



## HP A-802.11a/b/g Access Point Series

Data sheet

### Product overview

The HP A-WA2110 Access Point is a single-radio wireless access point that is used indoors to provide radio coverage. It can work in both 2.4 GHz or 5 GHz frequency bands and supports IEEE 802.11a, IEEE 802.11b, and IEEE 802.11g. It has a simple and light design (weighing 250 g) with detachable antennas. Its power consumption is about 6 W, it complies with RoHS standards, and is IEEE 802.3af PoE compatible. The HP A-WA2220 Access Point is a dual-radio wireless AP that is used indoors to provide radio coverage. It can work in 2.4 GHz and 5 GHz frequency bands and supports IEEE 802.11a, IEEE 802.11b, and IEEE 802.11g. It also adopts a simple and light design with detachable antennas. Its power consumption is about 10 W, it complies with RoHS standards, and is IEEE 802.3af PoE compatible. Both access points integrate functions such as hardware encryption, zero configuration, auto channel allocation, multi-BSSID, and IPv6 to implement network operability, robustness, and security.

### Key features

- Centralized access point management
- Automatic access point version upgrades
- IPv4/IPv6 dual stack
- EAD wireless client access
- Intelligent load balancing



## Features and benefits

### Management

- **Centralized access point management:** if the A-WA2110 or A-WA2220 access point is used with an AC, most of management and data frames will be processed by the AC, which controls all Fit APs by using the CAPWAP so that the status of all devices can be clearly known; compared to a traditional Fat AP, a Fit AP and an AC greatly help system administrators manage the whole network
- **Automatic access point version upgrades:** the A-WA2110 and A-WA2220 access points can automatically communicate with the AC in a network, as well as download the latest software versions to the AP; such operations do not require manual intervention, and therefore reduce network maintenance; this feature is especially important to large-sized networks

### Connectivity

- **Auto Channel Select (ACS):** helps reduce radio co-channel interference by automatically selecting an unoccupied radio channel

### Performance

- **Dual stack:** IPv4 and IPv6 support future-proofs the wireless network against obsolescence
- **Local forwarding:** provides efficient data transmission and prevents the controller from being a performance bottleneck
- **Intelligent load balancing:** effectively balances users between APs, increasing the capacity of the radio network
- **QoS and Multimedia:** IEEE 802.11e Wi-Fi Multimedia (WMM) wireless QoS standard—when combined with wired QoS policies—provides end-to-end QoS, delivering different wireless channel competitiveness for different services
- **10/100 Ethernet interface:** provides a connection to the network that eliminates the network as a bottleneck

### Security

- **Secure access control by user:** media access control (MAC)-based and IEEE 802.1X network access control centralize wireless security through existing Remote Authentication Dial-In User Service (RADIUS) servers to protect the network from unauthorized user access
- **Secure user isolation:** virtual AP services enable the network administrator to provide specific services for different user groups, improving bandwidth and system resources and simplifying network maintenance and management
- **Secure access by location:** location AP-based user access control helps ensure that wireless users can access and authenticate only to preselected APs, enabling system administrators to control the locations where a wireless user can access the network
- **Endpoint Admission Defense (EAD):** integrated wired and wireless EAD helps ensure that only wireless clients who comply with mandated enterprise security policies access the network, reducing threat levels by infected wireless clients and improving the overall security of the wireless network
- **WPA2:** the latest, toughest standards-based security—with Wi-Fi Protected Access 2 (WPA2), Advanced Encryption Standard (AES) encryption, Temporal Key Integrity Protocol (TKIP), and Wired Equivalency Protocol (WEP) for legacy clients—protects the network from unauthorized user access

### Ease of use

- **Ease of deployment:** management via the wireless controller eliminates the need to manage each AP individually
- **Power over Ethernet:** power via standards-based PoE source eliminates the need to run costly power outlets at the access point

### Technical features

- **Radio flexibility:** single and dual radio access points allow customers to deploy what fits their needs
- **Interoperability:** Wi-Fi Alliance certification prevents multivendor interoperability problems
- **High user capacity:** supports up to 64 wireless users per radio and is interoperable with all A series wireless controllers, enabling robust networking and flexible deployment options

- **Virtual Access Point (VAP):** VAP services enable network administrators to provide specific services for different user groups, improving bandwidth and system resources; each radio supports up to 16 VAPs
- **Wireless user isolation:** features enforce wireless user login policies to maintain secure, system-wide authentication
- **IEEE 802.11 a/b/g standards compliance:** compatibility with the IEEE 802.11 a/b/g standard provides interoperability

## Warranty and support

- **1-year warranty:** with advance replacement and 30-calendar-day delivery (available in most countries)
- **Electronic and telephone support:** limited electronic and telephone support is available from HP; refer to [www.hp.com/networking/warranty](http://www.hp.com/networking/warranty) for details on the support provided and the period during which support is available
- **Software releases:** refer to [www.hp.com/networking/warranty](http://www.hp.com/networking/warranty) for details on the software releases provided and the period during which software releases are available for your product(s)

