

## Overview

## HP M110 Access Point Series (Retired)

## Models

HP M110 Access Point (US)	J9385B
HP M110 Access Point (WW)	J9388B

## Key features

- Entry-level access point
- Single radio
- IEEE 802.11a/b/g
- Autonomous mode
- Two external antennas

## Product overview

HP M110 Access Point is an entry-level, single IEEE 802.11a/b/g radio device that can be configured to operate as an access point, a wireless distribution system (WDS) bridge, or a full-spectrum IEEE 802.11 wireless LAN (WLAN) monitor. The M110 Access Point supports up to two Virtual Service Communities, each with independent VLAN and wireless security profiles. It is plenum-rated and powered by an IEEE 802.3af(PoE)source. The M110 access point is Wi-Fi Certified for WPA2, WPA, and WEP security and has hardware-assisted AES and RC4 encryption.

## Features and benefits

## Quality of Service (QoS)

- **IEEE 802.1p prioritization:** delivers data to devices based on the priority and type of traffic
- **Diagnostic:**
  - Client event log records association, authentication, and DHCP events
  - Packet capture tool for Ethernet and IEEE 802.11 interfaces (PCAP format)
  - Data rate matrix
- **RF management:**
  - Automatically selects channel on power-up and continuously improves channel selection based on background interference scan
  - Configurable background rogue scanning
  - Automatically adjusts transmit power to reduce interference
- **Network management:** SNMP v2c, SNMP v3, MIB-II with Traps, and RADIUS Authentication Client MIB (RFC 2618) Embedded HTML management tool with secure access (SSL and VPN) Scheduled configuration and firmware upgrades from central server

## Connectivity

- **Auto-MDIX:** automatically adjusts for straight-through or crossover cables on all 10/100 ports
- **IEEE 802.3af Power over Ethernet (PoE) support:** simplifies deployment and dramatically reduces installation costs by helping to eliminate the time and cost involved in supplying local power at each access point location

## Mobility

- **Interoperability:** Wi-Fi Alliance certifications, including IEEE 802.11g Wi-Fi and WPA2 to help ensure multivendor interoperability
- **Virtual Service Communities (VSCs):**
  - Up to 2 SSIDs, each with a unique MAC address, and configurable SSID broadcasts
  - Individual security profiles per VSC

## Overview

- Configurable DTIM and minimum data rate per VSC
- Each VSC mapped to separate IEEE 802.1Q VLANs
- WMM and/or WMM-PS
- Security filter
- IP filter
- **AP client access control functions:**
  - IEEE 802.1X authentication using EAP-SIM, EAP-FAST, EAP-TLS, EAP-TTLS, and PEAP
  - MAC address authentication using local or RADIUS access lists
  - RADIUS AAA using EAP-MD5, PAP, CHAP, and MS-CHAPv2
  - RADIUS Client (RFC 2865 and 2866) with location-aware support
  - Layer 2 wireless client isolation
- **Enhanced Security:**
  - Configurable Ethernet MAC and protocol filters
  - WPA2, WPA, and WEP
  - IEEE 802.1X PEAP WLAN authentication
  - Hardware-assisted AES and RC4 encryption
- **Location flexibility:**
  - 100 mW radio and antenna diversity provide excellent range
  - Configurable IEEE 802.11 a/b/g radio with external antenna connectors
  - Plenum rated
  - Centrally manageable

## Security

- **Choice of IEEE 802.11i, Wi-Fi Protected Access 2 (WPA2), or WPA:** locks out unauthorized wireless access by authenticating users prior to granting network access; robust Advanced Encryption Standard (AES) or Temporal Key Integrity Protocol (TKIP) encryption secures the data integrity of wireless traffic
- **Local wireless bridge client traffic filtering:** when enabled, prevents communication between wireless devices associated with the same access point
- **IEEE 802.1X:** provides port-based user authentication with support for Extensible Authentication Protocol (EAP) MD5, TLS, TTLS, and PEAP with choice of AES, TKIP, and static or dynamic WEP encryption for protecting wireless traffic between authenticated clients and the access point

## Warranty and support

- **Lifetime warranty:** for as long as you own the product with advance replacement and next-business-day delivery (available in most countries)\*
- **Electronic and telephone support:** limited electronic and telephone support is available from HP; refer to: <http://www.hp.com/networking/warranty> for details on the support provided and the period during which support is available
- **Software releases:** refer to: <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)

\* Hardware warranty replacement for as long as you own the product, with next business day advance replacement (available in most countries) with a five-year hardware warranty replacement for the disk drive included with HP AllianceONE Services zL Module, HP Threat Management Services zL Module, HP PCM+ Agent with AllianceONE Services zL Module, and HP E-MSM765 zL Mobility Controller. For details, refer to the HP Software License, Warranty, and Support booklet at: <http://www.hp.com/networking/warranty>.

