Overview

Models

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

Key features

- Single radio
- Intelligent traffic forwarding
- Self-healing, advanced mesh capabilities
- Client access
- Indoor industrial enclosures

Product overview

HP offers intelligent single and dual radio access points designed to provide reliable, easy-to-use wireless connectivity across networks. All HP MSM access points can be managed by any HP MSM controllers and the HP RF Manager for the RF security sensors. All HP MSM access points can also work in autonomous mode. HP MSM access points are IEEE 802.3af compliant and require a single Power over Ethernet (PoE) cable drop or can be powered directly via a power adaptor. HP offers 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
 - O 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 Virtual Service Communities (VSC)
 - Maximum VoIP call capacity: 12 active calls on IEEE 802.11a/b/g/n
- Network management
 - Fully manageable using HP PCM 3.0 AU1 and HP Mobility Manager 3.0 AU2
 - O 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)
 - O Scheduled configuration and firmware upgrades from a central server
- Diagnostic
 - Client event log records association, authentication, and DHCP events
 - Packet capture tool for Ethernet and IEEE 802.11 interfaces (PCAP format)
 - O Data rate matrix
- RF management
 - Automatically selects channel on power-up and continuously improves channel selection based on background interference scan



Overview

- Provides configurable background rogue scanning
- O 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

• Anywhere, anytime wireless coverage

- Single radio IEEE 802.11a/b/g access points
- Per-radio software-selectable configuration of frequency bands
- O 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)
 - O 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
 - O Security filter
 - O IP filter
- AP client access control functions
 - O 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
 - O 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

• MSM325 and MSM335 with HP RF sensor license Included

are 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, 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



Overview

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; to reach our support centers, refer to
 www.hp.com/networking/contact-support; for details on the duration of support provided with your product purchase, refer
 to www.hp.com/networking/warrantysummary
- Software releases

to find software for your product, refer to **www.hp.com/networking/support**; for details on the software releases available with your product purchase, refer to **www.hp.com/networking/warrantysummary**

†HP warranty includes repair or replacement of hardware for as long as you own the product, with next business day advance replacement (available in most countries). The disk drive included with HP AllianceOne Advanced Services and Services zl Modules, HP Threat Management Services zl Module, HP AllianceOne Extended zl Module with Riverbed Steelhead, HP MSM765zl Mobility Controller and HP Survivable Branch Communication zl Module powered by Microsoft Lync has a five-year hardware warranty. For details, refer to the Software license and hardware warranty statements at www.hp.com/networking/warranty.



Technical Specifications

HP MSM310 Access Point (J) (JJJZ+D)		
Ports	2 RJ-45 autosensing 10/100 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX); Duple 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	
	these products have met a	ess devices are Wi-Fi Certified, providing our customers with the assurance that and passed the rigorous interoperability testing preformed by the Wi-Fi Alliance cifications section of this series for more information.	
Physical characteristics	Dimensions	6.4(w) x 6.52(d) x 1.88(h) in. (16.26 x 16.56 x 4.78 cm)	
	Weight	1.41 lb. (0.64 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	Description	IEEE 802.3af PoE compliant or 5 VDC from available AC power supply	
	Maximum power rating	6.5 W	
	Antenna Connector	(2) RP-SMA with diversity	
	Antenna	2) 2 dBi dual-band 2.4/5 GHz omnidirectional antennas	
	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)	
	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; 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		
Notes	Maximum transmit power varies by country.		



