FortiAP™ Wireless Access Points

Integrated Wireless Security and Access

DATASHEET

The Need for a Fortified Wireless LAN

Enterprises are looking to increase productivity through uninterrupted access to applications and resources, without compromising security and agility. You want to increase visibility and control of your wireless network traffic by enforcing the same policies as your wired network and eliminate potential blind spots. You also need a solution that helps you meet compliance by proactively blocking unauthorized access all while providing tools for business continuity by following industry best practices.

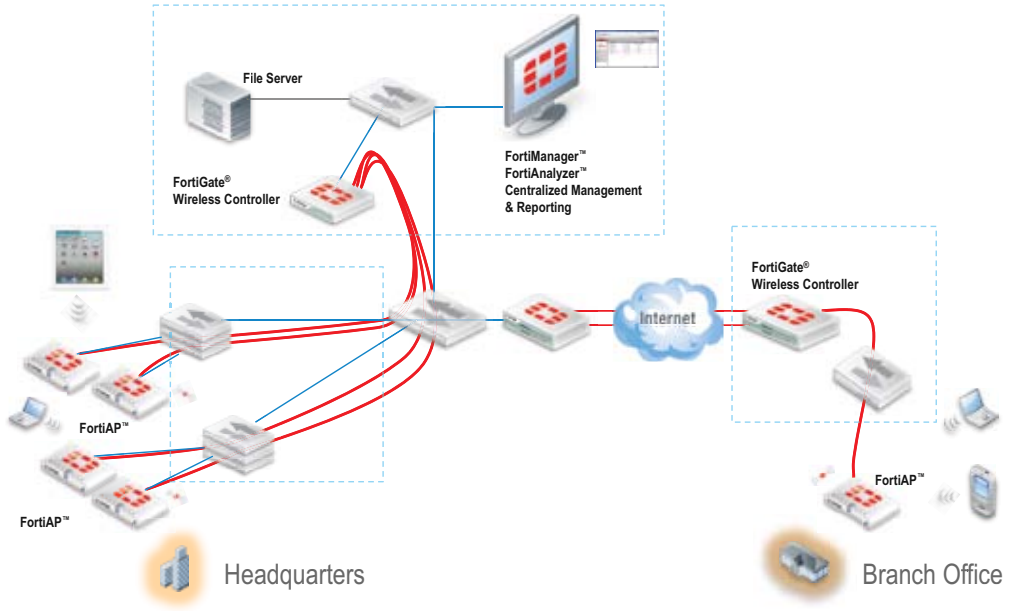
Integrated Wireless Security and Access Solution

Fortinet's FortiAP wireless thin access points deliver secure, identity-driven WiFi client access that creates a fortified WLAN network. Centrally managed by a FortiGate® or FortiWiFi™ platform with its integrated Wireless Controller, FortiAPs allow you to deploy a comprehensive, integrated security solution for your wireless and wired networks. By acting as a Wireless Controller, FortiGate or FortiWiFi security platforms enable you to deploy the comprehensive protection of the industry leader in enterprise unified threat management (UTM) in overlay architecture, thus leveraging your current investment.

Industry-Leading Wireless Technology

FortiAP wireless access points are IEEE 802.11a/b/g/n standards-based, and operate on both 2.4 GHz b/g/n and 5 GHz a/n spectrums. They utilize industry leading wireless chip technology that takes advantage of 2x2 MIMO (multiple input multiple output) with dual transmit streams. This MIMO technology allows the FortiAP to reach wireless association rates as high as 300Mbps per radio and enables the coverage to extend twice as far as legacy 802.11a/b/g. Each FortiAP can support up to eight SSIDs per radio--seven for client access and one for scanning for rogue access points. They also use multiple discovery techniques to find available FortiGate controllers over L2 or L3 networks.

