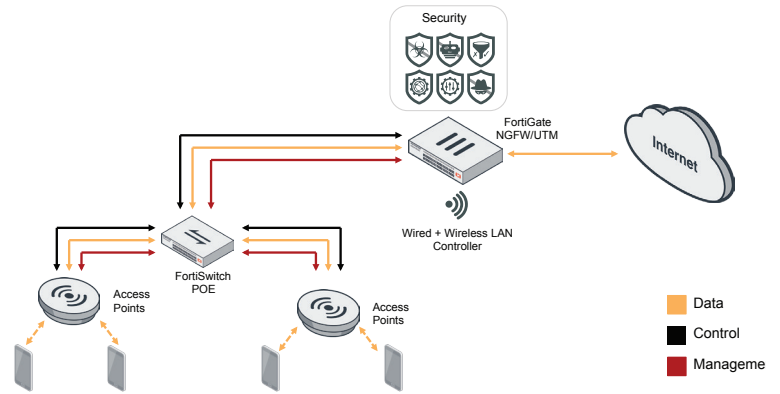


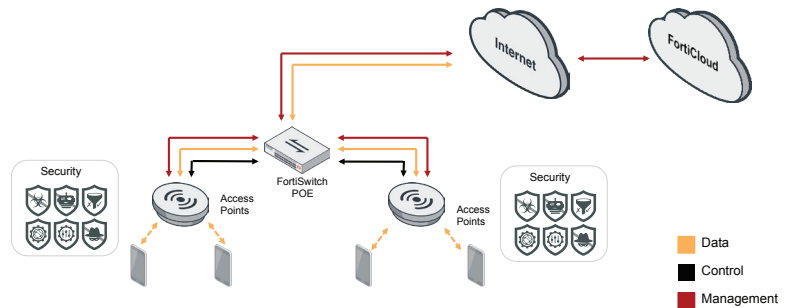
Integrated - FortiGate-Managed

Our Integrated offering leverages the wireless controller built into our FortiOS operating system. It features a family of controller-managed access points which function in cooperation with a FortiGate, our industry leading enterprise firewall. In addition to consolidating all the functions of a network firewall, IPS, anti-malware, VPN, WAN optimization, Web filtering, and application control in a single platform, FortiGate also has an integrated Wi-Fi controller. Wi-Fi is either integrated directly into the FortiGate (FortiWiFi) or connected as an access point (FortiAP) directly to a FortiGate to provide comprehensive wireless coverage.



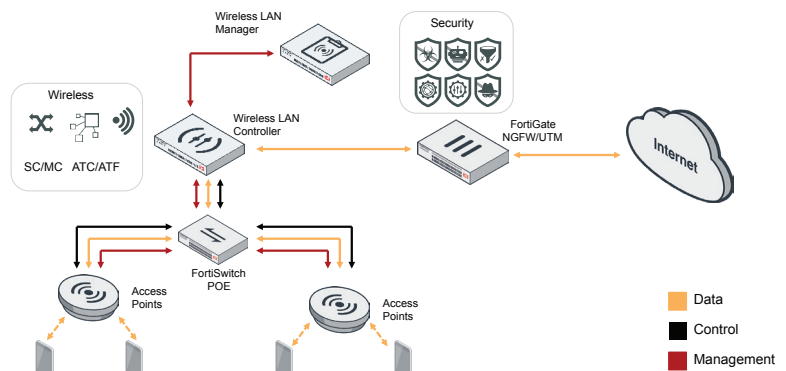
Cloud-Managed

Our cloud managed WLAN option contains capabilities unlike any other cloud Wi-Fi offering in the industry. This includes the FortiAP-S series which combines the elements of UTM protection at the network edge with the simplicity and convenience of cloud management through our FortiCloud service. FortiCloud management capabilities also extend beyond the management of Wi-Fi, to FortiGate and more.









Controller-Managed







Our Infrastructure wireless offering, formerly Meru Networks, combines on-premises controller-based management, open application appliances, and a range of high-performance indoor and outdoor access points. This is the ideal solution for large scale complex RF environment, or when an organization needs to separate the access infrastructure from the underlying network's security infrastructure. With network controlled roaming, users benefit from the best possible mobility experience. The Infrastructure solution offers multiple channel configuration options and layering to simplify deployment while increasing performance, traffic segmentation, and capacity. This solution scales for implementation in small, medium, and large enterprises of all types.






FortiAP™ Integrated Indoor or Cloud Managed Indoor (802.11ac Wave 2) Access Points