## Configuration

**HP M110 Access Point Series accessories**

<b>Power Supply</b>	HP MSM31x/MSM32x Power Supply	J9405B <a href="#">See Configuration Note:1</a>
	HP 1-port Power Injector	J9407B <a href="#">See Configuration Note:1</a>
<b>Configuration Rules:</b>		
<b>Note 1</b>	<a href="#">Localization required. (See Localization Menu)</a>	
<b>External Antenna</b>	HP 5 dBi Indoor/Outdoor Omnidirectional Antenna	J8441A
	HP 8 dBi Outdoor Omnidirectional Antenna	J8444A
	HP 3 dBi Dual Band Diversity Antenna	J8997A
	HP 7 dBi Dual Band Directional Antenna	J8999A
<b>Wireless Antenna</b>	HP Dual Band Indoor Short Omnidirectional Antenna	J9401A

**Accessory Product Details**

**NOTE:** Details are not available for all accessories. The following specifications were available at the time of publication.

## Technical Specifications

**HP M110 Access Point (US)** (J9385B)**HP M110 Access Point (WW)** (J9388B)

<b>Ports</b>	1 RJ-45 autosensing 10/100 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full	
<b>AP characteristics</b>	<b>Radios</b>	Single (a/b/g)
	<b>Radio operation modes</b>	Client access
	<b>AP operation modes</b>	Autonomous
	<b>Wi-Fi Alliance Certification</b>	a/b/g Wi-Fi Certified
<b>Physical characteristics</b>	<b>Dimensions</b>	5(d) x 5.5(w) x 1.3(h) in. (12.7 x 13.97 x 3.3 cm)
	<b>Weight</b>	2.0 lb. (0.91 kg)
	<b>Enclosure</b>	Indoor, plenum rated
<b>Environment</b>	<b>Operating temperature</b>	32°F to 122°F (0°C to 50°C)
	<b>Operating relative humidity</b>	5% to 95%, noncondensing
	<b>Nonoperating/Storage temperature</b>	-40°F to 176°F (-40°C to 80°C)
	<b>Nonoperating/Storage relative humidity</b>	5% to 95%, noncondensing
	<b>Shock and vibration</b>	EN61373
<b>Electrical characteristics</b>	<b>Description</b>	IEEE 802.3af PoE compliant or 5 VDC from available AC power supply
	<b>Maximum power rating</b>	5 W
	<b>Antenna connector</b>	(2) RP-SMA with diversity
	<b>Antenna</b>	(2) 2 dBi dual-band 2.4/5 GHz
	<b>Number of external antennas</b>	2
<b>Frequency band and operating channels</b>	<b>FCC</b>	2.412 - 2.462 GHz (1-11 channels)
		5.180 - 5.240 GHz (36-48 channels)
		5.745 - 5.825 GHz (149-165 channels)
	<b>EN</b>	2.412 - 2.472 GHz (1-13 channels) 5.180 - 5.240 GHz (36-48 channels)
<b>Radio</b>	FCC Part 15.247; FCC Part 15.407 (US)	
<b>Safety</b>	UL 2043; UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1	
<b>RF Exposure</b>	FCC Bulletin OET-65C; RSS-102; EN 50385	
<b>Emissions</b>	EN 55022 Class B; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B	
<b>Notes</b>	Maximum transmit power varies by country.	
<b>Services</b>	3-year, 4-hour onsite, 13x5 coverage for hardware (UN691E)	
	3-year, 4-hour onsite, 24x7 coverage for hardware (UN692E)	
	3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 SW phone support and SW updates (UN694E)	
	3-year, 24x7 SW phone support, software updates (UN693E)	
	1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR919E)	
	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR920E)	
	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR921E)	
	4-year, 4-hour onsite, 13x5 coverage for hardware (US029E)	
4-year, 4-hour onsite, 24x7 coverage for hardware (US030E)		
4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (US031E)		
4-year, 24x7 SW phone support, software updates (US032E)		

