



Cisco 100-500 Series Wireless Access Points for Small Business



Cisco SMB Portfolio At-a-Glance

Switching (Managed/Stackable) Portfolio



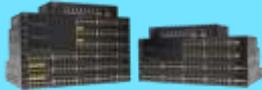
550XG/350XG Series
10G Stackable



550X/350X Series
Stackable



220, 250 Series **Smart** 350 Series **mGig/Managed**



Affordable price, performance, and
functionality
LLW, Cisco Smart Net Total Care™

FindIT Manager Multi-Site Management and Managed Services



Network management tool for Cisco®
100 to 500 Series products, Single interface
for entire network
Discovery, monitoring, reporting,
configuration, and operation
Lifecycle Reporting

Routing Portfolio



RV110W, RV215W



RV130, RV130W



RV340,
RV345



RV132W,
RV134W



RV160,
RV260

Secure Internet Gateways
Business Class Firewalls and VPN

Wireless Portfolio

Single Point Setup with clustering,
Captive Portal, LLW, MU-MIMO
Wave 2, Smart Net Total Care



WAP125



WAP131



WAP150



WAP371



WAP361



WAP561



WAP571



WAP571E



WAP581

* Select models. For more information, please check the product data sheet.

Cisco Small Business 500 - 100 Series WAPs

Where we fit...

Sophistication

Investment

Built for Small Business

Drivers: Price, Simplicity, Ease of Use

- Reliable, easy to use
- Competitive features
- Affordable price
- Easy to install, Web interface

Small Business Support + Cisco Smart Net Total Care™ Service

Meraki Cloud Managed

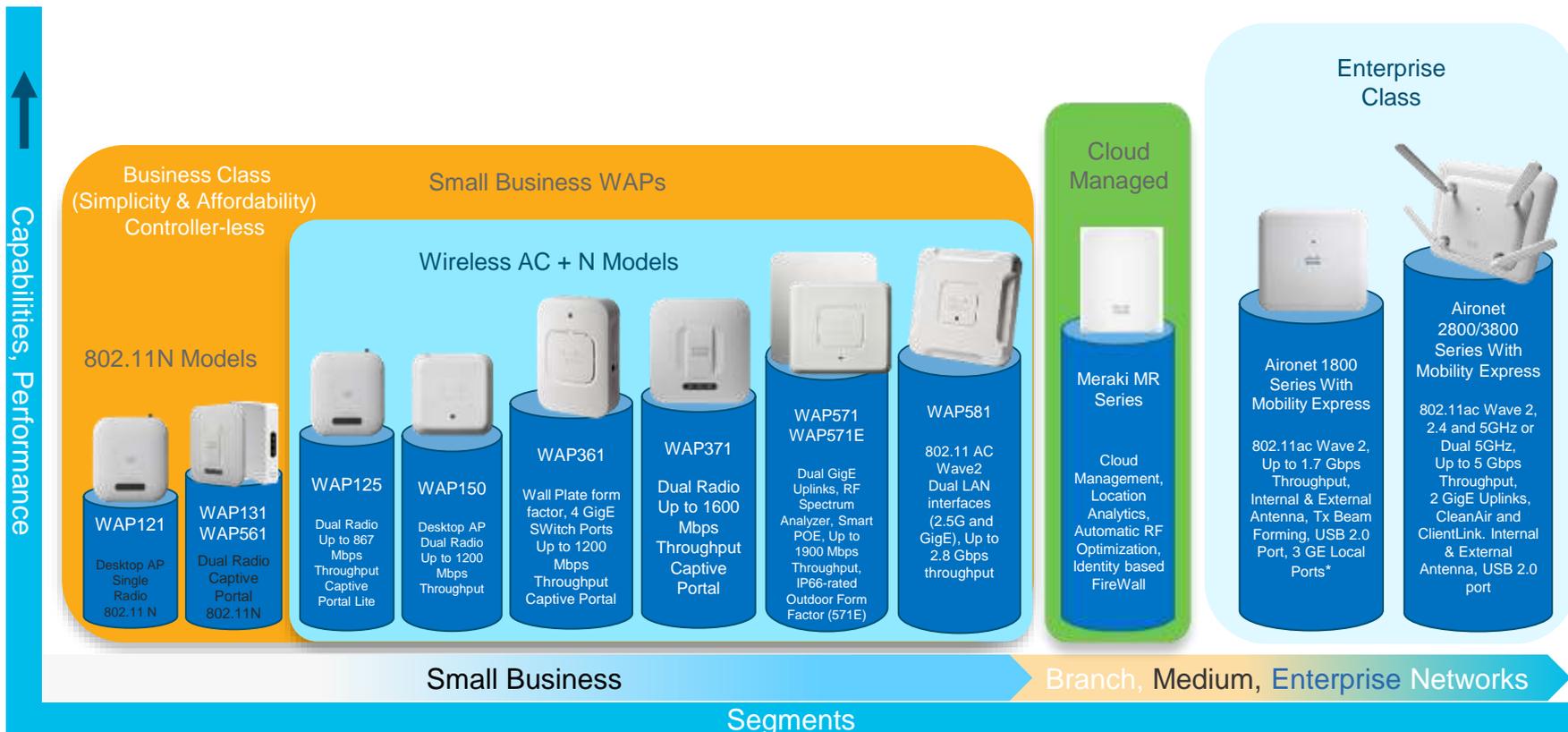
Drivers: Cloud based, Ease of Use

Enterprise Class

Drivers: Sophistication, Scalability

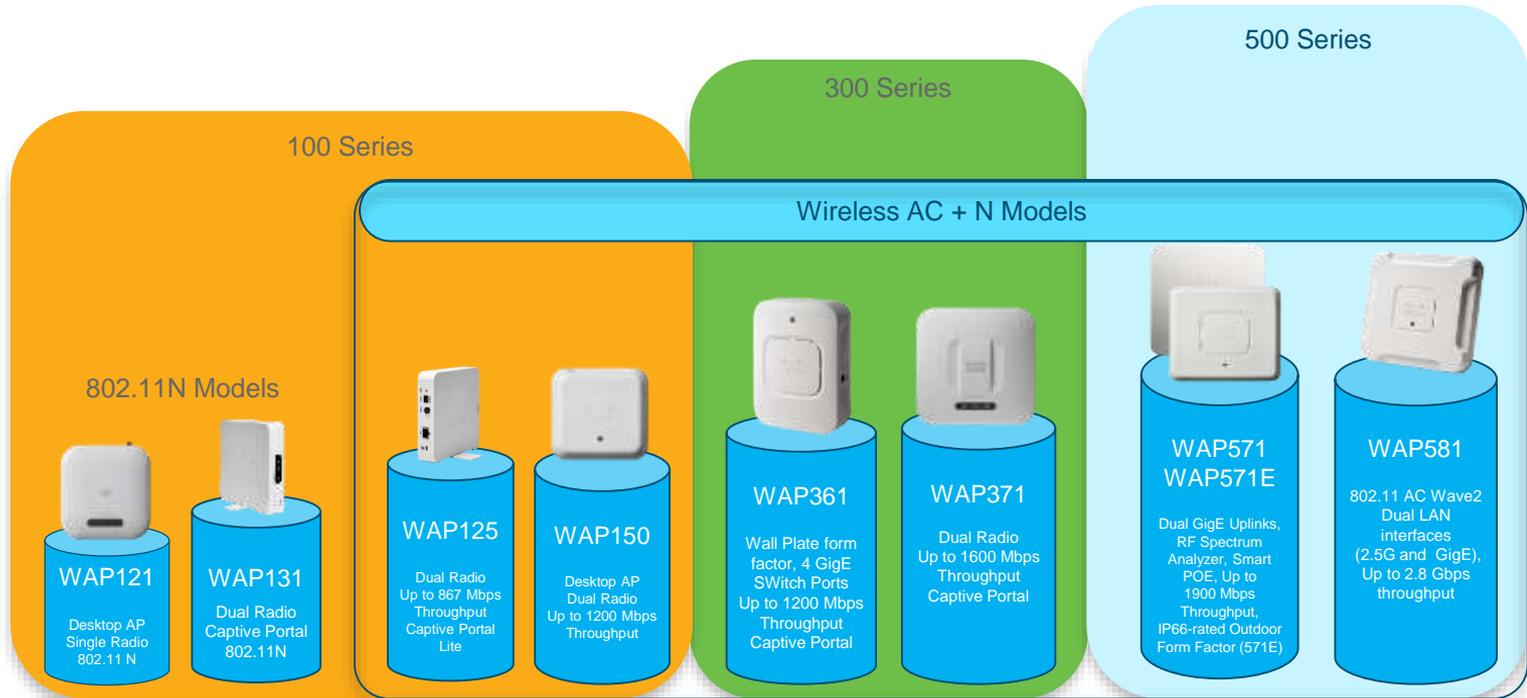
- Best in class
- Customizable configuration
- Broad range of services
- Comprehensive security

Cisco Wireless Portfolio: SMB to Enterprise



Cisco SMB WAP 100, 300, 500 Series

Business Class (Simplicity & Affordability) Controller-less



Good, Better, Best in Capabilities & Performance



Wireless Portfolio Positioning

	Model	List Price	Technology	Target	Use Case
EOS 12/18	WAP121	\$134	802.11 n	SOHO10x10	Carpeted office, retail, office
	WAP131	\$180	802.11 n	SOHO	Carpeted office, retail, office
	WAP150	\$233	802.11ac Wave 1	SOHO	Carpeted office, retail, office
NEW	WAP125	\$160	802.11ac Wave 1	SOHO	Carpeted office, retail, office
	WAP361	\$300	802.11ac Wave 1	Small to medium office, 20x20	Integrated switch Remote desk, conf. room
EOS	WAP561	-	802.11 n	Medium to large office, 30x30	Warehouse, retail, logistics, conf. room
	WAP371	\$320	802.11ac Wave 1	SOHO, medium, large	Office, warehouse, retail, logistics, conf. room
	WAP571	\$380	802.11ac Wave 1	Medium to large office, 30x30	Warehouse, retail, logistics, conf. room
	WAP571E	\$635	802.11ac Wave 1	External/outdoor	Retail, parking, school, pool, recreation center
NEW	WAP581	\$580	802.11ac Wave 2	Medium to large office, 30x30	Warehouse, retail, logistics, conf. room

SMB Increased Infrastructure Speed

WAP581 Wireless-AC Dual Radio Wave 2

Provides wireless 802.11ac Wave 2 capabilities



5GHz band supports 4x4 MU-MIMO - 2.4GHz band supports 3x3 MIMO

Theoretical wireless maximum data rate of 2800 Mbps aggregate

Supports high-bandwidth wireless with dual-LAN infrastructure connections

NOTE: Maximum 80MHz width channel is supported on WAP581



Increased Infrastructure Flexibility

Maximum speed capable Ethernet supporting 2.5Gbps (mGig – NBASE-T)



Secondary LAN interface supporting 1Gbps

Provides a single high-speed infrastructure connection to meet the needs of all wireless traffic

Provides a dual-LAN fault tolerant, resilient capability by using link aggregation (LAG)

Wireless 802.11ac Quick Review



Wireless 802.11ac Wave 1

Provides for 80MHz channel width and 256-QAM for higher bandwidth and data speed

Theoretical maximum throughput of 1.3Gbps

Pushing the boundaries of a 1 Gbps Ethernet connection

Wireless protocol overhead kept 1Gb to the infrastructure a practical solution



Wireless 802.11ac Wave 2

Support for 160MHz channel width and MU-MIMO

Increases to mobile client throughput

Increases to multiple clients simultaneously

Support for 4 Spatial Streams allows a theoretical maximum throughput of 1.76 Gbps

Bonding several channels to 80MHz+80MHz or 160MHz reaches a theoretical maximum throughput of 2.6 Gbps

Why Gigabit Wi-Fi

802.11ac Wave 2

- Up to 2.34 Gbps speed in the 5 GHz band
- Multiuser MIMO (MU-MIMO) for better efficiency
- Four spatial stream for greater performance
- Additional 5-GHz channels helps support more users, devices, and applications



5X the Performance of 802.11n Speed and Capacity

- 1 Antenna = 433 Mbps (instead of 75 Mbps)
- 2 Antennas = 866 Mbps
- 3 Antennas = 1.3 Gbps
- 4 Antennas = 2.3 Gbps



2X End User Device Battery Life



Further Range Compared to
802.11n in 5-GHz band

Features and Benefits



	Features	Benefits
Market-leading price/performance	<ul style="list-style-type: none"> Wave 2 4x4 11ac and Multigigabit technology (500 Series) 	<ul style="list-style-type: none"> High-speed, efficient bandwidth for real-time and feature-rich applications on mobile devices and clients, all possible on existing cabling infrastructure
	<ul style="list-style-type: none"> MU-MIMO (500 Series) 	<ul style="list-style-type: none"> Support Concurrent Downstream Communication for multiple clients resulting in efficient spectrum utilization and better productivity
	<ul style="list-style-type: none"> Single Point Setup FindIT Manager 	<ul style="list-style-type: none"> Easily deploy and manage scalable networks for SMBs
	<ul style="list-style-type: none"> RSDB 2x2 11ac (100 Series) 	<ul style="list-style-type: none"> Lowers cost and power consumption in a compact form factor
Ease of use	<ul style="list-style-type: none"> Consistent software features with WAP portfolio and look and feel of Small Business portfolio 	<ul style="list-style-type: none"> Consistent user experience; no learning curve; easy upgrade and migration
	<ul style="list-style-type: none"> Works with the new SMB switches 	<ul style="list-style-type: none"> Easily expand the network as coverage and capacity needs evolve
	<ul style="list-style-type: none"> Flexible management options – WebUI, FindIT Network Management, SNMP, FindIT Discovery 	<ul style="list-style-type: none"> Flexibility of network management options matching the needs of customers
Peace of mind	<ul style="list-style-type: none"> LLW with NBD advance replacement 	<ul style="list-style-type: none"> Peace of mind and superior total cost of ownership during the lifetime of the network deployment

Market Segmentation – Small Business Wireless

	100 Series	300 Series	500 Series
Company Size	< 50 users	< 250 users	< 500 users
IT Resources	DIY or limited IT	Limited IT or partner led	In-house IT or partner led
Usage	Basic access	Increase productivity	Business mobility
Buying behavior	Reactive	Proactive	Strategic
Purchase Drivers	Pricing is everything, simplicity	Good-enough scale, simplicity	Good-enough scale, simplicity, peace of mind
Satisfied when	It just works	Boosts productivity	Transforms the business
Support Expectation	Limited Lifetime Warranty (LLW)	LLW + Next Business Day (NBD)	LLW + NBD

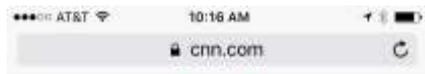
Wireless Series Features Comparison

Models	100 Series	300 Series	500 Series
Scalability	16 Active Clients per Radio	32 Active Clients Per Radio	64 Active clients per Radio
	4 Units per Cluster (64 Users per Cluster)	8 Units per Cluster (512 Users per Cluster)	16 Units per Cluster (2048 Users per Cluster)
	4 SSID Per Radio	8 SSID per Radio	16 SSID per Radio
Manageability	Web, Setup Wizard, Single Point Setup*, SNMP, FindIT Network Management Platform		
Security	802.1x Authentication with RADIUS*, Dot.1x Supplicant, Rogue AP detection*, Access Control List (ACL), WPA2 (ENT), Kensington Lock		
Additional Features	Captive Portal*, Social Login*, Cisco Umbrella Integration*, Mobile setup wizard*, Packet Capture with Cloudshark*, Wireless Bridging, IPv6, Spectrum Analyzer*, mGig Port*		
Outdoor Form Factor	No	No	Yes
Power	AC Power (PA Included) & PoE	AC Power (PA not included) & PoE	PoE & AC Power*