	FAP-221E	FAP-223E	FAP-221E Gen2	FAP-223E Gen2	FAP-421E	FAP-423E
						
Suggested Use Case	Medium density 802.11ac indoor	Medium density 802.11ac indoor	Medium density 802.11ac indoor	Medium density 802.11ac indoor	High density, high performance 802.11ac indoor	High density, high performance 802.11ac indoor
Hardware						
Number of Radios	2	2	2 + 1 BT/BLE	2 + 1 BT/BLE	2	2
Number of Antennas	4 Internal	4 External	4 Internal + 1 BT/BLE Internal	4 External + 1 BT/BLE Internal	8 Internal	8 External
Antenna Type and Peak Gain	Patch: 4 dBi for 2.4 GHz, 5 dBi for 5 GHz	Dipole: 4 dBi for 2.4 GHz, 5 dBi for 5 GHz	Patch: 4 dBi for 2.4 GHz, 5 dBi for 5 GHz	Dipole: 4 dBi for 2.4 GHz, 5 dBi for 5 GHz	PIFA: 4 dBi for 2.4 GHz, 5 dBi for 5 GHz	Dipole: 3 dBi for 2.4 GHz, 3 dBi for 5 GHz
Radio 1 Capabilities	2.4 GHz b/g/n (2x2:2) 20/40 MHz (256 QAM)	2.4 GHz b/g/n (2x2:2) 20/40 MHz (256 QAM)	2.4 GHz b/g/n (2x2:2) 20/40 MHz (256 QAM)	2.4 GHz b/g/n (2x2:2) 20/40 MHz (256 QAM)	2.4 GHz b/g/n (4x4:4) 20/40 MHz (256 QAM)	2.4 GHz b/g/n (4x4:4) 20/40 MHz (256 QAM)
Radio 2 Capabilities	5 GHz a/n/ac (2x2:2) 20/40/80 MHz (256 QAM)	5 GHz a/n/ac (2x2:2) 20/40/80 MHz (256 QAM)	5 GHz a/n/ac (2x2:2) 20/40/80 MHz (256 QAM)	5 GHz a/n/ac (2x2:2) 20/40/80 MHz (256 QAM)	5 GHz a/n/ac (4x4:4) 20/40/80 MHz (256 QAM)	5 GHz a/n/ac (4x4:4) 20/40/80 MHz (256 QAM)
Maximum Data Rate	Radio 1: up to 400 Mbps Radio 2: up to 867 Mbps	Radio 1: up to 400 Mbps Radio 2: up to 867 Mbps	Radio 1: up to 400 Mbps Radio 2: up to 867 Mbps	Radio 1: up to 400 Mbps Radio 2: up to 867 Mbps	Radio 1: up to 800 Mbps Radio 2: up to 1,733 Mbps	Radio 1: up to 800 Mbps Radio 2: up to 1,733 Mbps
Bluetooth (BT/BLE)			•	•		
Interfaces	1x GE RJ45, 1x Type A USB	1x GE RJ45, 1x Type A USB	1x GE RJ45, 1x Type A USB	1x GE RJ45, 1x Type A USB	2x GE RJ45, 1x Type A USB, 1x RS-232 RJ45 Serial Port	2x GE RJ45, 1x Type A USB, 1x RS-232 RJ45 Serial Port
Power over Ethernet (PoE)	IEEE 802.3af	IEEE 802.3af	IEEE 802.3af	IEEE 802.3af	Dual redundant PoE power ports, IEEE 802.3at or 2x2 operation with 802.3af	Dual redundant PoE power ports, IEEE 802.3at or 2x2 operation with 802.3af
Power Consumption (Max.)	12.36 W	12.36 W	12.36 W	12.36 W	23 W max power draw in 802.3at mode, 12.95 W max power draw when in 802.3af power mode	23 W max power draw in 802.3at mode, 12.95 W max power draw when in 802.3af power mode
Simultaneous SSIDs	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)
Maximum Tx Power	2.4 GHz: 23 dBm / 200 mW (2 chains combined)** 5 GHz: 24 dBm / 251 mW (2 chains combined)**	2.4 GHz: 23 dBm / 200 mW (2 chains combined)** 5 GHz: 24 dBm / 251 mW (2 chains combined)**	2.4 GHz: 23 dBm / 200 mW (2 chains combined)** 5 GHz: 24 dBm / 251 mW (2 chains combined)**	2.4 GHz: 23 dBm / 200 mW (2 chains combined)** 5 GHz: 24 dBm / 251 mW (2 chains combined)**	2.4 GHz: 24 dBm / 251 mW (4 chains combined)* 5 GHz: 25 dBm / 316 mW (4 chains combined)*	2.4 GHz: 24 dBm / 251 mW (4 chains combined)* 5 GHz: 25 dBm / 316 mW (4 chains combined)*
Kensington Lock	•	•	•	•	•	•
SSID Types Supported	Local-Bridge, Tunnel, Mesh	Local-Bridge, Tunnel, Mesh	Local-Bridge, Tunnel, Mesh	Local-Bridge, Tunnel, Mesh	Local-Bridge, Tunnel, Mesh	Local-Bridge, Tunnel, Mesh
Per Radio Client Capacity	Up to 512	Up to 512	Up to 512	Up to 512	Up to 512	Up to 512
UL2043 Plenum Material		•	•	•	•	•
Mounting Options	Ceiling, T-Rail and Wall	Ceiling, T-Rail and Wall	Ceiling, T-Rail and Wall	Ceiling, T-Rail and Wall	Ceiling, T-Rail and Wall	Ceiling, T-Rail and Wall
Cellular Coexistence**	•	•	•	•	•	•
LED Off Mode	•	•	•	•	•	•
Advanced 802.11 Features						
802.11ac Wave 2 MU-MIMO	•	•	•	•	•	•
Transmit Beam Forming (TxBF)	•	•	•	•	•	•
Low-Density Parity Check (LDPC) Encoding	•	•	•	•	•	•
Max Likelihood Demodulation (MLD)	•	•	•	•	•	•
Max Ratio Combining (MRC)	•	•	•	•	•	•
802.11ac 20/40/80 MHz Channel	•	•	•	•	•	•
A-MPDU and A-MSDU Packet Aggregation	•	•	•	•	•	•
MIMO Power Save	•	•	•	•	•	•
Short Guard Interval	•	•	•	•	•	•
Wireless Monitoring Capabilities						
Rogue Scan Radio Modes	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time
WIPS / WIDS Radio Modes	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time
Packet Sniffer Mode	•	•	•	•	•	•
Spectrum Analyzer	•	•	•	•	•	•
Certifications						
Wi-Fi Alliance Certified	•	•	•	•	•	•
DFS Certified	FCC, IC, CE, Japan, Taiwan	FCC, IC, CE, Japan, Taiwan	FCC, IC, CE, Japan, Taiwan	FCC, IC, CE, Japan, Taiwan	FCC, IC, CE, Japan, Taiwan, Korea	FCC, IC, CE, Japan, Taiwan, Korea







FortiAP™ Integrated or Cloud Managed Indoor, Outdoor and Wall Plate Access Points