# HP A-802.11a/b/g Access Point Series

## Specifications



**HP A-WA2110-AG Single Radio 802.11a/b/g FIT Access Point (WW) (JD446B)**



**HP A-WA2220-AG Dual Radio 802.11a/b/g FIT Access Point (WW) (JD451A)**

<b>Ports</b>	1 RJ-45 autosensing 10/100 PoE port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3af PoE); Duplex: half or full  1 RJ-45 serial console (only for debugging) port	1 RJ-45 autosensing 10/100 PoE port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3af PoE); Duplex: half or full  1 RJ-45 serial console (only for debugging) port
<b>AP characteristics</b>		
Radios	Single (a/b/g)	Dual (a/b/g)
AP operation modes	Controlled	Controlled
Wi-Fi Alliance Certification	a/b/g Wi-Fi Certified	a/b/g Wi-Fi Certified
<b>Physical characteristics</b>		
Dimensions	3.46(d) x 6.89(w) x 1.69(h) in. (8.8 x 17.5 x 4.3 cm)	4.65(d) x 6.54(w) x 1.57(h) in. (11.8 x 16.6 x 4.0 cm)
Weight	0.55 lb. (0.25 kg)	1.1 lb. (0.5 kg), Fully loaded
Enclosure	Indoor	Indoor
<b>Memory and processor</b>		
Processor	Atheros @ 180 MHz, 32 MB SDRAM, 4 MB flash	AMCC @ 266 MHz, 64 MB SDRAM, 8 MB flash
<b>Performance</b>		
MAC address table size	255 entries	255 entries
<b>Environment</b>		
Operating temperature	14°F to 131°F (-10°C to 55°C)	14°F to 131°F (-10°C to 55°C)
Operating relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing
Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing
<b>Electrical characteristics</b>		
Maximum heat dissipation	20 BTU/hr (21.1 kJ/hr)	34 BTU/hr (35.87 kJ/hr)
Maximum power rating	6 W	10 W
Power Inputs	Support IEEE 802.3af	Support IEEE 802.3af
Antenna connector	2 RP-SMA	2 RP-SMA
Antenna	2 dBi @ 2.4 GHz and 3 dBi @ 5 GHz omnidirectional	2 dBi @ 2.4 GHz and 3 dBi @ 5 GHz omnidirectional
Number of external antennas	2	2
<b>Frequency band and operating channels</b>		
FCC	2.412 - 2.472 GHz (1-11 channels) 5.180 - 5.240 GHz (36 - 48 channels) 5.745 - 5.825 GHz (149 - 165 channels)	2.412 - 2.472 GHz (1 - 11 channels) 5.180 - 5.240 GHz (36 - 48 channels) 5.745 - 5.825 GHz (149 - 165 channels)
EN	2.412 - 2.472 GHz (1 - 13 channels) 5.180 - 5.240 GHz (36 - 48 channels)	2.412 - 2.472 GHz (1 - 13 channels) 5.180 - 5.240 GHz (36 - 48 channels)
<b>Radio</b>	FCC Part 15.247; EN 300 328; EN 301 893 (EU) no DFS; RSS-210, Issue 7; RSS-Gen, Issue 2; FCC Part 15.407 (no DFS)	FCC Part 15.247; EN 300 328; EN 301 893 (EU) no DFS; RSS-210, Issue 7; RSS-Gen, Issue 2; FCC Part 15.407 (no DFS)
<b>Safety</b>	UL 60950-1; EN 60950-1; IEC 60950-1:2001 (with CB Report); CAN/CSA-C22.2 No. 60950-1	UL 60950-1; EN 60950-1; IEC 60950-1:2001 (with CB Report); CAN/CSA-C22.2 No. 60950-1
<b>Emissions</b>	ANSI C63.4; EN 55022; FCC Part 15	ANSI C63.4; EN 55022; FCC Part 15
<b>Immunity</b>		
EN	EN 301 489-1; EN 301 489-17	EN 301 489-1; EN 301 489-17
<b>Medical</b>	EN60601-1-2	EN60601-1-2
<b>RF Exposure</b>	FCC Bulletin OET-65C; RSS-102	FCC Bulletin OET-65C; RSS-102; EN 50385
<b>Management</b>	The 802.11a/b/g FIT APs can be managed by A series access controllers.	The 802.11a/b/g FIT APs can be managed by A series access controllers.
<b>Notes</b>	Maximum transmit power varies by country.	Maximum transmit power varies by country.

