

Highlights

FortiAP 221E and 223E

The FortiAP 221E and 223E are medium-density 802.11ac Wave 2 access points. These enterprise-class access points are ideal for medium-density environments such as an office or classroom with performance throughput of up to 867 Mbps.

 **802.11ac Wave 2 | Dual Radio 2.4 and 5 GHz | 4 Internal/External Antennas**

 **2x2 MU-MIMO | Up to 400 + 867 Mbps**



Specifications

	FORTIAP 221E	FORTIAP 223E
Hardware		
Hardware Type	Indoor AP	Indoor AP
Number of Radios	2 + 1 BLE	2 + 1 BLE
Number of Antennas	4 Internal + 1 Internal BLE	4 External + 1 Internal BLE
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
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	2.4 GHz b/g/n (2x2:2 stream) 20/40 MHz (256 QAM)	2.4 GHz b/g/n (2x2:2 stream) 20/40 MHz (256 QAM)
Radio 2 Capabilities	5 GHz a/n/ac (2x2:2 stream) 20/40/80 MHz (256 QAM)	5 GHz a/n/ac (2x2:2 stream) 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
Bluetooth Low Energy Radio	Bluetooth scanning and iBeacon advertisement @ 4 dBm max TX power	
Interfaces	1x 10/100/1000 Base-T RJ45	1x 10/100/1000 Base-T RJ45
Power over Ethernet (PoE)	IEEE 802.3af	IEEE 802.3af
Simultaneous SSIDs	16 (14 if background scanning enabled)	
EAP Type(s)	EAP-TLS, EAP-TTLS/MSCSHAPv2, EAPv0/EAP-MSCHAPv2, PEAPv1/EAP-GTC, EAP-SIM, EAP-AKA, EAP-FAST	
User/Device Authentication	WPA™, WPA2™, and WPA3™ with 802.1x or preshared key, WEP, Web Captive Portal, MAC blacklist & allowlist	
Maximum Tx Power	2.4 GHz: 23 dBm / 200 mW (2 chains combined)* 5 GHz: 24 dBm / 251 mW (2 chains combined)*	
Kensington Lock	Yes	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, 802.11v, 802.11ac, 802.1Q, 802.1X, 802.3af, 802.3az	
SSID Types Supported	Local-Bridge, Tunnel, Mesh	Local-Bridge, Tunnel, Mesh
Per Radio Client Capacity	Up to 512	Up to 512
Cellular Co-existence	Yes	Yes
Reset Button	Yes	Yes
LED Off Mode	Yes	Yes
Advanced 802.11 Features		
802.11ac Wave 2 MU-MIMO	Yes	Yes
Transmit Beam Forming (TxBF)	Yes	Yes
Low-Density Parity Check (LDPC) Encoding	Yes	Yes
Maximum Likelihood Demodulation (MLD)	Yes	Yes
Maximum Ratio Combining (MRC)	Yes	Yes

	FORTIAP 221E	FORTIAP 223E
A-MPDU and A-MSDU	Yes	Yes
Packet Aggregation		
MIMO Power Save	Yes	Yes
Short Guard Interval	Yes	Yes
Wireless Monitoring Capabilities		
Rogue Scan Radio Modes	Background, Dedicated	Background, Dedicated
WIPS / WIDS Radio Modes	Background, Dedicated	Background, Dedicated
Packet Sniffer Mode	Yes	Yes
Spectrum Analyzer	Yes	Yes
Dimensions		
Length x Width x Height	6.3 x 6.3 x 1.85 inches (160 x 160 x 47 mm)	
Weight	1.1 lbs (0.5 kg)	1.1 lbs (0.5 kg)
Package (shipping) Weight	4.95 lbs (2.2 kg)	5.3 lbs (2.4 kg)
Mounting Options	Ceiling, T-Rail, and Wall	Ceiling, T-Rail, and Wall
Included Accessories	Mount kits for Ceiling, T-Rail, and Wall	Mount kits for Ceiling, T-Rail, and Wall, 4 dipole antennas
Environment		
Power Supply	SP-FAP200-PA-XX, GPI-115, or GPI-130	
Power Consumption (Max.)	12.36 W	12.36 W
Humidity	5–90% non-condensing	5–90% non-condensing
Operating / Storage Temperature	-4–113°F (-20–45°C) / -40–158°F (-40–70°C)	
Directives	Low Voltage Directive • RoHS	Low Voltage Directive • RoHS
UL2043 Plenum Material	No	No
Mean Time Between Failures	>30 Years	>30 Years
IP Rating	—	—
Surge Protection Built In	—	—
Hit-less PoE Failover	No	No
Certifications		
Wi-Fi Alliance Certified	Yes	Yes
DFS	FCC, IC, CE, Japan, Taiwan, Korea	FCC, IC, CE, Japan, Taiwan, Korea
Warranty		
Limited Lifetime Warranty	Yes	Yes