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5-year, 4-hour onsite, 13x5 coverage for hardware (US033E)  
 5-year, 4-hour onsite, 24x7 coverage for hardware (US034E)  
 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (US035E)  
 5-year, 24x7 SW phone support, software updates (US036E)  
 3 Yr 6 hr Call-to-Repair Onsite (UW422E)  
 4 Yr 6 hr Call-to-Repair Onsite (UW423E)  
 5 Yr 6 hr Call-to-Repair Onsite (UW424E)  
 1-year, 6 hour Call-To-Repair Onsite for hardware (HR923E)  
 1-year, 24x7 software phone support, software updates (HR922E)  
 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HU323E)  
 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HU324E)  
 3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HU325E)  
 3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HU326E)  
 4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HU327E)  
 4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HU328E)  
 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HU329E)  
 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HU330E)

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 802.11a**

Data rate	6 Mbps	54 Mbps
Receiver sensitivity	-90 dBm	-72 dBm
Transmit power	20 dBm	16 dBm

**Radio characteristics: IEEE 802.11b**

Data rate	1 Mbps	11 Mbps
Receiver sensitivity	-90 dBm	-90 dBm
Transmit power	20 dBm	20 dBm

**Radio characteristics: IEEE 802.11g**

Data rate	6 Mbps	54 Mbps
Receiver sensitivity	-92 dBm	-72 dBm
Transmit power	20 dBm	16 dBm

**Standards and protocols** **Mobility**

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

## Accessories

<b>HP M110 Access Point Series accessories</b>	<b>Power Supply</b>	
	HP MSM31x/MSM32x Power Supply	J9405B
	HP 1-port Power Injector	J9407B
	<b>External Antenna</b>	
	HP 5 dBi Indoor/Outdoor Omnidirectional Antenna	J8441A
	HP 8 dBi Outdoor Omnidirectional Antenna	J8444A
	HP 3 dBi Dual Band Diversity Antenna	J8997A
	HP 7 dBi Dual Band Directional Antenna	J8999A
	<b>Wireless Antenna</b>	
	HP Dual Band Indoor Short Omnidirectional Antenna	J9401A

## Accessory Product Details

**NOTE:** Details are not available for all accessories. The following specifications were available at the time of publication.

<b>HP MSM31x/MSM32x Power Supply (J9405A)</b>	<b>Physical characteristics</b>	<b>Dimensions</b>	3.35(d) x 1.97(w) x 1.27(h) in. (8.5 x 5 x 3.22 cm)
		<b>Weight</b>	0.88 lb. (0.4 kg)
	<b>Environment</b>	<b>Operating temperature</b>	32°F to 104°F (0°C to 40°C)
		<b>Operating relative humidity</b>	5% to 95%, noncondensing
		<b>Nonoperating/Storage temperature</b>	-4°F to 176°F (-20°C to 80°C)
		<b>Nonoperating/Storage relative humidity</b>	5% to 95%, noncondensing
	<b>Electrical characteristics</b>	<b>Voltage</b>	100-240 VAC
		<b>Current</b>	0.5/0.3 A
		<b>Frequency</b>	50/60 Hz
		<b>Notes</b>	Output voltage: 5 VDC
<b>Services</b>	Refer to the HP website at: <a href="http://www.hp.com/networking/services">http://www.hp.com/networking/services</a> 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.		
<b>HP 1-port Power Injector (J9407A)</b>	<b>Physical characteristics</b>	<b>Dimensions</b>	5.71(d) x 2.36(w) x 1.22(h) in. (14.5 x 6 x 3.1 cm)
		<b>Weight</b>	1 lb. (0.45 kg)
	<b>Environment</b>	<b>Operating temperature</b>	32°F to 104°F (0°C to 40°C)
		<b>Operating relative humidity</b>	5% to 93%, noncondensing
		<b>Nonoperating/Storage temperature</b>	-4°F to 158°F (-20°C to 70°C)
		<b>Nonoperating/Storage relative humidity</b>	5% to 95%, noncondensing
	<b>Electrical characteristics</b>	<b>Altitude</b>	up to 10,000 ft. (3 km)
		<b>Voltage</b>	100-240 VAC
		<b>Current</b>	0.3/0.2 A
		<b>Frequency</b>	50/60 Hz
	<b>Safety</b>	<b>Notes</b> IEEE 802.3af compliant	
	<b>Emissions</b>	UL 60950; EN 60950	
	<b>Notes</b>	EN 55024; EN 55022 (CISPR 22) Class B with FTP Cabling; FCC Part 15, Class B with FTP cabling	
<b>Services</b>	The 1-port power converter has 1 AC power cord input, 1 RJ-45 10/100/1000 Mbps port for data coming from the network infrastructure, and 1 RJ-45 for data plus IEEE 802.3af-compliant PoE for Gigabit Ethernet to power the access point.		
	Refer to the HP website at: <a href="http://www.hp.com/networking/services">http://www.hp.com/networking/services</a> 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.		