SMB WAP Main Features Comparison

Models	WAP121	WAP131	WAP125	WAP150	WAP361	WAP371	WAP571	WAP571E	WAP581
Wireless Standard	802.11 a/b/g/n	802.11 a/b/g/n	802.11 a/b/g/n/AC Wave1	802.11 a/b/g/n/AC Wave1	802.11 a/b/g/n/AC Wave1	802.11 a/b/g/n/AC Wave1	802.11 a/b/g/n/AC Wave1	802.11 a/b/g/n/AC Wave1	802.11 a/b/g/n/AC Wave2
Wireless Band	2.4	2.4 + 5	2.4 + 5	2.4 + 5	2.4 + 5	2.4 + 5	2.4 + 5	2.4 + 5	2.4 + 5
Max data rate	300	300 + 300	300 + 867	300 + 867	300 + 867	300 + 1300	600 + 1300	600 + 1300	600 + 2.1Gps
Ethernet Ports	FE	GE	GE	GE	5 x GE	GE	2xGE	2xGE	1GE & 1 MGig
DC Power Support	12V1A (Inc.)	12V1.5A (Inc.)	12V1.5A (Inc.)	12V1.5A (Inc.)	48V1.25A optional	12V2A optional	NA	NA	NA
MIMO Spatial Streams	2:2x2	2:2x2	2:2x2	2:2x2	2:2x2 2:2x2	3:3x3 (5GHz) 2:2x2 (2.4GHz)	3:3x3	3:3x3	4x4 (5Ghz) 3x3 (2.4Ghz)
Active Clients	16	16 per radio	16 per radio	16 per radio	32 per radio	32 per radio	32 per radio	32 per radio	64 per radio
SSID	4	4 per radio	4 per radio	4 per radio	8 per Radio	8 per Radio	16 per radio	16 per radio	16 per radio
Captive Portal	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Single Point Setup	No	No	0	4	8	8	16	16	16

Mobile Setup Wizard Login screen shots

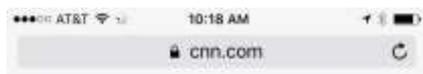


Show Password

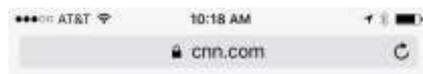
Login

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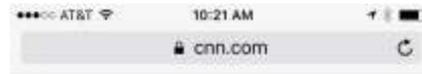
Loading Setup Wizard...



Welcome

Thank you for choosing Cisco Wireless Access Point. This setup wizard will help you install your Access Point.

To setup this access point manually you can cancel this wizard at any time (Not recommended).



Summary

Please review the following settings and ensure the data is correct.

Radio 1 (2.4 GHz)

Network Name (SSID): cisco8
Network Security Type: WPA2 Personal - AES
Security Key: Cisco1234
VLAN ID: 1

Radio 2 (5 GHz)

Network Name (SSID): cisco8
Network Security Type: WPA2 Personal - AES
Security Key: Cisco1234
VLAN ID: 1



Cisco Umbrella Integration for WAP581/571/125

The screenshot shows the Cisco Umbrella configuration interface for device WAP581-wap496910. The configuration fields are as follows:

- Enable:** A checkbox with a blue circle '1' next to it, currently checked.
- API Key:** A text input field with a blue circle '2' next to it.
- Secret:** A text input field with a blue circle '2' next to it.
- Local Domains to Bypass (optional):** A text input field containing "Multiple inputs separated by comma" with a blue circle '3' next to it.
- Device Tag (optional):** A text input field with a blue circle '4' next to it.
- DNSCrypt:** A checkbox with a blue circle '5' next to it, currently checked.
- Registration Status:** A status indicator showing "Successful".
- Save/Cancel:** Buttons at the top right with a blue circle '6' next to the Save button.

Note*
Log in to your Cisco Umbrella and go to dashboard: Navigate to **Admin > API Keys** to create the API Key and Secret information.

Note*
This is required for all intranet domains and split DNS domains.

Note*
DNSCrypt is used to secure DNS communication between a DNS client and a DNS resolver. It prevents several types of DNS attacks, and snooping. Default is enabled.

Step 1 Check the check box to enable the Umbrella functionality

Step 2 Enter the Secret and API Key which you obtain from the **Umbrella** website in the required fields

Step 3 Enter the domain name you trust in the **Local Domains to Bypass (optional)** field and the packets will reach the destination without going through the Umbrella

Step 4 Enter a tag name in the **Device Tag (optional)** field to tag the device

Step 5 Check the check box to enable DNS encryption. **(Enabled by Default)**

Step 6 Click **Save** to apply these configurations. The status of the registration is indicated in the **Registration Status** field

What is Single Point Setup?

Controller-less Access Point Management



Easy to Use WebUI with Setup Wizard for Initial Deployment



AP gather in a cluster a dynamic, configuration-aware group



Single Point Setup Clustering



Manage a WLAN as a single view and automatically synchronize



Synchronize Wi-Fi Radio Settings, User Accounts, Guest Access, Umbrella, Rouge AP Detection and others

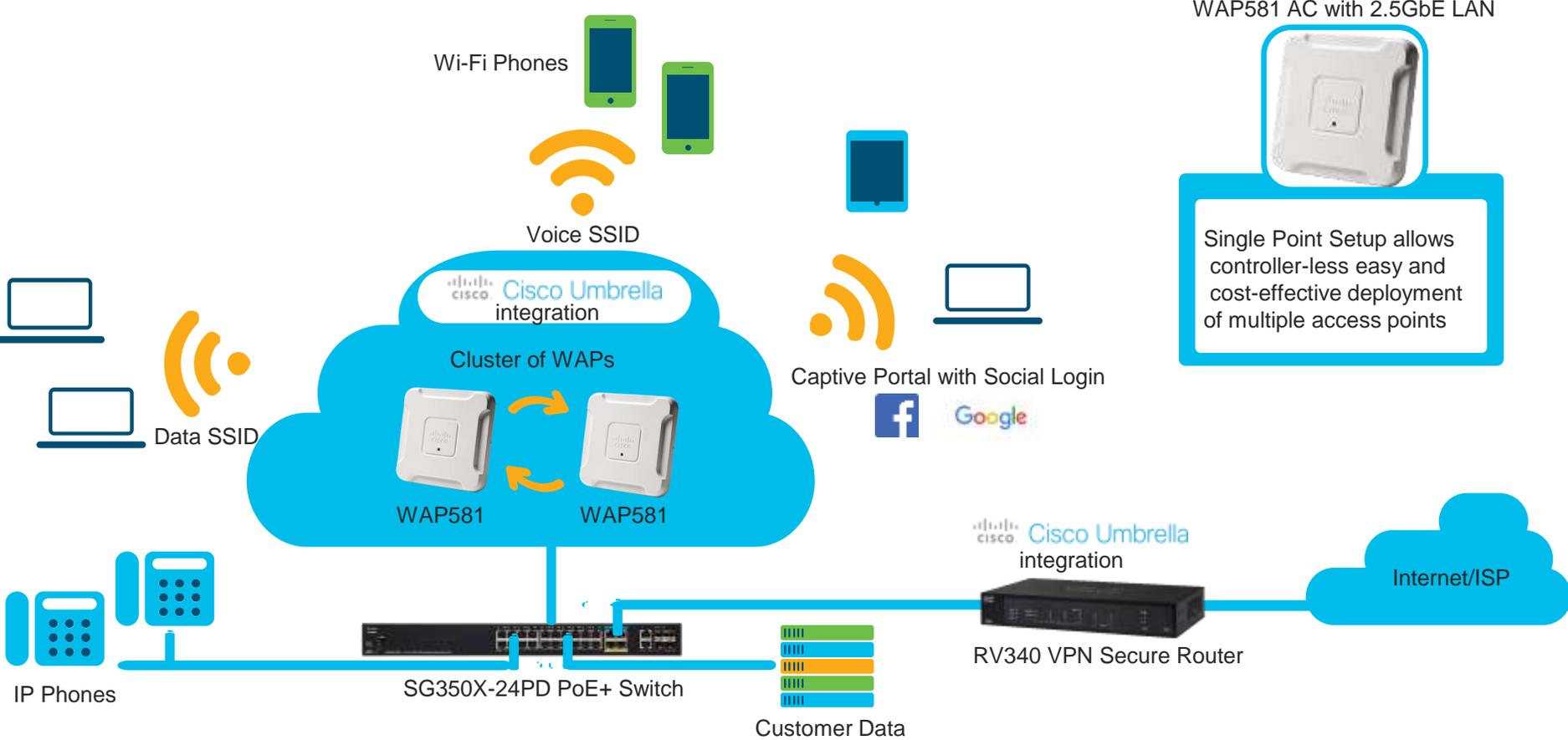


Works on the WAP100, 300, & 500 Series Access Points



Homogenous Clustering Integrated within the AP software

Typical SMB Wireless Deployment



Cisco SMB Access Points Summary

What are Cisco SMB APs?

- Non-IOS based APs for SMB
- Single Point Setup – Controller-less multi-AP management
- Part of the Cisco SMB Portfolio that includes switches and routers
- Supported by dedicated support center Small Business TAC

Purpose built for SMB partners and customers

- Easy to use Web-based UI – Limited network expertise required
- Discoverable and manageable through FindIT Network Manager
- Target feature-set – Align feature-set to target user
- Value pricing

100



300



500



Technical Overview WAP 500

WAP581 Highlights

- Dual-radio wireless AC Wave 2 connectivity
 - 2800-Mbps (data rate, not actual throughput) Wi-Fi – 4x4 11ac + 3x3 11n
 - MU-MIMO
 - Up to 128 clients per WAP581
- Single Point Setup, controllerless management
- Up to 16 WAP581s per cluster
- Works with FindIT Network Management
- 2.5 Gigabit Ethernet (GE) + 1 GE port with static LAG
- RF Spectrum Analysis tool
- Next Gen User Interface
- Guest access with captive portal
- Power provided via PoE or external AC power
- Wall and ceiling form factor, mounting hardware included
- Limited lifetime warranty



WAP571 Highlights

- Dual-radio Wireless AC+N connectivity
 - 3x3 1900-Mbps Wi-Fi, 1300-Mbps 802.11ac + 600-Mbps 802.11n
 - High power output, internal antennas
 - Up to 128 clients per WAP571
- Single Point Setup support (controller-less management)
 - Up to 16 WAP571s per cluster (2048 users)
- Dual GE LAN With static LAG
- RF spectrum analysis
- IPv6 and QoS support
- Browser-based configuration and Web-based setup Wizard
- Smart PoE – optimized for PoE+ but Works With PoE
- Limited Lifetime Warranty

Value
11ac



WAP571E Highlights

- Dual-radio Wireless AC+N connectivity
 - 3x3 1900-Mbps Wi-Fi, 1300-Mbps 802.11ac + 600-Mbps 802.11n
 - High power output, internal antennas
 - Up to 128 clients per WAP571E
- Single Point Setup support (controller- less management)
 - Up to 16 WAP571Es per cluster (2048 users)
- Dual GE LAN With static LAG
- RF spectrum analysis
- IPv6 and QoS support
- Browser based configuration and Web-based setup Wizard
- Smart PoE – optimized for PoE+ but Works With PoE
- Outdoor form factor, IP66-rated, surface/pole mounting hardware included
- Limited Lifetime Warranty

Value
11ac



WAP500 series Technical Specifications



Hardware Specification	WAP571/WAP571E	WAP581
Antennas	6 internal fixed PIFA antennas	4 internal fixed PIFA antennas
Antenna gain in dBi	1.99dBi@5GHz;1.28dBi@2.4GHz	3.61 dBi @2.4 GHz; 6.23 dBi @5 GHz
Frequency	Dual concurrent radios (2.4GHz and 5GHz)	Dual concurrent radios (2.4GHz and 5GHz)
Radio and modulation type	Dual radio, orthogonal frequency division multiplexing (OFDM) IEEE 802.11a/n: OFDM (BPSK/QPSK/16QAM/64QAM/256QAM) IEEE 802.11ac: OFDM (BPSK/QPSK/16QAM/64QAM/256QAM)	Dual radio, orthogonal frequency division multiplexing (OFDM) IEEE 802.11a/n: OFDM (BPSK/QPSK/16QAM/64QAM/256QAM) IEEE 802.11ac: OFDM (BPSK/QPSK/16QAM/64QAM/256QAM)
WLAN	802.11n/ac 3x3 MIMO with 3 spatial streams at 5 GHz and 2.4 GHz 21 for 20-MHz bandwidth; 9 for 40-MHz bandwidth; 4 for 80-MHz bandwidth 11 for 20-MHz bandwidth; 7 for 40-MHz bandwidth 802.11 dynamic frequency selection (DFS)	802.11n/ac 4x4 MU-MIMO at 5 GHz and 3x3 MIMO on 2.4 GHz 21 for 20-MHz bandwidth; 9 for 40-MHz bandwidth; 4 for 80-MHz bandwidth 11 for 20-MHz bandwidth; 7 for 40-MHz bandwidth 802.11 dynamic frequency selection (DFS)
System Memory	256 MB RAM; 128MB Flash	256 MB RAM; 128MB Flash
Power Options	IEEE 802.3at/af Ethernet switch Cisco power injector: SB-PWR-INJ2-xx	IEEE 802.3at/af Ethernet switch Cisco power injector: SB-PWR-INJ2-xx Cisco power adapter: SB-PWR-48v-xx
Ports	2 x LAN Gigabit Ethernet autosensing with support for 802.3at PoE for one of the ports	2 x LAN – one 2.5G and one 1G Ports with support for 802.3at PoE for one of the ports

WAP500 Series Detailed Features

Specification	WAP571/WAP571E	WAP581
VLAN support	1 management + 32 802.1Q-based VLANs for SSIDs	1 management + 32 802.1Q-based VLANs for SSIDs
SSID-to-VLAN mapping	Yes	Yes
Auto-channel selection	Yes	Yes
IPv6	IPv6 host support, IPv6 RADIUS, syslog, NTP, ISATP	IPv6 host support, IPv6 RADIUS, syslog, NTP, ISATP
802.1x supplicant	Yes	Yes
QoS	WMM TSPEC, client QoS	WMM TSPEC, client QoS
Performance		
Wireless throughput	Up to 1.9 Gbps data rate	Up to 2.8 Gbps data rate
Recommended user support	Up to 200 connective users, 50 active users per radio	Up to 200 connective users, 50 active users per radio
Security Features		
WPA, WPA2	Yes	Yes
Access Control	management ACL plus IPv4/IPv6/MAC ACL	management ACL plus IPv4/IPv6/MAC ACL
Secure Management	HTTPS	HTTPS
SSID broadcast	Yes	Yes
Rogue access point detection	Yes	Yes
Cisco Umbrella integration	Yes, integration as a network device	Yes, integration as a network device
Management		
Web UI	Yes	Yes
FindIT Network Management	Yes	Yes
Management protocols	SNMPv1/v2c/v3, Bonjour	SNMPv1/v2c/v3, Bonjour
Multiple AP Managemnet	Single Point Setup on same model WAPs	Single Point Setup on same model WAPs



