

### Overview

#### Models

HP MSM320 Access Point (US)	J9360B
HP MSM320 Access Point (WW)	J9364B
HP MSM320 Access Point (JP)	J9527B
HP MSM310 Access Point (US)	J9374B
HP MSM310 Access Point (WW)	J9379B
HP MSM310 Access Point (JP)	J9524B
HP MSM320-R Access Point (US)	J9365B
HP MSM320-R Access Point (WW)	J9368B
HP MSM320-R Access Point (JP)	J9528B
HP MSM310-R Access Point (US)	J9380B
HP MSM310-R Access Point (WW)	J9383B
HP MSM325 Access Point (US)	J9369B
HP MSM325 Access Point (WW)	J9373B
HP MSM335 Access Point (US)	J9356B
HP MSM335 Access Point (WW)	J9357B

#### Key features

- Single, dual and tri radio
- Intelligent traffic forwarding, Built-in security
- Self-healing, Advanced mesh capabilities
- Client Access
- Indoor and Outdoor enclosures

#### Product overview

HP offers intelligent single, dual and tri radio Access Points designed to provide reliable, easy-to-use wireless connectivity across the network. HP also offers integrated RF Security Sensors in some of their APs. All the HP MSM Access Points and integrated RF Security Sensors operating are managed by any of the HP MSM Controllers and the HP RF Manager for the RF Security Sensors. All the HP MSM Access Points can also work in autonomous mode. The HP MSM Access Points require a single Power over Ethernet (PoE) cable drop and are IEEE802.3af compliant or can be powered directly via a power adaptor. HP has a full range of both indoor and outdoor MSM Access Points.

#### Features and benefits

##### Quality of Service (QoS)

- **IEEE 802.1p prioritization:** delivers data to devices based on the priority and type of traffic
- **SpectraLink voice priority (SVP) support:** prioritizes SpectraLink voice IP packets sent from a SpectraLink NetLink SVP server to SpectraLink wireless voice handsets to help ensure excellent voice quality
- **Wireless:**
  - L2/L3/L4 classification: IEEE 802.1p VLAN priority, SpectraLink SVP and DiffServ
  - Wi-Fi MultiMedia (WMM), IEEE 802.11e EDCF, and Service-Aware priority assigned by VSC
  - Maximum VoIP call capacity: 12 active calls on IEEE 802.11a/b/g/n
- **Network management:**



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- Fully manageable using HP PCM 3.0 AU1 and HP Mobility Manager 3.0 AU2
- 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
- **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

### 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

- **Anytime wireless coverage:**
  - Single, dual, and tri-radio IEEE 802.11a/b/g access points
  - Per-radio software-selectable configuration of frequency bands
  - Self-healing, self-optimizing local mesh extends network availability
  - Wi-Fi Alliance certified for interoperability with all 802.11a/b/g client devices
  - IEEE 802.3af PoE or external power cord on selected models
- **Interoperability:** Wi-Fi Alliance certifications, including IEEE 802.11g Wi-Fi and WPA2 to help ensure multivendor interoperability
- **Virtual Service Communities (VSCs):**
  - Up to 16 SSIDs, each with unique MAC address, configurable SSID broadcasts
  - Individual security and QoS profiles per VSC
  - Configurable DTIM and minimum data rate per VSC
  - Each VSC can be 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
- **Auto Channel Select (ACS):** helps reduce radio co-channel interference by automatically selecting the radio channel with the least interference
- **E-MSM325 and E-MSM335 with HP RF sensor license Included:** ready, out of the box, to function as an RF monitor for the HP RF Manager IDS/IPS system

### Security

- **Choice of IEEE 802.11i, Wi-Fi Protected Access 2 (WPA2), or WPA:** locks out unauthorized wireless access by authenticating