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### Accessory Product Details

<b>HP 5 dBi Indoor/Outdoor Omnidirectional Antenna (J8441A)</b>	<b>Electrical characteristics</b>	<b>Frequency range 1</b>	2400 - 2500	
		<b>Gain 1 dBi</b> (with antenna cable)	4.4	
		<b>VSWR max</b>	1.7:1	
		<b>E-Plane</b> (3 dB beamwidth)	31 degrees	
		<b>H-Plane</b> (3 dB beamwidth)	Omnidirectional	
		<b>Polarization</b>	Linear (vertical)	
		<b>Impedance</b> (Ohms)	50	
		<b>RF connector</b>	Reverse SMA (male)	
		<b>Cable length</b>	2.75 ft. (0.84 m)	
		<b>Physical characteristics</b>	<b>Dimensions</b>	11.5(h) in. (29.21 cm)
			<b>Wind surface area</b>	0.08 sq. ft. (0.01 sq. m)
			<b>Wind survival</b>	125.1 mph (201.13 km/hr)
			<b>Weight</b>	0.30 lb. (0.14 kg)
<b>Mounting style</b>	Ceiling T-bar, I-beam, or mast			
<b>Environment</b>	<b>Enclosure</b>	Polycarbonate		
	<b>Operating temperature</b>	-22°F to 131°F (-30°C to 55°C)		
	<b>Nonoperating/Storage temperature</b>	-40°F to 149°F (-40°C to 65°C)		
<b>Services</b>	Refer to the HP website at: <a href="http://www.hp.com/networking/services">http://www.hp.com/networking/services</a> 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.			

<b>HP 8 dBi Outdoor Omnidirectional Antenna (J8444A)</b>	<b>Electrical characteristics</b>	<b>Frequency range 1</b>	2400 - 2500	
		<b>Gain 1 dBi</b> (with antenna cable)	8	
		<b>VSWR max</b>	1.5:1	
		<b>E-Plane</b> (3 dB beamwidth)	13 degrees	
		<b>H-Plane</b> (3 dB beamwidth)	Omnidirectional	
		<b>Polarization</b>	Linear (vertical)	
		<b>Impedance</b> (Ohms)	50	
		<b>RF connector</b>	N (male)	
		<b>Cable length</b>	2.75 ft. (0.84 m)	
		<b>Physical characteristics</b>	<b>Dimensions</b>	25.25(h) in. (64.14 cm)
			<b>Wind surface area</b>	0.11 sq. ft. (0.01 sq. m)
			<b>Wind survival</b>	125 mph (201.13 km/hr)
			<b>Weight</b>	0.5 lb. (0.23 kg)
<b>Mounting style</b>	Mast			
<b>Environment</b>	<b>Enclosure</b>	Polycarbonate		
	<b>Operating temperature</b>	-22°F to 131°F (-30°C to 55°C)		
	<b>Nonoperating/Storage temperature</b>	-40°F to 149°F (-40°C to 65°C)		
<b>Services</b>	Refer to the HP website at: <a href="http://www.hp.com/networking/services">www.hp.com/networking/services</a> 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.			