WAP500 Series Detailed Features

Management	WAP571/WAP571E	WAP581
Number of access points per cluster	16	16
Active clients per cluster	960	960
Network Diagnostics	Packet Capture, Cloudshark Packet Capture	Packet Capture, Cloudshark Packet Capture
Event logging	Local, remote syslog, email alerts	Local, remote syslog, email alerts
Captive portal Social Login	Yes, Facebook and Google	Yes, Facebook and Google
Captive portal login with ADDS	Yes	Yes
Mobile optimized setup wizard	Yes	Yes
DHCP	DHCP IPv4/IPv6 client, DHCP Auto Configuration	DHCP IPv4/IPv6 client, DHCP Auto Configuration
HTTP redirect	Yes	Yes
Wireless		
Wireless VLAN map	Yes	Yes
Wi-Fi Scheduler	Yes	Yes
Wireless Isolation between clients	Yes	Yes
WDS	Yes, with WorkGroup Bridge	Yes, with WorkGroup Bridge
Fast Roaming	Yes	Yes
Multiple SSIDs	16 per Radio	16 per Radio
WMM	Yes, with unscheduled automatic power save	Yes, with unscheduled automatic power save
Operating Modes	AP mode, WDS bridging, Workgroup Bridge mode	AP mode, WDS bridging, Workgroup Bridge mode
Standards	IEEE 802.11ac, 802.11a, 802.11n, 802.11g, 802.11b, 802.3af, 802.3u, 802.1X, 802.1Q (VLAN), 802.1D, 802.11i, 802.11e, RFC 791, RFC 2460, IP66*, Surge Protection*	IEEE 802.11ac, 802.11a, 802.11n, 802.11g, 802.11b, 802.3af, 802.3u, 802.1X, 802.1Q (VLAN), 802.1D, 802.11i, 802.11e, RFC 791, RFC 2460



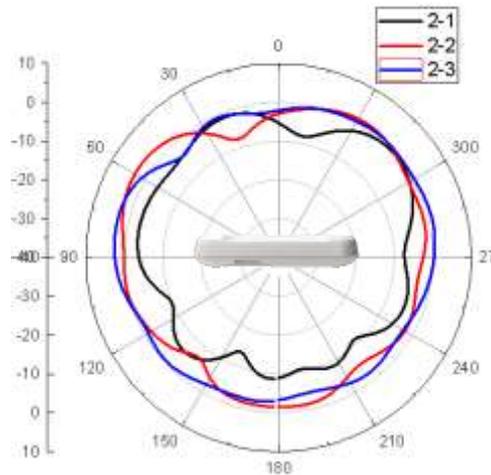
WAP5711/571E RF Performance Table

Band, rate	Maximum transition power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
2.4Ghz, 802.11b		
1/2/5.5/11 Mbps	20.0 +/- 1.5 dBm	- 86 dBm@11Mbps
2.4GHz, 802.11g		
6/54 Mbps	20.0 +/- 1.5 dBm/ 17.0 +/- 1.5 dBm	-74 dBm@54Mbps
2.4Ghz, 802.11n (HT20)		
MCS0	20.0 +/- 1.5 dBm	-
MCS7	17.0 +/- 1.5 dBm	-71 dBm@MCS7
2.4Ghz, 802.11n (HT40)		
MCS7	16.0 +/- 1.5 dBm	-68 dBm@MCS7
5GHz, 802.11a		
6/54 Mbps	22.0 +/- 1.5 dBm/ 22.0 +/- 1.5 dBm	-90 dBm@6Mbps/-75 dBm@54Mbps
5GHz, 802.11ac (HT20)		
MCS0	22.0 +/- 1.5 dBm	-
MCS9	14.0 +/- 1.5 dBm	-63 dBm@MCS9
5GHz, 802.11ac (HT40)		
MCS0	21.00 +/- 1.5 dBm	-
MCS9	14.00 +/- 1.5 dBm	-60 dBm@MCS9
5GHz, 802.11 ac (HT80)		
MCS0	20.0 +/- 1.5 dBm	-
MCS9	14.0 +/- 1.5 dBm	-58 dBm@MCS9

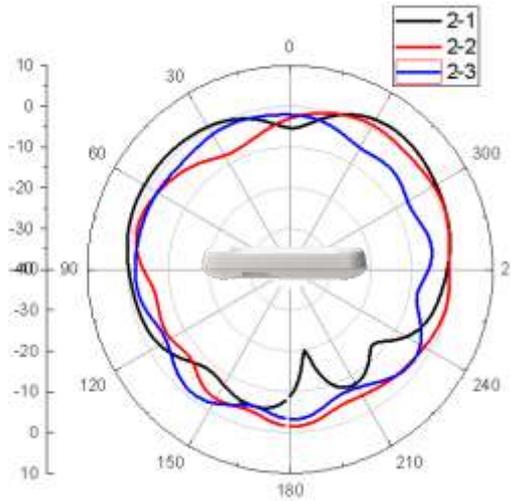


WAP 571 Radiation Patterns at 2.4 GHz band

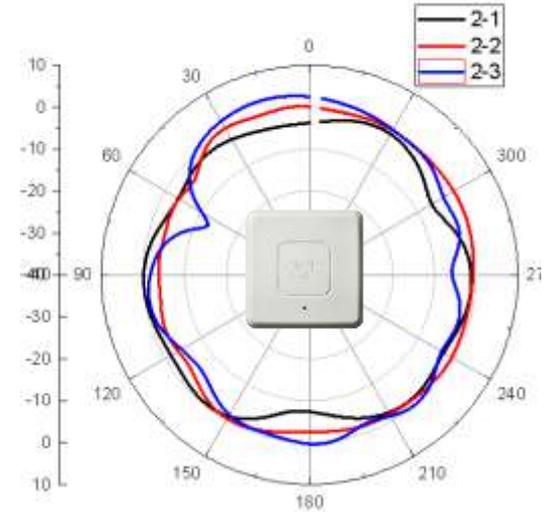
Elevation - 0° (XZ plane)



Elevation - 90° (YZ plane)



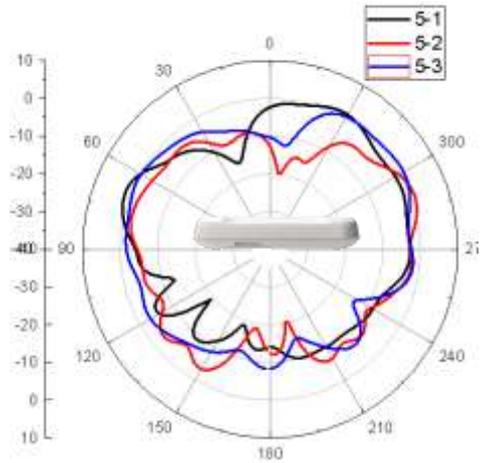
Azimuth (XY plane)



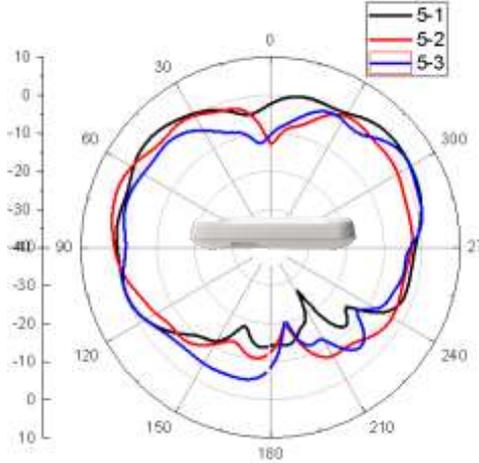
Radiation Plots – a general guide to tell you where most of the energy and receive sensitivity of the Cisco APs is being directed.

WAP 571 Radiation Patterns at 5.0 GHz band

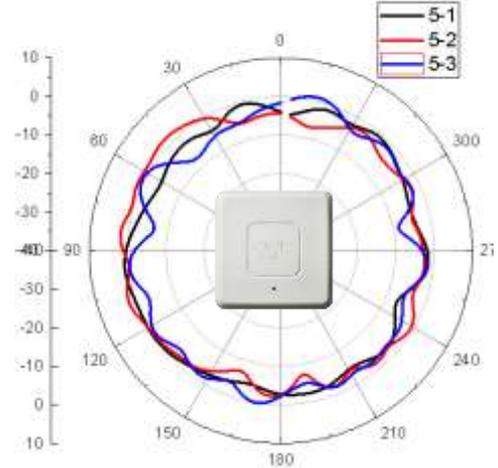
Elevation - 0° (XZ plane)



Elevation - 90° (YZ plane)

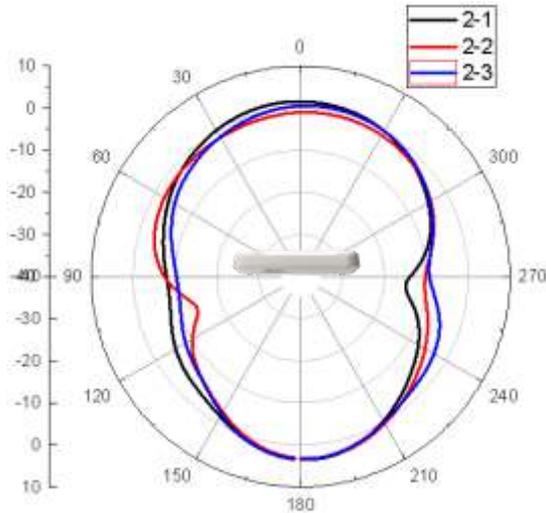


Azimuth (XY plane)

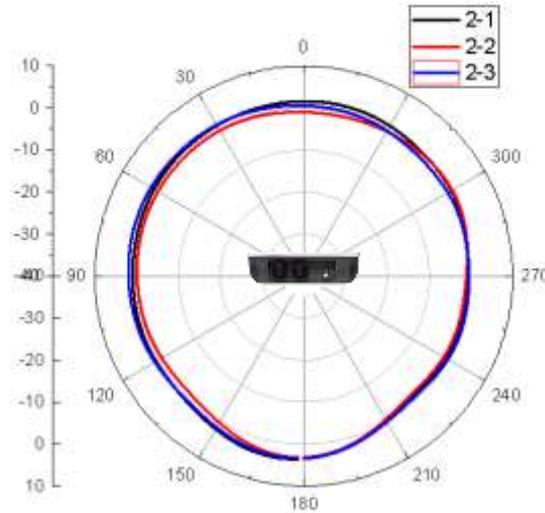


WAP 571E Radiation Patterns at 2.4 GHz band

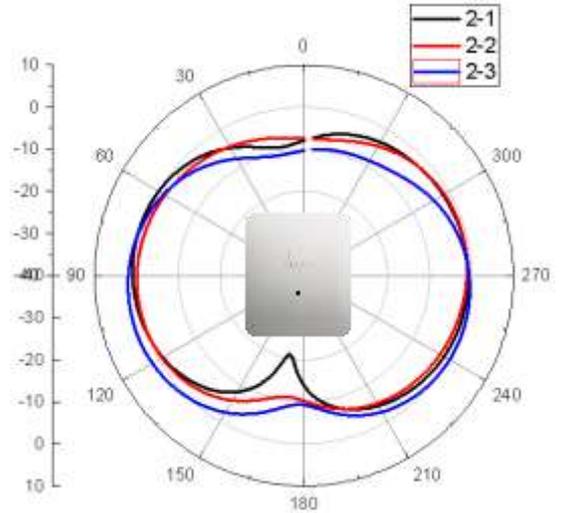
Elevation - 0° (XZ plane)



Elevation - 90° (YZ plane)

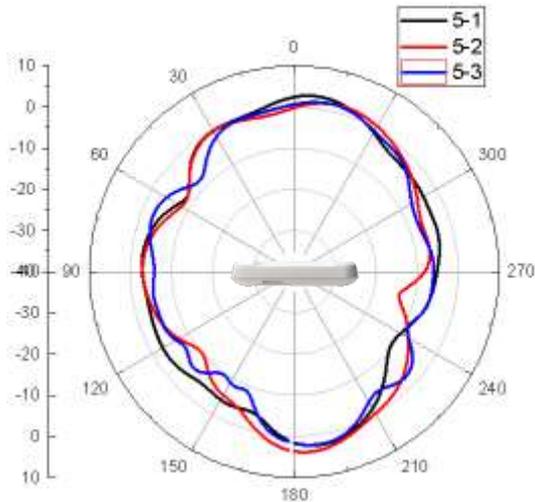


Azimuth (XY plane)

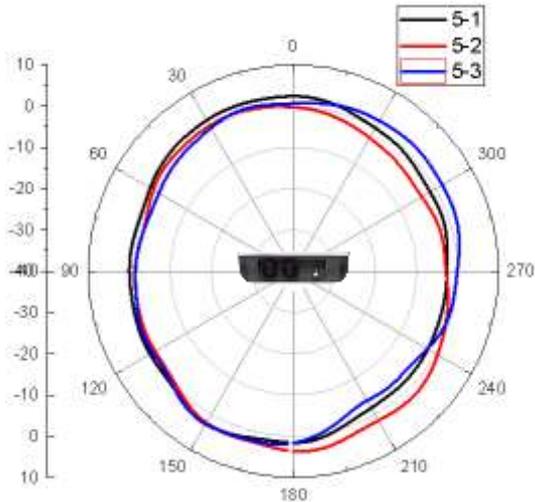


WAP 571E Radiation Patterns at 5.0 GHz band

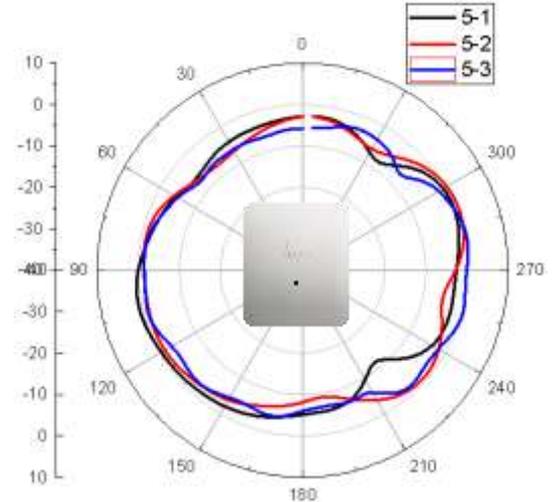
Elevation - 0° (XZ plane)



Elevation - 90° (YZ plane)



Azimuth (XY plane)



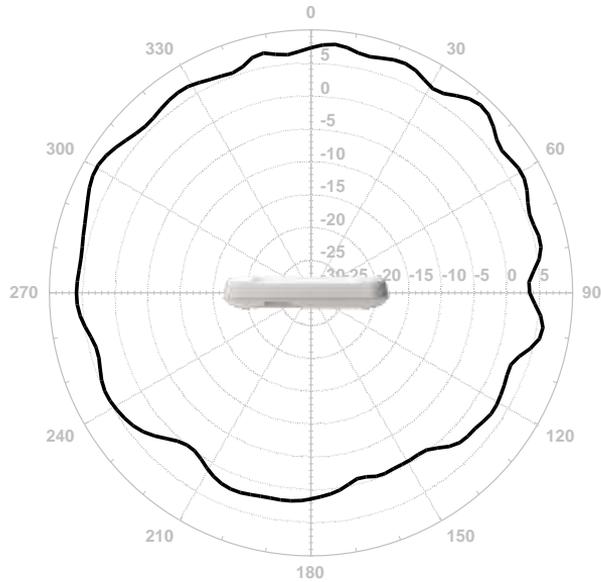
WAP581 RF Performance Table

Band, rate	Maximum transition power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
2.4Ghz, 802.11b		
1/2/5.5/11 Mbps	20.0 +/- 1.5 dBm@CH6	- 86 dBm@11Mbps
2.4GHz, 802.11g		
6/54 Mbps	20.0 +/- 1.5 dBm@CH6/ 17.0 +/- 1.5 dBm@CH6	-73 dBm@54Mbps
2.4Ghz, 802.11n (HT20)		
MCS0	20.0 +/- 1.5 dBm@CH6	-
MCS7	17.0 +/- 1.5 dBm@CH6	-71 dBm@MCS7
2.4Ghz, 802.11n (HT40)		
MCS7	16.0 +/- 1.5 dBm@CH6	-67 dBm@MCS7
5GHz, 802.11a		
6/54 Mbps	22.0 +/- 2 dBm/ 20.0 +/- 2 dBm	-90 dBm@6Mbps/-74 dBm@54Mbps
5GHz, 802.11ac (VHT20)		
MCS0	22.0 +/- 2 dBm	-
MCS8	14.0 +/- 2 dBm	-66 dBm@MCS8
5GHz, 802.11ac (VHT40)		
MCS0	21.00 +/- 2 dBm	-
MCS9	14.00 +/- 2 dBm	-62 dBm@MCS9
5GHz, 802.11 ac (VHT80)		
MCS0	20.0 +/- 2 dBm	-
MCS9	14.0 +/- 2 dBm	-58 dBm@MCS9