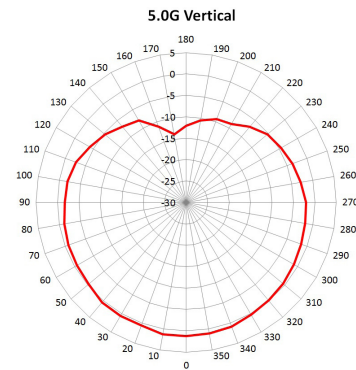
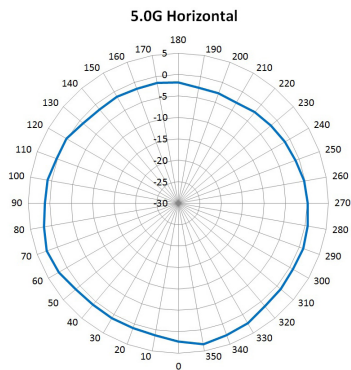
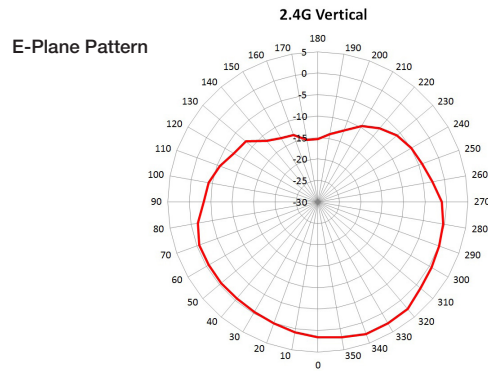
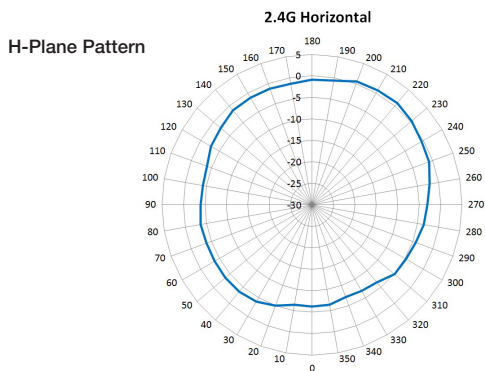
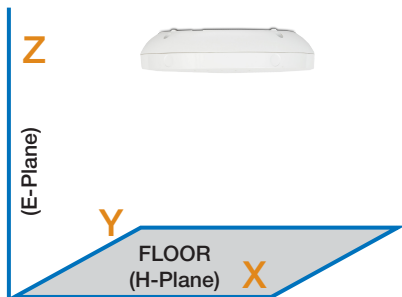
* Frequency selection and power may be restricted to abide by regional regulatory compliance laws.

RF Rx/Tx Performance Table

FORTIAP 221E / 223E				
	RADIO 1		RADIO 2	
802.11 a/g	2.4 GHz Tx Power (dBm)	RX Sensitivity (dBm)	5 GHz Tx Power (dBm)	RX Sensitivity (dBm)
6 Mbps	20	-93	21	-91
9 Mbps	20	-91	21	-90
12 Mbps	20	-90	21	-89
18 Mbps	19	-88	21	-86
24 Mbps	19	-85	21	-83
36 Mbps	18	-82	21	-80
48 Mbps	18	-77	19	-76
54 Mbps	17	-75	19	-74
802.11n HT20				
MCS 0/8/16	20	-91	21	-91
MCS 1/9/17	19	-89	21	-88
MCS 2/10/18	19	-86	21	-86
MCS 3/11/19	18	-83	21	-83
MCS 4/12/20	18	-80	21	-79
MCS 5/13/21	17	-75	21	-75
MCS 6/14/22	17	-73	19	-74
MCS 7/15/23	16	-71	19	-72
802.11n HT40				
MCS 0/8/16	19	-89	20	-88
MCS 1/9/17	19	-86	20	-85
MCS 2/10/18	18	-84	20	-82
MCS 3/11/19	18	-81	20	-79
MCS 4/12/20	17	-77	20	-76
MCS 5/13/21	17	-73	20	-72
MCS 6/14/22	16	-71	19	-70
MCS 7/15/23	16	-69	19	-69
802.11ac VHT20				
MCS 0	19	-91	21	-91
MCS 1	19	-89	21	-88
MCS 2	19	-86	21	-86
MCS 3	18	-83	21	-83
MCS 4	18	-80	21	-79
MCS 5	18	-76	21	-75
MCS 6	18	-73	19	-74
MCS 7	18	-71	19	-72
MCS 8	18	-68	18	-69
802.11ac VHT40				
MCS 0	19	-89	20	-88
MCS 1	19	-86	20	-85
MCS 2	19	-84	20	-82
MCS 3	18	-81	20	-79
MCS 4	17	-77	20	-76
MCS 5	17	-73	20	-72
MCS 6	17	-71	19	-70
MCS 7	17	-69	19	-69
MCS 8	17	-68	18	-65
MCS 9	16	-66	17	-64
802.11ac VHT80				
MCS 0	—	—	19	-85
MCS 1	—	—	19	-83
MCS 2	—	—	19	-80
MCS 3	—	—	19	-77
MCS 4	—	—	19	-74
MCS 5	—	—	19	-71
MCS 6	—	—	18	-69
MCS 7	—	—	18	-68
MCS 8	—	—	17	-63
MCS 9	—	—	17	-61

Antenna Radiation Patterns

FAP-221E



FAP-223E