	FAP-320C	FAP-321C	FAP-222C	FAP-222E	FAP-224E	FAP-C24JE
						
Suggested Use Case	High density, high performance 802.11ac indoor	Medium density 802.11ac indoor	IP67 High density 802.11ac outdoor	IP67 High density 802.11ac (wave2) outdoor	IP67 High density 802.11ac (wave2) outdoor	Indoor Wall Plate AP for hotel and dorm rooms
Hardware						
Number of Radios	2	2	2	2 + 1 BT/BLE	2 + 1 BT/BLE	2
Number of Antennas	6 Internal	6 Internal	4 External	4 External + 1 BT/BLE External	4 External + 1 BT/BLE Internal	4 Internal
Antenna Type and Peak Gain	PIFA: 5 dBi for 2.4 GHz, 6 dBi for 5 GHz	PIFA: 4 dBi for 2.4 GHz, 5 dBi for 5 GHz	Dipole: 3.5 dBi for 2.4 GHz, 6 dBi for 5 GHz	Dipole: 5 dBi for 2.4 GHz, 7 dBi for 5 GHz	Dipole: 6 dBi for 2.4 GHz, 8 dBi for 5 GHz	Chip: 1.5 dBi for 2.4 GHz, 2 dBi for 5 GHz
Radio 1 Capabilities	2.4 GHz b/g/n (3x3:3) 20/40 MHz (64 QAM) 128	2.4 GHz b/g/n (3x3:3) 20/40 MHz (64 QAM)	2.4 GHz b/g/n (2x2:2) 20/40 MHz (64 QAM)	2.4 GHz b/g/n (2x2:2) 20/40 MHz (256 QAM)	2.4 GHz b/g/n (2x2:2) 20/40 MHz (256 QAM)	2.4 GHz b/g/n (2x2:2) 20/40 MHz (64 QAM)
Radio 2 Capabilities	5 GHz a/n/ac (3x3:3) 20/40/80 MHz (256 QAM)	5 GHz a/n/ac (3x3:3) 20/40/80 MHz (256 QAM)	5 GHz a/n/ac (2x2:2) 20/40/80 MHz (256 QAM)	5 GHz a/n/ac (2x2:2) 20/40/80 MHz (256 QAM)	5 GHz a/n/ac (2x2:2) 20/40/80 MHz (256 QAM)	5 GHz a/n/ac (2x2:2) 20/40/80 MHz (256 QAM)
Maximum Data Rate	Radio 1: Up to 450 Mbps, Radio 2: Up to 1300 Mbps	Radio 1: up to 450 Mbps, Radio 2: up to 1,300 Mbps	Radio 1: Up to 300 Mbps, Radio 2: Up to 867 Mbps	Radio 1: up to 400 Mbps, Radio 2: up to 867 Mbps	Radio 1: up to 400 Mbps, Radio 2: up to 867 Mbps	Radio 1: up to 300 Mbps, Radio 2: up to 867 Mbps
Bluetooth (BT/BLE)				•	•	
Interfaces	2x GE RJ45, 1x Type A USB, 1x RJ45 Serial Port	1x GE RJ45	1x GE RJ45	1x GE RJ45	1x GE RJ45, 1x GE RJ45 (PoE), 1x SFP slot	2 + 6x GE RJ45 Ports (1x 802.3at PoE (PD), 1x 802.3af PoE (PSE), 1x pass-thru in, 1x pass-thru out), 1x RS-232 RJ45 Serial Port
Power over Ethernet (PoE)	Dual redundant PoE power ports, IEEE 802.3af	IEEE 802.3af	IEEE 802.3at or proprietary PoE injector	IEEE 802.3af/at	IEEE 802.3af/at	802.3af (max PSE output of 4W) or 802.3at (full 802.3af PSE output)
Power Consumption (Max.)	12.08 W	12.6 W	18.4 W	12.95 W	12.95 W	Depends on PoE connected
Simultaneous SSIDs	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)
Maximum Tx Power	2.4 GHz: 23.7 dBm / 234 mW (3 chains combined)* 5 GHz: 24.7 dBm / 295 mW (3 chains combined)*	2.4 GHz: 24 dBm / 251 mW (3 chains combined)* 5 GHz: 25 dBm / 316 mW (3 chains combined)*	2.4 GHz: 30 dBm / 1 W (2 chains combined)* 5 GHz: 27 dBm / 501 mW (2 chains combined)*	2.4 GHz: 27.2 dBm / 525 mW (2 chains combined)* 5 GHz: 29.5 dBm / 891 mW (2 chains combined)*	2.4 GHz: 24 dBm / 251 mW (2 chains combined)* 5 GHz: 24 dBm / 251 mW (2 chains combined)*	23 dBm / 100mW (2 chains combined)*
Kensington Lock	•	•	•	•	•	•
SSID Types Supported	Local-Bridge, Tunnel, Mesh	Local-Bridge, Tunnel, Mesh	Local-Bridge, Tunnel, Mesh	Local-Bridge, Tunnel & Mesh (when managed by controller)	Local-Bridge, Tunnel & Mesh (when managed by controller)	Local-Bridge, Tunnel
Per Radio Client Capacity	Up to 128	Up to 128	Up to 128	Up to 512	Up to 512	Up to 64
UL2043 Plenum Material	•	•	•	•	•	•
Mounting Options	Ceiling, T-Rail and Wall	Ceiling, T-Rail and Wall	Wall Mount or Pole Mount	Wall Mount or Pole Mount	Wall Mount or Pole Mount	Wall Plate
Cellular Coexistence**	•	•	•	•	•	•
LED Off Mode	•	•	•	•	•	•
Advanced 802.11 Features						
802.11ac Wave 2 MU-MIMO				•	•	•
Transmit Beam Forming (TxBF)				•	•	•
Low-Density Parity Check (LDPC) Encoding	•	•	•	•	•	•
Maxi Likelihood Demodulation (MLD)	•	•	•	•	•	•
Maxi Ratio Combining (MRC)	•	•	•	•	•	•
802.11ac 20/40/80 MHz Channel	•	•	•	•	•	•
A-MPDU and A-MSDU Packet Aggregation	•	•	•	•	•	•
MIMO Power Save	•	•	•	•	•	•
Short Guard Interval	•	•	•	•	•	•
Wireless Monitoring Capabilities						
Rogue Scan Radio Modes	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time
WIPS / WIDS Radio Modes	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time
Packet Sniffer Mode	•	•	•	•	•	•
Spectrum Analyzer	•	•	•	•	•	•
Certifications						
Wi-Fi Alliance Certified	•	•	•	•	•	•
DFS Certified	CE, Japan	CE, Japan	CE, Japan, Korea	FCC, IC, CE	In Process	In Process



