

## DATA SHEET

# ARUBA 205H ACCESS POINT

High-performance dual-radio 802.11ac access points for hospitality and branch deployments

The multifunctional and affordable AP-205H access point (AP) combines high-performance wireless mobility with wired Gigabit Ethernet access in a surprisingly compact device.

This compact and cost-effective dual-radio AP easily mounts to a standard data wall-box and uses the existing structured cabling system to provide secure wired and wireless network access in dormitories, classrooms, hotels, medical clinics and multitenant environments.

In addition, using a unique mount kit accessory, the AP-205H can easily be converted to a desk mounted AP to provide the same benefits for branch offices and teleworkers.

Capable of delivering high-performance Wi-Fi services to multiple rooms, the 205H simplifies RF coverage planning and reduces WLAN deployment costs. The AP-205H is built to provide years of trouble-free operation and is backed by Aruba's limited lifetime warranty.

The 205H delivers wireless data rates of up to 867 Mbps to 5-GHz devices with 802.11ac technology leveraging two spatial MIMO streams while simultaneously supporting 2.4-GHz 802.11n clients with data rates of up to 400 Mbps.

The integrated antennas of the 205H are optimized for the deployments with the AP mounted vertically on either a wall or desk. The antenna patterns are slightly directional, focusing RF energy to and from the area facing the front of the AP.

Three local Gigabit Ethernet ports are available to securely attach wired devices to your network. One of these ports is also capable of supplying PoE power to the attached device.

The 205H itself receives power from either an AC-to-DC adapter accessory or from the switch it attaches to, using PoE via the uplink Gigabit Ethernet port.



## UNIQUE BENEFITS

### Two devices in one

The 205H ships with everything you need to deploy it as a wall-mounted hospitality AP, attaching directly to a standard single gang data wall-box. In addition, using an optional accessory stand, the 205H can easily be converted to a desk mounted remote AP.



### Advanced Cellular Coexistence (ACC)

Aruba's Advanced Cellular Coexistence (ACC) feature enables WLANs to perform at peak efficiency by minimizing interference from 3G/4G LTE networks, distributed antenna systems and commercial small cell/femtocell equipment.

### Wi-Fi client optimization

To eliminate sticky client behavior while users roam, Aruba APs feature patented ClientMatch technology, which continuously gathers session performance metrics from mobile devices.

If a mobile device moves away from an AP or if RF interference impedes performance, ClientMatch automatically steers the device to a better AP.

### Quality of service for unified communication apps

Aruba APs support priority handling and policy enforcement for unified communication apps, including Microsoft Lync with encrypted videoconferencing, voice, chat and desktop sharing.

### Choose your operating mode

Aruba offers a choice of AP operating modes to meet your unique management and deployment requirements:

- **Controller-managed mode.** When managed by Aruba Mobility Controllers, Aruba APs offer centralized configuration, data encryption, policy enforcement and network services, as well as distributed and centralized traffic forwarding. Please refer to the Aruba Mobility Controller data sheets for more details.
- **Aruba Instant mode.** In Aruba Instant mode, a single AP automatically distributes the network configuration to other Instant APs in the WLAN. Simply power-up on Instant AP, configure it over the air, and plug in the other APs – the entire process takes about five minutes. If WLAN requirements change, a built-in migration path allows instant APs to become part of a WLAN that is managed by a Mobility Controller.

### Simplify deployment with Aruba Activate

For large installations across multiple sites, the Aruba Activate service significantly reduces deployment time by automating device provisioning, firmware upgrades, and inventory management.

With Aruba Activate, Instant APs are factory-shipped to any site and configure themselves when powered up.

### ARUBA 205H SPECIFICATIONS

- AP-205H (controller-managed) and IAP-205H (Aruba Instant): Dual radio 2x2:2 802.11ac APs for hospitality and branch offices with integrated antennas, three local Gigabit Ethernet ports, PoE out, USB host interface. Supports wall-box and desk mount deployments.

