

## HIGHLIGHTS

### FortiAP S421E

The FAP-S421E is our high-density 802.11ac Wave 2 access point. This enterprise class access point is ideal for large high-density environments such as a large office or classroom. The S421E supports MU-MiMO giving excellent performance throughput of up to 1.733 GHz and the ability to support 3 simultaneous devices.



 **802.11ac Wave 2 | Dual Radio 2.4 and 5 GHz | 3 External Antennas**

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

## SPECIFICATIONS

FORTIAP S421E	
<b>Hardware</b>	
Hardware Type	Indoor Smart AP
Number of Radios	2
Number of Antennas	8 Internal
Peak Antenna Gain	4 dBi for 2.4 GHz, 5 dBi for 5 GHz
Frequency Bands (GHz) *	2.400–2.4835, 5.150–5.250, 5.250–5.350, 5.470–5.725, 5.725–5.850
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	1x Type A
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 Pre-shared 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, 802.11x, 802.11ac, 802.3af, 802.3at, 802.3az
Mounting Options	Ceiling, T-Rail and wall
Included Accessories	Ceiling, T-Rail and wall mount kit (AC power adapter sold separately)
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
<b>Onboard Security Features when Managed from FortiCloud</b>	
Application Control	Yes
Block Botnet	Yes
Antivirus	Yes
Intrusion Prevention	Yes
URL Filtering	Yes
FortiGuard Security Feed	Subscription available through FortiCloud

FORTIAP S421E	
<b>Advanced 802.11 Features</b>	
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
<b>Wireless Monitoring Capabilities</b>	
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
<b>Dimensions</b>	
Length x Width x Height	8.46 x 8.46 x 2.2 inches (21.5 x 21.5 x 5.6 cm)
Weight	3.31 lb (1.5 kg)
Package (shipping) Weight	5.09 lb (2.31 kg)
<b>Environment</b>	
Power Supply	Adapter input: 100–240V, 50/60Hz, 0.9A, Max output: 12V DC, 3A
Power Consumption (Average / Maximum)	22.87 W / 24 W
Humidity	5–90% non condensing
Operating Temperature	–4–122°F (-20–50°C)
Storage Temperature	–40–158°F (-40–70°C)
Directives	Low Voltage Directive • RoHS
UL2043 Plenum Material	Yes
IP Rating	—
<b>Certifications</b>	
WiFi Alliance Certified	Yes
DFS Certified	In Process
<b>Warranty</b>	
Limited Lifetime Warranty	Yes

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

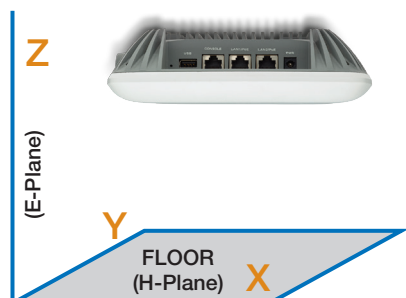
# RF RX/TX PERFORMANCE TABLE

802.11 a/g	FORTIAP S421E RADIO 1		RADIO 2	
	2.4 GHz Tx Power (dBm)	Rx Sensitivity (dBm)	5 GHz Tx Power (dBm)	Rx Sensitivity (dBm)
6 Mbps	22	-94	20	-91
9 Mbps	22	-92	20	-89
12 Mbps	22	-89	20	-86
18 Mbps	22	-88	20	-85
24 Mbps	22	-83	20	-80
36 Mbps	22	-78	19	-75
48 Mbps	22	-77	19	-74
54 Mbps	19	-76	18	-73
<b>802.11 HT20</b>				
MSC 0/8/16 (BPSK)	22	-91	20	-89
MSC 1/9/17 (QPSK)	21	-89	19	-87
MSC 2/10/18 (QPSK)	20	-86	19	-84
MSC 3/11/19 (16-QAM)	19	-85	18	-83
MSC 4/12/20 (16-QAM)	19	-80	17	-78
MSC 5/13/21 (64-QAM)	18	-75	17	-73
MSC 6/14/22 (64-QAM)	18	-74	17	-72
MSC 7/15/23 (64-QAM)	18	-73	17	-71
<b>802.11 HT40</b>				
MSC 0/8/16 (BPSK)	21	-89	20	-86
MSC 1/9/17 (QPSK)	20	-87	19	-84
MSC 2/10/18 (QPSK)	20	-84	19	-81
MSC 3/11/19 (16-QAM)	19	-83	18	-80
MSC 4/12/20 (16-QAM)	19	-78	18	-75
MSC 5/13/21 (64-QAM)	18	-73	17	-70
MSC 6/14/22 (64-QAM)	18	-72	17	-69
MSC 7/15/23 (64-QAM)	18	-71	17	-68
MSC 8/16/24 (256-QAM)	15	-66	14	-65
MSC 9/17/25 (256-QAM)	15	-65	14	-63
<b>802.11 HT80</b>				
MSC 0 (BPSK)			18	-83
MSC 1 (QPSK)			17	-80
MSC 2 (QPSK)			17	-78
MSC 3 (16-QAM)			16	-75
MSC 4 (16-QAM)			16	-73
MSC 5 (64-QAM)			15	-72
MSC 6 (64-QAM)			15	-70
MSC 7 (64-QAM)			15	-69
MSC 8 (256-QAM)			15	-65
MSC 9 (256-QAM)			15	-59