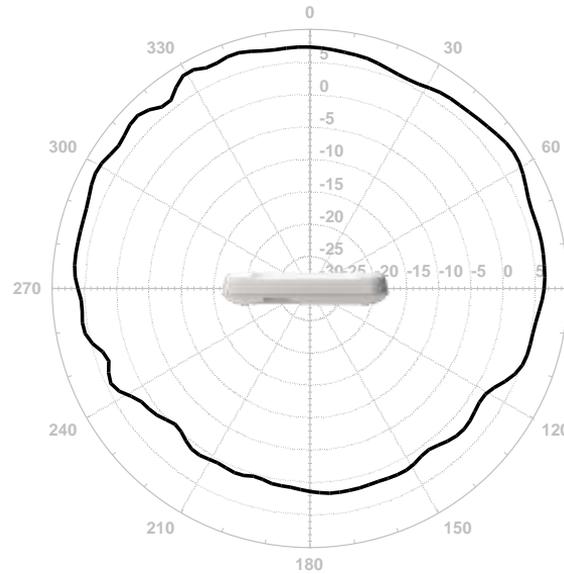


WAP 581 Radiation Patterns at 2.4 GHz band

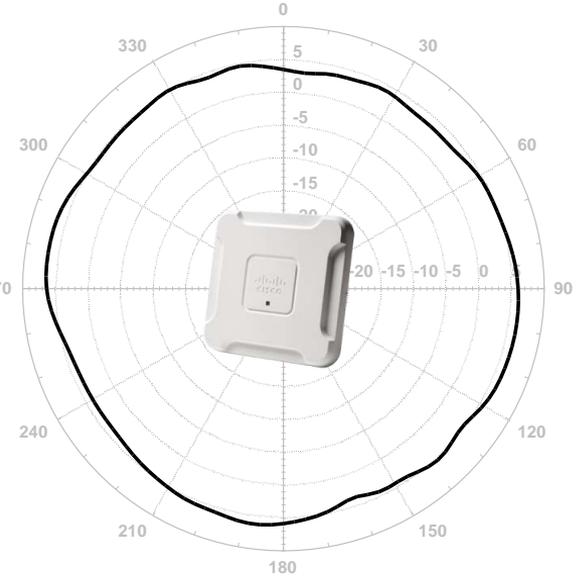
Elevation - 0° (XZ plane)



Elevation - 90° (YZ plane)

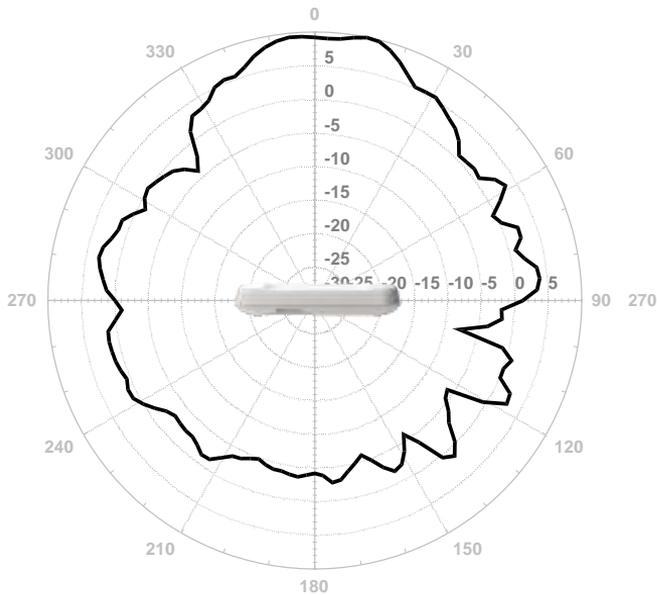


Azimuth (XY plane)

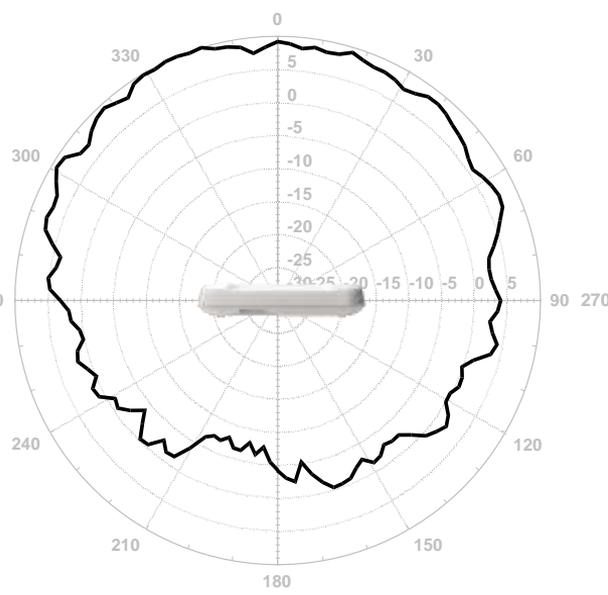


WAP 581 Radiation Patterns at 5.0 GHz band

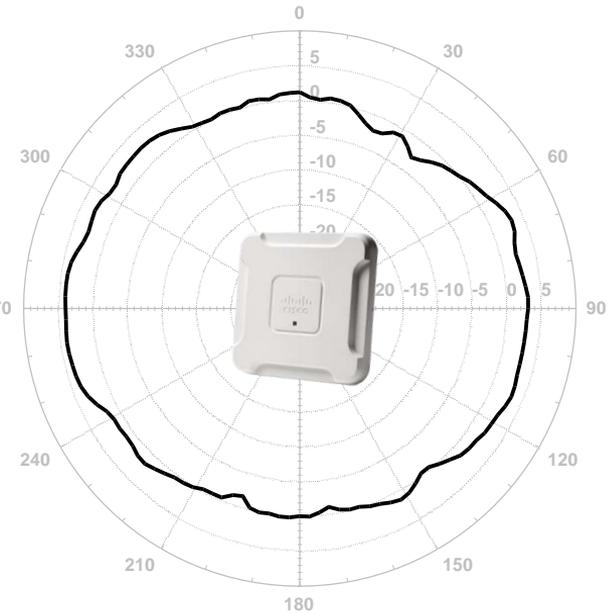
Elevation - 0° (XZ plane)



Elevation - 90° (YZ plane)



Azimuth (XY plane)





Technical Overview WAP 300

WAP361 Highlights

- Dual-radio 802.11ac access point for vertical markets
 - Cost-sensitive hospitality, education, conference rooms, etc.
 - 2x2 802.11ac + 802.11n With up to 1200-Mbps Wi-Fi
- 1 GE LAN uplink + 4 GE switch ports
- AC power and PoE options
 - PoE: Both PD and PSE
 - 48V power adapter sold separately
- Single Point Setup (controller less management)
- Wall plate form factor (165 x 110 mm)
 - Mounts to Wall electrical/data junction box
 - Security screw attaches access point to metal bracket
 - Easily install hardware in under a minute
 - Internal antennas
 - Single LED



WAP371 Highlights

- Dual Radio Wireless AC+N connectivity
 - 3x3 1600Mbps Wi-Fi, 1300Mbps 11ac + 300Mbps 11n
- Gigabit Ethernet LAN With PoE (802.3at)
- Single Point Setup (Controller-less Management)
 - Up to 8 WAP371s per Cluster
- Guest Access
- IPv6, QoS support
- AC Power and POE options (PA not included)

Value
11ac



WAP300 series Technical Specifications



Hardware Specification	WAP361	WAP371
Antennas	4 internal PIFA antennas	5 internal PIFA antennas
Antenna gain in dBi	4.35 dBi @2.4GHz , 3.96 dBi@5GHz	2 dBi @2.4GHz, 2dBi @5GHz
Frequency	Dual concurrent radios (2.4GHz and 5 GHz)	Dual concurrent radios (2.4GHz and 5 GHz)
Radio and modulation type	Dual radio, orthogonal frequency division multiplexing (OFDM) IEEE 802.11a/n: OFDM (BPSK, QPSK, 16 QAM, 64 QAM) IEEE 802.11ac: OFDM (BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM)	Dual radio, orthogonal frequency division multiplexing (OFDM) IEEE 802.11a/n: OFDM (BPSK, QPSK, 16 QAM, 64 QAM) IEEE 802.11ac: OFDM (BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM)
WLAN	802.11n/ac 2x2 MIMO with 2 spatial streams at 5 GHz 2x2 MIMO with 2 spatial streams at 2.4 GHz 20-, 40-, and 80-Mhz channels for 802.11ac 20- and 40-Mhz for 802.11n PHY data rate up to 1.2 Gbps 802.11 Dynamic Frequency Selection (DFS)	802.11n/ac 3x3 MIMO with 3 spatial streams at 5 GHz 2x2 MIMO with 2 spatial streams at 2.4 GHz 20-, 40-, and 80-MHz channels for 802.11ac 20- and 40-MHz for 802.11n PHY data rate up to 1.6 Gbps 802.11 dynamic frequency selection (DFS)
System Memory	256MB RAM, 128MB Flash	256MB RAM, 128MB Flash
Power Options	IEEE 802.3af/at Ethernet switch Cisco power injector: SB-PWR-INJ2-xx Cisco AC Adapter – SB-PWR-48V-xx (not included)	IEEE 802.3at Ethernet switch Cisco power injector: SB-PWR-INJ2-xx AC adapter: SB-PWR-12V2A-xx
Ports	5 x 10/100/1000 Ethernet, with support for 802.3af/at PoE, power port for AC adapter	1 x 10/100/1000 Ethernet, with support for 802.3af/at PoE, power port for AC adapter

WAP300 Series Detailed Features

Specification	WAP361	WAP371
VLAN support	1 management VLAN + 16 VLANs for SSIDs	1 management VLAN + 16 VLANs for SSIDs
SSID-to-VLAN mapping	Yes	Yes
Auto-channel selection	Yes	Yes
IPv6	IPv6 host support, IPv6 RADIUS, syslog, NTP, ISATP	IPv6 host support, IPv6 RADIUS, syslog, NTP, ISATP
802.1x supplicant	Yes	Yes
QoS	client QoS, CoS/802.1p, DSCP, Port	client QoS, CoS/802.1p, DSCP, Port
Performance		
Wireless throughput	Up to 1.2 Gbps	Up to 1.6 Gbps
Recommended user support	Up to 128 connective users, 32 active users per radio	Up to 128 connective users, 30 active users per radio
Security Features		
WPA, WPA2	Yes	Yes
Access Control	management ACL plus IPv4/IPv6/MAC ACL	management ACL plus IPv4/IPv6/MAC ACL
Secure Management	HTTPS	HTTPS
SSID broadcast	Yes	Yes
Rogue access point detection	Yes	Yes
Cisco Umbrella integration	No	No
Management		
Web UI	Yes	Yes
FindIT Network Management	Yes	Yes
Management protocols	SNMPv1/v2c/v3, Bonjour	SNMPv1/v2c/v3, Bonjour
Multiple AP Management	Single Point Setup on same model WAPs	Single Point Setup on same model WAPs



WAP300 Series Detailed Features

Management	WAP361	WAP371
Number of access points per cluster	8	8
Active clients per cluster	240	240
Network Diagnostics	Packet Capture	Packet Capture
Event logging	Local, remote, e-mail alert	Local, remote, e-mail alert
Captive portal Social Login	No, Captive portal only	No, Captive portal only
Captive portal login with ADDS	No, Captive portal only	No, Captive portal only
Mobile optimized setup wizard	No	No
DHCP	DHCP IPv4/IPv6 client	DHCP IPv4/IPv6 client
HTTP redirect	Yes	Yes
Wireless		
Wireless to VLAN map	Yes	Yes
Wi-Fi Scheduler	Yes	Yes
Wireless Isolation between clients	Yes	Yes
WDS	Yes, with WorkGroup Bridge mode	Yes, with WorkGroup Bridge mode
Fast Roaming	No	No
Multiple SSIDs	16	16
WMM	Yes, with unscheduled automatic power save	Yes, with unscheduled automatic power save
Operating Modes	AP mode, WDS bridging, Workgroup Bridge mode IEEE 802.11ac, 802.11a, 802.11n, 802.11g, 802.11b, 802.3af, 802.3u, 802.1X, 802.1Q (VLAN), 802.1D, 802.11i, 802.11e, RFC 791, RFC 2460	AP mode, WDS bridging, Workgroup Bridge mode IEEE 802.11ac, 802.11a, 802.11n, 802.11g, 802.11b, 802.3af, 802.3u, 802.1X, 802.1Q (VLAN), 802.1D, 802.11i, 802.11e, RFC 791, RFC 2460
Standards		



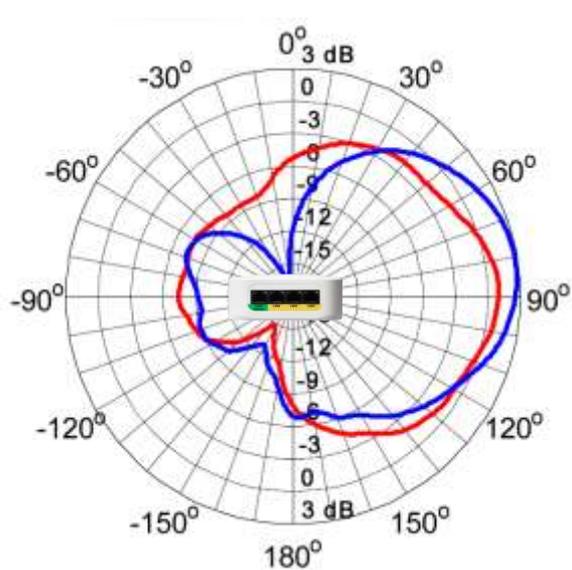
WAP361 RF Performance Table

Band, rate	Maximum transition power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
2.4Ghz, 802.11b		
1/11 Mbps	16.0 +/- 1.0 dBm/ 16.0 +/- 1.0 dBm	- 96 dBm/-89dBm
2.4GHz, 802.11g		
6/54 Mbps	14.0 +/- 1.0 dBm/ 14.0 +/- 1.0 dBm	-92 dBm/ -74 dBm
2.4Ghz, 802.11n (HT20)		
MCS0/8	14.0 +/- 1.0 dBm	-90 dBm
MCS7/15	14.0 +/- 1.0 dBm	-74 dBm
2.4Ghz, 802.11n (HT40)		
MCS0/8/MCS7/15	13.0 +/- 1.0 dBm/13.0 +/- 1.0 dBm	-87 dBm/ -70 dBm
5GHz, 802.11a		
6/54 Mbps	16.0 +/- 1.0 dBm/ 16.0 +/- 1.0 dBm	-91 dBm/-76 dBm
5GHz, 802.11ac (HT20)		
MCS0	14.0 +/- 1.0 dBm	- 91 dBm
MCS8	14.0 +/- 1.0 dBm	- 63 dBm
5GHz, 802.11ac (HT40)		
MCS0	14.00 +/- 1.0 dBm	- 87 dBm
MCS9	14.00 +/- 1.0 dBm	-64 dBm
5GHz, 802.11 ac (HT80)		
MCS0	14.0 +/- 1.0 dBm	- 86 dBm
MCS9	14.0 +/- 1.0 dBm	- 61 dBm

