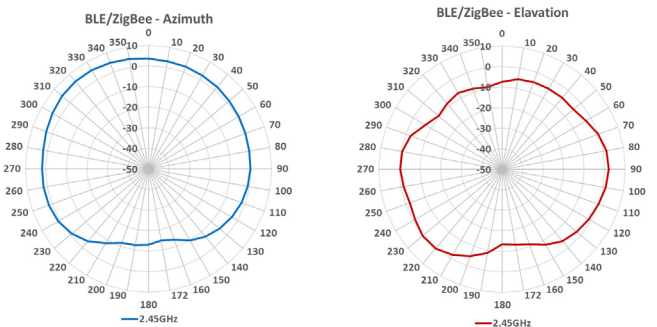
Wi-Fi 5.0GHz Plot



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.



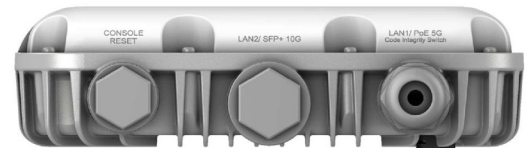
Four-Radio 2.4GHz + 5GHz + 6GHz + Scan | 6 Wi-Fi Internal Antennas + 1 BLE/Zigbee internal antenna



2x2 MU-MIMO | Up to 688 Mbps + 4.3 Gbps + 5.76 Gbps data rate



FAP-244K Front View



FAP-244K Side View

# Specifications

| FortiAP 244K                        |                                                                                                                                                                                                                                                                                          |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hardware</b>                     |                                                                                                                                                                                                                                                                                          |
| Type                                | Outdoor                                                                                                                                                                                                                                                                                  |
| Number of Radios                    | 4 + 1 BLE                                                                                                                                                                                                                                                                                |
| Number of Antennas                  | 7 Internal Antennas                                                                                                                                                                                                                                                                      |
| Antenna Type and Peak Gain          | Directional<br>Wi-Fi antennas<br>8.8 dBi for 2.4GHz,<br>9.4 dBi for 5 GHz, and<br>8.5 dBi for 6GHz band<br>BLE antenna<br>4.6 dBi for 2.4GHz band                                                                                                                                        |
| Frequency Bands (GHz)               | 2.4GHz Band: 2.4-2.484GHz<br><br>5GHz Band: U-NII-1 5.15-5.25GHz<br>U-NII-2A 5.25-5.35GHz<br>U-NII-2C 5.47-5.725GHz<br>U-NII-3 5.725-5.85GHz<br>U-NII-4 5.85-6.895GHz<br>6GHz Band: U-NII-5 5.925-6.425GHz<br>U-NII-6 6.425-6.525GHz<br>U-NII-7 6.525-6.875GHz<br>U-NII-8 6.875-7.125GHz |
| Radio 1 Capabilities                | Frequency band: 2.4GHz<br>Channel width: 20/40MHz<br>Modulation: BPSK, QPSK, 64 - 4096 QAM<br>MIMO Chains: 2x2 Service                                                                                                                                                                   |
| Radio 2 Capabilities                | Frequency band: 5.0GHz UNII-1 to UNII-4<br>Channel width: 20/40/80/160/240MHz<br>Modulation: BPSK, QPSK, 64 - 4096 QAM<br>MIMO Chains: 2x2 Service                                                                                                                                       |
| Radio 3 Capabilities                | Frequency band: 6.0GHz UNII-5 to UNII-8<br>Channel width: 20/40/80/160/320MHz<br>Modulation: BPSK, QPSK, 64 - 4096 QAM<br>MIMO Chains: 2x2 Service                                                                                                                                       |
| Maximum Data Rate                   | 2.4GHz band: up to 688 Mbps<br>5.0GHz band: up to 4.324 Gbps<br>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,<br>GLONASS L1: 1598.0625-1605.375 MHz<br>BeiDou : 1561.098 MHz, Galileo E1: 1575.42 MHz<br>Supports for multi-GNSS including QZSS and SBAS ranging<br>Indoor and outdoor multi-path detection and compensation                                                  |
| Interfaces                          | Port 1: 1x RJ-45 Multi-Gigabit Ethernet (100 M / 1 G / 2.5 G / 5 G), 802.3bt PoE-IN<br>Port 2: 1x Fiber optic SFP+ Cage, 1 G / 10 G link speed<br>Console: 1x 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)<br>2.4GHz band: 25 dB/316 mow<br>5.0GHz band: 26 dB/400 mow<br>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, 802.11Q, 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                                                                                                                                                                                                                       |
| <b>Advanced 802.11 Features</b>              |                                                                                                                                                                                                                           |
| OFDMA                                        | Yes                                                                                                                                                                                                                       |
| Spatial Reuse (BSS Coloring)                 | Yes                                                                                                                                                                                                                       |
| UL MU-MIMO                                   | Yes                                                                                                                                                                                                                       |
| DL- MU-MIMO                                  | Yes                                                                                                                                                                                                                       |
| Enhanced Target Wake Time (TWT)              | Yes                                                                                                                                                                                                                       |
| ZeroWait DFS                                 | No                                                                                                                                                                                                                        |
| <b>Onboard Security Functions</b>            |                                                                                                                                                                                                                           |
| UTP Capable                                  | Yes                                                                                                                                                                                                                       |
| UTP Features                                 | Application Control, Web Filtering                                                                                                                                                                                        |
| <b>Wireless Monitoring Capabilities</b>      |                                                                                                                                                                                                                           |
| Rogue Scan radio modes                       | Dedicated, Background                                                                                                                                                                                                     |
| WIPS / WIDS radio modes                      | Background, Dedicated (recommended)                                                                                                                                                                                       |
| Packet Sniffer Mode                          | Yes                                                                                                                                                                                                                       |
| Spectrum Analyzer                            | Yes                                                                                                                                                                                                                       |
| <b>Dimensions</b>                            |                                                                                                                                                                                                                           |
| 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.                                                                                                                                                                 |
| <b>Environment</b>                           |                                                                                                                                                                                                                           |
| 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                                                                                                                                                                                                                        |
| <b>PoE Mode</b>                              |                                                                                                                                                                                                                           |
| Humidity                                     | 5% to 90% non-condensing                                                                                                                                                                                                  |
| Operating/Storage Temp.                      | -40°F to 158°F (-40°C to 70°C)<br>-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                                                                                                                                                                                                                        |
| <b>Certifications</b>                        |                                                                                                                                                                                                                           |
| Wi-Fi7 Certified                             | Certified                                                                                                                                                                                                                 |
| DFS                                          | FCC, IC, and CE                                                                                                                                                                                                           |
| Hazardous Location                           | In Progress                                                                                                                                                                                                               |
| <b>Warranty</b>                              |                                                                                                                                                                                                                           |
| 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 244K |                                |                      |                      |                      |                      |                      |
|--------------|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 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                  |

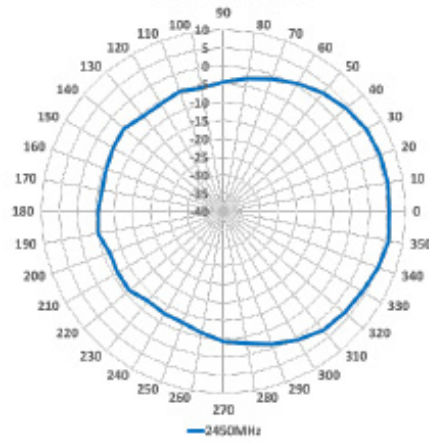


## Antenna Radiation Patterns

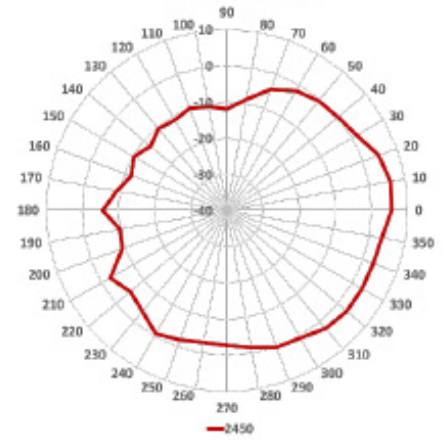
## FAP-244K



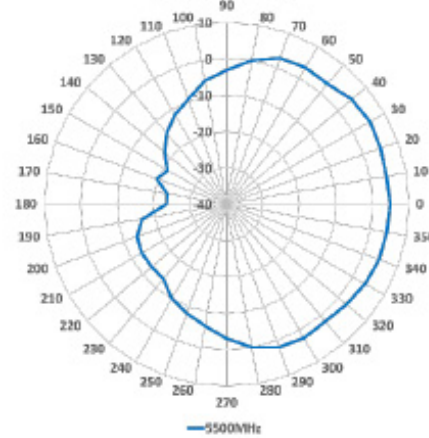
2.4GHz Azimuth



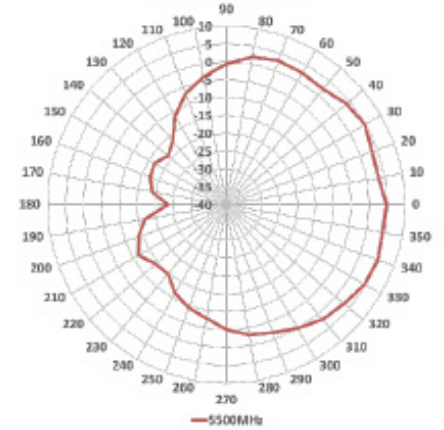
2.4GHz Elevation



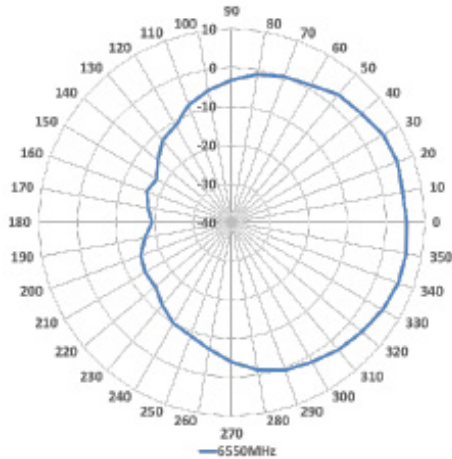
5.0GHz Azimuth



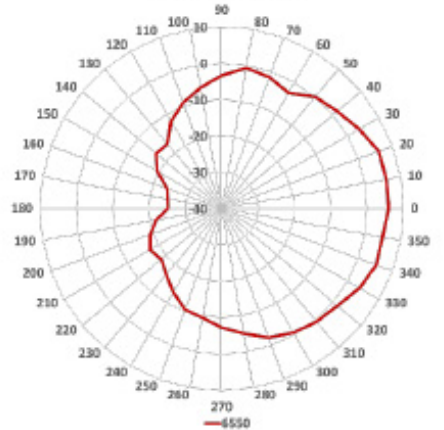
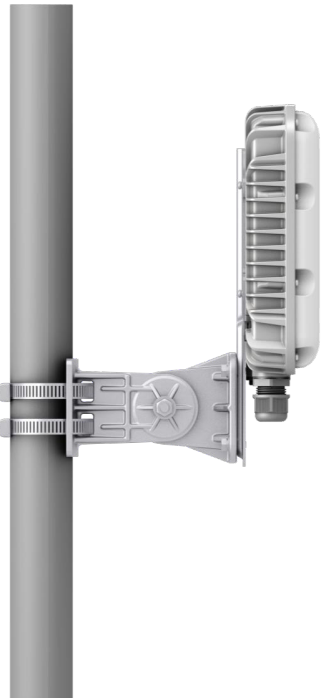
5.0GHz Elevation