FortiAP-S Integrated or Cloud Managed Smart (802.11ac Wave 2) Access Points

	FAP-S221E	FAP-S223E	FAP-S421E
			
Suggested Use Case	High density, high performance 802.11ac indoor	High density, high performance 802.11ac indoor	High density, high performance 802.11ac indoor
Hardware			
Number of Radios	2 + 1 BT/BLE	2 + 1 BT/BLE	2
Number of Antennas	4 Internal + 1 BT/BLE internal	4 External + 1 BT/BLE internal	8 Internal
Antenna Type and Peak Gain	PIFA: 3 dBi for 2.4 GHz, 5 dBi for 5 GHz	Dipole: 4 dBi for 2.4 GHz, 5 dBi for 5 GHz	PIFA: 4 dBi for 2.4 GHz, 5 dBi for 5 GHz
Radio 1 Capabilities	2.4 GHz b/g/n (2x2:2) 20/40 MHz (64 QAM)	2.4 GHz b/g/n (2x2:2) 20/40 MHz (64 QAM)	2.4 GHz b/g/n (4x4:4) 20/40 MHz (64 QAM)
Radio 2 Capabilities	5 GHz a/n/ac (2x2:2) 20/40/80 MHz (256 QAM)	5 GHz a/n/ac (2x2:2) 20/40/80 MHz (256 QAM)	5 GHz a/n/ac (4x4:4) 20/40/80 MHz (256 QAM)
Maximum Data Rate	Radio 1: up to 300 Mbps Radio 2: up to 867 Mbps	Radio 1: up to 300 Mbps Radio 2: up to 867 Mbps	Radio 1: up to 600 Mbps Radio 2: up to 1,733 Mbps
Bluetooth (BT/BLE)	•	•	
Interfaces	2x GE RJ45, 1x Type A USB, 1x RS-232 RJ45 Serial Port	2x GE RJ45, 1x Type A USB, 1x RS-232 RJ45 Serial Port	2x GE RJ45, 1x Type A USB, 1x RS-232 RJ45 Serial Port
Power over Ethernet (PoE)	Dual redundant PoE power ports with support for IEEE 802.3af & 802.3at	Dual redundant PoE power ports with support for IEEE 802.3af & 802.3at	Dual redundant PoE power ports with support for IEEE 802.3af & 802.3at
Power Consumption (Max.)	24 W	24 W	24 W
Simultaneous SSIDs	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)
Maximum Tx Power	2.4 GHz: 23 dBm / 200 mW (2 chains combined)* 5 GHz: 22 dBm / 158 mW (2 chains combined)*	2.4 GHz: 23 dBm / 200 mW (2 chains combined)* 5 GHz: 22 dBm / 158 mW (2 chains combined)*	2.4 GHz: 28 dBm / 631 mW (4 chains combined)* 5 GHz: 26 dBm / 398 mW (4 chains combined)*
Kensington Lock	•	•	•
SSID Types Supported	Local-Bridge, Tunnel & Mesh (when managed by controller)	Local-Bridge, Tunnel & Mesh (when managed by controller)	Local-Bridge, Tunnel & Mesh (when managed by controller)
Per Radio Client Capacity	Up to 512	Up to 512	Up to 512
UL2043 Plenum Material			•
Mounting Options	Ceiling, T-Rail, and Wall	Ceiling, T-Rail, and Wall	Ceiling, T-Rail, and Wall
Cellular Coexistence**	•	•	•
LED Off Mode	•	•	•
Advanced 802.11 Features			
802.11ac Wave 2 MU-MIMO	•	•	•
Transmit Beam Forming (TxBF)	•	•	•
Low-Density Parity Check (LDPC) Encoding	•	•	•
Max Likelihood Demodulation (MLD)	•	•	•
Max Ratio Combining (MRC)	•	•	•
802.11ac 20/40/80 MHz Channel	•	•	•
A-MPDU and A-MSDU Packet Aggregation	•	•	•
MIMO Power Save	•	•	•
Short Guard Interval	•	•	•
Wireless Monitoring Capabilities			
Rogue Scan Radio Modes	Background, Full-time	Background, Full-time	Background, Full-time
WIPS / WIDS Radio Modes	Background, Full-time	Background, Full-time	Background, Full-time
Packet Sniffer Mode	•	•	•
Spectrum Analyzer	•	•	•
Certifications			
Wi-Fi Alliance Certified	•	•	•
DFS Certified	FCC, IC, CE, Japan	FCC, IC, CE, Japan	FCC, IC, CE, Japan, Taiwan, Korea