FortiAP Deployment Example



High Performance Secure Thin Access Points

- Leverage existing FortiGate or FortiWiFi platforms as controllers for low TCO
- Simultaneous security monitoring and client services
- Full range of authentications and access for all use cases
- Integration with FortiManager and FortiAnalyzer for unified control and reporting
- Fast Roaming for uninterrupted data access
- Automatic Radio Resource Provisioning (ARRP) for optimized throughput
- Flexible deployment options with simple per device pricing
- Layer 7 application QoS for maximum business productivity
- Rogue AP control for PCI DSS compliance

a b g n

MEMBER Wi Fi ™ ALLIANCE

Differentiating Feature	Benefit
Enterprise Unified Threat Management	Protects your network with the widest range of security and networking technologies seamlessly integrated into a single device: Firewall, IPS, Application Control, VPN, Web Filtering, and many others.
Application-Layer Quality of Service	Going above and beyond Wireless Multimedia Extensions (WME) by offering layer 7 traffic shaping and application use control.
Robust rogue AP control	Industry's most comprehensive monitoring, detection and suppression of rogue APs for PCI DSS compliance.
'Single Pane of Glass' Management Console	Unmatched visibility and control of all wired and wireless network traffic that eliminates blindspots in your security infrastructure and ensures consistent and effective policy enforcement and compliance.
One Access Point, Many Uses	Software reconfiguration allows one radio to be dedicated to wireless air monitoring while the other provides full AP functionality to client; software license allows simultaneous mesh backhaul and remote AP functionality.



Technical Specifications	FortiAP-210B	FortiAP-220B	FortiAP-222B
Hardware Specifications			
Indoor/Outdoor Deployment	Indoor	Indoor	Indoor or Outdoor
Number of Radios	1	2	2
Number of Antennas	2 internal	2 internal	4 external - N type 2 pieces - OUTDOOR DIPOLE 2.4GHZ 5DBI 180 X D20 2 pieces - OUTDOOR DIPOLE 5GHZ 7DBI 180 X D20
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 (Selectable)	2.4 GHz b/g/n or 5 GHz a/n (Selectable)	5 GHz a/n
Frequency of Radio 2	-	2.4 GHz b/g/n	2.4 GHz b/g/n
Tx/Rx Streams (802.11n mode)	2x2 MIMO dual stream – 300 Mbps/Radio	2x2 MIMO dual stream – 300 Mbps/Radio (600 Mbps Total)	2x2 MIMO dual stream – 300 Mbps/Radio (600 Mbps Total)
Ethernet Port	1 x 10/100/1000	1 x 10/100/1000	1 x 10/100/1000
Serial Console Port	1	1	0
Power over Ethernet (PoE)	802.3af (15.4W)	802.3af (15.4W)	PoE power injector supplied, or 802.3at (30W)
WME Multimedia Extensions	Yes (4 priority queues for voice, video, data and background traffic)		
Simultaneous SSIDs	8 (7 for client access, 1 for monitoring)	16 (14 for client access, 2 for monitoring)	16 (14 for client access, 2 for monitoring)
Maximum Transmission Power	17dBm (50mW)	17dBm (50mW)	27dBm (500mW) hardware capable – limited by software for regulatory compliance
Physical Security	Kensington Lock	Kensington Lock	Concrete and pole mount
Mean Time Between Failures	86,013 hours	68,006 hours	305,420 hours
Dimensions			
Height x Width x Length	1.1 in (2.7 cm) x 6.4 in (16.3 cm) x 5.1 in (12.95 cm)	1.1 in (2.7 cm) x 6.4 in (16.3 cm) x 5.1 in (12.95 cm)	2.75 in (7 cm) x 7.75 in (19.7 cm) x 10 in (25.4cm)
Weight	11.2 oz (317 g)	11.3 oz (320 g)	5 lbs (2.3 Kg)
Mounting Options	Wall or Ceiling**	Wall or Ceiling**	Wall or Pole with mounting kit
Environment			
Power Adapter	Adapter Input 100-240V 50/60Hz 0.6A Output: 12V DC 1.5A –center positive		POE injector supplied with AC power source.
Humidity	10% to 90% non condensing		0 to 100%
Operating Temperature	32 – 104 ˚F (0 – 40 ˚C)		-4 – 140 ˚F (-20 – 60 ˚C)
Storage Temperature	-4 – 158 ˚F (-20 – 70 ˚C)`		-4 – 140 ˚F (-20 – 60 ˚C)
Target Application	Dedicated AP w/background scan or dedicated air monitor	Simultaneous AP and dedicated air monitor or concurrent 2.4Ghz and 5Ghz AP with background scan.	Warehouses, outdoor areas, industrial settings, and other harsh environments.
Directives	Low Voltage Directive • RoHS		

