

## HIGHLIGHTS

### FortiAP 221C and 223C

The FortiAP 221C and FortiAP 223C are dual-radio 802.11ac APs, designed for medium density indoor environments, including hotspot and guest or social WiFi deployments. The smoke detector form factor is perfect where discreet installation is required, like school classrooms and retail stores.



 **802.11ac Wave 1 | 2.4/5 GHz and 5 GHz Radios | 4 Internal/External Antennas**

 **2x2 MIMO | Up to 300 + 867 Mbps**

## SPECIFICATIONS

	FORTIAP 221C	FORTIAP 223C
<b>Hardware</b>		
Hardware Type	Indoor	Indoor
Number of Radios	2	2
Number of Antennas	4 internal	4 RP-SMA External
Peak Antenna Gain	3.5 dBi for 2.4 GHz, 6 dBi for 5 GHz	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, 5.725–5.850	
Frequency of Radio 1	2.4 GHz b/g/n or 5 GHz a/n	2.4 GHz b/g/n or 5 GHz a/n
Frequency of Radio 2	5 GHz a/n/ac	5 GHz a/n/ac
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
Tx/Rx Streams	2x2 MIMO 2 spatial stream	2x2 MIMO 2 spatial stream
Ethernet Ports	1x GE RJ45	1x GE RJ45
USB Port	–	–
Serial Console Port	–	–
Power over Ethernet (PoE)	IEEE 802.3af (12.9 W)	IEEE 802.3af (12.9 W)
WME Multimedia Extensions	Yes (4 priority queues for voice, video, data and background traffic)	
Simultaneous SSIDs	16 (14 if background scanning enabled)	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	20 dBm (100 mW) *	20 dBm (100 mW) *
Physical Security	Kensington Lock	Kensington Lock
Mean Time Between Failures	> 10 years	> 10 years
IEEE Specifications	802.11a, 802.11b, 802.11e, 802.11g, 802.11h, 802.11i, 802.11j, 802.11n, 802.1x, 802.3af, 802.11ac	
802.11ac 80MHz Channel	Yes	Yes
Mounting Options	Ceiling, T-Rail and wall	Ceiling, T-Rail and wall
Included Accessories	Ceiling, T-Rail and wall mount kit	Ceiling, T-Rail and wall mount kit
FortiPresence Capable	Yes	Yes
802.11n Features	20 MHz and 40 MHz High-Throughput (HT) Support  Increased maximum frame transmission by incorporating A-MPDU and A-MSDU Packet Aggregation  Conserve power via Dynamic MIMO power save	

	FORTIAP 221C	FORTIAP 223C
Advanced 802.11n to enhance rate-over-range including:	Low-density parity check (LDPC) encoding Maximum likelihood demodulation (MLD) Maximum Ratio Combining (MRC) for improved receiver performance	
<b>Wireless Monitoring Capabilities</b>		
Frequencies scanned	2.4 and 5 GHz	2.4 and 5 GHz
Background scan with client access on 2.4 and 5 GHz	Yes	Yes
Full-time scan as dedicated monitor	Yes	Yes
Full-time scan with client access on 5G GHz	Yes	Yes
<b>Dimensions</b>		
Length x Width x Height	6.3 x 6.3 x 1.5 inches (16.0 x 16.0 x 3.8 cm)	6.3 x 6.3 x 1.5 inches (16.0 x 16.0 x 3.8 cm)
Weight	0.64 lb (0.3 kg)	0.64 lb (0.3 kg)
Package (shipping) Weight	1.21 lb (0.55 kg)	1.37 lb (0.62 kg)
<b>Environment</b>		
Power Supply	Adapter Input: 100–240V, 50/60Hz, 0.4A Output: 12V DC, 2A	Adapter Input: 100–240V, 50/60Hz, 0.4A Output: 12V DC, 2A
Power Consumption (Average)	7.8 W	7.8 W
Power Consumption (Maximum)	15.72 W	12 W
Humidity	5–90% non condensing	5–90% non condensing
Operating Temperature	32–104°F (0–40°C)	32–104°F (0–40°C)
Storage Temperature	-4–140°F (-20–60°C)	-4–140°F (-20–60°C)
Directives	Low Voltage Directive • RoHS	Low Voltage Directive • RoHS
<b>Certifications</b>		
WiFi Alliance Certified	Yes	No
<b>Warranty</b>		
Limited Lifetime Warranty	Yes	Yes