FortiAP-U Universally Manageable Indoor Access Points

	FAP-U221EV	FAP-U223EV	FAP-U321EV	FAP-U323EV	FAP-U421EV	FAP-U423EV
						
Suggested Use Case	High density, high performance 802.11ac indoor	High density, high performance 802.11ac W2 indoor	High density, high performance 802.11ac W2 indoor	High density, high performance 802.11ac W2 indoor	High density, high performance 802.11ac W2 indoor	High density, high performance 802.11ac W2 indoor
Hardware						
Number of Radios	2 + 1 BT/BLE	2 + 1 BT/BLE	2 + 1 BT/BLE	2 + 1 BT/BLE	2 + 1 BT/BLE	2 + 1 BT/BLE
Number of Antennas	4 Internal + 1 BT/BLE Internal	4 External + 1 BT/BLE Internal	6 Internal + 1 BT/BLE Internal	6 External + 1 BT/BLE Internal	8 Internal + 1 BT/BLE Internal	8 External + 1 BT/BLE Internal
Antenna Type and Peak Gain	Patch: 3 dBi for 2.4 GHz, 4 dBi for 5 GHz	Dipole: 3 dBi for 2.4 GHz, 4 dBi for 5 GHz	Patch: 4.5 dBi for 2.4 GHz, 6.5 dBi for 5 GHz	Dipole: 3.5 dBi for 2.4 GHz, 5 dBi for 5 GHz	Patch: 4 dBi for 2.4 GHz, 5 dBi for 5 GHz	Dipole: 3 dBi for 2.4 GHz, 3 dBi for 5 GHz
Radio 1 Capabilities	2.4 GHz b/g/n (2x2:2) 20/40 MHz (64 QAM)	2.4 GHz b/g/n (2x2:2) 20/40 MHz (64 QAM)	2.4 GHz b/g/n (3x3:3) 20/40 MHz (64 QAM)	2.4 GHz b/g/n (3x3:3) 20/40 MHz (64 QAM)	2.4 GHz b/g/n (4x4:4) 20/40 MHz (64 QAM)	2.4 GHz b/g/n (4x4:4) 20/40 MHz (64 QAM)
Radio 2 Capabilities	5 GHz a/n/ac (2x2:2) 20/40/80 MHz (256 QAM)	5 GHz a/n/ac (2x2:2) 20/40/80 MHz (256 QAM)	5 GHz a/n/ac (3x3:3) 20/40/80 MHz (256/1024 QAM)	5 GHz a/n/ac (3x3:3) 20/40/80 MHz (256/1024 QAM)	5 GHz a/n/ac (4x4:4) 20/40/80/160 MHz (256/1024 QAM)	5 GHz a/n/ac (4x4:4) 20/40/80/160 MHz (256/1024 QAM)
Maximum Data Rate	Radio 1: up to 300 Mbps Radio 2: up to 867 Mbps	Radio 1: up to 300 Mbps Radio 2: up to 867 Mbps	Radio 1: up to 450 Mbps Radio 2: up to 2,600 Mbps	Radio 1: up to 450 Mbps Radio 2: up to 2,600 Mbps	Radio 1: up to 600 Mbps Radio 2: up to 3,466 Mbps	Radio 1: up to 600 Mbps Radio 2: up to 3,466 Mbps
Bluetooth (BT/BLE)	•	•	•	•	•	•
Interfaces	1x GE RJ45, 1x Type A USB	1x GE RJ45, 1x Type A USB	2x GE RJ45, 1x Type A USB, 1x RS-232 RJ45 Serial Port	2x GE RJ45, 1x Type A USB, 1x RS-232 RJ45 Serial Port	2x GE RJ45, 1x Type A USB, 1x RS-232 RJ45 Serial Port	2x GE RJ45, 1x Type A USB, 1x RS-232 RJ45 Serial Port
Power over Ethernet (PoE)	IEEE 802.3af or 802.3at	IEEE 802.3af or 802.3at	Dual redundant PoE power ports with support for IEEE 802.3af & 802.3at	Dual redundant PoE power ports with support for IEEE 802.3af & 802.3at	Dual redundant PoE power ports with support for IEEE 802.3af & 802.3at	Dual redundant PoE power ports with support for IEEE 802.3af & 802.3at
Power Consumption (Max.)	12.5 W	12.5 W	15 W when supplied by 802.3at power and 12.8 W when in 802.3af power mode	15 W when supplied by 802.3at power and 12.8 W when in 802.3af power mode	24.5 W when supplied by 802.3at power and 12.5 W when in 802.3af power mode	24.5 W when supplied by 802.3at power and 12.5 W when in 802.3af power mode
Simultaneous SSIDs	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)
Maximum Tx Power	2.4 GHz: 25 dBm / 316 mW (2 chains combined)* 5 GHz: 23 dBm / 200 mW (2 chains combined)*	2.4 GHz: 25 dBm / 316 mW (2 chains combined)* 5 GHz: 23 dBm / 200 mW (2 chains combined)*	2.4 GHz: 26.7 dBm / 468 mW (3 chains combined)* 5 GHz: 24.7 dBm / 295 mW (3 chains combined)*	2.4 GHz: 26.7 dBm / 468 mW (3 chains combined)* 5 GHz: 24.7 dBm / 295 mW (3 chains combined)*	2.4 GHz: 28 dBm / 631 mW (4 chains combined)* 5 GHz: 26 dBm / 398 mW (4 chains combined)*	2.4 GHz: 28 dBm / 631 mW (4 chains combined)* 5 GHz: 26 dBm / 398 mW (4 chains combined)*
Kensington Lock	•	•	•	•	•	•
SSID Types Supported	Local-Bridge, Tunnel & Mesh	Local-Bridge, Tunnel & Mesh	Local-Bridge, Tunnel & Mesh	Local-Bridge, Tunnel & Mesh	Local-Bridge, Tunnel & Mesh	Local-Bridge, Tunnel & Mesh
Per Radio Client Capacity	Up to 128	Up to 128	Up to 256	Up to 256	Up to 256	Up to 256
UL2043 Plenum Material	•	•	•	•	•	•
Mounting Options	Ceiling, T-Rail and Wall	Ceiling, T-Rail and Wall	Ceiling, T-Rail and Wall	Ceiling, T-Rail and Wall	Ceiling, T-Rail and Wall	Ceiling, T-Rail and Wall
Cellular Coexistence**	•	•	•	•	•	•
LED Off Mode	•	•	•	•	•	•
Advanced 802.11 Features						
802.11ac Wave 2 MU-MIMO	•	•	•	•	•	•
Transmit Beam Forming (TxBF)	•	•	•	•	•	•
Low-Density Parity Check (LDPC) Encoding	•	•	•	•	•	•
Max Likelihood Demodulation (MLD)	•	•	•	•	•	•
Max Ratio Combining (MRC)	•	•	•	•	•	•
802.11ac 20/40/80 MHz Channel	•	•	•	•	•	•
A-MPDU and A-MSDU Packet Aggregation	•	•	•	•	•	•
MIMO Power Save	•	•	•	•	•	•
Short Guard Interval	•	•	•	•	•	•
Wireless Monitoring Capabilities						
Rogue Scan Radio Modes	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time
WIPS / WIDS Radio Modes	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time	Background, Full-time
Packet Sniffer Mode	•	•	•	•	•	•
Spectrum Analyzer	•	•	•	•	•	•
Certifications						
Wi-Fi Alliance Certified	•	•	•	•	•	•
DFS Certified	CE, Japan	CE, Japan	FCC, CE, IC, Japan	FCC, CE, IC, Japan	FCC, CE, IC, Japan, Taiwan, Korea	FCC, CE, IC, Japan, Taiwan, Korea