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                         | 5 External Antennas                                                                                                                                                                                                                                                                                     |             |                                                                                                                                              |         |
| Antenna Type Support                       | N Type: 5 Antennas                                                                                                                                                                                                                                                                                      |             |                                                                                                                                              |         |
| Antenna Type and Peak Gain                 | Wi-Fi                                                                                                                                                                                                                                                                                                   | LoraWAN     | LTE                                                                                                                                          | GNSS    |
|                                            | 5 dBi                                                                                                                                                                                                                                                                                                   | Omni        | 4 dBi                                                                                                                                        | Patch   |
|                                            | @2.4GHz                                                                                                                                                                                                                                                                                                 | Directional |                                                                                                                                              | 2.7 dBi |
|                                            | 6.5 dBi                                                                                                                                                                                                                                                                                                 | 4 dBi       |                                                                                                                                              |         |
|                                            | @5GHz                                                                                                                                                                                                                                                                                                   |             |                                                                                                                                              |         |
| Frequency Bands (GHz)                      | 2.4GHz Band:<br>2.4-2.484GHz                                                                                                                                                                                                                                                                            |             | 5GHz Band:<br>U-NII-1: 5.15-5.25GHz<br>U-NII-2A: 5.25-5.35GHz<br>U-NII-2C: 5.47-5.725GHz<br>U-NII-3: 5.725-5.85GHz<br>U-NII-4: 5.85-5.925GHz |         |
| 2.4GHz Wi-Fi Capabilities                  | Frequency band: 2.4GHz<br>Channel width: 20/40MHz<br>Modulation: BPSK, QPSK, 64 - 4096 QAM<br>MIMO Chains: 2×2 Service Radio                                                                                                                                                                            |             |                                                                                                                                              |         |
| 5.0GHz Wi-Fi Capabilities                  | Frequency band: 5.0GHz UNII-1 to UNII-4<br>Channel width: 20/40/80/160/240MHz<br>Modulation: BPSK, QPSK, 64 - 4096 QAM<br>MIMO Chains: 2×2 Service Radio                                                                                                                                                |             |                                                                                                                                              |         |
| WiFi Data Rate                             | 2.4GHz band: up to 688 Mbps<br>5.0GHz band: up to 4.324 Gbps                                                                                                                                                                                                                                            |             |                                                                                                                                              |         |
| Wi-Fi TX Power maximum (2 chains combined) | 2.4GHz band: 25 dB/316 mw<br>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<br>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,<br>GLONASS L1: 1598.0625-1605.375 MHz<br>BeiDou : 1561.098 MHz, Galileo E1: 1575.42 MHz<br>Supports for multi-GNSS including QZSS and SBAS ranging<br>Indoor and outdoor multi-path detection and compensation<br>GNSS sensitivity -165 dBm (Tracking), -148 dBm (acquisition) |             |                                                                                                                                              |         |
| Interfaces                                 | Port 1:<br>1× RJ-45 Multi-Gigabit Ethernet (100 M / 1 G / 2.5 G), 802.3bt PoE-IN<br><br>Port 2:<br>1× RJ-45 Multi-Gigabit Ethernet (10M / 100 M / 1 G), 802.3af PoE-OUT<br><br>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 blacklist 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                                                                                                                                                                                                                      |
| <b>Advanced 802.11 Features</b>         |                                                                                                                                                                                                                          |
| OFDMA                                   | Yes                                                                                                                                                                                                                      |
| Spatial Reuse (BSS Coloring)            | Yes                                                                                                                                                                                                                      |
| UL MU-MIMO                              | Yes                                                                                                                                                                                                                      |
| DL- MU-MIMO                             | Yes                                                                                                                                                                                                                      |
| Enhanced Target Wake Time (TWT)         | Yes                                                                                                                                                                                                                      |
| ZeroWait DFS                            | No                                                                                                                                                                                                                       |
| <b>Onboard Security Functions</b>       |                                                                                                                                                                                                                          |
| UTP Capable                             | No                                                                                                                                                                                                                       |
| <b>Wireless Monitoring Capabilities</b> |                                                                                                                                                                                                                          |
| Rogue Scan radio modes                  | Background                                                                                                                                                                                                               |
| WIPS / WIDS radio modes                 | Background                                                                                                                                                                                                               |
| Packet Sniffer Mode                     | Yes                                                                                                                                                                                                                      |
| Spectrum Analyzer                       | Yes                                                                                                                                                                                                                      |
| <b>Dimensions</b>                       |                                                                                                                                                                                                                          |
| 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                                                                                                                                                                           |
| <b>Environment</b>                      |                                                                                                                                                                                                                          |
| 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 2x2 ; PSE - Enabled                                                                                                                              |
| Humidity                                | 5% to 90% non-condensing                                                                                                                                                                                                 |
| Operating/Storage Temp.                 | -40°F to 158°F (-40°C to 70°C)<br>-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)                                                                                                                                                                                                       |
| <b>Certifications</b>                   |                                                                                                                                                                                                                          |
| 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                                                                                                                                                                                                              |
| <b>Warranty</b>                         |                                                                                                                                                                                                                          |
| Limited Lifetime Warranty               | Yes                                                                                                                                                                                                                      |

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



## 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

 4x4 MU-MIMO | Up to 1148 Mbps + 2402 Mbps + 4804 Mbps



FAP-432G



FAP-432G  
Pole/Wall Mounting

# Specifications

| FortiAP 432G                                  |                                                                                                                                                                                                                                                                               |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hardware</b>                               |                                                                                                                                                                                                                                                                               |
| <b>Hardware Type</b>                          | Wi-Fi 6E 4x4 MIMO Outdoor AP                                                                                                                                                                                                                                                  |
| <b>Number of Radios</b>                       | 3 + 1 BLE                                                                                                                                                                                                                                                                     |
| <b>Number of Antennas</b>                     | External: x4 Dual band WiFi + x4 Tri-band WiFi and Scanning + x1 2.4GHz band BLE/ZigBee                                                                                                                                                                                       |
| <b>Antenna Type Support</b>                   | N-Type (9 total): Dual Band Antenna (4); Tri Band Antenna (4); BLE/Scan antenna (1)                                                                                                                                                                                           |
| <b>Antenna Type and Peak Gain</b>             | Omni Directional antenna.<br>Dual band: 5.1 dBi for 2.4GHz, 6.4 dBi for 5 GHz<br>Tr-band: 4.9 dBi for 2.4GHz, 5.8 dBi for 5 GHz, and 6.0dBi for 6GHz band<br>BLE Antenna: 4.7dBi for 2.4GHz<br>GPS Antenna: ceramic patch circular polarized: 3.0dBi Peak gain                |
| <b>Antenna Beam width</b>                     | Wi-Fi:<br>2.4GHz Band: 360° Horizontal and 65° Vertical<br>5.0GHz Band: 360° Horizontal and 50° Vertical<br>6.0GHz Band: 360° Horizontal and 65° Vertical<br><br>BLE: 2.4GHz Band: 225° Horizontal and 55° Vertical<br>GPS: 1.5-1.6GHz Band: 360° Horizontal and 98° Vertical |
| <b>Supported Frequency Bands (GHz)*</b>       | 2.4-2.484GHz                      5.925-6.425GHz<br>5.15-5.25GHz                    6.425-6.525GHz<br>5.25-5.35GHz                    6.525-6.875GHz<br>5.47-5.725GHz                  6.875-7.125GHz<br>5.725-5.85GHz                                                        |
| <b>Radio 1 Capabilities</b>                   | Frequency band: 2.4GHz<br>Channel width: 20/40MHz<br>Modulation: BPSK, QPSK, 64/256/1024 QAM<br>MIMO Chains: 4x4 Service                                                                                                                                                      |
| <b>Radio 2 Capabilities</b>                   | Frequency band: 5.0GHz<br>Channel width: 20/40/80MHz<br>Modulation: BPSK, QPSK, 64/256/1024 QAM<br>MIMO Chains: 4x4 Service                                                                                                                                                   |
| <b>Radio 3 Capabilities</b>                   | Frequency band: 2.4GHz, 5.0GHz, and 6.0GHz<br>Channel width: 20/40/80/160MHz<br>Modulation: BPSK, QPSK, 64/256/1024 QAM<br>MIMO Chains: 4X4 Service (2x2 when Scanning)                                                                                                       |
| <b>Maximum Data Rate</b>                      | Radio 1: up to 1182 Mbps<br>Radio 2: up to 2475 Mbps<br>Radio 3: Up to 4804 Mbps                                                                                                                                                                                              |
| <b>Bluetooth Low Energy Radio</b>             | Bluetooth scanning and iBeacon advertizement<br>@10 dBm max TX power                                                                                                                                                                                                          |
| <b>Trusted Platform Module (TPM)</b>          | Yes                                                                                                                                                                                                                                                                           |
| <b>GNSS</b>                                   |                                                                                                                                                                                                                                                                               |
| <b>Supported Bands</b>                        | GPS L1 C/A, QZSS L1 C/A: 1575.42 MHz,<br>GLONASS L1: 1598.0625-1605.375 MHz<br>BDS B1I : 1561.098 MHz, Galileo E1: 1575.42 MHz                                                                                                                                                |
| <b>Default constallations</b>                 | GPS + GLONASS + BDS + Galileo + QZSS                                                                                                                                                                                                                                          |
| <b>Tracking channels</b>                      | 47                                                                                                                                                                                                                                                                            |
| <b>Concurrent GNSS</b>                        | 5                                                                                                                                                                                                                                                                             |
| <b>SBAS</b>                                   | WAAS, EGNOS, MSAS and GAGAN                                                                                                                                                                                                                                                   |
| <b>Sensitivity (@ default constallations)</b> | Acquisition: -147 dBm   Tracking: -166 dBm  <br>Reacquisition: -159                                                                                                                                                                                                           |
| <b>Interfaces</b>                             | x1 10GBASE-T/5GBASE-T/2.5GBASE-T/1000BASE-T/100BASE-TX/10BASE-T RJ45, x1 10/100/1000 Base-T RJ45, x1 RS-232 RJ45 Serial Port                                                                                                                                                  |
| <b>MDI/MDIX</b>                               | Supported                                                                                                                                                                                                                                                                     |
| <b>Power over Ethernet (PoE)</b>              | 802.3bt PoE on LAN1/10G PoE port                                                                                                                                                                                                                                              |
| <b>PSE OUT</b>                                | 802.3af power on LAN2/1G PSE port                                                                                                                                                                                                                                             |
| <b>Simultaneous SSIDs</b>                     | Up to 8 per client serving radio<br>(7 if background scanning is enabled)                                                                                                                                                                                                     |
| <b>EAP Type(s)</b>                            | EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST, EAP-TTLS/PAP                                                                                                                                                                     |
| <b>User/Device Authentication</b>             | WPA™, WPA2™, and WPA3™ with 802.1x or Preshared key, WEP, Web Captive Portal, MAC blacklist and whitelist                                                                                                                                                                     |
| <b>Maximum Tx Power</b>                       | Radio 1: 2.4GHz: 29.8 dBm / 955 mW (4 chains combined)*<br>Radio 2: 5GHz: 29.8 dBm / 955 mW (4 chains combined)*<br>Radio 3: 6GHz: 26 dBm / 400 mW (4 chains combined @ 160MHz BW)*                                                                                           |