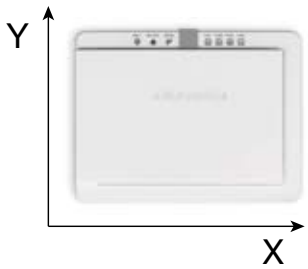
* Frequency selection varies by region-specific SKU

** Sold separately under the SKU: FAP-200-MNT-1

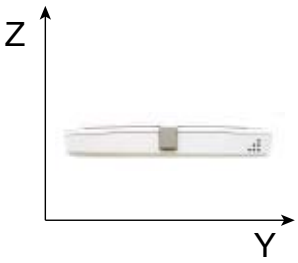
RF RX/TX Performance Table						
	Radio 1 (FAP-220B and FAP-210B)				Radio 2 (FAP-220B only)	
	2.4 GHz		5GHz		2.4 GHz	
802.11 a/g	Tx Power	Rx Sensitivity	Tx Power	Rx Sensitivity	Tx Power	Rx Sensitivity
6 Mbps	15	-89	19	-90	15	-88
9 Mbps	15	-89	19	-89	15	-88
12 Mbps	15	-87	19	-87	15	-86
18 Mbps	15	-85	19	-85	15	-84
24 Mbps	15	-81	19	-81	15	-80
36 Mbps	15	-78	19	-78	15	-77
48 Mbps	15	-75	19	-75	15	-74
54 Mbps	15	-73	19	-73	15	-72
802.11n HT20						
MCS0	15	-93	19	-90.5	17	-92
MCS1	15	-92	18	-88	17	-90
MCS2	15	-88.5	17.5	-85	17	-87
MCS3	15	-87	17.5	-83	17	-85
MCS4	15	-83	17.5	-79.5	17	-82
MCS5	15	-80	17.5	-75	17	-78
MCS6	15	-78	17	-73	17	-77
MCS7	15	-75	16	-72	17	-74
802.11n HT40						
MCS0	14.6	-90	18	-86	15	-90
MCS1	14.6	-89	17	-85	15	-89
MCS2	14.6	-87	17	-83	15	-87
MCS3	14.6	-83	17	-80.5	15	-84
MCS4	14.6	-89	17	-77.5	15	-81
MCS5	14.6	-80	16.5	-73	15	-77
MCS6	14.6	-75	16	-71	15	-75
MCS7	14.6	-72	15	-70	15	-74

FAP-222B RF RX/TX Performance Table				
	Radio 1		Radio 2	
	2.4 GHz		5GHz	
802.11 a/g	Tx Power	Rx Sensitivity	Tx Power	Rx Sensitivity
6 Mbps	27	-95	26	-95
9 Mbps	27	-93	26	-93
12 Mbps	27	-91	26	-91
18 Mbps	27	-90	26	-90
24 Mbps	27	-88	26	-88
36 Mbps	26	-86	25	-86
48 Mbps	25	-84	23	-84
54 Mbps	24	-80	21	-80
802.11n				
MCS0	27	-95	27	-94
MCS1	27	-92	27	-90
MCS2	27	-89	27	-87
MCS3	27	-86	26	-85
MCS4	26	-83	25	-83
MCS5	25	-81	23	-80*
MCS6	24	-79	22	-78
MCS7	23	-77	21	-76