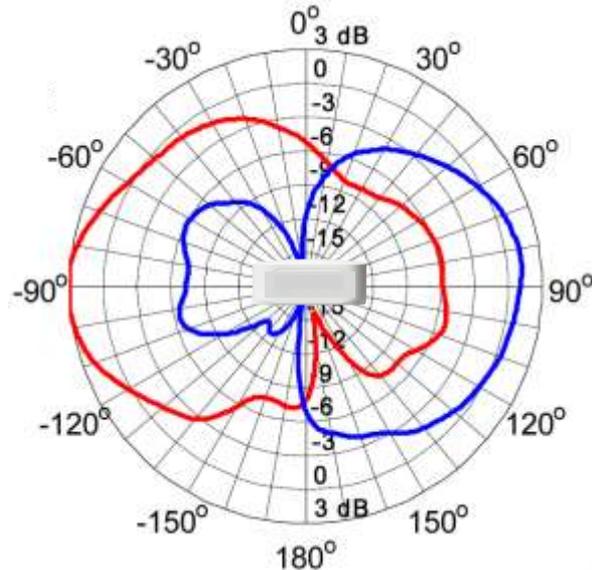


WAP 361 Radiation Patterns at 2.4 GHz band

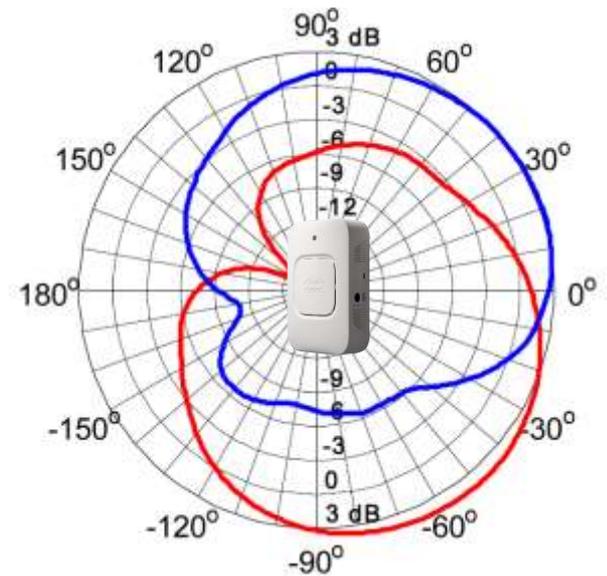
Elevation - 0° (XZ plane)



Elevation - 90° (YZ plane)



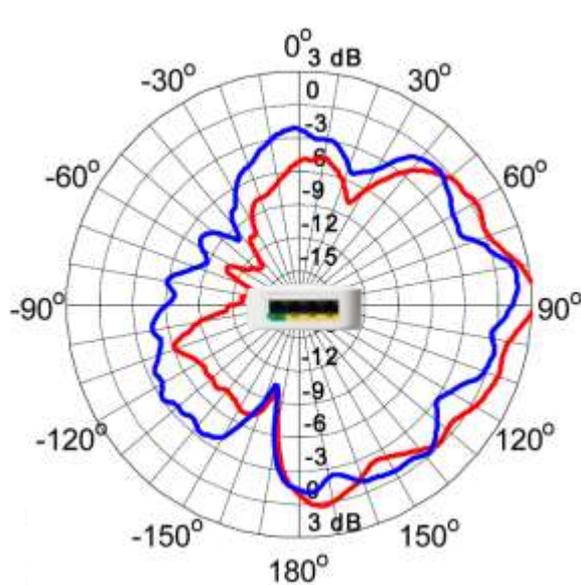
Azimuth (XY plane)



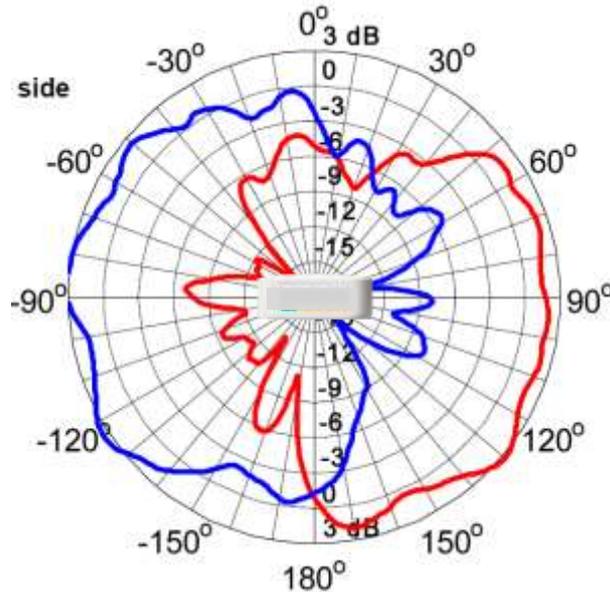
Excellent 3D coverage that is optimized for wall mounting application

WAP 361 Radiation Patterns at 5.0 GHz band

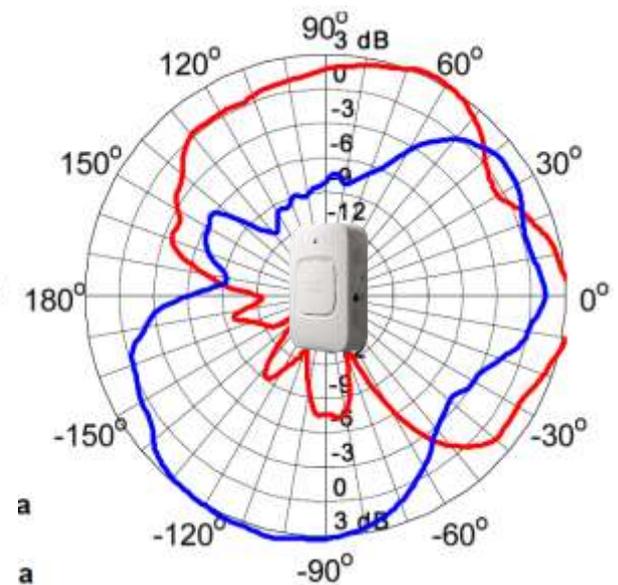
Elevation - 0° (XZ plane)



Elevation - 90° (YZ plane)



Azimuth (XY plane)



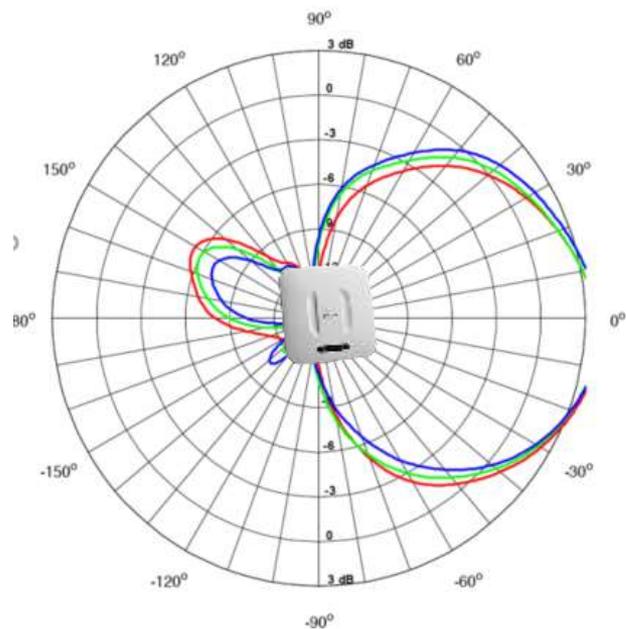
WAP371 RF Performance Table

Band, rate	Maximum transition power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
2.4Ghz, 802.11b		
1/2/5.5/11 Mbps	17.0 +/- 1.5 dBm@CH6	- 86 dBm@11Mbps
2.4GHz, 802.11g		
6/54 Mbps	17.0 +/- 1.5 dBm@CH6/ 15.0 +/- 1.5 dBm@CH6	-75 dBm@54Mbps
2.4Ghz, 802.11n (HT20)		
MCS0	17.0 +/- 1.5 dBm@CH6	-
MCS15	14.0 +/- 1.5 dBm@CH6	-69 dBm@MCS15
2.4Ghz, 802.11n (HT40)		
MCS15	12.0 +/- 1.5 dBm@CH6	-66 dBm@MCS7
5GHz, 802.11a		
6/54 Mbps	16.0 +/- 1.5 dBm/ 15.0 +/- 1.5 dBm	-79 dBm@54Mbps
5GHz, 802.11ac (HT20)		
MCS0	16.0 +/- 1.5 dBm	-
MCS9	13.0 +/- 1.5 dBm	-62 dBm@MCS9
5GHz, 802.11ac (HT40)		
MCS0	18.00 +/- 1.5 dBm	-
MCS9	13.00 +/- 1.5 dBm	-59 dBm@MCS9
5GHz, 802.11 ac (HT80)		
MCS0	18.0 +/- 1.5 dBm	-
MCS9	13.0 +/- 1.5 dBm	-57 dBm@MCS9

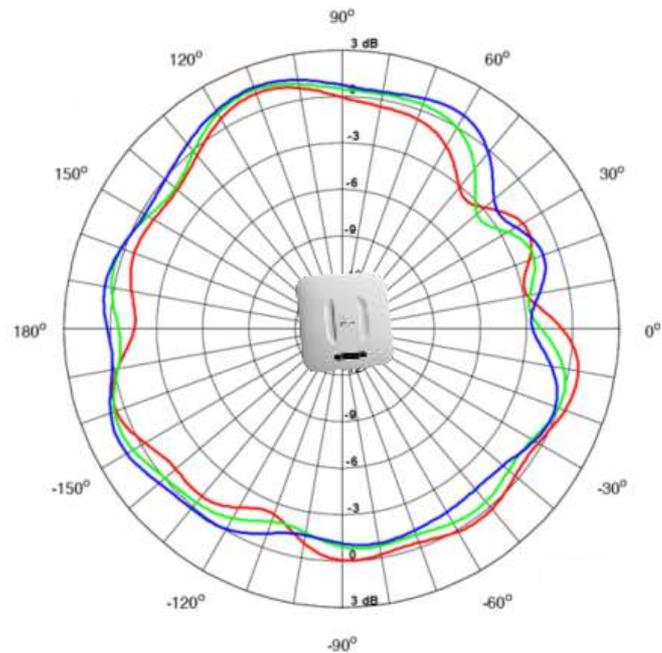


WAP 371 Radiation Patterns at 2.4 GHz band

Azimuth front antenna (XY plane)

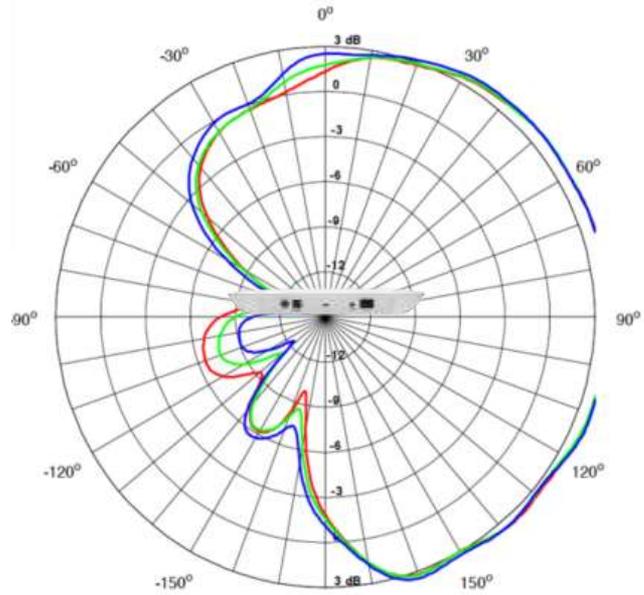


Azimuth right antenna (XY plane)

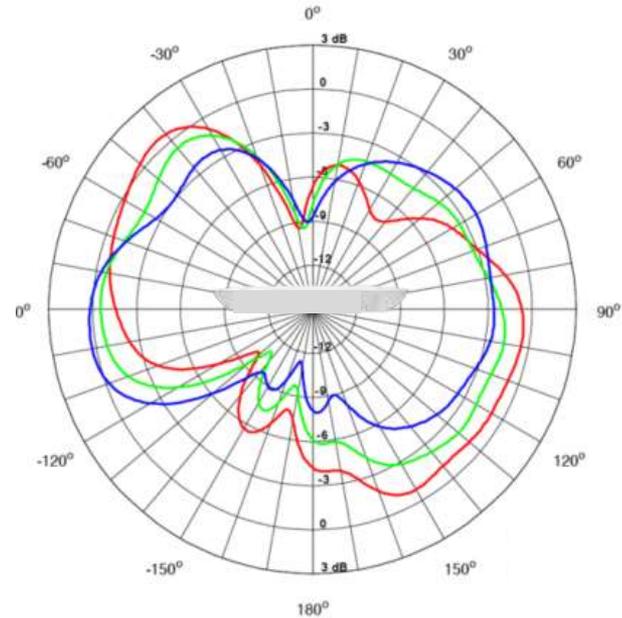


WAP 371 Radiation Patterns at 2.4 GHz band

Elevation - 0° front antenna (XZ plane)

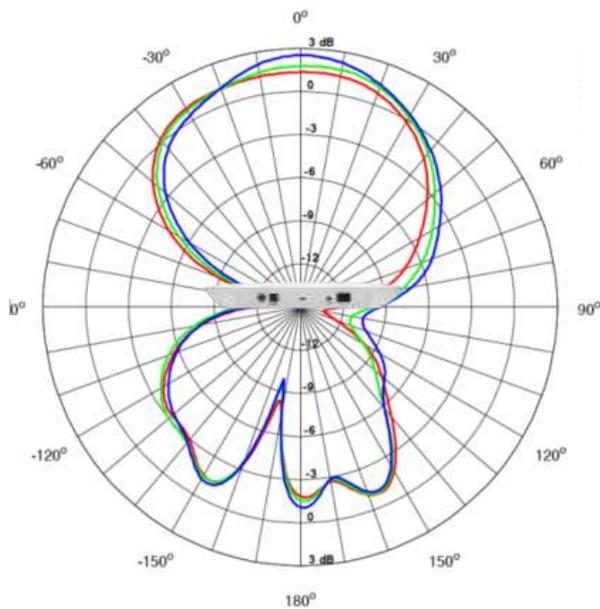


Elevation - 0° right antenna (XZ plane)

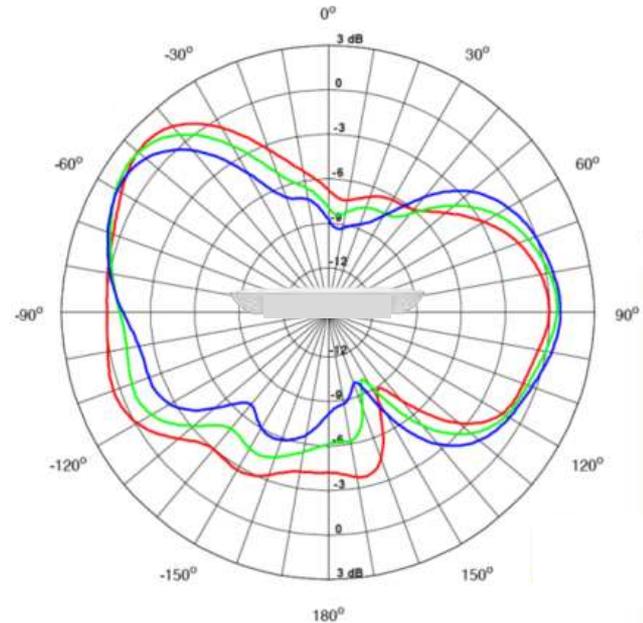


WAP 371 Radiation Patterns at 2.4 GHz band

Elevation - 90° front antenna (YZ plane)