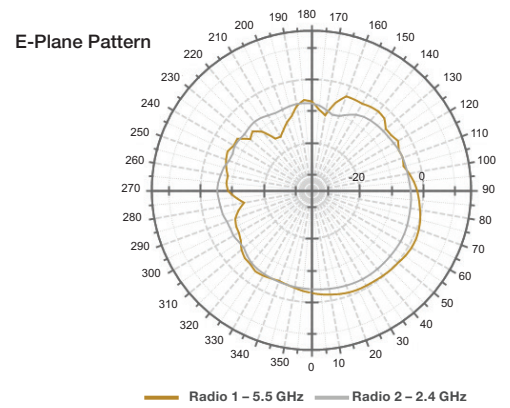
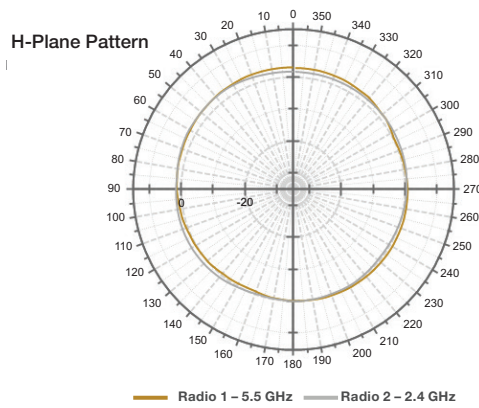
\* Frequency selection and power may be restricted to abide by regional regulatory compliance laws.

## RF RX/TX PERFORMANCE TABLE

FORTIAP 221C / 223C						
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)	5 GHz Tx Power (dBm)	Rx Sensitivity (dBm)
6 Mbps	20	-86	—	-86	18	-86
9 Mbps	20	-85	—	-85	18	-85
12 Mbps	20	-83	—	-83	17	-83
18 Mbps	20	-81	—	-81	17	-81
24 Mbps	20	-78	—	-78	17	-78
36 Mbps	20	-75	—	-75	16	-75
48 Mbps	19	-74	—	-74	15	-74
54 Mbps	17	-73	—	-73	15	-73
<b>802.11n HT20</b>						
MCS 0/8	18	-86	—	-86	18	-86
MCS 1/9	18	-83	—	-83	18	-83
MCS 2/10	18	-81	—	-81	18	-81
MCS 3/11	18	-78	—	-78	18	-78
MCS 4/12	18	-76	—	-76	17	-76
MCS 5/13	18	-72	—	-74	16	-74
MCS 6/14	17	-71	—	-73	15	-73
MCS 7/15	16	-70	—	-72	14	-72
<b>802.11n HT40</b>						
MCS 0/8	18	-83	—	-83	18	-83
MCS 1/9	18	-80	—	-80	18	-80
MCS 2/10	18	-78	—	-78	18	-78
MCS 3/11	18	-75	—	-75	18	-75
MCS 4/12	18	-73	—	-73	16	-73
MCS 5/13	18	-72	—	-72	15	-72
MCS 6/14	17	-71	—	-70	14	-70
MCS 7/15	16	-70	—	-69	13	-69
<b>802.11ac VHT20</b>						
MCS 0	—	—	—	—	18	-90
MCS 1	—	—	—	—	17	-86
MCS 2	—	—	—	—	17	-82
MCS 3	—	—	—	—	17	-78
MCS 4	—	—	—	—	17	-74
MCS 5	—	—	—	—	16	-70
MCS 6	—	—	—	—	15	-69
MCS 7	—	—	—	—	14	-68
MCS 8	—	—	—	—	13	-67
<b>802.11 ac VHT40</b>						
MCS 0	—	—	—	—	18	-86
MCS 1	—	—	—	—	16	-82
MCS 2	—	—	—	—	16	-78
MCS 3	—	—	—	—	16	-74
MCS 4	—	—	—	—	16	-70
MCS 5	—	—	—	—	15	-69
MCS 6	—	—	—	—	14	-68
MCS 7	—	—	—	—	13	-66
MCS 8	—	—	—	—	13	-64
MCS 9	—	—	—	—	12	-62
<b>802.11ac VHT80</b>						
MCS 0	—	—	—	—	18	-81
MCS 1	—	—	—	—	16	-78
MCS 2	—	—	—	—	16	-74
MCS 3	—	—	—	—	16	-70
MCS 4	—	—	—	—	16	-69
MCS 5	—	—	—	—	15	-68
MCS 6	—	—	—	—	14	-66
MCS 7	—	—	—	—	13	-64
MCS 8	—	—	—	—	13	-62
MCS 9	—	—	—	—	12	-60

# ANTENNA RADIATION PATTERNS

## FAP-221C



## FAP-223C

