

HIGHLIGHTS

FortiAP S422E

The FAP-422E is our high-density 802.11ac Wave 2 outdoor access point. This enterprise class access point is ideal for large high-density outdoor environments such as an outside office building or recreation area. It supports MU-MiMO giving excellent performance throughput and the ability to support 3 simultaneous devices.

 **802.11ac Wave 2 | Dual Radio 2.4 and 5 GHz | 8 External Antennas**

 **Up to 800 + 1,733 Mbps**



SPECIFICATIONS

FORTIAP S422E	
Hardware	
Hardware Type	Outdoor Smart AP
Number of Radios	2
Number of Antennas	8 N-type External
Peak Antenna Gain	5 dBi for 2.4 GHz, 7 dBi for 5 GHz
Frequency Bands (GHz) *	2.400–2.4835, 5.150–5.250, 5.250–5.350, 5.470–5.725, 5.725–5.851
Frequency of Radio 1	2.4 GHz b/g/n (4x4:4 stream), 20/40 Mhz (256 QAM)
Frequency of Radio 2	5 GHz a/n/ac (4x4:4 stream), 20/40/80 Mhz (256 QAM), MU-MIMO 3 simultaneous devices
Throughput	Radio 1: up to 800 Mbps, Radio 2: up to 1.733 Gbps
Ethernet Ports	2x GE RJ45
USB Port	—
Serial Console Port	1 RS-232 x RJ45
Power over Ethernet (PoE)	Dual redundant PoE power ports with support for IEEE 802.3at (25.5 W)
WME Multimedia Extensions	Yes (4 priority queues for voice, video, data and background traffic)
Simultaneous SSIDs	16 (14 if background scanning enabled)
EAP Type(s)	EAP-TLS, EAP-TTLS/MSCHAPv2, EAPV0/EAP-MSCHAPv2, PEAPv1/EAP-GTC EAP-SIM, EAP-AKA, EAP-FAST
User/Device Authentication	WPA™ and WPA2™ with 802.1x or Preshared key, WEP and Web Captive Portal, MAC blacklist & whitelist
Maximum Tx Power	19 dBm (80 mW)*
Physical Security	Kensington Lock
Mean Time Between Failures	>30 Years
IEEE Specifications	802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11n, 802.1x, 802.3af, 802.11ac, 802.3at, 802.3az
Mounting Options	Wall or Pole Mounting
Included Accessories	8x Dipole Antennas, power adapter and proprietary injector, pole mount bracket, grounding cable, surge protector
FortiPresence Capable	Yes
Wireless Mesh Capable	Yes
Modes of Operation	FortiGate or FortiCloud management
SSID Types Supported	Local-Bridge, Tunnel & Mesh (when managed by FortiGate)
FortiDeploy and FortiCloud Key	Yes
Concurrent Clients Per Radio (Maximum / Recommended)	512 / 128
LED Off Mode	Yes
Onboard Security Features when Managed from FortiCloud	
Application Control	Yes
Block Botnet	Yes
Antivirus	Yes
Intrusion Prevention	Yes
URL Filtering	Yes
FortiGuard Security Feed	Subscription available through FortiCloud

FORTIAP S422E	
Advanced 802.11 Features	
802.11ac Wave2 MU-MIMO	Yes
Transmit Beam Forming (TxBF)	Yes
Low-Density Parity Check (LDPC) Encoding	Yes
Maximum Likelihood Demodulation (MLD)	Yes
Maximum Ratio Combining (MRC)	Yes
A-MPDU and A-MSDU Packet Aggregation	Yes
MIMO Power Save	Yes
Short Guard Interval	Yes
Wireless Monitoring Capabilities	
Frequencies scanned	2.4 and 5 GHz
Background scan with client access on 2.4 and 5 GHz	Yes
Full-time scan as dedicated monitor	Yes
Full-time scan with client access	No
Packet sniffer mode	Yes
Spectrum analyzer	Yes
Dimensions	
Length x Width x Height	8.23 x 8.23 x 2.36 inches (20.9 x 20.9 x 6.0 cm)
Weight	4.08 lb (1.85 kg)
Package (shipping) Weight	11.42 lb (5.18 kg)
Environment	
Power Supply	PoE input: 48V DV, 0.8A
Power Consumption (Average / Maximum)	18.83 W / 22 W
Humidity	5–95% non condensing
Operating Temperature	-40–140°F (-40–60°C)
Storage Temperature	-40–158°F (-40–70°C)
Directives	Low Voltage Directive • RoHS
UL2043 Plenum Material	Yes
IP Rating	IP67
Certifications	
WiFi Alliance Certified	In Process
DFS Certified	In Process