| FortiAP 432G                              |                                                                                                                                                                                                                         |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Kensington Lock</b>                    | No                                                                                                                                                                                                                      |
| <b>IEEE Standards</b>                     | 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 |
| <b>SSID Types Supported</b>               | Local-Bridge, Mesh, and Tunnel                                                                                                                                                                                          |
| <b>Per Radio Client Capacity</b>          | Up to 512 clients per radio (Radio1, Radio2, and Radio3)                                                                                                                                                                |
| <b>Cellular Co-existence</b>              | Yes                                                                                                                                                                                                                     |
| <b>LED Off Mode</b>                       | Yes                                                                                                                                                                                                                     |
| <b>Advanced 802.11 Features</b>           |                                                                                                                                                                                                                         |
| <b>OFDMA</b>                              | Yes                                                                                                                                                                                                                     |
| <b>Spatial Reuse (BSS Coloring)</b>       | Yes                                                                                                                                                                                                                     |
| <b>UL MU-MIMO</b>                         | Yes                                                                                                                                                                                                                     |
| <b>DL- MU-MIMO</b>                        | Yes                                                                                                                                                                                                                     |
| <b>Enhanced Target Wake Time (TWT)</b>    | Yes                                                                                                                                                                                                                     |
| <b>ZeroWait DFS</b>                       | Yes                                                                                                                                                                                                                     |
| <b>Onboard Security Functions</b>         |                                                                                                                                                                                                                         |
| <b>UTP Capable</b>                        | Yes                                                                                                                                                                                                                     |
| <b>UTP Features</b>                       | Application control and Web filtering                                                                                                                                                                                   |
| <b>Wireless Monitoring Capabilities</b>   |                                                                                                                                                                                                                         |
| <b>Rogue Scan Radio Modes</b>             | Background, Dedicated                                                                                                                                                                                                   |
| <b>WIPS / WIDS Radio Modes</b>            | Background, Dedicated (recommended)                                                                                                                                                                                     |
| <b>Packet Sniffer Mode</b>                | Yes                                                                                                                                                                                                                     |
| <b>Spectrum Analyzer</b>                  | Yes                                                                                                                                                                                                                     |
| <b>Power source and power consumption</b> |                                                                                                                                                                                                                         |
| <b>PoE</b>                                | PIN060-54PR 60W PoE with reset switch shipped with the AP                                                                                                                                                               |
| <b>Power Consumption (Maximum)</b>        | 41.2 Watts (Including PSE out of 12.9 watts)                                                                                                                                                                            |
| <b>PoE Mode</b>                           | Full - 802.3bt or Passive (Shipped with unit) : Tx Power - Full ; Chain 4x4 ; PSE - Enabled<br>High - 802.3at or 2x802.3af : All Radio Operation in Low Tx Power 17 dBm ; Chain 4x4 ; PSE - Disabled                    |
| <b>Hit-less PoE Failover</b>              | N/A                                                                                                                                                                                                                     |
| <b>Surge Protection Built In</b>          | No                                                                                                                                                                                                                      |
| <b>Dimensions</b>                         |                                                                                                                                                                                                                         |
| <b>Length x Width x Height</b>            | 9.45 × 9.45 × 2.74 inches (240.0 × 240.0 × 69.6 mm)                                                                                                                                                                     |
| <b>Weight</b>                             | 7.05 lbs (3.2 kg)                                                                                                                                                                                                       |
| <b>Package (shipping) Weight</b>          | 13.2 lbs (6.0 kg)                                                                                                                                                                                                       |
| <b>Accessories (included)</b>             |                                                                                                                                                                                                                         |
| <b>Mounting Accessories</b>               | Wall and Pole installation brackets with mounting kits                                                                                                                                                                  |
| <b>PoE</b>                                | PIN060-54PR 60W PoE with reset switch or IEEE 802.3bt PoE                                                                                                                                                               |
| <b>Environment</b>                        |                                                                                                                                                                                                                         |
| <b>CPU/RAM</b>                            | Quad-core ARM Cortex-A53 2.2GHz / 1 GB                                                                                                                                                                                  |
| <b>Humidity</b>                           | 5% to 90% non-condensing                                                                                                                                                                                                |
| <b>Operating / Storage Temperature</b>    | -40°F to 140°F (-40°C to 60°C) /<br>-58°F to 158°F (-50°C to 70°C)                                                                                                                                                      |
| <b>Directives</b>                         | Low Voltage Directive • RoHS                                                                                                                                                                                            |
| <b>UL2043 Plenum Material</b>             | No                                                                                                                                                                                                                      |
| <b>Mean Time Between Failures</b>         | >10 Years                                                                                                                                                                                                               |
| <b>IP Rating</b>                          | IP67                                                                                                                                                                                                                    |
| <b>Certifications</b>                     |                                                                                                                                                                                                                         |
| <b>Wi-Fi Alliance Certified</b>           | Certified                                                                                                                                                                                                               |
| <b>DFS</b>                                | Europe, FCC, N, Brazil, Taiwan                                                                                                                                                                                          |
| <b>Hazardous Location</b>                 | In Progress                                                                                                                                                                                                             |
| <b>Warranty</b>                           |                                                                                                                                                                                                                         |
| <b>Limited Lifetime Warranty</b>          | Yes                                                                                                                                                                                                                     |

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



## RF Rx/Tx Performance Table

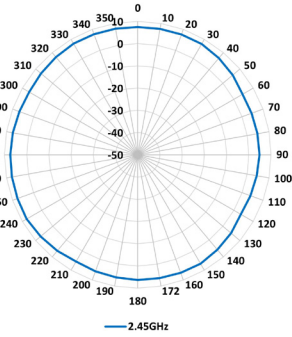
| FORTIAP 432G                                                         |                      |                      |                      |                      |                      |                      |
|----------------------------------------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Data rate                                                            | 2.4 GHz Band         |                      | 5.0 GHz Band         |                      | 6 GHz Band           |                      |
|                                                                      | 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) |                      |                      |                      |                      |                      |                      |