### ADVANCED FEATURES

- RF Management
  - Adaptive Radio Management (ARM) technology automatically assigns channel and power settings, provides airtime fairness and ensures that APs stay clear of all sources of RF interference to deliver reliable, high-performance WLANs.
  - The 205H can be configured to provide part-time or dedicated air monitoring for spectrum analysis and wireless intrusion protection, VPN tunnels to extend remote locations to corporate resources, and wireless mesh connections where Ethernet drops are not available.
- Spectrum analysis
  - Capable of part-time or dedicated air monitoring, the spectrum analyzer remotely scans the 2.4-GHz and 5-GHz radio bands to identify sources of RF interference
- Security
  - Integrated wireless intrusion protection offers threat protection and mitigation, and eliminates the need for separate RF sensors and security appliances.
  - IP reputation and security services identify, classify, and block malicious files, URL and IPs, providing comprehensive protection against advanced online threats.
  - Integrated Trusted Platform Module (TPM) for secure storage of credentials and keys
  - SecureJack-capable for secure tunneling of wired Ethernet traffic

### OPERATING MODES

- Mobility Controller-managed AP
- Aruba Instant AP
- Remote AP (RAP) for branch deployments
- Air monitor (AM) for wireless IDS, rogue detection and containment
- Spectrum analyzer, dedicated or hybrid
- Secure enterprise mesh

## WIRELESS RADIO SPECIFICATIONS

- AP type: Indoor, dual radio, 5-GHz 802.11ac and 2.4-GHz 802.11n 2x2:2
- Software-configurable dual radio supports 5 GHz (Radio 0) and 2.4 GHz (Radio 1)
- 2x2 MIMO with two spatial streams and up to 867 Mbps (80-MHz channel) or 400 Mbps (40-MHz channel) wireless data rate
- Support for up to 255 associated client devices per radio, and up to 16 BSSIDs per radio
- Supported frequency bands (country-specific restrictions apply):
  - 2.4000GHz to 2.4835 GHz
  - 5.150 to 5.250 GHz
  - 5.250 to 5.350 GHz
  - 5.470 to 5.725 GHz
  - 5.725 to 5.850 GHz
- Available channels: Dependent on configured regulatory domain
- Dynamic frequency selection (DFS) optimizes the use of available RF spectrum
- Supported radio technologies:
  - 802.11b: Direct-sequence spread-spectrum (DSSS)
  - 802.11a/g/n/ac: Orthogonal frequency-division multiplexing (OFDM)
- Supported modulation types:
  - 802.11b: BPSK, QPSK, CCK
  - 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
- Transmit power: Configurable in increments of 0.5 dBm
- Maximum transmit power (antenna gain not included):
  - 5-GHz band: +21 dBm (18 dBm per chain)
  - 2.4-GHz band: +21 dBm (18 dBm per chain)
  - Power may be restricted to comply with local regulatory rules
- Advanced Cellular Coexistence (ACC) minimizes interference from cellular networks
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay/shift diversity (CDD/CSD) for improved downlink RF performance
- Short guard interval for 20-MHz, 40-MHz and 80-MHz channels
- Space-time block coding (STBC) for increased range and improved reception
- Low-density parity check (LDPC) for high-efficiency error correction and increased throughput

- Transmit beam-forming (TxBF) for increased reliability in signal delivery
- Supported data rates (Mbps):
  - 802.11b: 1, 2, 5.5, 11
  - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
  - 802.11n: 6.5 to 300 (MCS0 to MCS15)
  - 802.11ac: 6.5 to 867 (MCS0 to MCS9, NSS = 1 to 2)
- 802.11n high-throughput (HT) support: HT 20/40
- 802.11ac very high throughput (VHT) support: VHT 20/40/80
- 802.11n/ac packet aggregation: A-MPDU, A-MSDU

## ENCRYPTED THROUGHPUT

- Max IPsec encrypted wired throughput = 40Mbps

## ANTENNAS

- Four integrated semi-directional antennas for 2x2 MIMO with maximum antenna gain of 4.5 dBi in 2.4 GHz and 5.0 dBi in 5 GHz. Built-in antennas are optimized for vertical orientation of the AP.