Technical Specifications

Services	3-year, 4-hour or	isite, 13x5 covera	ge for hardware (l	JN687E)		
			ge for hardware (l			
			ge for hardware, 2		ne support (UN69	OE)
			, ftware updates (U			
			te, 13x5 coverage		924E)	
			te, 24x7 coverage			
		•	te, 24x7 coverage			support
	(HR926E)				•	
	4-year, 4-hour or	isite, 13x5 covera	ge for hardware (L	JS021E)		
	-		ge for hardware (L			
	4-year, 4-hour or	isite, 24x7 covera	ge for hardware, 2	4x7 software pho	ne (US023E)	
	4-year, 24x7 SW	phone support, so	ftware updates (U	ISO24E)		
	5-year, 4-hour or	isite, 13x5 covera	ge for hardware (L	JS025E)		
	5-year, 4-hour or	isite, 24x7 covera	ge for hardware (L	JS026E)		
	5-year, 4-hour or	isite, 24x7 covera	ge for hardware, 2	4x7 software pho	ne (US027E)	
	5-year, 24x7 SW	phone support, so	, ftware updates (U	IS028E)		
	3 Yr 6 hr Call-to-F	Repair Onsite (UW	419E)			
	4 Yr 6 hr Call-to-F	Repair Onsite (UW	420E)			
	5 Yr 6 hr Call-to-F	Repair Onsite (UW	421E)			
	1-year, 6 hour Ca	ll-To-Repair Onsit	e for hardware (H	R928E)		
	1-year, 24x7 soft	ware phone supp	ort, software upda	ites (HR927E)		
	1-year, 24x7 soft	ware phone supp	ort, software upda	ites + Next Busine	ss Day Hardware E	Exchange
	(HV150E)					
	1-year, 24x7 soft	ware phone supp	ort, software upda	ites + 4 hour hardw	vare exchange (H\	/151E)
	3-year, 24x7 soft	ware phone supp	ort, software upda	ites + Next Busine	ss Day Hardware E	Exchange
	(HV152E)					
	3-year, 24x7 soft	ware phone supp	ort, software upda	ites + 4 hour Hard	ware Exchange (HI	J318E)
		ware phone supp	ort, software upda	ites + Next Busine	ss Day Hardware E	Exchange
	(HU319E)					
	2		ort, software upda		-	
	2	ware phone supp	ort, software upda	ites + Next Busine	ss Day Hardware E	Exchange
	(HU321E)					
	5-year, 24x7 soft	ware phone supp	ort, software upda	ites + 4 hour Hardv	ware Exchange (HI	J322E)
	Refer to the HP w	ebsite at: www.hr	.com/networking	/services for detai	ls on the service-l	evel descriptions
		bers. For details a	bout services and	response times in	your area, please	contact your local
	HP sales office.					
Radio characteristics: II	EE 802.11a/b/g					
	IEEE 802.11a	IEEE 802.11a	IEEE 802.11b	IEEE 802.11b	IEEE 802.11g	IEEE 802.11g

	IEEE 802.11d	IEEE OUZ.IId	IEEE 802.110	IEEE 802.110	1666 802.1 I g	1666 802.1 Ig
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



Accessories

HP MSM-802.11a/b/g Access Point Series accessories

Power Supply	
HP MSM31x/MSM32x Power Supply	J9405A
HP 1-Port Power Injector	J9407B
Mounting Kit	
HP MSM310/MSM320 Access Point Mounting Bracket	J9403A
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
HP Antenna Lightning Arrester	J8996A
Wireless Antenna	
HP Dual Band Indoor Short Omnidirectional Antenna	J9401A



Accessory Product Details

HP MSM31x/MSM32x	Dhusical characteristics	Dimensions	3.35(d) x 1.97(w) x 1.27(h) in. (8.5 x 5 x 3.22 cm)	
Power Supply (J9405A)	Physical characteristics	Weight	0.88 lb. (0.4 kg)	
	Environment	Operating temperature	32°F to 104°F (0°C to 40°C)	
	Environment	Operating relative	5% to 95%, noncondensing	
		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	the service-level description	: www.hp.com/networking/services for details on ons and product numbers. For details about services r area, please contact your local HP sales office.	
HP 1-port Power Injector (J9407B)	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	
		Altitude	up to 10,000 ft. (3 km)	
	Electrical characteristics	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 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 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.

