

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

Power Supply	HP MSM31x/MSM32x Power Supply	J9405B
		See Configuration Note:1
	HP 1-port Power Injector	J9407B
		See Configuration Note:1
Configuration Rules:		
Note 1	Localization required. (See Localization Menu)	
External Antenna	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
Wireless Antenna	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)

Ports	1 RJ-45 autosensing 10/100 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full	
AP characteristics	Radios	Single (a/b/g)
	Radio operation modes	Client access
	AP operation modes	Autonomous
	Wi-Fi Alliance Certification	a/b/g Wi-Fi Certified
Physical characteristics	Dimensions	5(d) x 5.5(w) x 1.3(h) in. (12.7 x 13.97 x 3.3 cm)
	Weight	2.0 lb. (0.91 kg)
	Enclosure	Indoor, plenum rated
Environment	Operating temperature	32°F to 122°F (0°C to 50°C)
	Operating relative humidity	5% to 95%, noncondensing
	Nonoperating/Storage temperature	-40°F to 176°F (-40°C to 80°C)
	Nonoperating/Storage relative humidity	5% to 95%, noncondensing
Electrical characteristics	Shock and vibration	EN61373
	Description	IEEE 802.3af PoE compliant or 5 VDC from available AC power supply
	Maximum power rating	5 W
	Antenna connector	(2) RP-SMA with diversity
	Antenna	(2) 2 dBi dual-band 2.4/5 GHz
	Number of external antennas	2
Frequency band and operating channels	FCC	2.412 - 2.462 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)
Radio	FCC Part 15.247; FCC Part 15.407 (US)	
Safety	UL 2043; UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1	
RF Exposure	FCC Bulletin OET-65C; RSS-102; EN 50385	
Emissions	EN 55022 Class B; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B	
Notes	Maximum transmit power varies by country.	
Services	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)	

Technical Specifications

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 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

HP M110 Access Point Series accessories	Power Supply	
	HP MSM31x/MSM32x Power Supply	J9405B
	HP 1-port Power Injector	J9407B
	External Antenna	
	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
	Wireless Antenna	
	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.

HP MSM31x/MSM32x Power Supply (J9405A)	Physical characteristics	Dimensions	3.35(d) x 1.97(w) x 1.27(h) in. (8.5 x 5 x 3.22 cm)
		Weight	0.88 lb. (0.4 kg)
	Environment	Operating temperature	32°F to 104°F (0°C to 40°C)
		Operating relative humidity	5% to 95%, noncondensing
		Nonoperating/Storage temperature	-4°F to 176°F (-20°C to 80°C)
		Nonoperating/Storage relative humidity	5% to 95%, noncondensing
	Electrical characteristics	Voltage	100-240 VAC
		Current	0.5/0.3 A
		Frequency	50/60 Hz
		Notes	Output voltage: 5 VDC
	Services	Refer to the HP website at: 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.	

HP 1-port Power Injector (J9407A)	Physical characteristics	Dimensions	5.71(d) x 2.36(w) x 1.22(h) in. (14.5 x 6 x 3.1 cm)
		Weight	1 lb. (0.45 kg)
	Environment	Operating temperature	32°F to 104°F (0°C to 40°C)
		Operating relative humidity	5% to 93%, noncondensing
		Nonoperating/Storage temperature	-4°F to 158°F (-20°C to 70°C)
		Nonoperating/Storage relative humidity	5% to 95%, noncondensing
	Electrical characteristics	Altitude	up to 10,000 ft. (3 km)
		Voltage	100-240 VAC
		Current	0.3/0.2 A
		Frequency	50/60 Hz
		Notes	IEEE 802.3af compliant
	Safety	UL 60950; EN 60950	
	Emissions	EN 55024; EN 55022 (CISPR 22) Class B with FTP Cabling; FCC Part 15, Class B with FTP cabling	
	Notes	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.	
	Services	Refer to the HP website at: 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.	

Accessory Product Details

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

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

Accessory Product Details

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

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

Accessory Product Details

	Environment	Wind survival	120 mph (193.08 km/hr)
		Weight	0.5 lb. (0.23 kg)
		Mounting style	Flush wall mount, articulating wall, or mast
		Enclosure	PVC/Acrylic
		Front-to-back ratio (dB)	10
		Operating temperature	-22°F to 131°F (-30°C to 55°C)
	Services	Nonoperating/Storage temperature	-40°F to 149°F (-40°C to 65°C)
		Refer to the HP website at: 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.	
HP Dual Band Indoor Short Omnidirectional Antenna (J9401A)	Physical characteristics	Dimensions	3.78(h) in. (9.59 cm)
		Base diameter	0.37 in. (0.93 cm)
	Notes	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	
	Electrical characteristics	VSWR 2:1 max. across all bands	
		Connector	RP-SMA
	Services	Refer to the HP website at: 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.	

Summary of Changes

Date	Version History	Action	Description of Change
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.

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