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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 next-business-day advance replacement (available in most countries)
- **Electronic and telephone support:** limited electronic and telephone support is available from HP; refer to the HP Web site at: [www.hp.com/networking/support](http://www.hp.com/networking/support) for details on the support provided and the period during which support is available
- **Software releases:** refer to the HP Web site at: [www.hp.com/networking/support](http://www.hp.com/networking/support) for details on the software releases provided and the period during which software releases are available



### Technical Specifications

HP MSM320 Access Point (US) (J9360B)  
 HP MSM320 Access Point (WW) (J9364B)  
 HP MSM320 Access Point (JP) (J9527B)

Ports	2 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full	
AP characteristics	Radios	Dual (a/b/g)
	Radio operation modes	Client access, Local mesh, Packet capture, Optional RF security
	AP operation modes	Autonomous and controlled
	Wi-Fi Alliance Certification*	a/b/g Wi-Fi Certified
	* 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 preformed by the Wi-Fi Alliance Organization. See the Specifications section of this series for more information.	
Physical characteristics	Dimensions	6.52(d) x 6.4(w) x 1.88(h) in. (16.56 x 16.26 x 4.78 cm)
	Weight	1.5 lb. (0.68 kg)
	Enclosure	Indoor, plenum rated
Environment	Operating temperature	32°F to 113°F (0°C to 45°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	Description	IEEE 802.3af PoE compliant or 5 VDC from available AC power supply
	Maximum power rating	8.6 W
	Antenna Connector	(4) RP-SMA with diversity
	Antenna	(4) 2 dBi dual-band 2.4/5 GHz omnidirectional antennas
	Number of external antennas	4
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)
	RCR	2.412 - 2.472 GHz (1 - 13 channels) 5.170 - 5.230 GHz (34 - 46 channels)
Radio	FCC Part 15.247; FCC Part 15.407 (US); RSS-210 (Canada); EN 300 328; ARIB STD-T66; IDA Registration (Singapore); MIC approval (Korea); RCR STD-33; ARIB STD-T71 (Japan); EN 301 893 (EU)	
Safety	UL 2043; IEC 60950-1; EN 60950-1; CSA 22.2 No. 950-95; CAN/CSA-C22.2 No. 60950-1-03; EN 60601-1-2	
Emissions	EN 55022 Class B; EN 60601-1-2; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B	
RF Exposure	FCC Bulletin OET-65C; RSS-102	



### Technical Specifications

Features	Optional - Security sensor software upgrade for use with the HP RF Manager IDS/IPS system
Notes	Maximum transmit power varies by country.
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UN683E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UN684E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN686E) 3-year, 24x7 SW phone support, software updates (UN685E) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR939E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR940E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR941E) 4-year, 4-hour onsite, 13x5 coverage for hardware (US013E) 4-year, 4-hour onsite, 24x7 coverage for hardware (US014E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (US015E) 4-year, 24x7 SW phone support, software updates (US016E) 5-year, 4-hour onsite, 13x5 coverage for hardware (US017E) 5-year, 4-hour onsite, 24x7 coverage for hardware (US018E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (US019E) 5-year, 24x7 SW phone support, software updates (US020E) 3 Yr 6 hr Call-to-Repair Onsite (UW416E) 4 Yr 6 hr Call-to-Repair Onsite (UW417E) 5 Yr 6 hr Call-to-Repair Onsite (UW418E) 1-year, 6 hour Call-To-Repair Onsite for hardware (HR943E) 1-year, 24x7 software phone support, software updates (HR942E) 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS830E) 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HS831E) 3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS832E) 3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS832E) 3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS833E) 4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS834E) 4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS835E) 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HS836E) 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HS837E)

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.