FortiAP-U Universally Manageable Outdoor and Wall Plate Access Points

	FAP-U422EV	FAPU24JEV
		
Suggested Use Case	High performance 802.11ac W2 outdoor	Low cost, compact 802.11ac wallplug/wall plate
Hardware		
Number of Radios	2 + 1 BT/BLE	1 or 2 + 1 BT/BLE
Number of Antennas	8 External + 1 BT/BLE Internal	2 Internal + 1 BT/BLE Internal
Antenna Type and Peak Gain	Dipole: 5 dBi for 2.4 GHz, 7 dBi for 5 GHz	Patch: 3 dBi for 2.4 GHz, 4 dBi for 5 GHz
Radio 1 Capabilities	2.4 GHz b/g/n (4x4:4) 20/40 MHz (64 QAM)	2.4 GHz b/g/n (2x2:2) 20/40 MHz (64 QAM) or 5 GHz a/n/ac (2x2:2) 20/40/80 MHz (256 QAM)
Radio 2 Capabilities	5 GHz a/n/ac (4x4:4) 20/40/80/160 MHz (256/1024 QAM)	or 2.4 GHz b/g/n (1x1:1) 20/40 MHz (64 QAM) & 5 GHz a/n/ac (1x1:1) 20/40/80 MHz (256 QAM)
Maximum Data Rate	Radio 1: up to 600 Mbps Radio 2: up to 3,466 Mbps	up to 867 Mbps
Bluetooth (BT/BLE)	•	•
Interfaces	2x GE RJ45, 1x RS-232 RJ45 Serial Port	2 + 4x GE RJ45 Ports (1x 802.3at PoE (PD), 1x 802.3af PoE (PSE), 1x pass-thru in, 1x pass-thru out)
Power over Ethernet (PoE)	Proprietary or 802.3at	802.3af (max PSE output of 4W) or 802.3at (full 802.3af PSE output)
Power Consumption (Max.)	22 W	24W (Depends on PoE connected and USB power consumed)
Simultaneous SSIDs	16 (14 client, 2 monitor)	16 (14 client, 2 monitor)
Maximum Tx Power	2.4 GHz: 24 dBm / 251 mW (4 chains combined)* 5 GHz: 24 dBm / 251 mW (4 chains combined)*	2.4 GHz: 23 dBm / 200 mW (2 chains combined)* 5 GHz: 21 dBm / 126 mW (2 chains combined)*
Kensington Lock		
SSID Types Supported	Local-Bridge, Tunnel & Mesh	Local-Bridge, Tunnel
Per Radio Client Capacity	Up to 256	Up to 128
UL2043 Plenum Material		
Mounting Options	Wall Mount or Pole Mount	Wall plate or desk stand
Cellular Coexistence**	•	•
LED Off Mode	•	•
Advanced 802.11 Features		
802.11ac Wave 2 MU-MIMO	•	•
Transmit Beam Forming (TxBF)	•	•
Low-Density Parity Check (LDPC) Encoding	•	•
Max Likelihood Demodulation (MLD)	•	•
Max Ratio Combining (MRC)	•	•
802.11ac 20/40/80 MHz Channel	•	•
A-MPDU and A-MSDU Packet Aggregation	•	•
MIMO Power Save	•	•
Short Guard Interval	•	•
Wireless Monitoring Capabilities		
Rogue Scan Radio Modes	Background, Full-time	Background, Full-time
WIPS / WIDS Radio Modes	Background, Full-time	Background, Full-time
Packet Sniffer Mode	•	•
Spectrum Analyzer	•	•
Certifications		
Wi-Fi Alliance Certified	•	•
DFS Certified	CE, Japan	CE