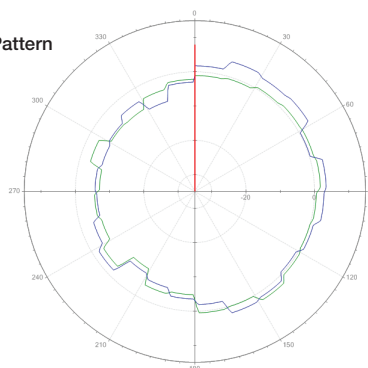
Maximum capability of the Hardware provided (Excluding antenna gain)

## ANTENNA RADIATION PATTERNS

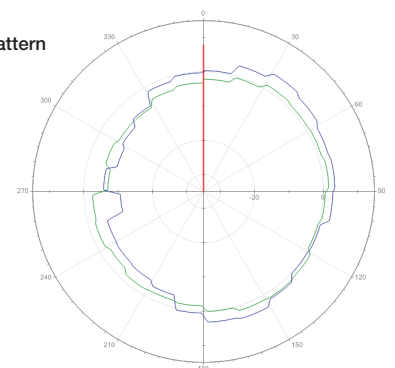
### FAP-S421E



H-Plane Pattern



E-Plane Pattern



## HIGHLIGHTS

### FortiAP S423E

The FAP-423E is our high-density 802.11ac Wave 2 access point. This enterprise class access point is ideal for large high-density environments such as a large office or classroom. The S423E supports MU-MiMO giving excellent performance throughput of up to 1.733 GHz 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 S423E	
<b>Hardware</b>	
Hardware Type	Indoor Smart AP
Number of Radios	2
Number of Antennas	8 RP-SMA External
Peak Antenna Gain	3 dBi for 2.4 GHz, 3 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	1x Type A
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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, 802.11ac, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11n, 802.11r, 802.3af, 802.3at, 802.3az
Mounting Options	Ceiling, T-Rail and wall
Included Accessories	Ceiling, T-Rail and wall mount kit and 8 dipole antennas (AC power adaptor sold separately)
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
<b>Onboard Security Features when Managed from FortiCloud</b>	
Application Control	Yes
Block Botnet	Yes
Antivirus	Yes
Intrusion Prevention	Yes
URL Filtering	Yes
FortiGuard Security Feed	Subscription available through FortiCloud

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Limited Lifetime Warranty	Yes

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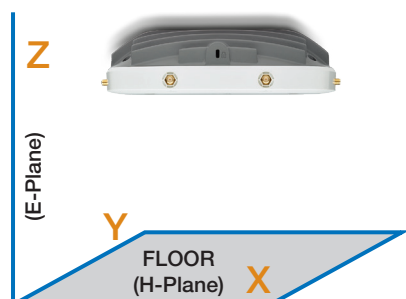
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MSC 1 (QPSK)			17	-80
MSC 2 (QPSK)			17	-78
MSC 3 (16-QAM)			16	-75
MSC 4 (16-QAM)			16	-73
MSC 5 (64-QAM)			15	-72
MSC 6 (64-QAM)			15	-70
MSC 7 (64-QAM)			15	-69
MSC 8 (256-QAM)			15	-65
MSC 9 (256-QAM)			15	-59

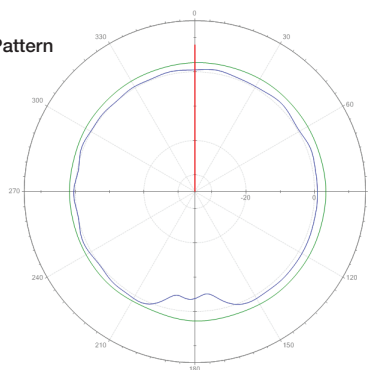
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### FAP-S423E



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