HP MSM310 Access Point (US) (J9374B)  
HP MSM310 Access Point (WW) (J9379B)  
HP MSM310 Access Point (JP) (J9524B)

Ports	2 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duplex: half or full	
AP characteristics	Radios	Single (a/b/g)



### Technical Specifications

	<b>Radio operation modes</b>	Client access, Local mesh, Packet capture
	<b>AP operation modes</b>	Autonomous and controlled
	<b>Wi-Fi Alliance Certification*</b>	a/b/g Wi-Fi Certified
	* 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.	
<b>Physical characteristics</b>	<b>Dimensions</b>	6.52(d) x 6.4(w) x 1.88(h) in. (16.56 x 16.26 x 4.78 cm)
	<b>Weight</b>	1.41 lb. (0.64 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>Electrical characteristics</b>	<b>Description</b>	IEEE 802.3af PoE compliant or 5 VDC from available AC power supply
	<b>Maximum power rating</b>	6.5 W
	<b>Antenna Connector</b>	(2) RP-SMA with diversity
	<b>Antenna</b>	2) 2 dBi dual-band 2.4/5 GHz omnidirectional antennas
	<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>RCR</b>	2.412 - 2.472 GHz (1 - 13 channels) 5.170 - 5.230 GHz (34 - 46 channels)
<b>Radio</b>	FCC Part 15.247; FCC Part 15.407 (US); RSS-210 (Canada); EN 300 328; ARIB STD-T66; IDA Registration (Singapore); MIC approval (Korea); RCR STD-33; ARIB STD-T71 (Japan); EN 301 893 (EU)	
<b>Safety</b>	UL 2043; IEC 60950-1; EN 60950-1; EN 60601-1-2	
<b>Emissions</b>	EN 55022 Class B; EN 60601-1-2; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B	
<b>RF Exposure</b>	FCC Bulletin OET-65C; RSS-102; EN 50385	
<b>Notes</b>	Maximum transmit power varies by country.	
<b>Services</b>	3-year, 4-hour onsite, 13x5 coverage for hardware (UN687E)	
	3-year, 4-hour onsite, 24x7 coverage for hardware (UN688E)	
	3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN690E)	
	3-year, 24x7 SW phone support, software updates (UN689E)	
	1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR924E)	
	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR925E)	
	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR926E)	



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4-year, 4-hour onsite, 13x5 coverage for hardware (US021E)  
 4-year, 4-hour onsite, 24x7 coverage for hardware (US022E)  
 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (US023E)  
 4-year, 24x7 SW phone support, software updates (US024E)  
 5-year, 4-hour onsite, 13x5 coverage for hardware (US025E)  
 5-year, 4-hour onsite, 24x7 coverage for hardware (US026E)  
 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (US027E)  
 5-year, 24x7 SW phone support, software updates (US028E)  
 3 Yr 6 hr Call-to-Repair Onsite (UW419E)  
 4 Yr 6 hr Call-to-Repair Onsite (UW420E)  
 5 Yr 6 hr Call-to-Repair Onsite (UW421E)  
 1-year, 6 hour Call-To-Repair Onsite for hardware (HR928E)  
 1-year, 24x7 software phone support, software updates (HR927E)  
 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HV150E)  
 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HV151E)  
 3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HV152E)  
 3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HU318E)  
 4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HU319E)  
 4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HU320E)  
 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HU321E)  
 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HU322E)

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/b/g

	IEEE 802.11a	IEEE 802.11a	IEEE 802.11b	IEEE 802.11b	IEEE 802.11g	IEEE 802.11g
Data rate	6 Mbps	54 Mbps	1 Mbps	11 Mbps	6 Mbps	54 Mbps
Receiver sensitivity	-87 dBm	-67 dBm	-94 dBm	-87 dBm	-87 dBm	-70 dB
Transmit power	18 dBm	12 dBm	18.5 dBm	18.5 dBm	18 dBm	13 dBm

HP MSM320-R Access Point (US) (J9365B)

HP MSM320-R Access Point (WW) (J9368B)

HP MSM320-R Access Point (JP) (J9528B)

**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**

<b>Radios</b>	Dual (a/b/g)
<b>Radio operation modes</b>	Client access, Local mesh, Packet capture
<b>AP operation modes</b>	Autonomous and controlled
<b>Wi-Fi Alliance Certification*</b>	a/b/g Wi-Fi Certified

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### Technical Specifications