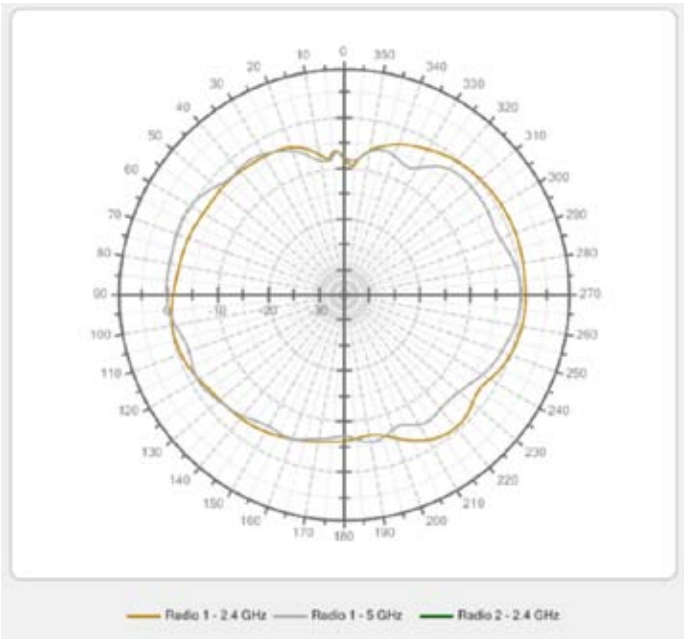
All power values are in dBm.

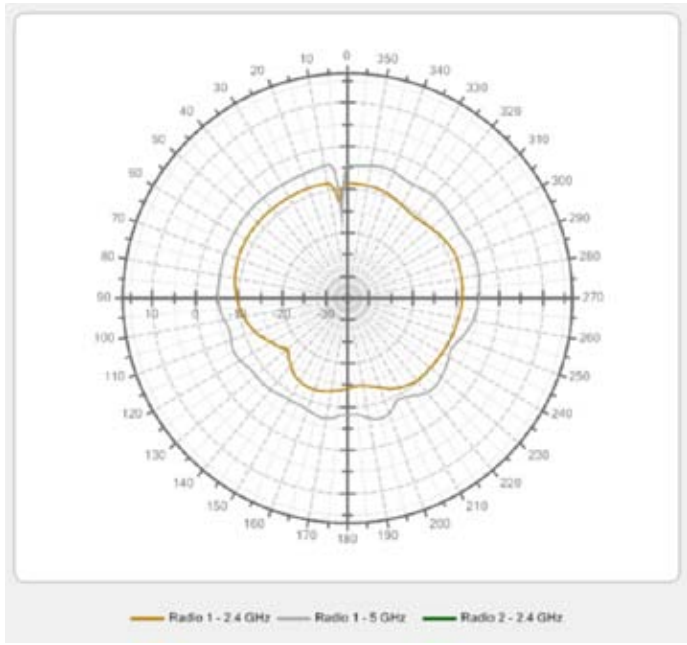


FAP-220B / FAP-210B Azimuth (Radio 1)



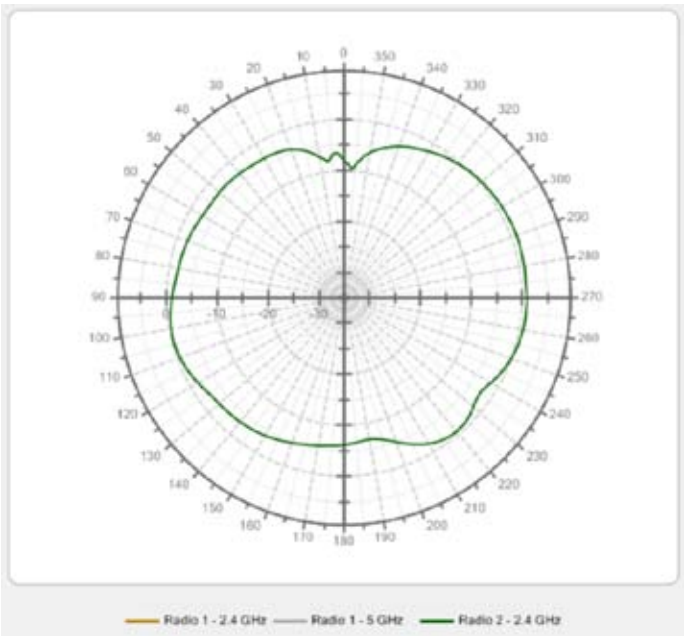
FAP-220B / FAP-210B Elevation (Radio 1)