## Accessory Product Details

<b>HP 3 dBi Dual Band Diversity Antenna</b> (J8997A)	<b>Electrical characteristics</b>	<b>Frequency range 1</b>	2400 - 2500	
		<b>Gain 1 dBi</b> (with antenna cable)	3	
		<b>Frequency range 2</b>	4900 - 5990	
		<b>Gain 2 dBi</b> (with antenna cable)	4	
		<b>VSWR max</b>	2.0:1	
		<b>E-Plane</b> (3 dB beamwidth)	60 degrees	
		<b>E-plane radiation plots</b>	2.45 GHz, E Plane	
		<b>H-Plane</b> (3 dB beamwidth)	Omnidirectional	
		<b>H-plane radiation plots</b>	2.45 GHz, H Plane	
		<b>Impedance</b> (Ohms)	50	
		<b>Grounding</b>	DC	
		<b>RF connector</b>	Reverse SMA (male)	
		<b>Cable length</b>	2.75 ft. (0.84 m)	
		<b>Physical characteristics</b>	<b>Dimensions</b>	6.16(d) x 3.66(w) x 0.89(h) in. (15.65 x 9.3 x 2.26 cm)
			<b>Weight</b>	0.5 lb. (0.23 kg)
			<b>Mounting style</b>	Ceiling grid
		<b>Environment</b>	<b>Enclosure</b>	PVC/Acrylic
<b>Operating temperature</b>	-22°F to 131°F (-30°C to 55°C)			
<b>Services</b>	<b>Nonoperating/Storage temperature</b>	-40°F to 149°F (-40°C to 65°C)		
	Refer to the HP website at: <a href="http://www.hp.com/networking/services">http://www.hp.com/networking/services</a> 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.			

<b>HP 7 dBi Dual Band Directional Antenna</b> (J8999A)	<b>Electrical characteristics</b>	<b>Frequency range 1</b>	2400 - 2500	
		<b>Gain 1 dBi</b> (with antenna cable)	6.9	
		<b>Frequency range 2</b>	4900 - 5990	
		<b>Gain 2 dBi</b> (with antenna cable)	7.7	
		<b>VSWR max</b>	2.0:1	
		<b>E-Plane</b> (3 dB beamwidth)	66 degrees	
		<b>E-plane radiation plots</b>	E Plane 2.45 GHz	
		<b>H-Plane</b> (3 dB beamwidth)	68 degrees	
		<b>H-plane radiation plots</b>	H Plane 2.45 GHz	
		<b>Polarization</b>	Linear (vertical)	
		<b>Impedance</b> (Ohms)	50	
		<b>RF connector</b>	Reverse SMA (male)	
		<b>Cable length</b>	2.75 ft. (0.84 m)	
		<b>Physical characteristics</b>	<b>Dimensions</b>	5.16(d) x 5.16(w) x 1.37(h) in. (13.11 x 13.11 x 3.48 cm)
			<b>Wind surface area</b>	0.12 sq. ft. (0.01 sq. m)

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	<b>Wind survival</b>	120 mph (193.08 km/hr)
	<b>Weight</b>	0.5 lb. (0.23 kg)
	<b>Mounting style</b>	Flush wall mount, articulating wall, or mast
	<b>Enclosure</b>	PVC/Acrylic
	<b>Front-to-back ratio (dB)</b>	10
<b>Environment</b>	<b>Operating temperature</b>	-22°F to 131°F (-30°C to 55°C)
	<b>Nonoperating/Storage temperature</b>	-40°F to 149°F (-40°C to 65°C)
<b>Services</b>	Refer to the HP website at: <a href="http://www.hp.com/networking/services">http://www.hp.com/networking/services</a> 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.	

<b>HP Dual Band Indoor Short Omnidirectional Antenna (J9401A)</b>	<b>Physical characteristics</b>	<b>Dimensions</b>	3.78(h) in. (9.59 cm)
		<b>Base diameter</b>	0.37 in. (0.93 cm)
	<b>Notes</b>	2.1 dBi (2.45 GHz), 2.4 dBi (4.9 GHz), 2.6 dBi (5.25 GHz), 3.4 dBi (5.875 GHz) Polarization: vertical, omnidirectional VSWR 2:1 max. across all bands	
	<b>Electrical characteristics</b>	Connector	RP-SMA
	<b>Services</b>	Refer to the HP website at: <a href="http://www.hp.com/networking/services">http://www.hp.com/networking/services</a> 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.	

# QuickSpecs

## Summary of Changes

<b>Date</b>	<b>Version History</b>	<b>Action</b>	<b>Description of Change</b>
24-Jul-2015	From Version 3 to 4	Changed	This QuickSpecs was retired; no further updates will be made.
20-Dec-2013	From Version 2 to 3	Added	Configuration was added.
04-Nov-2011	From Version 1 to 2	Added	Accessory Product Details was added.

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

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