Physical characteristics	Dimensions	8.44(d) x 7.25(w) x 2.14(h) in. (21.44 x 18.42 x 5.44 cm)
	Weight	2.91 lb. (1.32 kg) mounting bracket
	Enclosure	Die cast aluminum with 3-point silicone rubber gasket; compliant with IP65 and EN61373
Mounting	Includes pole top U-bolts and wall mounting brackets	
Environment	Operating temperature	-4°F to 122°F (-20°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	Description	IEEE 802.3af PoE compliant
	Maximum power rating	8.6 W
	Antenna Connector	(2) Waterproof N-type female (one per radio)
	Antenna	(2) 5.5 dBi 2.4 GHz omnidirectional
	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)
	RCR	2.412 - 2.472 GHz (1 - 13 channels) 5.170 - 5.230 GHz (34 - 46 channels)
	Radio	FCC Part 15.247; FCC Part 15.407 (US); RSS-210 (Canada); EN 300 328; ARIB STD-T66; IDA Registration (Singapore); MIC approval (Korea); RCR STD-33; ARIB STD-T71 (Japan); EN 301 893 (EU)
	Safety	UL 60950-1; EN 60950-1
Emissions	EN 55022 Class B; EN 60601-1-2; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B	
RF Exposure	FCC Bulletin OET-65C; RSS-102; EN 50385	
Features	Optional	
	- Security sensor software upgrade for use with the HP RF Manager IDS/IPS system	
Notes	Maximum transmit power varies by country.	
Services	3-year, parts only, global next-day advance exchange (UN551E)	
	3-year, 4-hour onsite, 13x5 coverage for hardware (UN552E)	
	3-year, 4-hour onsite, 24x7 coverage for hardware (UN553E)	
	3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN554E)	
	3-Year, 9x5 SW phone support, software updates (UY959E)	
	3-year, 24x7 SW phone support, software updates (UY960E)	
	1-year, post-warranty, parts only, global next-day advance exchange (UN635PE)	
	1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (UN636PE)	
	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (UN637PE)	
	1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN638PE)	
	3 Yr 6 hr Call-to-Repair Onsite (UW330E)	





### Technical Specifications

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#### HP MSM310-R Access Point (US) (J9380B)

#### HP MSM310-R Access Point (WW) (J9383B)

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, Local mesh, Packet capture
	AP operation modes	Autonomous and controlled
	Wi-Fi Alliance Certification*	a/b/g Wi-Fi Certified
	* 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 preformed by the Wi-Fi Alliance Organization. See the Specifications section of this series for more information.	
Physical characteristics	Dimensions	8.44(d) x 7.25(w) x 2.14(h) in. (21.44 x 18.42 x 5.44 cm)
	Weight	2.54 lb. (1.15 kg) mounting bracket
	Enclosure	Die cast aluminum with 3-point silicone rubber gasket; compliant with IP65 and EN61373
Mounting	Outdoor Access Point, includes pole top U-bolts and wall mounting brackets	
Environment	Operating temperature	-4°F to 122°F (-20°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	Description	5% to 95%, noncondensing
	Maximum power rating	6.5 W
	Antenna Connector	(2) Waterproof N-type female with diversity
	Antenna	(2) 5.5 dBi 2.4 GHz omnidirectional
	Number of external antennas	2
Frequency band and Operating channels	FCC	2.412 - 2.462 GHz (1 - 11 channels) 5.745 - 5.825 GHz (149 - 165 channels)
	EN	2.412 - 2.472 GHz (1 - 13 channels)
	Radio	FCC Part 15.247; FCC Part 15.407 (US); RSS-210 (Canada); EN 300 328; ARIB STD-T66; IDA Registration (Singapore); MIC approval (Korea); RCR STD-33; ARIB STD-T71 (Japan); EN 301 893 (EU)
Safety	UL 60950-1	
Emissions	EN 55022 Class B; EN 60601-1-2; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B	
RF Exposure	FCC Bulletin OET-65C; RSS-102; EN 50385	
Features	Outdoor Access Point	