## OTHER INTERFACES

- Uplink: 10/100/1000BASE-T Ethernet (RJ-45, back)
  - Auto-sensing link speed and MDI/MDX
  - 802.3az Energy Efficient Ethernet (EEE)
  - PoE-PD (input): 48 Vdc (nominal) 802.3af/at PoE
- Local: Three 10/100/1000BASE-T Ethernet (RJ-45, bottom)
  - Auto-sensing link speed and MDI/MDX
  - 802.3az Energy Efficient Ethernet (EEE)
  - One port: PoE-PSE (output): 48 Vdc (nominal) 802.3af PoE
- Passive pass-through interface (two RJ-45, back and bottom)
- USB 2.0 host interface (Type A connector)
  - Aruba Beacon USB radio module
  - 3G/4G cellular modems
  - Device battery charging port
  - Capable of supplying up to 1A/5 watts of power to an attached device
- DC power interface, accepts 1.35/3.5-mm center-positive circular plug with 9.5-mm length
- Visual indicators (LEDs):
  - Power/system status
  - PoE-PSE status
- Reset/LED control button ("paperclip access")
  - Factory reset (when activated during device power up)
  - LED control: toggle off/normal
- Serial console interface (custom, four-pin header)
- Kensington security slot

## POWER

- Direct DC source: 48 Vdc nominal, +/- 5%
- Power over Ethernet (PoE): 48 Vdc (nominal) 802.3af/at compliant source
- Power sources sold separately. Recommended Aruba part numbers:
  - DC: AP-AC-48V36 (48V/36 watts)
  - PoE: PD-9001GR-AC (802.3at)
- When both power sources are connected and active, DC power takes priority
- Power modes:
  - DC: unrestricted mode (USB: 5 watts max, PoE-PSE: 15.4 watts max)
  - 802.3at PoE: reduced mode (USB disabled when PoE-PSE enabled, PoE-PSE reduced power budget: 10 watts max)
  - 802.3af PoE: restricted (USB and PoE-PSE disabled)
- Maximum (worst-case) power consumption:
  - DC: 12 watts max, plus 16.5 watts max for PoE-PSE and 5.5 watts max for USB
  - 802.3at PoE: 13 watts max, plus 11.5 watts max for PoE-PSE or 6 watts max for USB
  - 802.3af PoE: 13 watts max
- Maximum (worst-case) power consumption in idle mode (excluding PoE-PSE, USB): 7.5 watts

## MOUNTING

- Included with AP: Mount plate to attach AP to single gang wall-box (most international variations covered), security screw
- Optional mounting kits:
  - AP-205H-MNT2: Mount plate and insert for use with dual gang box (most North America variations covered)
  - AP-205H-MNTR: Aruba 205H Access Point desk mount conversion kit – includes desk mount and RJ45 jumper

## MECHANICAL

- Dimensions/weight (with supplied single-gang wall box mount plate, as mounted):
  - 86 mm (W) x 40 mm (D) x 150 mm (H),  
3.38" (W) x 1.57" (D) x 5.90" (H)
  - 375 g/13.22 oz
- Dimensions/weight (shipping):
  - 115 mm (W) x 63 mm (D) x 167 (H),  
4.52" (W) x 2.4" (D) x 6.57" (H)
  - 500 g/17.63 oz

## ENVIRONMENTAL

- Operating:
  - Temperature: 0° C to +40° C (+32° F to +104° F)
  - Humidity: 5% to 95% non-condensing
- Storage and transportation:
  - Temperature: -40° C to +70° C (-40° F to +158° F)

## REGULATORY

- FCC/Industry of Canada
- CE Marked
- R&TTE Directive 1999/5/EC
- Low-Voltage Directive 2006/95/EC
- EN 300 328
- EN 301 489
- EN 301 893
- UL/IEC/EN 60950
- EN 60601-1-1 and EN 60601-1-2

For more country-specific regulatory information and approvals, please see your Aruba representative.