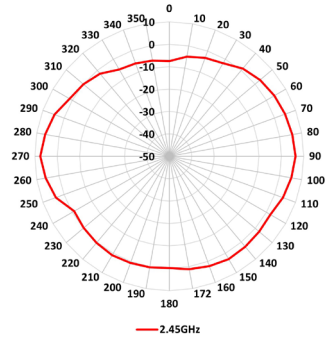
## Antenna Radiation Patterns

## FAP-432G

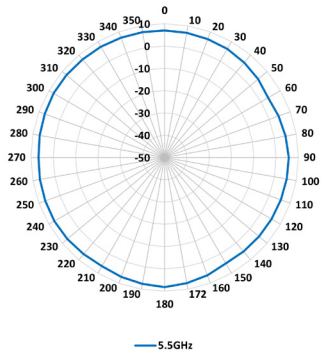
2.4GHz Band - Azimuth



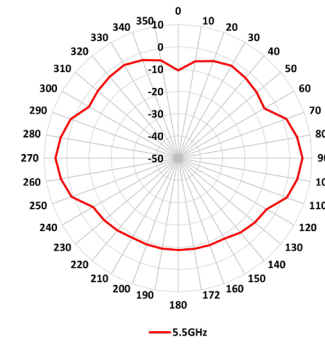
2.4GHz Band - Elevation



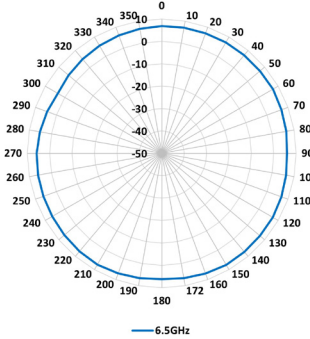
5.0GHz Band - Azimuth



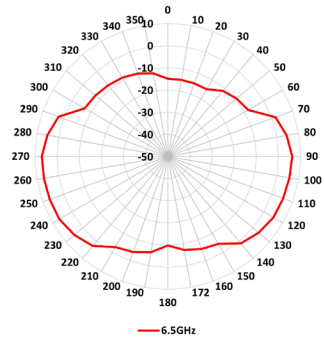
5.0GHz Band - Elevation



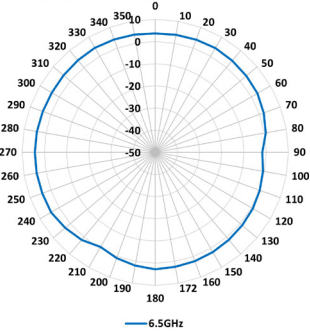
6.0GHz Band - Azimuth



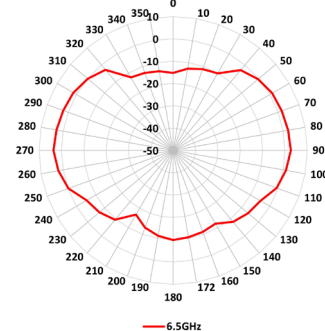
6.0GHz Band - Elevation



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**



**2x2 MU-MIMO | Up to 574 Mbps + 1201 Mbps + 2402 Mbps**



FAP-234G

# Specifications

| FortiAP 234G                                  |                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hardware</b>                               |                                                                                                                                                                                                                                                                                                                |
| <b>Hardware Type</b>                          | Outdoor AP                                                                                                                                                                                                                                                                                                     |
| <b>Number of Radios</b>                       | 3 + 1 BLE                                                                                                                                                                                                                                                                                                      |
| <b>Number of Antennas</b>                     | 10<br>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                                                                                                                                                                           |
| <b>Antenna Type and Peak Gain</b>             | Cross dipole 2.4GHz band: 6.8dBi<br>Cross dipole 5.0GHz band: 8.4dBi<br>Cross dipole Dual band: 8.1 dBi for 5.0GHz, 5.5 dBi for 6 GHz<br><br>Tr-band: 4.5 dBi for 2.4GHz, 5.5 dBi for 5 GHz and 8.4 dBi for 6GHz band<br><br>BLE antenna: 4.4dBi for 2.4Ghz<br><br>GPS Circular polarized patch antenna 5.0dBi |
| <b>Antenna Beam width</b>                     | Wi-Fi:<br>2.4GHz Band: 305° Horizontal and 97° Vertical<br>5.0GHz Band: 337° Horizontal and 122° Vertical<br>6.0GHz Band: 283° Horizontal and 94° Vertical<br><br>BLE: 2.4GHz/5GHz Band: 196° Horizontal and 133° Vertical<br>GPS: 1.5-1.6GHz Band: 360° Horizontal and 98° Vertical                           |
| <b>Frequency Bands (GHz)*</b>                 | 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                                                                                                                                                           |
| <b>Radio 1 Capabilities</b>                   | Frequency band: 2.4GHz<br>Channel width: 20/40MHz<br>Modulation: BPSK, QPSK, 64/256/1024 QAM<br>MIMO Chains: 2x2 Service                                                                                                                                                                                       |
| <b>Radio 2 Capabilities</b>                   | Frequency band: 5.0GHz<br>Channel width: 20/40/80/80+80MHz<br>Modulation: BPSK, QPSK, 64/256/1024 QAM<br>MIMO Chains: 2x2 Service                                                                                                                                                                              |
| <b>Radio 3 Capabilities</b>                   | Frequency band: 2.4GHz, 5.0GHz, and 6.0GHz<br>Channel width: 20/40/80/160MHz<br>Modulation: BPSK, QPSK, 64/256/1024 QAM<br>MIMO Chains: 2x2 Service and Scanning                                                                                                                                               |
| <b>Maximum Data Rate</b>                      | Radio 1: up to 574 Mbps<br>Radio 2: up to 1201 Mbps<br>Radio 3: Up to 2401 Mbps                                                                                                                                                                                                                                |
| <b>Bluetooth Low Energy Radio</b>             | Bluetooth scanning and iBeacon advertisement<br>@10 dBm max TX power                                                                                                                                                                                                                                           |
| <b>Trusted Platform Module (TPM)</b>          | Yes                                                                                                                                                                                                                                                                                                            |
| <b>GNSS</b>                                   |                                                                                                                                                                                                                                                                                                                |
| <b>Supported Bands</b>                        | GPS L1 C/A, QZSS L1 C/A: 1575.42 MHz, GLONASS L1: 1598.0625-1605.375 MHz<br>BDS B1I : 1561.098 MHz, Galileo E1: 1575.42 MHz                                                                                                                                                                                    |
| <b>Default constallations</b>                 | GPS + GLONASS + BDS + Galileo + QZSS                                                                                                                                                                                                                                                                           |
| <b>Tracking channels</b>                      | 47                                                                                                                                                                                                                                                                                                             |
| <b>Concurrent GNSS</b>                        | 5                                                                                                                                                                                                                                                                                                              |
| <b>SBAS</b>                                   | WAAS, EGNOS, MSAS and GAGAN                                                                                                                                                                                                                                                                                    |
| <b>Sensitivity (@ default constallations)</b> | Acquisition: -147 dBm<br>Tracking: -166 dBm<br>Reacquisition: -159                                                                                                                                                                                                                                             |
| <b>Interfaces</b>                             | 1*100/1000/2500 Base-T RJ45, 1*10/100/1000 Base-T RJ45, 1*RS-232 RJ45 Serial Port                                                                                                                                                                                                                              |
| <b>MDI/MDIX</b>                               | Supported                                                                                                                                                                                                                                                                                                      |
| <b>Power over Ethernet (PoE)</b>              | IEEE 802.at                                                                                                                                                                                                                                                                                                    |
| <b>Simultaneous SSIDs</b>                     | Up to 24                                                                                                                                                                                                                                                                                                       |
| <b>EAP Type(s)</b>                            | EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST, EAP-TTLS/PAP                                                                                                                                                                                                      |
| <b>User/Device Authentication</b>             | WPA™, WPA2™, and WPA3™ with 802.1x or Preshared key, WEP, Web Captive Portal, MAC blacklist and allowlist                                                                                                                                                                                                      |
| <b>Maximum Tx Power</b>                       | Radio 1: 2.4GHz: 26 dBm / 398 mW (2 chains combined)*<br>Radio 2: 5GHz: 26 dBm / 398 mW (2 chains combined)*<br>Radio 3: 5GHz: 26 dBm / 398 mW (2 chains combined)*,<br>6GHz: 26dBm/398 mW (2 chains combined EIRP)*                                                                                           |

| FortiAP 234G                              |                                                                                                                                                                                                                            |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>IEEE Standards</b>                     | 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 |
| <b>SSID Types Supported</b>               | Local-Bridge, Mesh, and Tunnel                                                                                                                                                                                             |
| <b>Per Radio Client Capacity</b>          | Up to 512 clients per radio (Radio1, Radio2 and Radio3)                                                                                                                                                                    |
| <b>Cellular Co-existence</b>              | Yes                                                                                                                                                                                                                        |
| <b>LED Off Mode</b>                       | Yes                                                                                                                                                                                                                        |
| <b>Advanced 802.11 Features</b>           |                                                                                                                                                                                                                            |
| <b>OFDMA</b>                              | Yes                                                                                                                                                                                                                        |
| <b>Spatial Reuse (BSS Coloring)</b>       | Yes                                                                                                                                                                                                                        |
| <b>UL MU-MIMO</b>                         | Yes                                                                                                                                                                                                                        |
| <b>DL- MU-MIMO</b>                        | Yes                                                                                                                                                                                                                        |
| <b>Enhanced Target Wake Time (TWT)</b>    | Yes                                                                                                                                                                                                                        |
| <b>ZeroWait DFS</b>                       | No                                                                                                                                                                                                                         |
| <b>Onboard Security Functions</b>         |                                                                                                                                                                                                                            |
| <b>UTP Capable</b>                        | Yes                                                                                                                                                                                                                        |
| <b>UTP Features</b>                       | Application control and Web filtering                                                                                                                                                                                      |
| <b>Wireless Monitoring Capabilities</b>   |                                                                                                                                                                                                                            |
| <b>Rogue Scan Radio Modes</b>             | Background, Dedicated                                                                                                                                                                                                      |
| <b>WIPS / WIDS Radio Modes</b>            | Background, Dedicated (recommended)                                                                                                                                                                                        |
| <b>Packet Sniffer Mode</b>                | Yes                                                                                                                                                                                                                        |
| <b>Spectrum Analyzer</b>                  | Yes                                                                                                                                                                                                                        |
| <b>Power source and power consumption</b> |                                                                                                                                                                                                                            |
| <b>PoE</b>                                | PIN060-54PR 60W PoE with reset switch shipped with the AP                                                                                                                                                                  |
| <b>Power Consumption (Max)</b>            | 28 Watts                                                                                                                                                                                                                   |
| <b>PoE Mode</b>                           | Full - 802.3at or passive(Shipped with unit) : Tx Power - Full ; Chain 2x2<br>Low - 802.3af : R1(2.4GHz) and R2(5GHz) Operation in Low Tx Power 17 dBm ; Radio3 - Disabled                                                 |
| <b>Hit-less PoE Failover</b>              | Yes                                                                                                                                                                                                                        |
| <b>Surge Protection Built In</b>          | No                                                                                                                                                                                                                         |
| <b>Dimensions</b>                         |                                                                                                                                                                                                                            |
| <b>Length x Width x Height</b>            | 10.15 × 8.50 × 2.26 inches (258 × 216 × 57.3 mm)                                                                                                                                                                           |
| <b>Weight</b>                             | 3.05 lbs (1.38 kg)                                                                                                                                                                                                         |
| <b>Package (shipping) Weight</b>          | 8.15 lbs (3.7 kg)                                                                                                                                                                                                          |
| <b>Accessories (included)</b>             |                                                                                                                                                                                                                            |
| <b>Mounting Accessories</b>               | Wall and Pole installation brackets with mounting kits                                                                                                                                                                     |
| <b>PoE</b>                                | PIN060-54PR 60W PoE with reset switch or IEEE 802.3bt PoE                                                                                                                                                                  |
| <b>Environment</b>                        |                                                                                                                                                                                                                            |
| <b>CPU/RAM</b>                            | Quad-core ARM Cortex-A53 1.8GHz / 1 GB                                                                                                                                                                                     |
| <b>Humidity</b>                           | 5% to 90% non-condensing                                                                                                                                                                                                   |
| <b>Operating / Storage Temperature</b>    | -40°F to 140°F (-40°C to 60°C) / -58°F to 158°F (-50°C to 70°C)                                                                                                                                                            |
| <b>Directives</b>                         | Low Voltage Directive • RoHS                                                                                                                                                                                               |
| <b>UL2043 Plenum Material</b>             | Yes                                                                                                                                                                                                                        |
| <b>Mean Time Between Failures</b>         | > 10 Years                                                                                                                                                                                                                 |
| <b>IP Rating</b>                          | IP67                                                                                                                                                                                                                       |
| <b>Certifications</b>                     |                                                                                                                                                                                                                            |
| <b>Wi-Fi Alliance Certified</b>           | Certified                                                                                                                                                                                                                  |
| <b>DFS</b>                                | Europe, FCC, N, Brazil, Taiwan, India                                                                                                                                                                                      |
| <b>Hazard Location</b>                    | C1D2/ATEX Certified                                                                                                                                                                                                        |
| <b>Warranty</b>                           |                                                                                                                                                                                                                            |
| <b>Limited Lifetime Warranty</b>          | Yes                                                                                                                                                                                                                        |