### Technical Specifications

Notes

Maximum transmit power varies by country.  
The HP ProCurve MSM310-R Access Point WW J9383A is no longer shipping into Japan

Services

3-year, parts only, global next-day advance exchange (UN647E)  
3-year, 4-hour onsite, 13x5 coverage for hardware (UN648E)  
3-year, 4-hour onsite, 24x7 coverage for hardware (UN649E)  
3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN650E)  
1-year, post-warranty, parts only, global next-day advance exchange (UN651PE)  
1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (UN652PE)  
1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (UN653PE)  
1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN654PE)  
3 Yr 6 hr Call-to-Repair Onsite (UW332E)

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.

HP MSM325 Access Point (US) (J9369B)  
HP MSM325 Access Point (WW) (J9373B)

Ports

2 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Duplex: half or full

AP characteristics

RadiosDual (a/b/g)  
Radio operation modesClient access, Local mesh, Packet capture, RF security  
AP operation modesAutonomous and controlled  
Wi-Fi Alliance Certification\*a/b/g Wi-Fi Certified

\* 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.

Physical characteristics

Dimensions6.52(d) x 6.40(w) x 1.88(h) in. (16.56 x 16.26 x 4.78 cm)  
Weight1.5 lb. (0.68 kg)  
EnclosureIndoor, plenum rated

Environment

Operating temperature32°F to 113°F (0°C to 45°C)  
Operating relative humidity5% to 95%, noncondensing  
Nonoperating/Storage temperature-40°F to 176°F (-40°C to 80°C)  
Nonoperating/Storage relative humidity5% to 95%, noncondensing

Electrical characteristics

DescriptionIEEE 802.3af PoE compliant or 5 VDC from available AC power supply  
Maximum power rating8.6 W  
Antenna Connector(4) RP-SMA with diversity  
Antenna(4) 2 dBi dual-band 2.4/5 GHz omnidirectional antennas  
Number of external antennas4



### Technical Specifications

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); RSS-210 (Canada); EN 300 328; ARIB STD-T66; IDA Registration (Singapore); MIC approval (Korea); RCR STD-33; ARIB STD-T71 (Japan); EN 301 893 (EU)	
Safety	UL 2043; UL 60950; IEC 60950; IEC 60950-1; EN 60950-1; CSA 22.2 No. 950-95; CAN/CSA-C22.2 No. 60950-1-03; EN 60601-1-2	
Emissions	EN 55022 Class B; EN 60601-1-2; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B	
RF Exposure	FCC Bulletin OET-65C; RSS-102; EN 50385	
Features	Integrated security sensor for use with the HP RF Manager system.	
Notes	Maximum transmit power varies by country. The HP MSM325 Access Point WW J9373A is no longer shipping into Japan.	
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (HR944E) 3-year, 4-hour onsite, 13x5 coverage for hardware (UN679E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UN680E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN682E) 3-year, 24x7 SW phone support, software updates (UN681E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR945E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR946E) 4-year, 4-hour onsite, 13x5 coverage for hardware (US005E) 4-year, 4-hour onsite, 24x7 coverage for hardware (US006E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (US007E) 4-year, 24x7 SW phone support, software updates (US008E) 5-year, 4-hour onsite, 13x5 coverage for hardware (US009E) 5-year, 4-hour onsite, 24x7 coverage for hardware (US010E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (US011E) 5-year, 24x7 SW phone support, software updates (US012E) 3 Yr 6 hr Call-to-Repair Onsite (UW413E) 4 Yr 6 hr Call-to-Repair Onsite (UW414E) 5 Yr 6 hr Call-to-Repair Onsite (UW415E) 1-year, 6 hour Call-To-Repair Onsite for hardware (HR948E) 1-year, 24x7 software phone support, software updates (HR947E) 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HV142E) 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HV143E) 3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HV144E) 3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HV145E) 4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HV146E) 4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HV147E) 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HV148E) 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HV149E)	



### Technical Specifications

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.