FortiWiFi™ Firewall and WiFi Gateway

	FWF-30E	FWF-50E	FWF-50E-2R	FWF-60D	FWF-60E	FWF-90D
Suggested Deployment	Home/small office	Home/small office	Distributed office	Distributed office	Distributed office	Indoor Motels, Clinics, Small Enterprise, Retail
Hardware						
Form Factor	Desktop, wall mountable	Desktop, wall mountable	Desktop, wall mountable	Desktop, wall mountable	Desktop, wall mountable	Desktop, wall mountable
Dimension	1.61 x 8.27 x 5.24 in	1.44 x 5.5 x 8.52	1.44 x 5.5 x 8.52	1.50 x 8.50 x 5.83 in	1.5 x 8.5 x 6.3 in	1.72 x 8.5 x 8.78 in
Kensington Lock						•
Ethernet Interfaces	1 x GE RJ45 WAN, 4 x GE RJ45 Switch ports	2 x GE RJ45 WAN, 5 x GE RJ45 Switch ports	2 x GE RJ45 WAN, 5 x GE RJ45 Switch ports	3 x GE RJ45 WAN/DMZ, 7 x GE RJ45 Switch ports	3 x GE RJ45 WAN/DMZ, 7 x GE RJ45 Switch ports	2 x GE RJ45 WAN ports, 14 x GE RJ45 Switch ports
Mesh Root		•		•		•
Other WiFi Variants	—	+ Storage (FWF-51E)	—	POE (PSE)	—	POE (PSE)
Wireless						
IEEE Standard	802.11 a/b/g/n	802.11 a/b/g/n	802.11 a/b/g/n/ac	802.11 a/b/g/n	802.11 a/b/g/n/ac	802.11a/b/g/n
Number of Radios	1	1	2	1	1	1
Radio 1 Band (association rate)	2.4GHz / 5GHz (300Mbps)	2.4GHz / 5GHz (300Mbps)	2.4GHz (300Mbps)	2.4GHz / 5GHz (300Mbps)	2.4GHz / 5GHz (300Mbps)	2.4GHz / 5GHz (300Mbps)
Radio 2 Band (association rate)	—	—	5GHz (867 Mbps)	—	—	—
MIMO	2x2	2x2	2x2	2x2	2x2	2x2
Max / recommended number of concurrent clients	128 / 30	128 / 30	128 / 30	128 / 30	128 / 30	128 / 30
Antenna Type and Count	2 F-type antennas	2 F-type antennas	2 F-type antennas	2 di-pole antennas	2 di-pole antennas	2 di-pole antennas
Antenna Gain	3 dBi/(3dBi-5GHz)	3 dBi/(3dBi-5GHz)	3 dBi/(6dBi-5GHz)	3 dBi/(6dBi-5GHz)	3 dBi/(6dBi-5GHz)	up to 5dB
Max TX Power	17dBm	17dBm	2.4G:20.5 dBm, 5G:16.5dBm	17dBm	17dBm	17dBm
Number of SSIDs	8 (7 client, 1 monitor)	8 (7 client, 1 monitor)	8 (7 client, 1 monitor)	8 (7 client, 1 monitor)	8 (7 client, 1 monitor)	8 (7 client, 1 monitor)
Traffic Queues	4 queues	4 queues	4 queues	4 queues	4 queues	4 queues
802.11n 20/40MHz HT	•	•	•	•	•	•
Short Guard	•	•	•	•	•	•
802.11ac 80 MHz channel						
MAC Service Data Unit (MSDU) aggregation and MAC Protocol Data Unit (MPDU) frame aggregation	•	•	•	•	•	•
Cyclic-delay diversity (CDD)	•	•	•	•	•	•
Power Save (WME-PS)	•	•	•	•	•	•
802.11n Max ratio combining (MRC)	•	•	•	•	•	•
Transmit Beam Forming (TxBF)	•	•	•	•	•	•
Low Density Parity Check encoding (LDPC)	•	•	•	•	•	•
802.11n Maximum Likelihood Detection (MLD)	•	•	•	•	•	•
Rogue AP scanning						
Dual Band Scanning	•	•	•	•	•	•
Background Scan	•	•	•	•	•	•
Full-time dedicated monitor	•	•	•	•	•	•
Single Radio Dual band scanning	•	•	•	•	•	•
Management						
WebUI & CLI	•	•	•	•	•	•
Max managed APs	2	10	10	10	20	32
Cloud deployment support	•	•	•	•	•	•
Certifications						
Wi-Fi Alliance Certified						
DFS Certified				Region: J		Region: J




* Certification covers following specifications: - 802.11a/b/g/n, Short Guard Interval, TX A-MPDU, STBC, 40 MHz operation in 5 GHz/WPA™ Personal, WPA™ Enterprise / Personal, WPA2™, Enterprise / Personal, WMM™, EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST, 802.11 d/h, WMM Power Save.

** Additional filtration added to reduce interference in 2.4GHz band from nearby cellular equipment.






FortiGate/FortiWiFi® Wireless Controller (with FortiOS 6.0)

	FortiGate/FortiWiFi 30D/E, 50E & 60D/E Series	FortiGate/FortiWiFi 70D, 80D, 90D, 90E, 92D Series	FortiGate 100D Series	FortiGate 200D Series	FortiGate 300D, 400D & 500D
Hardware					
Product Range / Form Factor	Entry / Desktop	Entry / Desktop-2 RU	Mid Range / 1 RU	Mid Range / 1-2 RU	Mid Range / 1 RU
GE Interfaces	5-10	4 - 78	8 - 40	18 - 88	10 - 18
GE PoE/PoE+ Interfaces	2 / - (FG-60D-POE)	4 / - (FG-90D/70D-POE)	16 (FG-140D-POE)	8 (FG-200D-POE) 24 (FG-240D-POE) 32 (FG-280D-POE)	-
10 GE Interfaces	-	-	-	-	-
40 GE Interfaces	-	-	-	-	-
Capacity					
Maximum Supported APs (Tunnel Mode)	2 - 5	16	32	64	256
Maximum Supported APs (Total)	2 - 20	32	64	128	512
Max number of SSIDs	32	32	256	256	256
Max CAPWAP throughput	250 Mbps - 1.9 Gbps	260 Mbps - 2.2 Gbps	1.2 Gbps	1.8 Gbps	5.4 - 10 Gbps
Max Concurrent Sessions	500 K - 1.8 Mil	1.5 - 2 Mil	3 Mil	3.2 Mil	5.5 - 6 Mil
	FortiGate 600C, 600D, 800C, 800D & 900D	FortiGate 1000,2000 & 3000 Series	FG-5000 Series	FG-VM Series	
Hardware					
Product Range / Form Factor	Mid Range / 1 RU	High End / 2-3 RU	High End / 3-13 RU	-	
GE Interfaces	16-34	18 - 34	2 - 28	Refer to Data Sheet	
GE PoE/PoE+ Interfaces	-	-	-	-	
10 GE Interfaces	0 - 2	2 - 48	2 - 112	Refer to Data Sheet	
40 GE Interfaces	-	4	-	-	
100 GE Interfaces	-	6	2	-	
Capacity					
Maximum Supported APs (Tunnel Mode)	512	1,024	Up to 14,336 (1,024/blade)	32 - 1,024	
Maximum Supported APs (Total)	1,024	4,096	Up to 57,344 (4,096/blade)	64 - 4,096	
Max number of SSIDs	256	1,024	Up to 14,336 (1,024/blade)	32 - 1,024	
Max CAPWAP throughput	5.5 Gbps - 11 Gbps	11 Gbps - 22 Gbps	Refer to Datasheet	Refer to Data Sheet	
Max Concurrent Sessions	3 - 11 Mil	11 - 95 Mil	10 - 100 Mil	Refer to Data Sheet	