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



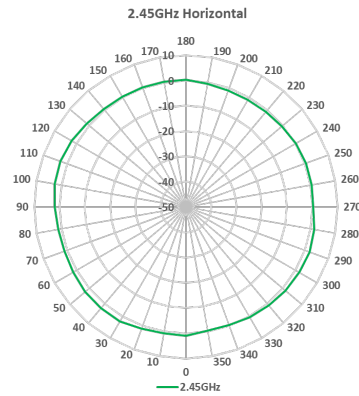
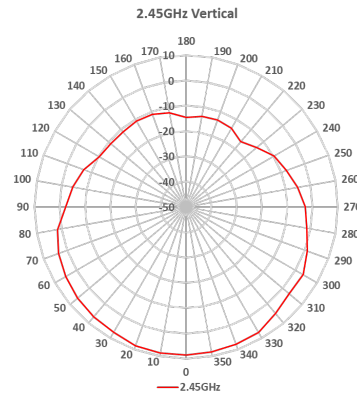
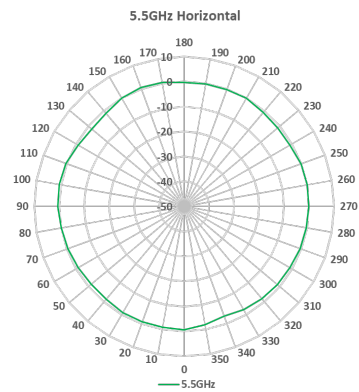
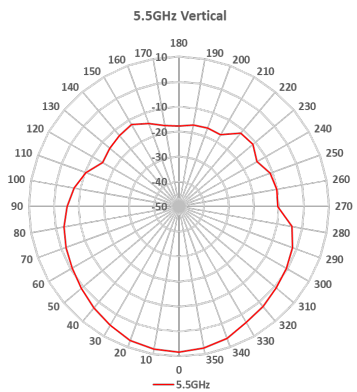
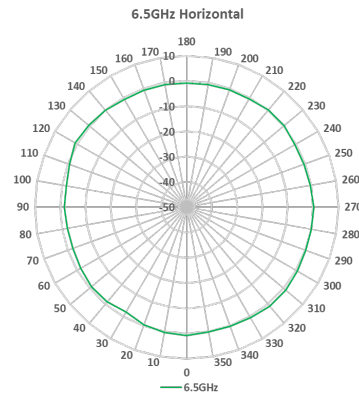
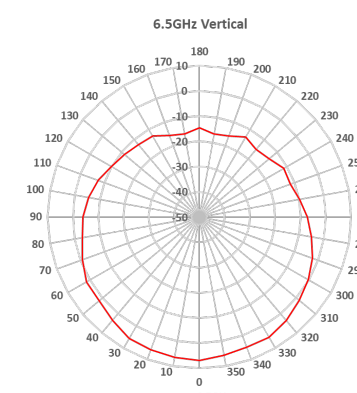
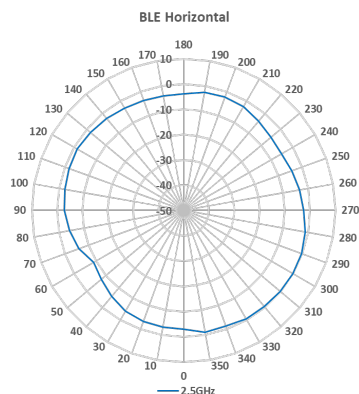
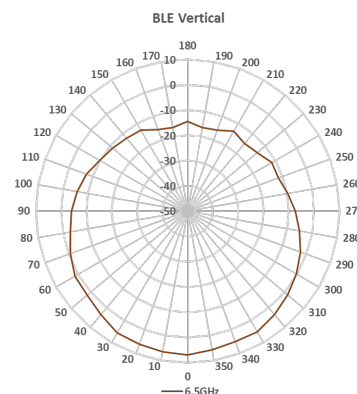
## RF Rx/Tx Performance Table

| FORTIAP 234G   |                      |                      |                      |                      |                      |                      |
|----------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Data rate      | Radio1 2.4GHz Band   |                      | Radio2 5.0GHz Band   |                      | Radio3 6GHz Band     |                      |
|                | 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



## 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
-  8x8 MU-MIMO | Up to 1147 Mbps + 4804 Mbps



FAP-831F

# Specifications

| FortiAP 831F                 |                                                                                                                                                                                                                         |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hardware</b>              |                                                                                                                                                                                                                         |
| Hardware Type                | Indoor AP                                                                                                                                                                                                               |
| Number of Radios             | 3 + 1 BLE                                                                                                                                                                                                               |
| Number of Antennas           | 4 2.4GHz band WiFi + 8 5GHz band WiFi + 1 Dual band Scanning + 1 2.4GHz band BLE                                                                                                                                        |
| Antenna Type and Peak Gain   | PIFA:<br>4.0 dBi for 2.4 GHz band WiFi antennas<br>6.0 dBi for 5.0 GHz band WiFi antennas<br>4.0 dBi for dual band Scanning radio antenna<br>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<br>Channel width: 20/40 MHz<br>Modulation: BPSK, QPSK, QAM64<br>MIMO chains: 4×4 service                                                                                                        |
| Radio 2 Capabilities         | Frequency Band: 5.0 GHz<br>Channel width: 20/40/80/80+80/160MHz<br>Modulation: BPSK, QPSK, QAM64, QAM256, and QAM1024<br>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<br>MIMO chains: 1×1 frequency scanning                                                                                                                                                      |
| Maximum Data Rate            | 802.11AX features: PHY data rates up to 5.95 Gbps<br>802.11AC features: PHY data rates up to 3.4 Gbps<br>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<br>1 × 10/100/1000 Base-T RJ45<br>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)<br>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 blacklist and allowlist                                                                                                               |
| Maximum Tx Power (Conducted) | Radio 1: 2.4 GHz 27 dBm / 500 mW (4 chains combined)*<br>Radio 2: 5 GHz 25.5 dBm / 354 mW (4 chains combined)*<br>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                            |                                                                                                                                                                                                                                   |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Advanced 802.11 Features</b>         |                                                                                                                                                                                                                                   |
| 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                                                                                                                                                                                                                                |
| <b>Onboard Security Functions</b>       |                                                                                                                                                                                                                                   |
| UTP Capable                             | No                                                                                                                                                                                                                                |
| UTP Features                            | N/A                                                                                                                                                                                                                               |
| <b>Wireless Monitoring Capabilities</b> |                                                                                                                                                                                                                                   |
| Rogue Scan Radio Mode                   | Dedicated                                                                                                                                                                                                                         |
| WIPS / WIDS RAdio Modes                 | Dedicated                                                                                                                                                                                                                         |
| Packet Sniffer Mode                     | Yes                                                                                                                                                                                                                               |
| Spectrum Analyzer                       | Yes                                                                                                                                                                                                                               |
| <b>Dimensions</b>                       |                                                                                                                                                                                                                                   |
| 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)                                                                                                                                                                                                                  |
| <b>Accessories</b>                      |                                                                                                                                                                                                                                   |
| 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                                                                                                                                                                                                        |
| <b>Environment</b>                      |                                                                                                                                                                                                                                   |
| CPU/RAM                                 | Quad-core ARM Cortex-A53 2.2GHz / 1 GB                                                                                                                                                                                            |
| PSE Functionality                       | No                                                                                                                                                                                                                                |
| Power Consumption (Max)                 | 33 W                                                                                                                                                                                                                              |
| <b>PoE Mode</b>                         |                                                                                                                                                                                                                                   |
| Single 5G                               | DC/2at → Full Mode ; Radios will be in (8×8 4×4) and USB Enabled<br>1at/2af → High Mode ; Radios will be in (8×8 4×4) and USB Disabled<br>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<br>1at/2af → High Mode ; Radios will be in [4×4 4×4 4×4] and USB Disabled<br>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                                                                                                                                                                                                                                |
| <b>Certifications</b>                   |                                                                                                                                                                                                                                   |
| Wi-Fi Alliance Certified                | Yes (includes Passpoint)                                                                                                                                                                                                          |
| DFS                                     | FCC, IC, Europe, Brazil, and Taiwan                                                                                                                                                                                               |
| <b>Warranty</b>                         |                                                                                                                                                                                                                                   |
| Limited Lifetime Warranty               | Yes                                                                                                                                                                                                                               |

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

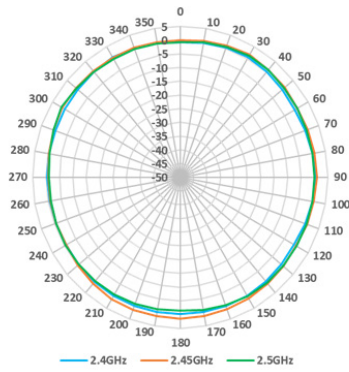


## RF Rx/Tx Performance Table

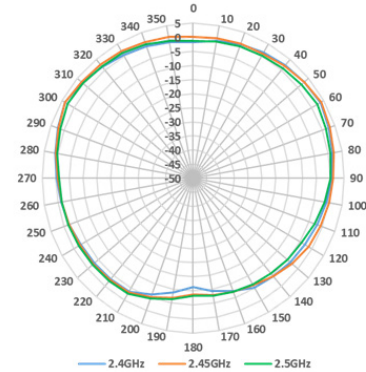
| FortiAP 831F   |                                  |                      |                                |                      |                                  |                      |                                |                      |
|----------------|----------------------------------|----------------------|--------------------------------|----------------------|----------------------------------|----------------------|--------------------------------|----------------------|
| Data rate      | Radio 1                          |                      | Radio 2                        |                      | Radio 3                          |                      |                                |                      |
|                | 2.4 GHz Tx Power per chain (dBm) | Rx Sensitivity (dBm) | 5 GHz Tx Power per Chain (dBm) | Rx Sensitivity (dBm) | 2.4 GHz Tx Power per chain (dBm) | Rx Sensitivity (dBm) | 5 GHz Tx Power per Chain (dBm) | Rx Sensitivity (dBm) |
| 802.11b        |                                  |                      |                                |                      |                                  |                      |                                |                      |
| 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                  | —                                | —                    | —                              | —                    |