HP MSM335 Access Point (US) (J9356B)  
HP MSM335 Access Point (WW) (J9357B)

Ports	1 RJ-45 autosensing 10/100/1000 port (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Media Type: Auto-MDIX; Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only	
	1 RS-232C DB-9 console port	
AP characteristics	Radios	Triple (a/b/g)
	Radio operation modes	Client access, Local mesh, Packet capture, RF security
	AP operation modes	Autonomous and controlled
	Wi-Fi Alliance Certification*	a/b/g Wi-Fi Certified
	* 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.	
Physical characteristics	Dimensions	6.7(d) x 8.8(w) x 2.6(h) in. (17.02 x 22.35 x 6.6 cm)
	Weight	3.97 lb. (1.8 kg) mounting bracket
	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	Description	IEEE 802.3af PoE compliant; IEEE 802.3af PoE for Gigabit Ethernet or External power supply available as accessory
	Maximum power rating	12 W
	Antenna Connector	(3) RP-SMA
	Antenna	(3) Integrated, dual-band 2.4/5 GHz omnidirectional or directional patch antennas (per flap)
	Number of internal antennas	6
	Number of external antennas	3
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); RSS-210 (Canada); EN 300 328; ARIB STD-T66; IDA Registration (Singapore); MIC approval (Korea); RCR STD-33; ARIB STD-T71 (Japan); EN 301 893 (EU)	



### Technical Specifications

Safety	UL 2043; UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03
Emissions	EN 55022 Class B; EN 60601-1-2; EN 301 489-1; EN 301 489-17; ICES-003 Class B; FCC Part 15, Class B
RF Exposure	FCC Bulletin OET-65C; RSS-102
Features	Accepts external IEEE 802.11a/b/g (non-diversity) Will operate all 3 radios; full power on IEEE 802.3af for Gigabit Ethernet Integrated security sensor for use with the HP RF Manager IDS/IPS system
Notes	Maximum transmit power varies by country. The HP E-MSM335 Access Point WW J9357A is no longer shipping into Japan.
Services	3-year, 4-hour onsite, 13x5 coverage for hardware (UN671E) 3-year, 4-hour onsite, 24x7 coverage for hardware (UN672E) 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UN674E) 3-year, 24x7 SW phone support, software updates (UN673E) 1-year, post-warranty, 4-hour onsite, 13x5 coverage for hardware (HR964E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware (HR965E) 1-year, post-warranty, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (HR966E) 4-year, 4-hour onsite, 13x5 coverage for hardware (UR988E) 4-year, 4-hour onsite, 24x7 coverage for hardware (UR989E) 4-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR990E) 4-year, 24x7 SW phone support, software updates (UR991E) 5-year, 4-hour onsite, 13x5 coverage for hardware (UR992E) 5-year, 4-hour onsite, 24x7 coverage for hardware (UR993E) 5-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone (UR994E) 5-year, 24x7 SW phone support, software updates (UR995E) 3 Yr 6 hr Call-to-Repair Onsite (UW407E) 4 Yr 6 hr Call-to-Repair Onsite (UW408E) 5 Yr 6 hr Call-to-Repair Onsite (UW409E) 1-year, 6 hour Call-To-Repair Onsite for hardware (HR968E) 1-year, 24x7 software phone support, software updates (HR967E) 1-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HV126E) 1-year, 24x7 software phone support, software updates + 4 hour hardware exchange (HV127E) 3-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HV128E) 3-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HV129E) 4-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HV130E) 4-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HV131E) 5-year, 24x7 software phone support, software updates + Next Business Day Hardware Exchange (HV132E) 5-year, 24x7 software phone support, software updates + 4 hour Hardware Exchange (HV133E)

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.