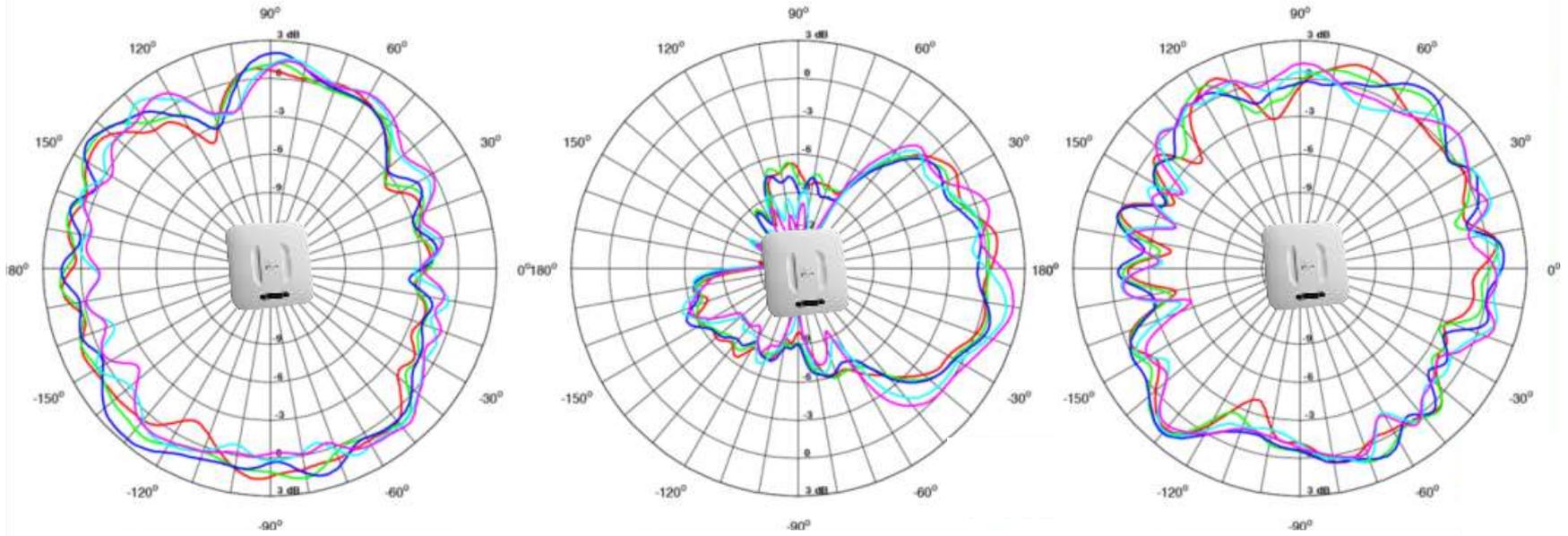


Elevation - 90° right antenna (YZ plane)



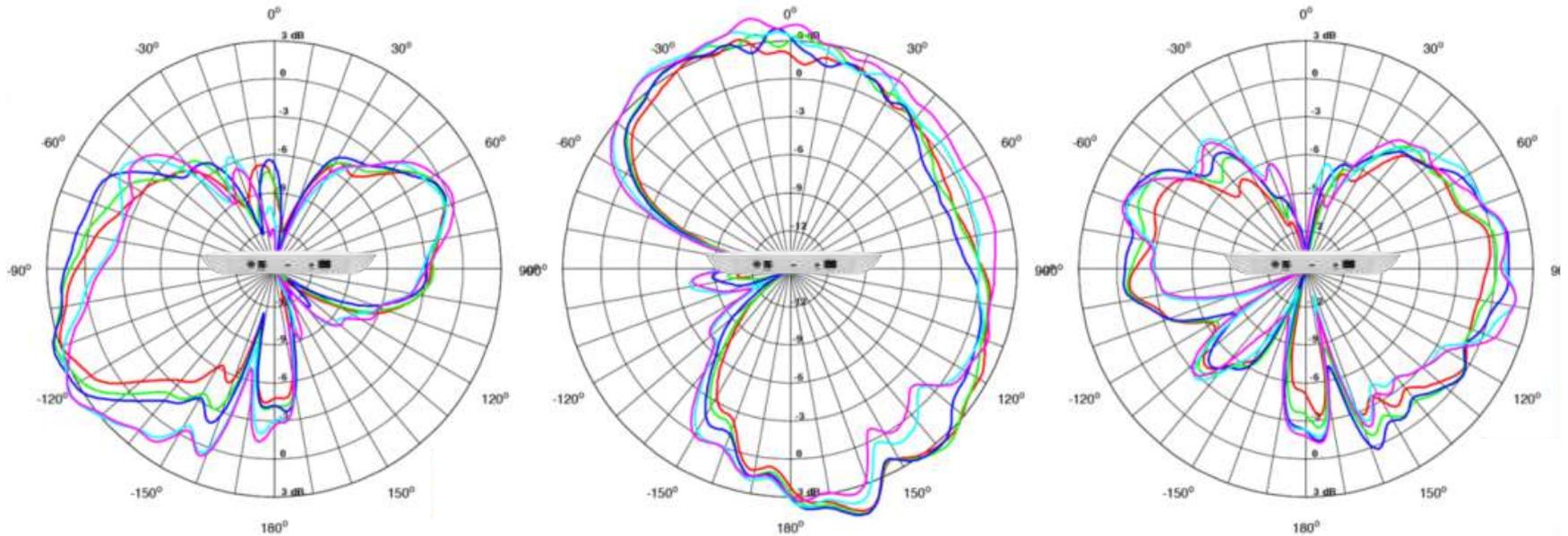
WAP 371 Radiation Patterns at 5.0 GHz band

Azimuth left, front and right antenna (XY plane)



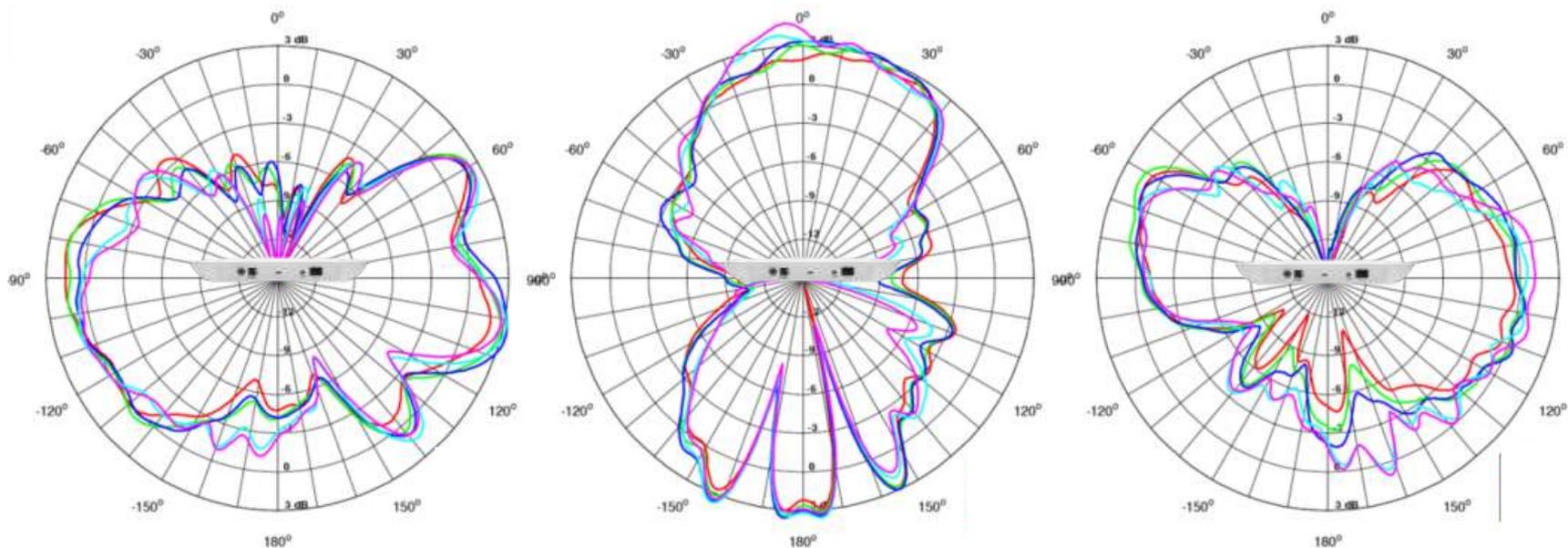
WAP 371 Radiation Patterns at 5.0 GHz band

Elevation - 0° left, front and right antenna (XZ plane)



WAP 371 Radiation Patterns at 5.0 GHz band

Elevation - 90° left, front and right antenna (YZ plane)





Technical Overview WAP 100

WAP125 Rapid 802.11ac Deployment



Wireless-AC Dual Band

Continues with wireless 802.11ac Wave 1 capabilities
5GHz band supports 2x2 MIMO - 2.4GHz band supports 2x2 MIMO
Support for two spatial streams, simultaneous dual band operation



Consistent Feature Set

Faster Wi-Fi, Secure Connectivity and DIY installation
Continues with the same deployment options as rest of 100-Series



High Performance Platform

Maximum theoretical data rate of 867Mbps



WAP125 Deployment Considerations



Easy to set up and use with intuitive wizard-based configuration



Single Radio but Dual Band



Single Band Performance



Simultaneous Dual Band Performance

- Major power savings
- Designed around single set of 2x2 antennas

- 5GHz band with supports 1x1 MIMO with single spatial stream
- 5GHz band on 802.11ac max data rate 867Mbps – 2.4GHz max data rate 300Mbps

- 5GHz band with supports 1x1 MIMO with single spatial stream
- 2.4GHz band supports 1x1 MIMO with single spatial stream
- Aggregate theoretical maximum data rate of 583Mbps

WAP125 Highlights

- Real simultaneous dual-band wireless AC
 - Radio modes:
 - 2x2 11ac, 2x2 11n, or 1x1 11ac + 1x1 11n, Wave 1
 - Up to 867 Mbps
- Standalone access point with captive portal lite guest access
- Works with FindIT Network Management
- Compact design with integrated stand
- Single Gigabit Ethernet LAN with 802.3af PoE
- Browser-based configuration and web-based setup wizard
- Power provided via PoE or AC power (adapter included)
- Limited lifetime warranty



WAP131 Highlights

- Dual Radio 2.4 and 5Ghz Wireless N connectivity
- Standalone access point
- Compact Design with integrated stand
- 1 Gigabit Ethernet LAN w/PoE
- IPv6 and QoS support
- Browser based configuration and Web-based Setup Wizard
- AC or PoE power options (PA included)
- Limited lifetime warranty



WAP150 Highlights

- Low-cost dual-radio Wireless AC+N connectivity
 - 2x2 1200-Mbps Wi-Fi, 867-Mbps 802.11ac + 300 Mbps 802.11n
- Single Point Setup (controller-less management)
 - Up to 4 WAP150s per cluster
- Guest access
- AC power and PoE options
 - 802.3af PD
 - AC power adapter included
- Compact form factor, 135 x 135 mm
 - Desktop placement
 - Basic Wall/ceiling mounting
 - Internal antennas
 - Single LED



WAP100 series Technical Specifications

Hardware Specification	WAP125	WAP150
Antennas	4 internal PIFA antennas	4 internal PIFA antennas
Antenna gain in dBi	4.02 dBi @2.4GHz and 5.63dBi@5GHz	3.61 dBi @2.4GHz and 3.85 dBi @5GHz
Frequency	Dual bands (2.4 and 5 GHz)	Dual Concurrent radios (2.4GHz and 5GHz)
Radio and modulation type	Direct-Sequence Spread-Spectrum (DSSS) 802.11b: BPSK, QPSK, CCK 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM	Dual concurrent radios (2.4GHz and 5 GHz) 802.11b: BPSK, QPSK, CCK 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
WLAN	802.11ac/n 2x2 Multiple-Input Multiple-Output (MIMO) with 2 spatial streams at 5 GHz 2x2 MIMO with 2 spatial streams at 2.4 GHz 20-, 40-, and 80-Mhz channels for 802.11ac 20 and 40 MHz for 802.11n PHY data rate up to 867Mbps	802.11n/ac 2x2 multiple-input multiple-output (MIMO) with 2 spatial streams at 5 GHz 2x2 MIMO with 2 spatial streams at 2.4 GHz 20-, 40-, and 80-Mhz channels for 802.11ac 20- and 40-Mhz for 802.11n PHY data rate up to 1.2 Gbps 802.11 dynamic frequency selection (DFS)
System Memory	256MB RAM, 128 MB Flash	256MB RAM, 128 MB Flash
Power Options	IEEE 802.3af Ethernet switch Cisco Power Injector: SB-PWR-INJ2-xx AC adapter included, 12V/1A	IEEE 802.3af Ethernet switch Cisco Power Injector - SB-PWR-INJ2-xx AC adapter – SB-PWR-12V/1.5A power adapter in a box POE power
Ports	1 x GE LAN, with support for 802.3af /at PoE, power port for AC adapter (included)	1 x GE LAN, with support for 802.3af /at PoE, power port for AC adapter (included)

WAP100 Series Detailed Features

Specification	WAP125	WAP150
VLAN support	1 management VLAN + 8 VLANs for SSIDs	1 management VLAN + 8 VLANs for SSIDs
SSID-to-VLAN mapping	Yes	Yes
Auto-channel selection	Yes	Yes
IPv6	IPv6 host support, IPv6 RADIUS, syslog, NTP, ISATP	IPv6 host support, IPv6 RADIUS, syslog, NTP, ISATP
802.1x supplicant	Yes	Yes
QoS	client QoS	client QoS
Performance		
Wireless throughput	Up to 867 Mbps	Up to 1.2 Gbps
Recommended user support	Up to 64 connective users, 10 active users	Up to 64 connective users, 10 active users per radio
Security Features		
WPA, WPA2	Yes	Yes
Access Control	management ACL plus IPv4/IPv6/MAC ACL	management ACL plus IPv4/IPv6/MAC ACL
Secure Management	HTTPS	HTTPS
SSID broadcast	Yes	Yes
Rogue access point detection	Yes	Yes
Cisco Umbrella integration	Yes	No
Management		
Web UI	Yes	Yes
FindIT Network Management	Yes	Yes
Management protocols	SNMPv1/v2c/v3, Bonjour	SNMPv1/v2c/v3, Bonjour
Multiple AP Management	No	Yes



WAP100 Series Detailed Features

Management	WAP125	WAP150
Number of access points per cluster	N/A	4
Active clients per cluster	N/a	120
Network Diagnostics	Packet Capture, Cloudshark Packet Capture	Packet Capture
Event logging	Local, remote, e-mail alert	Local, remote, e-mail alert
Captive portal Social Login	Yes, Facebook and Google	No, Captive Portal only
Captive portal login with ADDS	Yes	No, Captive Portal only
Mobile optimized setup wizard	Yes	No
DHCP	DHCP IPv4/IPv6 client, DHCP Auto Configuration	DHCP IPv4/IPv6 client
HTTP redirect	Yes	Yes
Wireless		
Wireless SSID to VLAN mapping	Yes	Yes
Wi-Fi Scheduler	Yes	Yes
Wireless Isolation between clients	Yes	Yes
WDS	Yes, with WorkGroup Bridge mode	Yes, with WorkGroup Bridge mode
Fast Roaming	Yes	Yes
Multiple SSIDs	8	8
WMM	Yes, with unscheduled automatic power save	Yes, with unscheduled automatic power save
Operating Modes	AP mode, WDS bridging, Workgroup Bridge mode	AP mode, WDS bridging, Workgroup Bridge mode
Standards	IEEE 802.11ac, 802.11a, 802.11n, 802.11g, 802.11b, 802.3af, 802.3u, 802.1X, 802.1Q (VLAN), 802.1D, 802.11i, 802.11e, RFC 791, RFC 2460	IEEE 802.11ac, 802.11a, 802.11n, 802.11g, 802.11b, 802.3af, 802.3u, 802.1X, 802.1Q (VLAN), 802.1D, 802.11i, 802.11e, RFC 791, RFC 2460