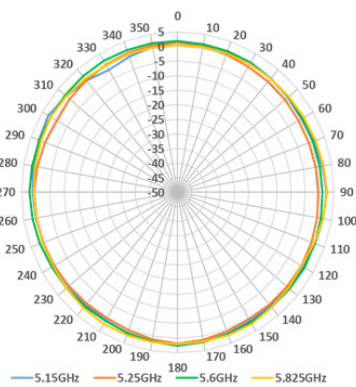
## FAP 831F Antenna Radiation Patterns



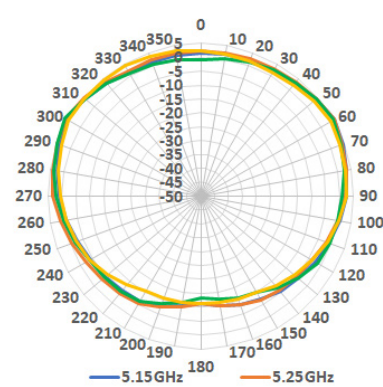
Radio1 2.4 GHz Horizontal



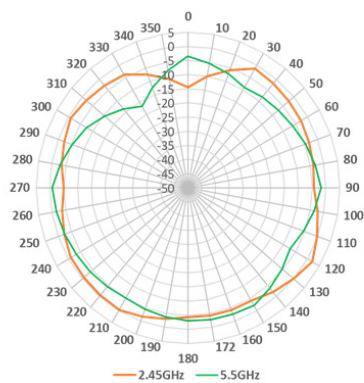
Radio1 2.4 GHz Vertical



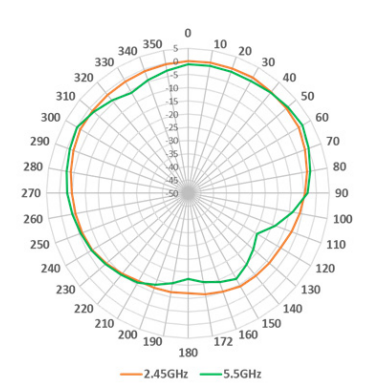
Radio2 5.0 GHz Horizontal



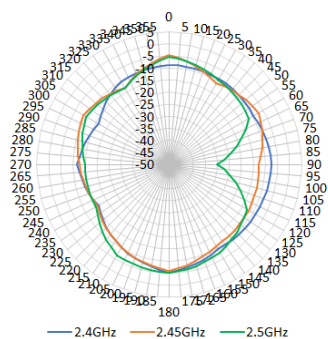
Radio2 5.0 GHz Vertical



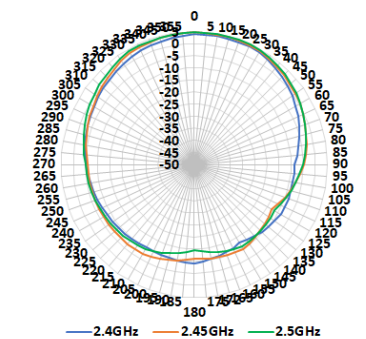
Scanning Radio Horizontal



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 spatial 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

 4x4 MU-MIMO | Up to 1147 Mbps + 2402 Mbps



FAP-432FR



FAP-432FR

# Specifications

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

| FortiAP 432FR                                                                |                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Onboard Security Functions</b>                                            |                                                                                                                                                                                                                                                            |
| <b>UTP Capable</b>                                                           | No                                                                                                                                                                                                                                                         |
| <b>UTP Features</b>                                                          | N/A                                                                                                                                                                                                                                                        |
| <b>Wireless Monitoring Capabilities</b>                                      |                                                                                                                                                                                                                                                            |
| <b>Rogue Scan radio modes</b>                                                | Background, Dedicated                                                                                                                                                                                                                                      |
| <b>WIPS / WIDS radio modes</b>                                               | Background, Dedicated (recommended)                                                                                                                                                                                                                        |
| <b>Packet Sniffer Mode</b>                                                   | Yes                                                                                                                                                                                                                                                        |
| <b>Spectrum Analyzer</b>                                                     | Yes                                                                                                                                                                                                                                                        |
| <b>Dimensions</b>                                                            |                                                                                                                                                                                                                                                            |
| <b>Length x Width x Height</b>                                               | 8.23 × 8.23 × 2.38 inches (209 × 209 × 60.5 mm)                                                                                                                                                                                                            |
| <b>Weight</b>                                                                | 5.12 lbs (2.325 kg)                                                                                                                                                                                                                                        |
| <b>Package (shipping) Weight</b>                                             | 12.56.93 lbs (5.7 kg)                                                                                                                                                                                                                                      |
| <b>Accessories</b>                                                           |                                                                                                                                                                                                                                                            |
| <b>Mounting Options</b>                                                      | Wall and Pole                                                                                                                                                                                                                                              |
| <b>Included Accessories</b>                                                  | Wall and Pole mounting kit                                                                                                                                                                                                                                 |
| <b>Power Supply</b>                                                          | 802.3bt PoE, ships with PoE injector (reset functionality)                                                                                                                                                                                                 |
| <b>Optional Antennas** (Professional Installer Required for FCC domains)</b> | FANT-04ABGN-0606-O-N<br>FANT-04ABGN-1414-P-N<br>FANT-04ABGN-8065-P-N                                                                                                                                                                                       |
| <b>Environment</b>                                                           |                                                                                                                                                                                                                                                            |
| <b>CPU/RAM</b>                                                               | Quad-core ARM Cortex-A53 2.2GHz / 1 GB                                                                                                                                                                                                                     |
| <b>PSE functionality</b>                                                     | Yes (while powered by PoE injector shipped with product)                                                                                                                                                                                                   |
| <b>Power Consumption (Maximum)</b>                                           | 25 W without PSE out and 37.9 W with PSE out                                                                                                                                                                                                               |
| <b>PoE Mode</b>                                                              | 802.3bt PoE default (ships with Passive PoE injector<br>Powered by 802.3at PoE - Operate in 4×4 mode with reduced Tx power Radio1/R2 17dBm<br>This product only supports PSE functionality when it is powered by PoE injector that ships with the product. |
| <b>Humidity</b>                                                              | 10% to 90% non condensing                                                                                                                                                                                                                                  |
| <b>Operating / Storage Temperature</b>                                       | -40°F to 140°F (-40°C to 60°C) /<br>-50°F to 176°F (-58°C to 80°C)                                                                                                                                                                                         |
| <b>Directives</b>                                                            | Low Voltage Directive • RoHS                                                                                                                                                                                                                               |
| <b>UL2043 Plenum Material</b>                                                | No                                                                                                                                                                                                                                                         |
| <b>Mean Time Between Failures</b>                                            | > 10 Years                                                                                                                                                                                                                                                 |
| <b>IP Rating</b>                                                             | IP67                                                                                                                                                                                                                                                       |
| <b>Surge Protection Built In</b>                                             | Yes                                                                                                                                                                                                                                                        |
| <b>Hit-less PoE Failover</b>                                                 | N/A                                                                                                                                                                                                                                                        |
| <b>Certifications</b>                                                        |                                                                                                                                                                                                                                                            |
|                                                                              | FCC/ISED<br>CE Marked<br>UKCA Marked<br>AS/NZS<br>Radio Equipment Directive (RED) 2014/53/EU<br>UL/IEC/EN 62368-1<br>IEC 60529<br>Class I Division 2 (CID2)<br>EN 50385<br>EN 62311                                                                        |
| <b>Radio Equipment Directive (RED)</b>                                       | 2014/53/EU                                                                                                                                                                                                                                                 |
| <b>WiFi Alliance Certified</b>                                               | Yes (includes Pass point)                                                                                                                                                                                                                                  |
| <b>DFS</b>                                                                   | In Process                                                                                                                                                                                                                                                 |
| <b>Hazardous Location</b>                                                    | C1D2 Certified                                                                                                                                                                                                                                             |
| <b>Warranty</b>                                                              |                                                                                                                                                                                                                                                            |
| <b>Limited Lifetime Warranty</b>                                             | 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](#).



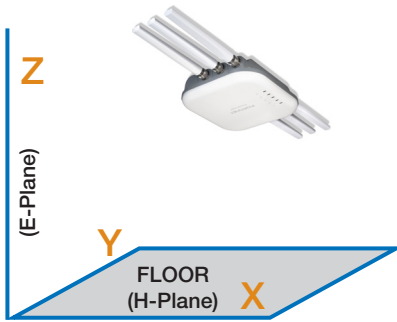
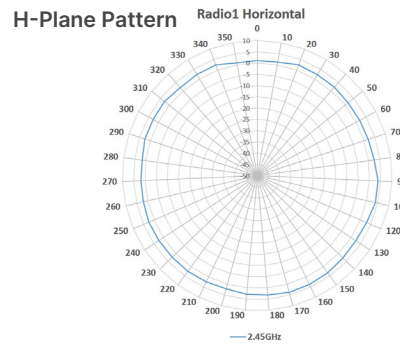
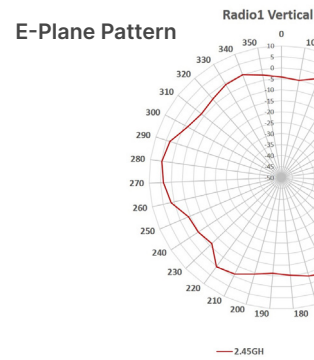
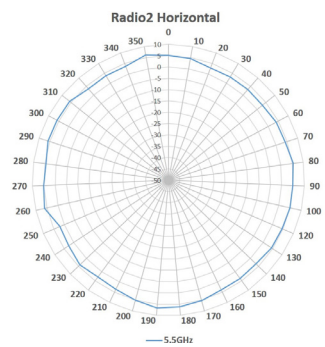
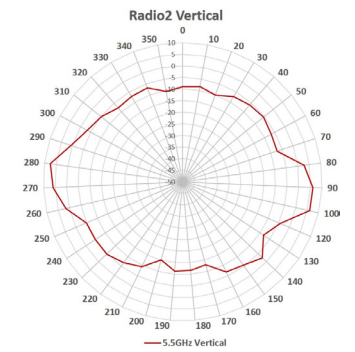
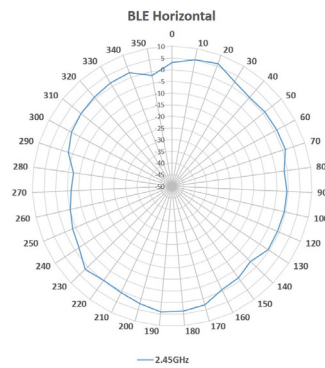
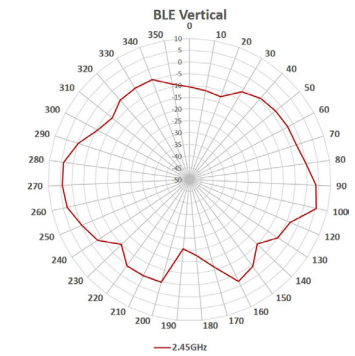
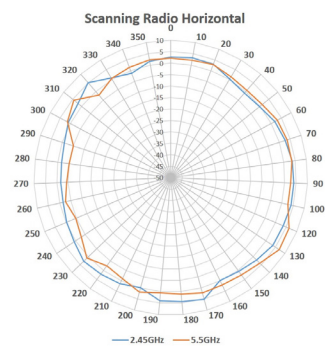
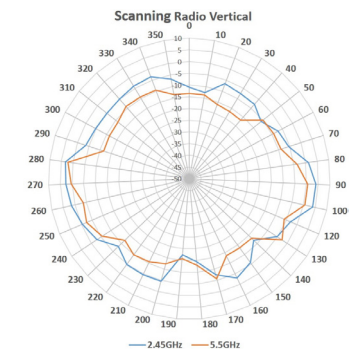
## RF Rx/Tx Performance Table

| FortiAP 432FR  |                                  |                      |                                |                      |                                  |                                |                      |
|----------------|----------------------------------|----------------------|--------------------------------|----------------------|----------------------------------|--------------------------------|----------------------|
| Data rate      | Radio 1                          |                      | Radio 2                        |                      | Radio 3 Scanning                 |                                |                      |
|                | 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