### *Technical Specifications*

**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



### Accessories

HP MSM-802.11a/b/g Access Point Series accessories	<b>Power Supply</b>	
	HP MSM31x/MSM32x Power Supply	J9406A
	HP MSM335/MSM422 Power Supply	J9405A
	HP 1-Port Power Injector	J9407A
	<b>Mounting Kit</b>	
	HP MSM310/MSM320 Access Point Mounting Bracket	J9403A
	<b>External Antenna</b>	
	HP 5 dBi @2.4GHz Indoor/Outdoor Omnidir Antenna	J8441A
	HP 8 dBi @ 2.4GHz Outdoor Omnidirectional Antenna	J8444A
	HP 3 dBi Dual-Band Diversity Antenna	J8997A
	HP 7 dBi Dual-Band Directional Antenna	J8999A
	HP Antenna Lightning Arrester	J8996A
	<b>Wireless Antenna</b>	
	HP Dual Band Indoor Short Omnidirectional Antenna	J9401A
	HP MSM320 Access Point (US) (J9360B)	
	HP MSM320 RF Sensor License	J9384A
	HP MSM320 Access Point (WW) (J9364B)	
	HP MSM320 RF Sensor License	J9384A
	HP MSM320 Access Point (JP) (J9527B)	
	HP MSM320 RF Sensor License	J9384A
	HP MSM320-R Access Point (US) (J9365B)	
	HP MSM320 RF Sensor License	J9384A
	HP MSM320-R Access Point (WW) (J9368B)	
	HP MSM320 RF Sensor License	J9384A
	HP MSM320-R Access Point (JP) (J9528B)	
	HP MSM320 RF Sensor License	J9384A



### Accessory Product Details

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

HP MSM335/MSM422 Power Supply (J9406A)	Physical characteristics	Dimensions	2.64(d) x 4.17(w) x 1.5(h) in. (6.7 x 10.6 x 3.8 cm)
		Weight	0.73 lb. (0.33 kg)
	Environment	Operating temperature	32°F to 104°F (0°C to 40°C)
		Operating relative humidity	5% to 95%, noncondensing
		Nonoperating/Storage temperature	-40°F to 185°F (-40°C to 85°C)
		Nonoperating/Storage relative humidity	5% to 95%, noncondensing
	Electrical characteristics	Voltage	100-240 VAC
		Current	0.3/0.2 A
		Maximum power rating	50 W
		Frequency	50/60 Hz
		Notes	Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
	Safety	UL 60950; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03	
	Emissions	EN 55022 Class B; EN 55024; FCC Part 15, Class B	
	Services	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

HP E-MSM31x and E-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: <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.	

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
	Safety	Notes	IEEE 802.3af compliant
		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.	



### Accessory Product Details

#### Services

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.

HP 5 dBi @2.4GHz  
Indoor/Outdoor Omnidir  
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

#### Physical characteristics

RF connector Reverse SMA (male)  
Cable length 2.75 ft. (0.84 m)  
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: [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.



### Accessory Product Details

HP 8 dBi @ 2.4GHz 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
	Physical characteristics	Polarization	Linear (vertical)
		Impedance (Ohms)	50
		RF connector	N (male)
		Cable length	2.75 ft. (0.84 m)
		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: <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.	

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
		Grounding	DC
		RF connector	Reverse SMA (male)
		Cable length	2.75 ft. (0.84 m)



### Accessory Product Details

Physical characteristics	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)
	Mounting style	Ceiling grid
	Enclosure	PVC/Acrylic
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: <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.	

### 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
	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)
Physical characteristics	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)
	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
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: <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

HP Antenna Lightning Arrester (J8996A)	Electrical characteristics	VSWR max	1.4:1
	Physical characteristics	Dimensions	2.4(d) x 0.9(w) x 1.2(h) in. (6.1 x 2.29 x 3.05 cm)
	Notes	Input RF power, 100 MHz/6000 MHz: 250 W/10 W 50 Meg Ohm insulation resistance Maximum insertion loss of 0.4 dB	
	Services	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.	
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 VSWR 2:1 max. across all bands	
	Electrical characteristics	Connector	RP-SMA
	Services	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.	

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