## RELIABILITY

- MTBF: 709,492 hours (81 years) at +25° C operating temperature

## REGULATORY MODEL NUMBER

- AP-205H and IAP-205H: APINH205

## CERTIFICATIONS

- CB Scheme Safety, cTUVus
- Wi-Fi Alliance (WFA) certified 802.11a/b/g/n/ac

## WARRANTY

- [Aruba limited lifetime warranty](#)

## MINIMUM SOFTWARE VERSIONS

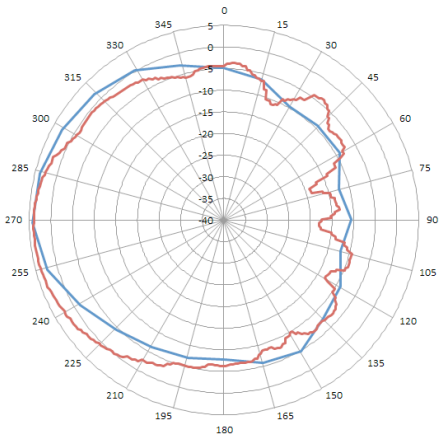
- ArubaOS 6.4.3.0
- Aruba InstantOS 4.2.0.0

RF PERFORMANCE TABLE		
	Maximum transmit power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
<b>2.4 GHz</b>		
<b>802.11b</b>		
1 Mbps	18.0	-97.0
11 Mbps	18.0	-89.0
<b>802.11g</b>		
6 Mbps	18.0	-93.0
54 Mbps	15.5	-75.0
<b>802.11n HT20</b>		
MCS0/8	18.0	-92.0
MCS7/15	14.0	-71.0
<b>802.11n HT40</b>		
MCS0/8	18.0	-89.0
MCS7/15	14.0	-68.0
<b>802.11ac VHT20</b>		
MCS0	18.0	-92.0
MCS8	12.5	-68.0
<b>802.11ac VHT40</b>		
MCS0	18.0	-89.0
MCS9	12.0	-63.0
<b>5 GHz</b>		
<b>802.11a</b>		
6 Mbps	16.0	-95.0
54 Mbps	15.0	-77.0
<b>802.11n HT20</b>		
MCS0/8	16.0	-94.0
MCS7/15	14.5	-71.0
<b>802.11n HT40</b>		
MCS0/8	16.0	-90.0
MCS7/15	14.5	-68.0
<b>802.11ac VHT20</b>		
MCS0	16.0	-94.0
MCS8	14.0	-69.0
<b>802.11ac VHT40</b>		
MCS0	16.0	-89.0
MCS9	14.0	-63.0
<b>802.11ac VHT80</b>		
MCS0	16.0	-86.0
MCS9	14.0	-60.0

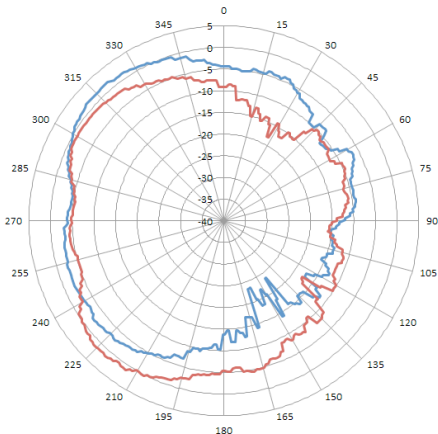
Numbers above exclude antenna gain. Table shows maximum capability of the radios. Transmit power may be restricted in software to comply with local regulatory rules.

ANTENNA PATTERN PLOTS

Horizontal or Azimuth plane (top view, AP front facing left)

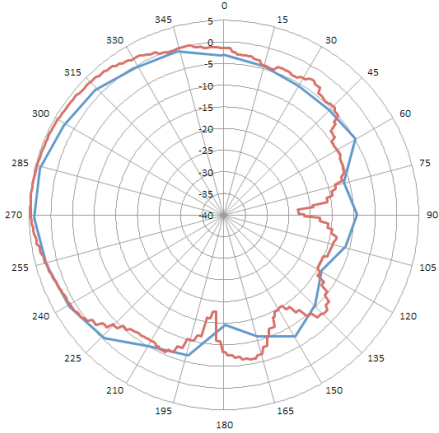


2.4 GHz

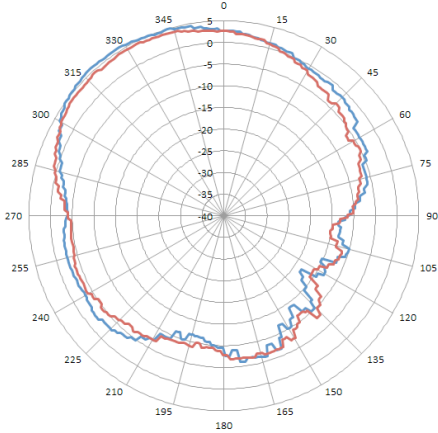


5 GHz

Elevation plane (side view, AP front facing left)