## Highlights

### FortiAP 23JF

This enterprise class Wi-Fi 6 wall plate AP provides three radios with internal antennas and two spatial 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

 2x2 MU-MIMO | Up to 574 Mbps + 1200 Mbps + scanning



FAP-23JF

# Specifications

| FortiAP 23JF                        |                                                                                                                                                                                                                         |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hardware</b>                     |                                                                                                                                                                                                                         |
| <b>Hardware Type</b>                | Indoor walljack/desktop AP                                                                                                                                                                                              |
| <b>Number of Radios</b>             | 3 + 1 BLE                                                                                                                                                                                                               |
| <b>Number of Antennas</b>           | 3 dual band internal Wi-Fi + 1 single band 2.4 GHz BLE/ZigBee                                                                                                                                                           |
| <b>Antenna Type and Peak Gain</b>   | PCB antenna<br>Dual band: 4.0 dBi in 2.4 GHz band and 4.0 dBi in 5 GHz band<br>BLE antenna: 3.5 dBi in 2.4 GHz band                                                                                                     |
| <b>Frequency Bands (GHz)*</b>       | 2.400–2.4835, 5.150–5.250, 5.250–5.350, 5.470–5.725, 5.725–5.850                                                                                                                                                        |
| <b>Radio 1 Capabilities</b>         | Frequency band: 2.4 GHz<br>Channel width: 20/40 MHz<br>Modulation: BPSK, QPSK, 64/256/1024 QAM<br>MIMO Chains: 2x2 Service                                                                                              |
| <b>Radio 2 Capabilities</b>         | Frequency band: 5.0 GHz<br>Channel width: 20/40/80 MHz<br>Modulation: BPSK, QPSK, 64/256/1024 QAM<br>MIMO Chains: 2x2 Service                                                                                           |
| <b>Radio 3 Capabilities</b>         | Frequency bands: 2.4 GHz and 5.0 GHz<br>MIMO Chains: 1x1 Frequency Scanning                                                                                                                                             |
| <b>Maximum Data Rate</b>            | Radio 1: up to 574 Mbps<br>Radio 2: up to 1200 Mbps<br>Radio 3: Frequency scanning only                                                                                                                                 |
| <b>Bluetooth Low Energy Radio</b>   | Bluetooth scanning and iBeacon advertisement @ 10 dBm max TX power                                                                                                                                                      |
| <b>Interfaces</b>                   | 4x 10/100/1000 Base-T RJ45 Ports (1x 802.3at PoE(PD), 1x 802.3af PoE (PSE), 2x Non-PoE Ports)<br>3 RJ-45 Ports (1xPass-through in, 1x Pass-through out, 1x RS-232 Serial Port)                                          |
| <b>MDI/MDIX</b>                     | Supported Supported                                                                                                                                                                                                     |
| <b>Simultaneous SSIDs</b>           | Up to 8 per client serving radio (7 if background scanning is enabled)                                                                                                                                                  |
| <b>EAP Type(s)</b>                  | EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST, EAP-TTLS/PAP                                                                                                               |
| <b>User/Device Authentication</b>   | WPA™, WPA2™, and WPA3™ with 802.1x or preshared key, WEP, Web Captive Portal, MAC blacklist and allowlist                                                                                                               |
| <b>Maximum Tx Power (Conducted)</b> | Radio 1: 2.4 GHz: 25 dBm / 158 mW (2 chains combined)*<br>Radio 2: 5 GHz: 21 dBm / 158 mW (2 chains combined)*<br>Radio 3: N/A                                                                                          |
| <b>Kensington Lock</b>              | Yes                                                                                                                                                                                                                     |
| <b>IEEE Standards</b>               | 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 |
| <b>SSID Types Supported</b>         | Local-Bridge, Tunnel, and Mesh                                                                                                                                                                                          |
| <b>Per Radio Client Capacity</b>    | Up to 512 clients per radio (Radio1 and Radio2)                                                                                                                                                                         |
| <b>Cellular Co-existence</b>        | Yes                                                                                                                                                                                                                     |
| <b>LED Off Mode</b>                 | Yes                                                                                                                                                                                                                     |

| FortiAP 23JF                            |                                                                                                                                                                                                                                                                                   |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Advanced 802.11 Features</b>         |                                                                                                                                                                                                                                                                                   |
| <b>OFDMA</b>                            | Yes (UL and DL)                                                                                                                                                                                                                                                                   |
| <b>Spatial Reuse (BSS Coloring)</b>     | Yes                                                                                                                                                                                                                                                                               |
| <b>UL MU-MIMO</b>                       | Yes                                                                                                                                                                                                                                                                               |
| <b>DL-MU-MIMO</b>                       | Yes                                                                                                                                                                                                                                                                               |
| <b>Enhanced Target Wake Time (TWT)</b>  | Yes                                                                                                                                                                                                                                                                               |
| <b>ZeroWait DFS</b>                     | No                                                                                                                                                                                                                                                                                |
| <b>Onboard Security Functions</b>       |                                                                                                                                                                                                                                                                                   |
| <b>UTP Capable</b>                      | No                                                                                                                                                                                                                                                                                |
| <b>UTP Features</b>                     | N/A                                                                                                                                                                                                                                                                               |
| <b>Wireless Monitoring Capabilities</b> |                                                                                                                                                                                                                                                                                   |
| <b>Rogue Scan radio modes</b>           | Background, Dedicated                                                                                                                                                                                                                                                             |
| <b>WIPS / WIDS radio modes</b>          | Background, Dedicated (recommended)                                                                                                                                                                                                                                               |
| <b>Packet Sniffer Mode</b>              | Yes                                                                                                                                                                                                                                                                               |
| <b>Spectrum Analyzer</b>                | Yes                                                                                                                                                                                                                                                                               |
| <b>Dimensions</b>                       |                                                                                                                                                                                                                                                                                   |
| <b>Length x Width x Height</b>          | 6.6 x 4.6 x 1.1 inches (168 x 117 x 28 mm)                                                                                                                                                                                                                                        |
| <b>Weight</b>                           | 0.99 lbs (0.45 kg)                                                                                                                                                                                                                                                                |
| <b>Package (shipping) Weight</b>        | 1.54 lbs (0.7 kg)                                                                                                                                                                                                                                                                 |
| <b>Accessories</b>                      |                                                                                                                                                                                                                                                                                   |
| <b>Mounting Options</b>                 | Wall Plate, Optional Desk Mount FAP-MNT-WJ-20                                                                                                                                                                                                                                     |
| <b>Included Accessories</b>             | Standard Mount kit for Ceiling, T-Rail, and Wall                                                                                                                                                                                                                                  |
| <b>Power Supply</b>                     | 802.3at PoE: GPI-130<br>Optional DC power adaptor SP-FAP23J-PA-10                                                                                                                                                                                                                 |
| <b>Environment</b>                      |                                                                                                                                                                                                                                                                                   |
| <b>CPU/RAM</b>                          | 23JF Quad-core ARM Cortex-A53 1.6GHz / 1 GB                                                                                                                                                                                                                                       |
| <b>PSE functionality</b>                | Yes                                                                                                                                                                                                                                                                               |
| <b>Power Consumption (Maximum)</b>      | 17.5W without PSE out and 31W with PSE out                                                                                                                                                                                                                                        |
| <b>PoE Mode</b>                         | 802.3at PoE default( optional DC adaptor)<br>Powered via DC power supply - Full System functionality + USB + PSE (8023af 15.4W)<br>Powered by 802.3af - Only Radio functionality is operational (No USB/PSE supported)<br>Powered by 802.3at - Full System functionality+ PSE(7w) |
| <b>Humidity</b>                         | 10% to 90% non condensing                                                                                                                                                                                                                                                         |
| <b>Operating / Storage Temperature</b>  | 32°F to 122°F (0°C to 50°C) / -22°F to 158°F (-30°C to 70°C)                                                                                                                                                                                                                      |
| <b>Directives</b>                       | Low Voltage Directive • RoHS                                                                                                                                                                                                                                                      |
| <b>UL2043 Plenum Material</b>           | No                                                                                                                                                                                                                                                                                |
| <b>Mean Time Between Failures</b>       | > 10 Years                                                                                                                                                                                                                                                                        |
| <b>IP Rating</b>                        | N/A                                                                                                                                                                                                                                                                               |
| <b>Surge Protection Built In</b>        | No                                                                                                                                                                                                                                                                                |
| <b>Hit-less PoE Failover</b>            | N/A                                                                                                                                                                                                                                                                               |
| <b>Certifications</b>                   |                                                                                                                                                                                                                                                                                   |
| <b>WiFi Alliance Certified</b>          | Yes (includes Passpoint)                                                                                                                                                                                                                                                          |
| <b>DFS</b>                              | FCC, IC, Europe, Japan, Brazil, Taiwan, and Korea                                                                                                                                                                                                                                 |
| <b>Warranty</b>                         |                                                                                                                                                                                                                                                                                   |
| <b>Limited Lifetime Warranty</b>        | Yes                                                                                                                                                                                                                                                                               |