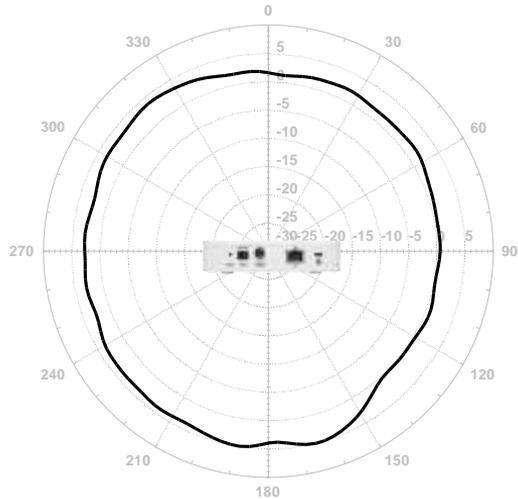
WAP125 RF Performance Table

Band, rate	Maximum transition power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
2.4Ghz, 802.11b		
1/11 Mbps	18.0 +/- 1.5 dBm/ 18.0 +/- 1.5 dBm	- 96 dBm/- 88dBm
2.4GHz, 802.11g		
6/54 Mbps	18.0 +/- 1.5 dBm/ 17.0 +/- 1.5 dBm	- 92 dBm/ -75 dBm
2.4Ghz, 802.11n (HT20)		
MCS0/8	18.0 +/- 1.5 dBm	-92 dBm
MCS7/15	17.0 +/- 1.5 dBm	-73 dBm
2.4Ghz, 802.11n (HT40)		
MCS0/8/MCS7/15	18.0 +/- 1.5 dBm/17.0 +/- 1.5 dBm	- 90 dBm/ -71 dBm
5GHz, 802.11a		
6/54 Mbps	17.0 +/- 1.5 dBm/ 15.0 +/- 1.5 dBm	- 90 dBm/ -73 dBm
5GHz, 802.11ac (HT20)		
MCS0	17.0 +/- 1.5 dBm	- 90 dBm
MCS8	12.0 +/- 1.5 dBm	- 67 dBm
5GHz, 802.11ac (HT40)		
MCS0	17.00 +/- 1.5 dBm	- 88 dBm
MCS9	12.00 +/- 1.5 dBm	- 63 dBm
5GHz, 802.11 ac (HT80)		
MCS0	17.0 +/- 1.5 dBm	- 85 dBm
MCS9	12.0 +/- 1.5 dBm	- 60 dBm

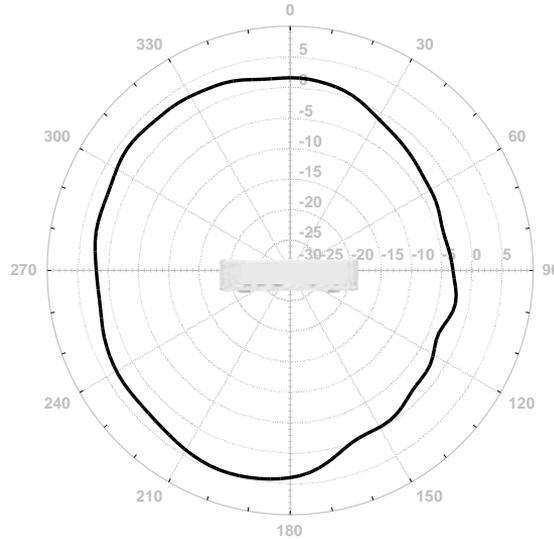


WAP 125 Radiation Patterns at 2.4 GHz band

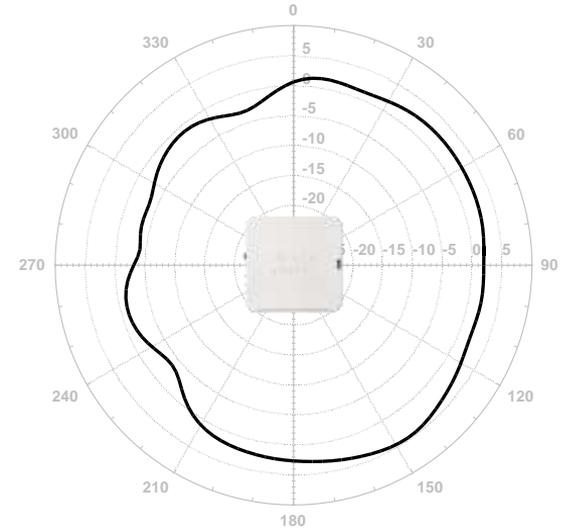
Elevation - 0° (XZ plane)



Elevation - 90° (YZ plane)

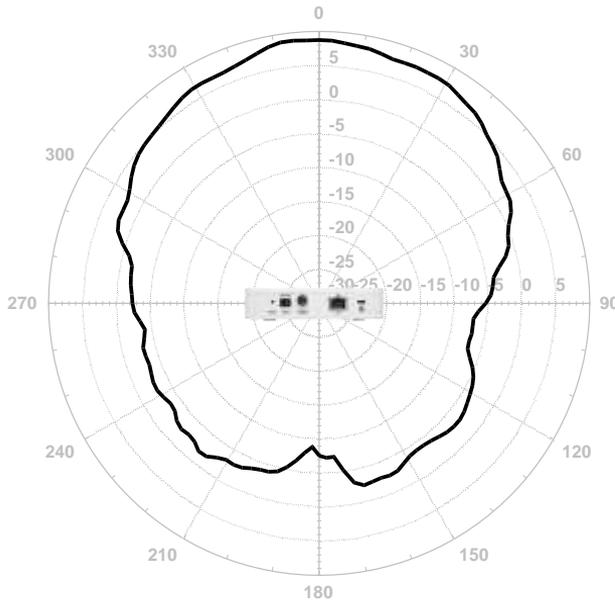


Azimuth (XY plane)

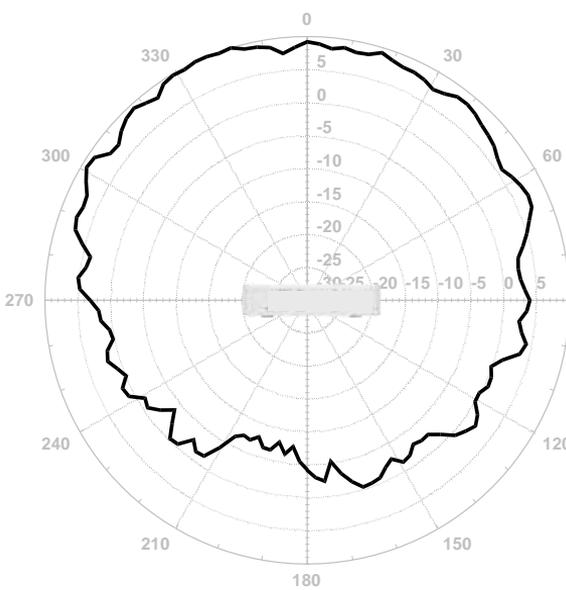


WAP 125 Radiation Patterns at 5 GHz band

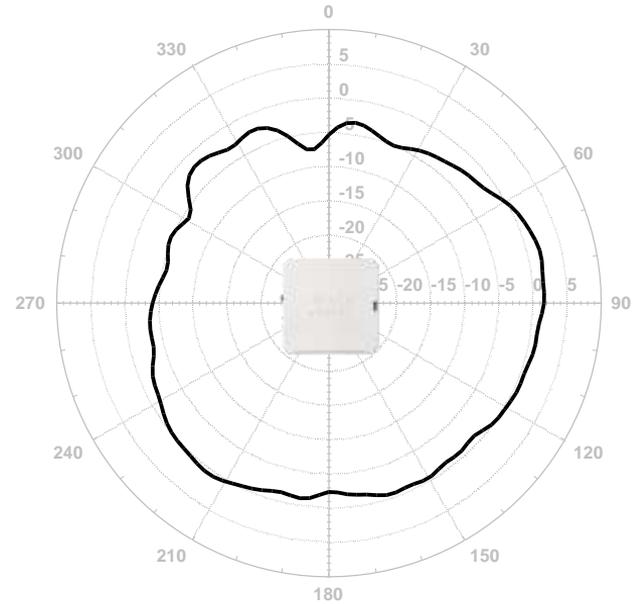
Elevation - 0° (XZ plane)



Elevation - 90° (YZ plane)



Azimuth (XY plane)



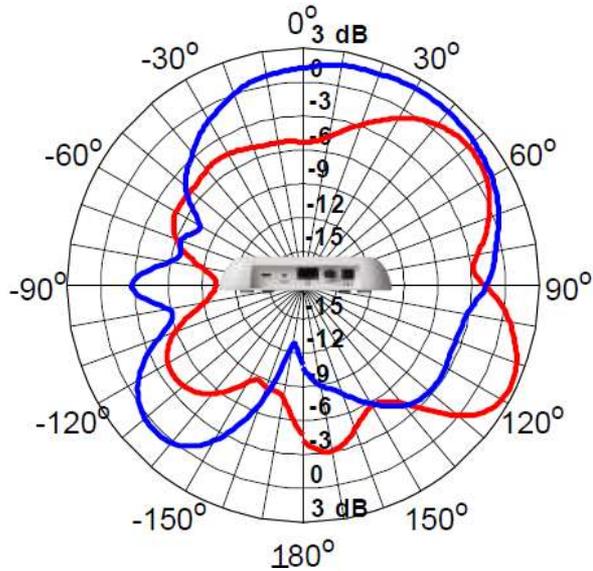
WAP150 RF Performance Table

Band, rate	Maximum transition power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
2.4Ghz, 802.11b		
1/11 Mbps	16.0 +/- 1.5 dBm/ 16.0 +/- 1.5 dBm	- 98 dBm/-90dBm
2.4GHz, 802.11g		
6/54 Mbps	14.0 +/- 1.5 dBm/ 14.0 +/- 1.5 dBm	-90 dBm/ -75 dBm
2.4Ghz, 802.11n (HT20)		
MCS0/8	14.0 +/- 1.5 dBm	-90 dBm
MCS7/15	14.0 +/- 1.5 dBm	-74 dBm
2.4Ghz, 802.11n (HT40)		
MCS0/8/MCS7/15	13.0 +/- 1.5 dBm/13.0 +/- 1.5 dBm	-88 dBm/ -71 dBm
5GHz, 802.11a		
6/54 Mbps	16.0 +/- 1.5 dBm/ 16.0 +/- 1.5 dBm	-91 dBm/-77 dBm
5GHz, 802.11ac (HT20)		
MCS0	14.0 +/- 1.5 dBm	- 91 dBm
MCS8	14.0 +/- 1.5 dBm	- 69 dBm
5GHz, 802.11ac (HT40)		
MCS0	14.0 +/- 1.5 dBm	- 87 dBm
MCS9	14.0 +/- 1.5 dBm	- 64 dBm
5GHz, 802.11 ac (HT80)		
MCS0	14.0 +/- 1.5 dBm	- 88 dBm
MCS9	14.0 +/- 1.5 dBm	- 61 dBm

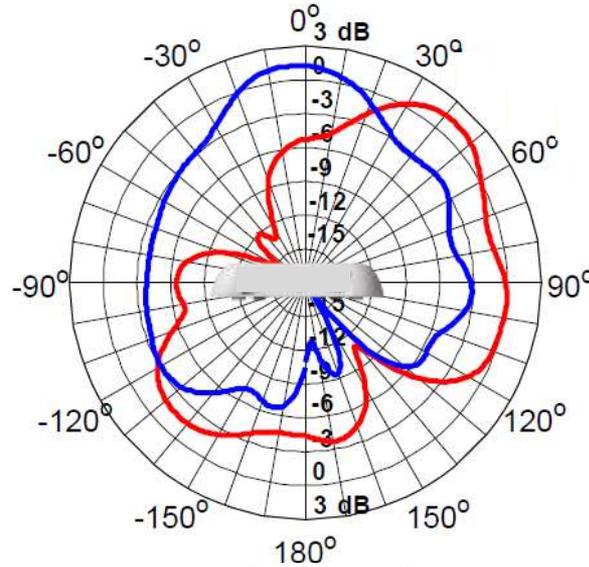


WAP 150 Radiation Patterns at 2.4 GHz band

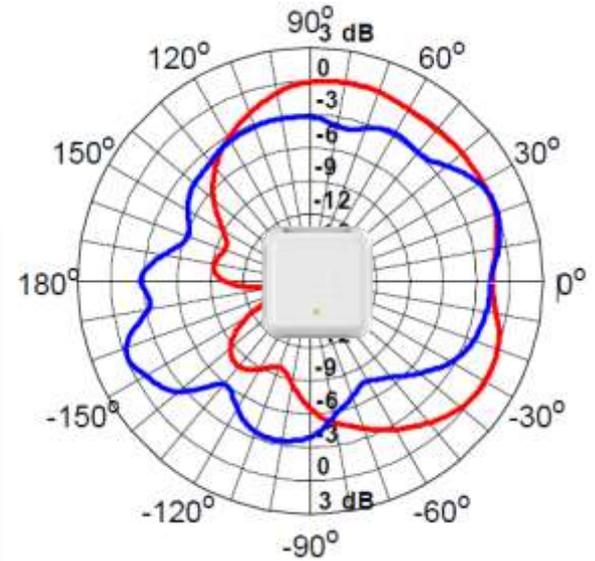
Elevation - 0° (XZ plane)



Elevation - 90° (YZ plane)

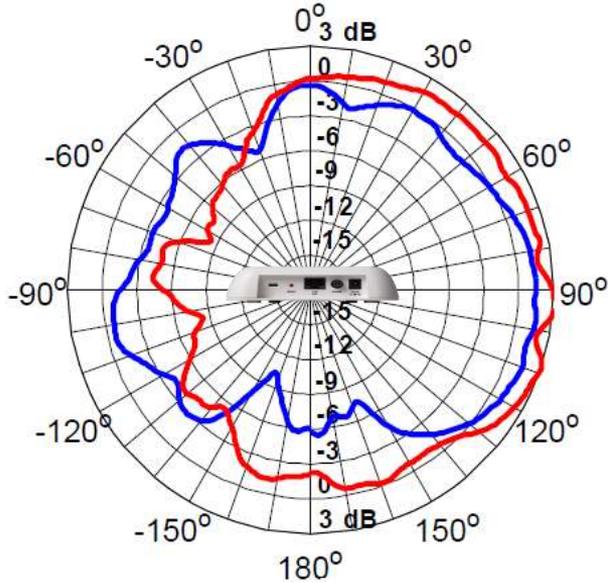


Azimuth (XY plane)