Fortinet Infrastructure Wi-Fi Access Points

	AP 122	AP 822i/822e	OAP 832e
			
Suggested Use Case	In-room hotel, hospital, dormitory	Classrooms, Dormitory Common Areas, Moderate Density Enterprise	Parking Lots, Courtyards, University Grounds
Hardware			
Form Factor	Small, wall mountable	Wall or ceiling wall mountable	Outdoor 67 rated, wall or pole wall mountable
Dimension	5.51 x 5.35 x 1.18 in	7.1 x 7.1 x 2.7 in	11.0 x 8.54 x 2.0 in
Ethernet Interfaces	1x GE RJ45 (PD), 1x FE, 1x FE PoE (PSE), 1x pass through RJ45 pair	1x GE RJ45 (PD), 1x GE RJ45 (disabled)	1x GE RJ45 (PD), 1x GE RJ45
PoE	802.3af, 802.3at	802.3af, 802.3at	802.3at
Included accessories	Mounting kit	Mounting kits, omnidirectional antennas for AP822e	Mounting kits and omnidirectional antennas
Mesh capable		•	•
Wireless			
IEEE Standard	802.11 a/b/g/n/ac	802.11 a/b/g/n/ac	802.11 a/b/g/n/ac
Number of Radios	2	2	2
Radio 1 Band (association rate)	2.4 GHz / 5 GHz (300 Mbps)	2.4 GHz / 5 GHz (300 Mbps)	2.4 GHz (450 Mbps)
Radio 2 Band (association rate)	5 GHz a/n/ac (867 Mbps)	5 GHz a/n/ac (867 Mbps)	5 GHz a/n/ac (1,300 Mbps)
MIMO	2x2 (dual stream)	2x2 (dual stream)	3x3 (3 stream)
Max / recommended number of concurrent clients	128 / 20 per radio	128 / 50 per radio	128 / 50 per radio
Antenna Type and Count	4 - Internal	822i: 4 - Internal 822e: 4 - External	6 N-type External
Antenna Gain	3.6 dBi / (5 dBi for 5 GHz)	AP 822i :3.3 dBi / (6 dBi for 5 GHz) AP 822e :3.3 dBi / (6 dBi for 5 GHz)	6 dBi / (7dBi for 5 GHz)
Max TX Power	20 dBm (2.4 GHz) 20 dBm (5 GHz)	AP 822i : 23 & 22 dBm - 2.4/5 GHz AP 822e : 24 & 24 dBm - 2.4/5 GHz	29 dBm (2.4 GHz) 23 dBm (5 GHz)
Number of SSIDs	64	64	64
802.11n 20/40MHz HT	•	•	•
802.11ac 80 MHz channel	•	•	•
Security			
WEP, WPA-PSK, WPA-TKIP, WPA2-AES, 802.11i, 802.1X (EAP-TLS, EAP-TTLS, PEAP, LEAP, EAP-FAST, EAP-SIM, EAP-AKA, and EAP-MD5)	•	•	•
802.1X and captive portal authentication against local database on the controller, RADIUS, and Active Directory	•	•	•
RADIUS-assisted per-user and per-ESSID access control via MAC filtering	•	•	•
Operation Mode			
Centralized deployment mode	•	•	•
Distributed deployment mode	•	•	•
Remote VPN tunnel mode	•	•	•
Certifications			
Wi-Fi Alliance Certified*	•	•	•
DFS Certified**	Region A, K, J, E	Region A, K, J, E	Region A, J, E

FortiWLC Wireless Controllers

	FWC-50D	FWC-200D	FWC-500D	FWC-1000D	FWC-3000D
					
Suggested Use Case	Small enterprises, remote offices	Medium enterprises, branch offices	Large enterprises, regional offices	Large enterprises	Large enterprises
Hardware					
Form Factor	1 RU	1 RU	1 RU	2 RU	2 RU
Ethernet Interfaces	4x GE RJ45	4x GE RJ45	4x GE RJ45, 4x GE SFP, 2x 10GE SFP+	2x GE RJ45, 4x 10GE SFP+	2x GE RJ45, 8x 10GE SFP+
Capacity					
Max. Access Points	50	200	500	1,000	3,000
Max. Clients	1,500	2,500	7,500	20,000	45,000
	FWC-50D-VM	FWC-200D-VM	FWC-500D-VM	FWC-1000D-VM	FWC-3000D-VM
Suggested Use Case	Small enterprises, remote offices	Medium enterprises, branch offices	Large enterprises, regional offices	Large enterprises	Large enterprises
Hardware					
Max. vCPU	4	4	8	24	48
Max. PAM	4 GB	8 GB	16 GB	32 GB	64 GB
Min. HDD Size	16 GB	16 GB	16 GB	16 GB	16GB
Capacity					
Max. Access Points	50	200	500	1,000	3,000
Max. Clients	1,250	2,500	6,250	10,000	30,000

FortiWLM Wireless Manager

	FWM-100D	FWM-1000D	FWM-VM
			
Suggested Use Case	Small enterprises	Medium to large enterprises	—
Hardware			
Form Factor	1 RU	1 RU	Supports VMware, Hyper-V, AWS and KVM hypervisors.
Ethernet Interfaces	4x GE RJ45	4x GE RJ45, 4x GE SFP	—
Capacity			
Number of Infrastructure Controllers	10	250	200
Number of Infrastructure APs	1,000	15,000	15,000
Number of Stations	5,000	75,000	75,000

This document is provided as a convenient comparison of Fortinet products and services. The datasheet for any product or service can be found on www.fortinet.com should be consulted for the most updated specifications.

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