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

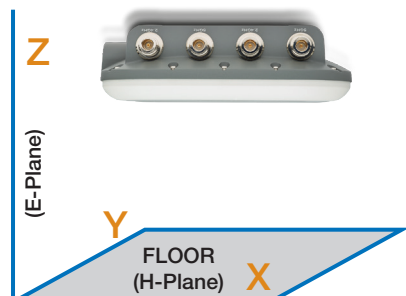
RF RX/TX PERFORMANCE TABLE

802.11 a/g	FORTIAP S422E RADIO 1		RADIO 2	
	2.4 GHz Tx Power (dBm)	Rx Sensitivity (dBm)	5 GHz Tx Power (dBm)	Rx Sensitivity (dBm)
6 Mbps	21	-94	20	-90
9 Mbps	21	-92	20	-89
12 Mbps	21	-89	20	-86
18 Mbps	21	-88	20	-85
24 Mbps	21	-83	20	-80
36 Mbps	21	-78	18	-75
48 Mbps	21	-77	18	-74
54 Mbps	19	-76	17	-73
802.11 HT20				
MSC 0/8/16 (BPSK)	19	-91	19	-90
MSC 1/9/17 (QPSK)	19	-89	19	-87
MSC 2/10/18 (QPSK)	19	-86	19	-84
MSC 3/11/19 (16-QAM)	19	-85	18	-82
MSC 4/12/20 (16-QAM)	19	-80	17	-77
MSC 5/13/21 (64-QAM)	18	-75	16	-72
MSC 6/14/22 (64-QAM)	18	-74	16	-71
MSC 7/15/23 (64-QAM)	18	-73	16	-70
802.11 HT40				
MSC 0/8/16 (BPSK)	19	-89	19	-87
MSC 1/9/17 (QPSK)	19	-87	18	-85
MSC 2/10/18 (QPSK)	19	-84	18	-82
MSC 3/11/19 (16-QAM)	18	-83	17	-81
MSC 4/12/20 (16-QAM)	18	-78	17	-76
MSC 5/13/21 (64-QAM)	17	-73	17	-71
MSC 6/14/22 (64-QAM)	17	-72	17	-70
MSC 7/15/23 (64-QAM)	17	-71	17	-69
MSC 8/16/24 (256-QAM)	15	-66	13	-63
MSC 9/17/25 (256-QAM)	15	-65	13	-62
802.11 HT80				
MSC 0 (BPSK)			18	-84
MSC 1 (QPSK)			17	-81
MSC 2 (QPSK)			17	-79
MSC 3 (16-QAM)			16	-76
MSC 4 (16-QAM)			16	-74
MSC 5 (64-QAM)			15	-73
MSC 6 (64-QAM)			15	-71
MSC 7 (64-QAM)			15	-70
MSC 8 (256-QAM)			14	-66
MSC 9 (256-QAM)			14	-59

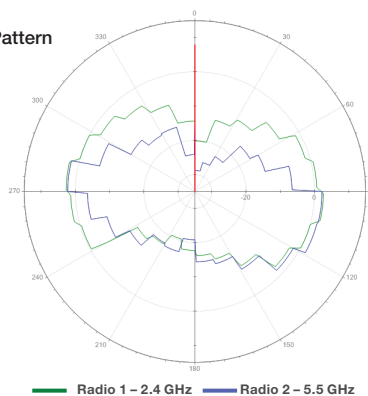
Maximum capability of the Hardware provided (Excluding antenna gain)

ANTENNA RADIATION PATTERNS

FAP-S422E



H-Plane Pattern



E-Plane Pattern