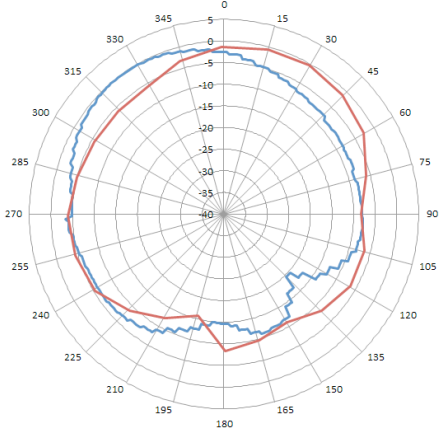


2.4 GHz

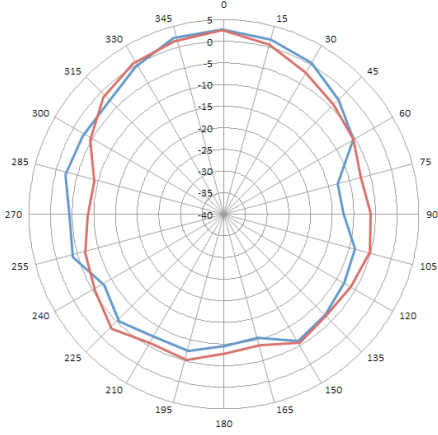


5 GHz

Elevation plane (front view)



2.4 GHz



5 GHz

## ORDERING INFORMATION

Part Number	Description
<b>AP-205H Access Points</b>	
AP-205H	Aruba AP-205H Wireless Access Point, 802.11n/ac, 2x2:2, dual radio, integrated antennas
AP-205H-F1	Aruba AP-205H Wireless Access Point, 802.11n/ac, 2x2:2, dual radio, integrated antennas – FIPS/TAA compliant
IAP-205H-RW	Aruba IAP-205H Wireless Access Point – Hospitality, 802.11 ac, 2x2:2, dual radio, integrated antennas – Restricted regulatory domain: Rest of world
IAP-205H-US	Aruba IAP-205H Wireless Access Point – Hospitality, 802.11 ac, 2x2:2, dual radio, integrated antennas – Restricted regulatory domain: United States
IAP-205H-JP	Aruba IAP-205H Wireless Access Point – Hospitality, 802.11 ac, 2x2:2, dual radio, integrated antennas – Restricted regulatory domain: Japan
IAP-205H-IL	Aruba IAP-205H Wireless Access Point – Hospitality, 802.11 ac, 2x2:2, dual radio, integrated antennas – Restricted regulatory domain: Israel
<b>Mounting Spares</b>	
AP-205H-MNT1	Aruba 205H Access Point Mount Kit (single) – Kit with spare single gang wall-box mount adapter for AP-205H
<b>Mounting Accessories</b>	
AP-205H-MNT2	Aruba 205H Access Point Mount Kit (dual) – Kit with optional dual gang wall-box mount adapter for AP-205H
AP-205H-MNTR	Aruba 205H Access Point desk mount conversion kit – includes desk mount and RJ45 jumper
<b>Generic Indoor AP Accessories</b>	
AP-AC-48V36C	48V/36W AC-to-DC Desktop Style Power Adapter with Type C DC plug (1.35/3.5/9.5mm circular, 90-degree angled).
AP-AC-48V36	48V/36W Indoor Access Point AC power adapter. Does not include country-specific power cord (order separately)
PD-3501G-AC	PoE midspan injector, 10/100/1000 802.3af (15.4 watts) Note: AP has reduced functionality when using 802.3af PoE (USB port and PSE capability disabled)
PD-9001GR-AC	30W 802.3at PoE midspan injector, 10/100/1000BASE-T Ethernet
AP-CBL-SER	Serial adapter cable for AP console port (proprietary header to DB9 female)