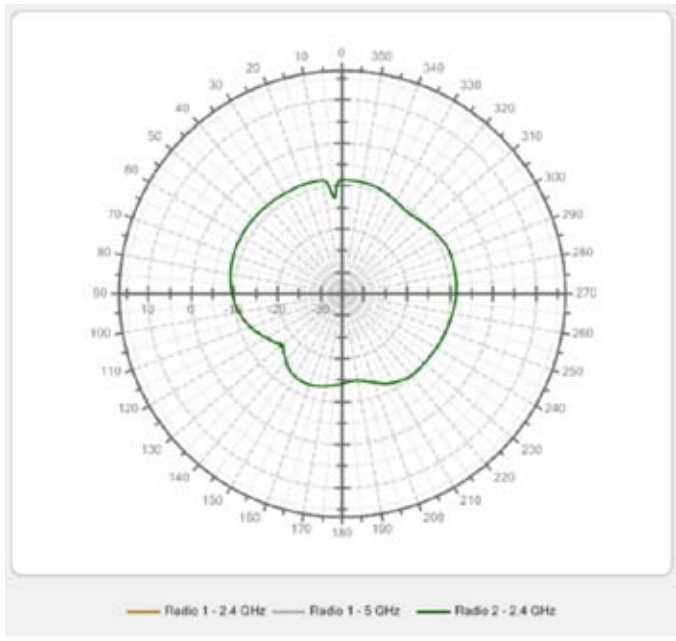




FAP-220B Azimuth (Radio 2)

FAP-220B Elevation (Radio 2)





Declaration of Conformity				
Organization	Compliance Identifier	FAP-210B	FAP-220B	FAP-222B
CB	IEC 60950-1:2005	Yes	Yes	Yes
UL	UL 60950-1, CSA C22.2 No. 60950-1-07	Yes	Yes	Yes
FCC	FCC Part 15, Class B and Subpart C &E ICES-003	Yes	Yes	Yes
CE	RR&TTE Directive 1999/5/EC EN 300 328 /EN 301 489/ EN 301 893 EN 50385	Yes	Yes	Yes
	EU Directive 2004/108/EC EMC EU Directive 2006/95/EC LVD EN 55022/ EN 55024/EN 61000	Yes	Yes	No
IC	Canada RSS-210 Issue 7 Canada RSS-Gen Issue 2	Yes	Yes	Yes
	RSS102, Issue 4	Yes	Yes	Yes
VCCI	V-3/2010.04 V-4/2010.04 ARIB STD – T71 ARIB STD – T66	No	Yes	No
NCC	低功率射頻電機技術規範LP0002	No	Yes	No

Ordering Information		
Product	**SKU**	**Description**
FortiAP-210B	FAP-210B	Dual Band - Single radio controller-based thin access point - supports 802.11 a/b/g/n. 802.3af PoE power option.
	FC-10-P0210-311-02-DD	8x5 Enhanced FortiCare.
	FC-10-P0210-247-02-DD	24x7 Comprehensive FotiCare.
FortiAP-220B	FAP-220B	Dual-Band, Dual-Radio, controller-based AP, supports 802.11a/b/g/n, 802.3af PoE option.
	FC-10-P0221-311-02-DD	8x5 Enhanced FortiCare.
	FC-10-P0221-247-02-DD	24x7 Comprehensive FotiCare.
FortiAP-222B	FAP-222B	Dual-Band, Dual-Radio, controller-based outdoor AP, supports 802.11a/b/g/n, 802.3 at PoE+ option.
	FC-10-P0221-311-02-DD	8x5 Enhanced FortiCare.
	FC-10-P0221-247-02-DD	24x7 Comprehensive FotiCare.
GPI-115 PoE	GPI-115	Fortinet 1-Port Gigabit POE Power Injector, 802.3af 15.4Watts 10/100/1000 (PD-3501).
FAP-200 Mount Kit	FAP-200-MNT-1	FAP-210B, FAP-220A and FAP-220B. Fits 9/16” and 15/16” drop ceiling T-rails.
FortiPlanner	N/A	Access point deployment planning software. Visit http://wireless.fortinet.com/ for download and further information.
	FAP-FPL-PRO	Unlimited AP placement.

Region/Country SKU Suffix*									
Americas	China	Europe ETSI	International	Japan	Korea	Non-FFCA	Singapore	Taiwan	World 2.4G
-A	-C	-E	-I	-J	-K	-N	-S	-T	-W

*For the complete list of countries and regions, refer to http://www.fortinet.com/wireless.

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