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



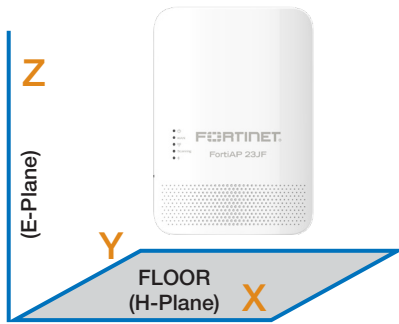
## RF Rx/Tx Performance Table

| FortiAP 23JF   |                                  |                      |                                |                      |                                  |                                |                      |
|----------------|----------------------------------|----------------------|--------------------------------|----------------------|----------------------------------|--------------------------------|----------------------|
| Data rate      | Radio 1                          |                      | Radio 2                        |                      | Radio 3 Scanning                 |                                |                      |
|                | 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                  | —                                | —                              | —                    |

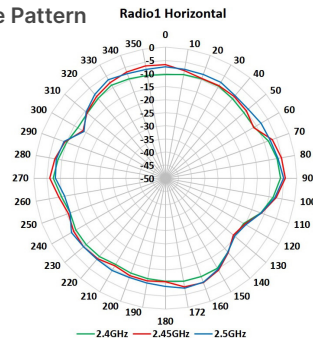


## Antenna Radiation Patterns

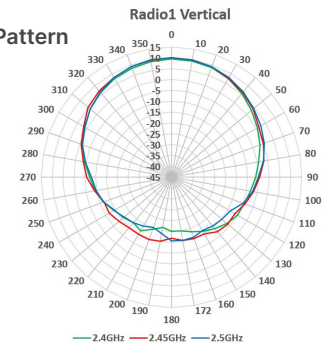
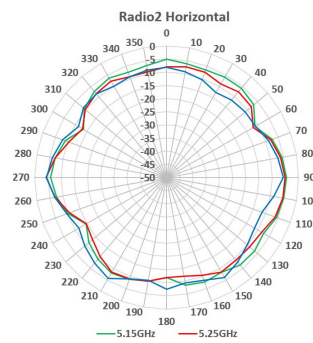
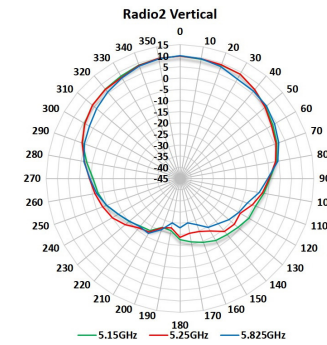
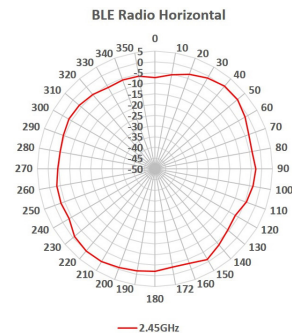
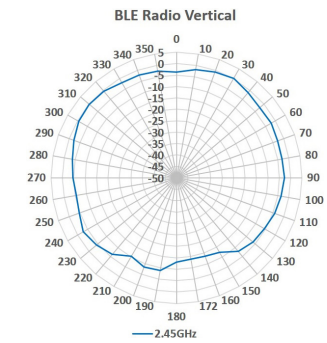
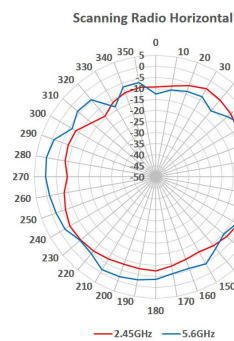
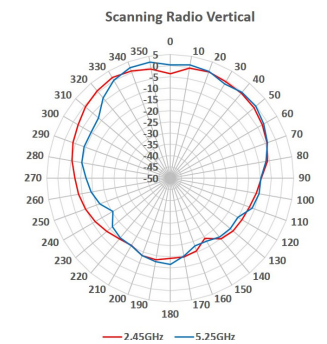
## FAP-23JF



H-Plane Pattern



E-Plane Pattern



## Ordering Information

| Product              | SKU                   | Description                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FortiAP-443K</b>  | 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.                                                                                                                                                                                                                                                                                                                 |
| <b>FortiAP-441K</b>  | 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.                                                                                                                                                                                                                                                                                                                 |
| <b>FortiAP-244K</b>  | 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.                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>FortiAP-243K</b>  | 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.                                                                                                                                                                                                                                                                                                                 |
| <b>FortiAP-241K</b>  | 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.                                                                                                                                                                                                                                                                                                                 |
| <b>FortiAP-231K</b>  | 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.                                                                                                                                                                                                                                                                                                                 |
| <b>FortiAP-222KL</b> | 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.                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>FortiAP 432G</b>  | 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.                                                                                                                                                                                                                                                                                                                                                   |
| <b>FortiAP 234G</b>  | 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.                                                                                                                                                                                                                                                                                                                                                   |
| <b>FortiAP 234G</b>  | FC-10-P234G-314-02-DD | Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.                                                                                                                                                                                                                                                                                                                 |



## Ordering Information

| Product                        | SKU                   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FortiAP 831F</b>            | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>FortiAP 432FR</b>           | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>FortiAP 23JF</b>            | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>FortiAP 221K</b>            | FAP-221K-[RC]         | Indoor Wireless AP - 4 raIndoor Wireless AP - (Wi-Fi-7 IEEE Dual-band 2.4/5GHz 2+2 2 streams 2 radios), internal antennas, 100/1000/2500 Base-T RJ45, BT/BLE, 1x RS-232 RJ45 Serial Port. Ceiling/wall mount kit included. For power order: 802.3at PoE injector GPI-130 or AC adapter SP-FAP250-PA. Region Code Adios (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. Region Code * |
|                                | FC-10-P221K-247-02-DD | FortiCare Premium Support.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                | FC-10-P221K-284-02-DD | FortiCare Elite Support.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                | FC-10-PG221-595-02-DD | FortiSASE subscription for cloud managed FortiAP with bandwidth included.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                | FC-10-P221K-314-02-DD | Forticare Essential Support for FortiAP. Available only for renewal and not with initial Hardware purchase.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>UTP Services (G Series)</b> | 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.                                                                                                                                                                                                                                           |
| <b>FortiManagement Cloud</b>   | FC-10-MGT0A-639-02-DD | FortiManagement Cloud Standard Subscription for all FortiAP Series. Includes cloud management, one-year log retention and FortiCare Premium.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Gigabit PoE Injector</b>    | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Power Adapter</b>           | 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.                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Desktop Stand</b>           | 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.

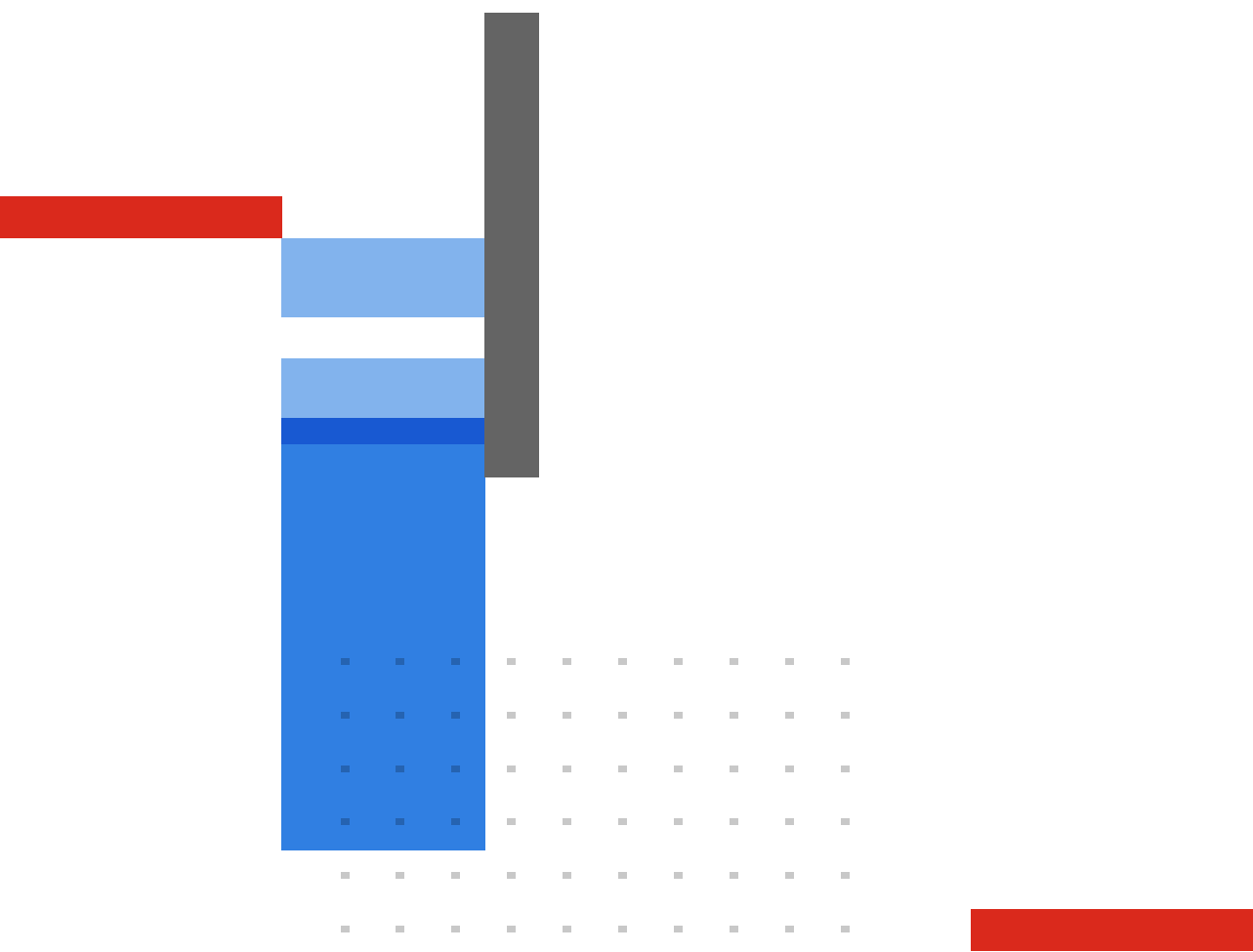
- Additional external antenna options available for some models. See antenna datasheet for details.
  - [RC](regional code): A, B, C, D, E, EO, F, I, J, K, N, P, S, T, U, V, W or Y, applies to all AP models based upon country of deployment. Work with your local supplier for the correct model in your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

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