# HP A-802.11a/b/g Access Point Series

## Specifications (continued)

### HP A-WA2110-AG Single Radio 802.11a/b/g FIT Access Point (WW) (JD446B)

### HP A-WA2220-AG Dual Radio 802.11a/b/g FIT Access Point (WW) (JD451A)

#### Services

3-year, parts only, global next-day advance exchange (UW931E)  
 3-year, 4-hour onsite, 13x5 coverage for hardware (UW932E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware (UW935E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UW938E)  
 3-year, 24x7 SW phone support, software updates (UW941E)  
 4-year, 4-hour onsite, 13x5 coverage for hardware (UW933E)  
 4-year, 4-hour onsite, 24x7 coverage for hardware (UW936E)  
 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW939E)  
 4-year, 24x7 SW phone support, software updates (UW942E)  
 5-year, 4-hour onsite, 13x5 coverage for hardware (UW934E)  
 5-year, 4-hour onsite, 24x7 coverage for hardware (UW937E)  
 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW940E)  
 5-year, 24x7 SW phone support, software updates (UW943E)  
 3 Yr 6 hr Call-to-Repair Onsite (UW944E)  
 4 Yr 6 hr Call-to-Repair Onsite (UW945E)  
 5 Yr 6 hr Call-to-Repair Onsite (UW946E)

Refer to the HP website at [www.hp.com/networking/services](http://www.hp.com/networking/services) for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

3-year, parts only, global next-day advance exchange (UW931E)  
 3-year, 4-hour onsite, 13x5 coverage for hardware (UW932E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware (UW935E)  
 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UW938E)  
 3-year, 24x7 SW phone support, software updates (UW941E)  
 4-year, 4-hour onsite, 13x5 coverage for hardware (UW933E)  
 4-year, 4-hour onsite, 24x7 coverage for hardware (UW936E)  
 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW939E)  
 4-year, 24x7 SW phone support, software updates (UW942E)  
 5-year, 4-hour onsite, 13x5 coverage for hardware (UW934E)  
 5-year, 4-hour onsite, 24x7 coverage for hardware (UW937E)  
 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UW940E)  
 5-year, 24x7 SW phone support, software updates (UW943E)  
 3 Yr 6 hr Call-to-Repair Onsite (UW944E)  
 4 Yr 6 hr Call-to-Repair Onsite (UW945E)  
 5 Yr 6 hr Call-to-Repair Onsite (UW946E)

Refer to the HP website at [www.hp.com/networking/services](http://www.hp.com/networking/services) for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

#### Radio characteristics:

##### IEEE 802.11b/g (A-WA2110)

Modulation: DSSS:DBPSK (1 Mbps)/DQPSK (2 Mbps)/CCK (5.5 Mbps, 11 Mbps); OFDM:BPSK (6 Mbps, 9 Mbps)/QPSK (12 Mbps, 18 Mbps)/16-QAM (24 Mbps, 36 Mbps)/64-QAM (48 Mbps, 54 Mbps)

Data rate	11b-1 Mbps	11b-11 Mbps	11g-6 Mbps	11g-54 Mbps
Receiver sensitivity	-95 dBm	-88 dBm	-90 dBm	-74 dBm
Transmit power	20 dBm	20 dBm	20 dBm	17 dBm

##### IEEE 802.11a (A-WA2110)

Modulation: OFDM:BPSK (6 Mbps, 9 Mbps)/QPSK (12 Mbps, 18 Mbps)/16-QAM (24 Mbps, 36 Mbps)/64-QAM (48 Mbps, 54 Mbps)

Data rate	6 Mbps	54 Mbps
Receiver sensitivity	-88 dBm	-72 dBm
Transmit power	18 dBm	14 dBm

##### IEEE 802.11b/g (A-WA2220)

Modulation: DSSS:DBPSK (1 Mbps)/DQPSK (2 Mbps)/CCK (5.5 Mbps, 11 Mbps); OFDM:BPSK (6 Mbps, 9 Mbps)/QPSK (12 Mbps, 18 Mbps)/16-QAM (24 Mbps, 36 Mbps)/64-QAM (48 Mbps, 54 Mbps)

Data rate	11b-1 Mbps	11b-11 Mbps	11g-6 Mbps	11g-54 Mbps
Receiver sensitivity	-95 dBm	-88 dBm	-90 dBm	-74 dBm
Transmit power	20 dBm	20 dBm	20 dBm	16 dBm

##### IEEE 802.11a (A-WA2220)

Modulation: OFDM:BPSK (6 Mbps, 9 Mbps)/QPSK (12 Mbps, 18 Mbps)/16-QAM (24 Mbps, 36 Mbps)/64-QAM (48 Mbps, 54 Mbps)

Data rate	6 Mbps	54 Mbps
Receiver sensitivity	-88 dBm	-72 dBm
Transmit power	18 dBm	13 dBm

#### Standards and protocols

(applies to all products in series)

#### Mobility

IEEE 802.11a High Speed Physical Layer in the 5 GHz Band  
 IEEE 802.11b Higher-Speed Physical Layer Extension in the 2.4 GHz Band  
 IEEE 802.11d Global Harmonization

IEEE 802.11g Further Higher Data Rate Extension in the 2.4 GHz Band  
 IEEE 802.11i Medium Access Control (MAC) Security Enhancements



HP access points and access devices are Wi-Fi Certified, providing our customers with the assurance that these products have met and passed the rigorous interoperability testing performed by the Wi-Fi Alliance Organization. See the Specifications section of this series for more information.

To learn more, visit [www.hp.com/networking](http://www.hp.com/networking)

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4AA3-0791ENW, Created August 2010; Updated February 2011, Rev. 1