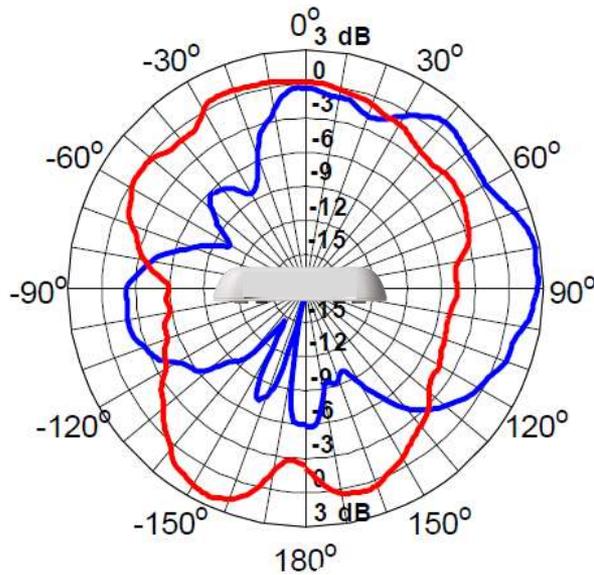


WAP 150 Radiation Patterns at 5 GHz band

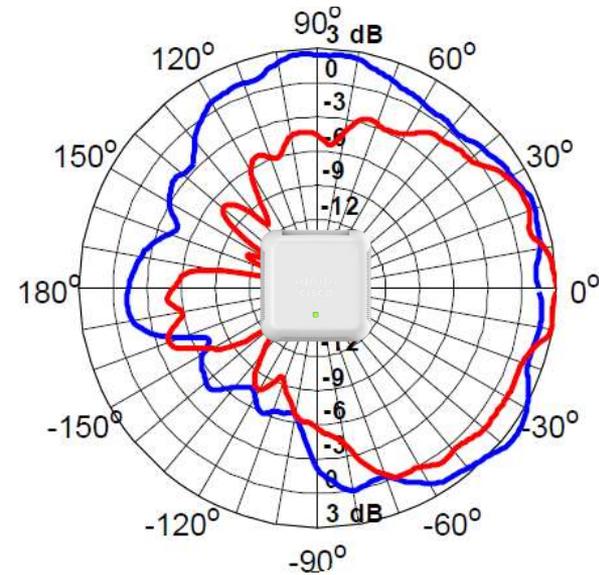
Elevation - 0° (XZ plane)



Elevation - 90° (YZ plane)



Azimuth (XY plane)



WiFi antenna configuration offers excellent 3D coverage

WAP100 series Technical Specifications

Hardware Specification	WAP131
Antennas	2 internal PIFA antennas with vertical orientation optimized for desktop installation
Antenna gain in dBi	3.4 dBi @2.4GHz and 4.5dBi@5GHz
Frequency	Dual concurrent radios (2.4 and 5 GHz)
Radio and modulation type	Dual radio, orthogonal frequency division multiplexing (OFDM)
WLAN	802.11a/b/g/n 2x2 Multiple-Input Multiple-Output (MIMO) with 2 spatial streams 20 and 40 MHz channels for 802.11n 20 and 40 MHz for 802.11n PHY data rate up to 600Mbps
System Memory	128MB RAM, 128 MB Flash
Power Options	IEEE 802.3af Ethernet switch Cisco Power Injector: SB-PWR-INJ2-xx AC adapter included, 12V/1.5A
Ports	1 x GE LAN with support for 802.3af /at PoE, power port for AC adapter (included)

WAP100 Series Detailed Features

Specification	WAP131
VLAN support	1 management VLAN + 8 VLANs for SSIDs
SSID-to-VLAN mapping	Yes
Auto-channel selection	Yes
IPv6	IPv6 host support, IPv6 RADIUS, syslog, NTP, ISATP
802.1x supplicant	Yes
QoS	client QoS, WMM
Performance	
Wireless throughput	Up to 300 Mbps
Recommended user support	Up to 32 connective users, 16 active users per radio
Security Features	
WPA, WPA2	Yes
Access Control	management ACL plus IPv4/IPv6/MAC ACL
Secure Management	HTTPS
SSID broadcast	Yes
Rouge access point detection	No
Cisco Umbrella integration	No
Management	
Web UI	Yes
FindIT Network Management	Limited to Discovery, Monitoring and Reporting
Management protocols	SNMPv1/v2c/v3, Bonjour
Multiple AP Management	No



WAP100 Series Detailed Features

Management	WAP131
Number of access points per cluster	N/A
Active clients per cluster	N/A
Network Diagnostics	Packet Capture
Event logging	Local, remote, e-mail alert
Captive portal Social Login	No Social Login Captive Portal
Captive portal login with ADDS	No ADDS login Captive Portal
Mobile optimized setup wizard	No
DHCP	DHCP IPv4/IPv6 client
HTTP redirect	No
Wireless	
Wireless SSID to VLAN mapping	Yes
Wi-Fi Scheduler	Yes
Wireless Isolation between clients	Yes
WDS	Yes, with WorkGroup Bridge mode
Fast Roaming	No
Multiple SSIDs	8
WMM	Yes, with unscheduled automatic power save
Operating Modes	AP mode, WDS bridging, Workgroup Bridge mode
Standards	802.11a, 802.11n, 802.11g, 802.11b, 802.3af, 802.3u, 802.1X, 802.1Q (VLAN), 802.1D, 802.11i, 802.11e, RFC 791, RFC 2460



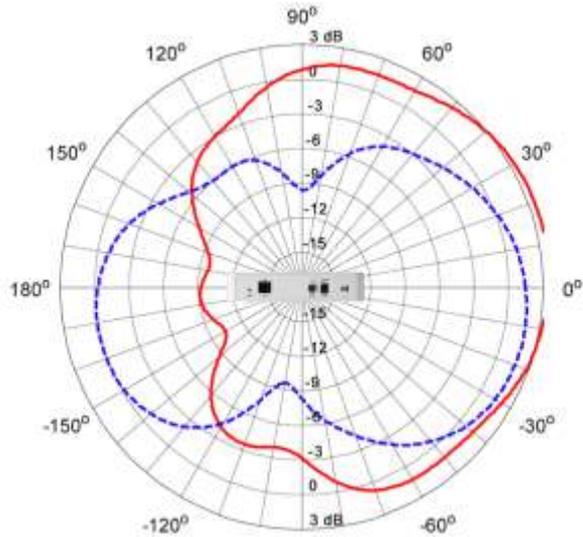
WAP131 RF Performance Table

Band, rate	Maximum transition power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
2.4Ghz, 802.11b		
1/11 Mbps	18.0 +/- 1.5 dBm/ 18.0 +/- 1.5 dBm	- 93 dBm/-90dBm
2.4GHz, 802.11g		
6/54 Mbps	18.0 +/- 1.5 dBm/ 16.0 +/- 1.5 dBm	-94 dBm/ -75 dBm
2.4Ghz, 802.11n (HT20)		
MCS0/8	18.0 +/- 1.5 dBm	-92 dBm
MCS7/15	15.0 +/- 1.5 dBm	-73 dBm
2.4Ghz, 802.11n (HT40)		
MCS0/8/MCS7/15	16.0 +/- 1.5 dBm/14.0 +/- 1.5 dBm	-89 dBm/ -70 dBm
5GHz, 802.11a		
6/54 Mbps	18.0 +/- 1.5 dBm/ 14.0 +/- 1.5 dBm	-91 dBm/-71 dBm

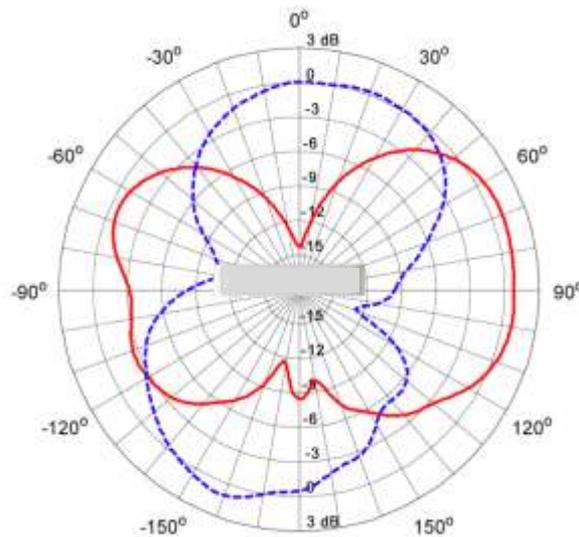


WAP 131 Radiation Patterns at 2.4 GHz band

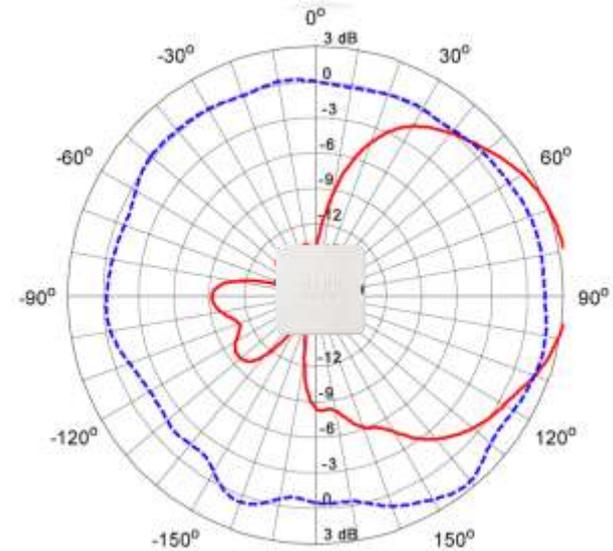
Elevation - 0° (XZ plane)



Elevation - 90° (YZ plane)

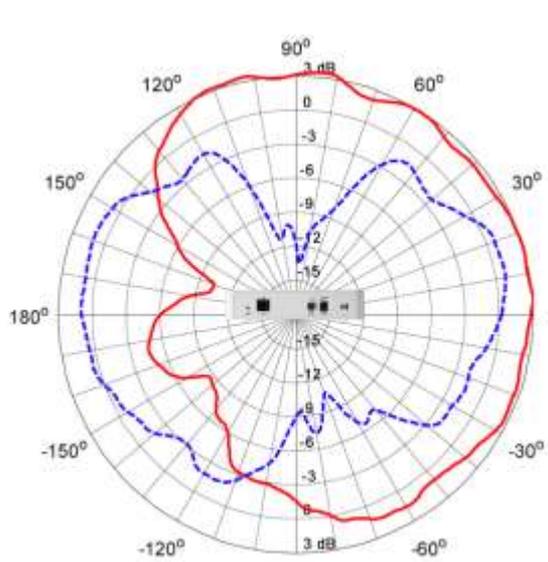


Azimuth (XY plane)

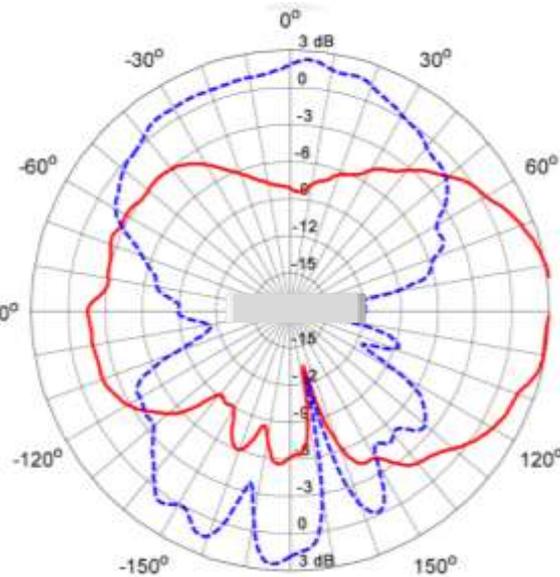


WAP 131 Radiation Patterns at 5 GHz band

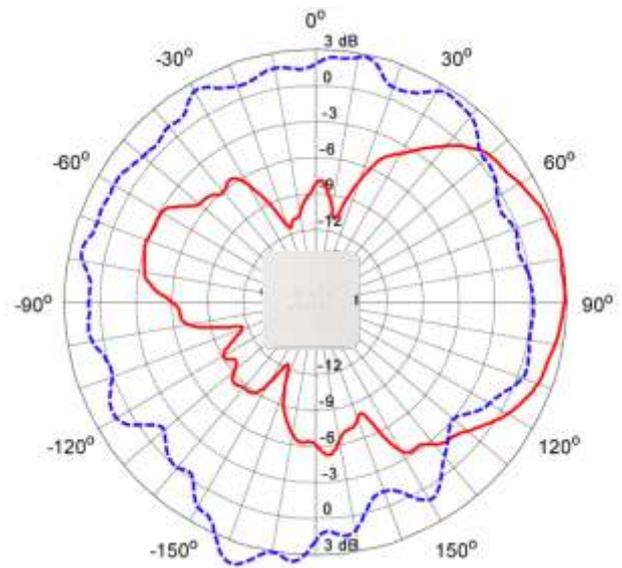
Elevation - 0° (XZ plane)



Elevation - 90° (YZ plane)



Azimuth (XY plane)





Positioning

Cisco SMB WAP Positioning

	Small Business WAPs	Meraki Cloud Managed	Cisco Enterprise Class Access points
Target Market	SMB / Sub 500	SMB, Medium Branch, Large Branch, Concentrator	SMB, Mid-market and Enterprise
TCO	Lower CapEx	Low OpEx (overall network life)	Lower OpEx (overall network life)
Integration	Seamlessly integrates with other SBTG solutions	Seamless blending of hardware, software and cloud technologies	Complex per technology integration solutions
Support	Cisco Small Business TAC	Cisco Meraki Support	Cisco TAC
Key Features	<ul style="list-style-type: none"> ✓ Deliver business-class, high-capacity wireless LAN and guest access services that are highly secure and reliable, without a controller. ✓ Easy to deploy and use, these access points offer 802.11ac Wave1, Wave2, and 802.11n wireless connectivity for indoor and outdoor environments. ✓ Get exceptional performance and coverage for mobile devices and bandwidth-heavy applications. ✓ Integrates with FindIT Network Manager for additional management 	<ul style="list-style-type: none"> ✓ High Capacity- Built from highest grade components and optimized for seamless user experience. ✓ Built for performance- 802.11ac enterprise class AP's w/ high power radios and enhanced sensitivity ✓ Dedicated Radio Security- A dedicated security radio that continuously scans against security threats, sense RF environment and adapts to interference & configures RF settings to maximize performance. ✓ Unmatched Visibility with Meraki Dashboard- Visibility into network users, device and their applications and manage all from a Single pane of Glass 	<ul style="list-style-type: none"> ✓ High-performance, nonstop connectivity, high availability ✓ Seamless wireless ✓ Secure – allows for simplified segmentation ✓ Flexible- flexible deployment via on premise or cloud, manageable via DNA Center or programmable APIs ✓ Optimal User experience- Delivers personalized experiences to users & troubleshoot faster with contextual insights

Cisco SMB WAP Positioning

	Small Business WAPs	Meraki Cloud Managed	Cisco Enterprise Class Access points
Software	Non-Cisco IOS Software	Cisco Meraki Software for IOS/macOS/Android Windows and Mac Devices	Cisco IOS Software
Orderability / Refresh Cycles	3-5 years orderability 1-2 years product refresh Support: 5 yrs. after EOS	5-7 years orderability 3-5 years product refresh Support: 7 yrs. following the EOS	5-7 years orderability 3-5 years product refresh Support: 5 yrs. after EOS
Services	Cisco SMARTnet Total Care	Cisco Meraki Enterprise support	Cisco SMARTnet® Total Care/Cisco Partner Support Service
Scalability	Home Office / Small Office / Branch Office	Small Office, Mid and Large Branch Office, Large Enterprise,	Small Office to Large Enterprise, Branch Office
Management	<ul style="list-style-type: none"> ✓ Optimized for deployment and management of small and mid-sized networks ✓ WebUI, SNMP, Cisco Prime (Limited Support), FindIT Network Management platform 	<ul style="list-style-type: none"> ✓ Centralized Device Management with provision, monitor, secure and remote troubleshooting features ✓ Cloud Management with Out-of-band Control Plane including security, routing, switching, voice and mobile devices 	<ul style="list-style-type: none"> ✓ Command Line, Multiple enterprise-level management options: APIC-EM, CNA, Cisco Prime Infrastructure, Cisco Configuration Engine, Cisco WAAS Central Manager ✓ Supported by Cisco and third-party management tools, with programmability and automation.