Omnidirectional Antenna (J8441A) Gain 1 dBi (with antenna cable) 4.4 USWR max 1.7:1 E-Plane (3 dB beamwidth) 31 degrees H-Plane (3 dB beamwidth) 0mnidirectional Polarization Linear (vertical) Impedance (0hms) 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 Operating temperature -22ºF to 131ºF (-30ºC to 55°C) Nonoperating/Storage -40°F to 149°F (-40°C to 65°C) temperature Services Refer to the HP webite at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about servic and response times in your area, please contact your local HP sales office. HP 8 dBi Outdoor Electrical characteristics Frequency range 1 2400 - 2500 Gain 1 dBi (with antenna 8 1 1					
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Environment Operating temperature Nonoperating/Storage -22% to 131% (-30% to 55% c) Nonoperating/Storage 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 servic 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 Gain 1 dBi (with antenna cable) 2400 - 2500 VSWR max 1.5:1 E-Plane (3 dB beamwidth) 13 degrees H-Plane (3 dB beamwidth) 0mnidirectional 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)			Mounting style	Ceiling T-bar, I-beam, or mast	
HP 8 dBi Outdoor Omnidirectional Antenna (J8444A) Electrical characteristics characteristics Frequency range 1 Frequency range 1 (Cable length Cable length Cable length Cable length Cable length Cable length Cable state of the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about servic and response times in your area, please contact your local HP sales office. HP 8 dBi Outdoor Omnidirectional Antenna (J8444A) 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) 13 degrees H-Plane (0 dms) 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)			Enclosure	Polycarbonate	
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 servic 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 (J8444A) Electrical characteristics Frequency range 1 2400 - 2500 VSWR max 1.5:1 E-Plane (3 dB beamwidth) 13 degrees H-Plane (3 dB beamwidth) 13 degrees H-Plane (3 dB beamwidth) Polarization Linear (vertical) Impedance (0hms) Impedance (0hms) 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) 1.1 sq. ft. (0.01 sq. m)		Environment	Operating temperature	-22ºF to 131ºF (-30ºC to 55ºC)	
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) 0mnidirectional 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)				-40ºF to 149ºF (-40ºC to 65ºC)	
Omnidirectional Antenna (J8444A)Gain 1 dBi (with antenna cable)8(J8444A)Gain 1 dBi (with antenna cable)8VSWR max1.5:1E-Plane (3 dB beamwidth)13 degreesH-Plane (3 dB beamwidth)0mnidirectionalPolarizationLinear (vertical)Impedance (Ohms)50RF connectorN (male)Cable length2.75 ft. (0.84 m)Dimensions25.25(h) in. (64.14 cm)Wind surface area0.11 sq. ft. (0.01 sq. m)		Services	the service-level descriptions and product numbers. For details about ser		
(J8444A) cable) VSWR max 1.5:1 E-Plane (3 dB beamwidth) 13 degrees H-Plane (3 dB beamwidth) 0mnidirectional H-Plane (3 dB beamwidth) 0mnidirectional Impedance (0hms) 50 Impedance (0hms) 50 RF connector N (male) Cable length 2.75 ft. (0.84 m) 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)	HP 8 dBi Outdoor	Electrical characteristics	Frequency range 1	2400 - 2500	
E-Plane(3dB beamwidth)13 degreesH-PlaneOmnidirectionalPolarizationLinear (vertical)Impedance00RF connectorN (male)Cable length2.75 ft. (0.84 m)Dimensions0.11 sq. (0.64.14 cm)	Omnidirectional Antenna (J8444A)			8	
H-Plane (3 dB beamwidth)OmnidirectionalPolarizationLinear (vertical)Impedance (Ohms)50RF connectorN (male)Cable length2.75 ft. (0.84 m)Physical characteristicaDimensionsWind surface area0.11 sq. ft. (0.01 sq. m)			VSWR max	1.5:1	
PolarizationLinear (vertical)Impedance (Ohms)50RF connectorN (male)Cable length2.75 ft. (0.84 m)Physical characteristicsDimensionsWind surface area0.11 sq. ft. (0.01 sq. m)			E-Plane (3 dB beamwidth)	13 degrees	
Impedance (Ohms)50RF connectorN (male)Cable length2.75 ft. (0.84 m)Physical characteristicsDimensionsUind surface area0.11 sq. ft. (0.01 sq. m)			H-Plane (3 dB beamwidth)	Omnidirectional	
RF connectorN (male)Cable length2.75 ft. (0.84 m)Physical characteristicsDimensions25.25(h) in. (64.14 cm)Wind surface area0.11 sq. ft. (0.01 sq. m)			Polarization	Linear (vertical)	
Cable length2.75 ft. (0.84 m)Physical characteristicsDimensions25.25(h) in. (64.14 cm)Wind surface area0.11 sq. ft. (0.01 sq. m)			Impedance (Ohms)	50	
Physical characteristicsDimensions25.25(h) in. (64.14 cm)Wind surface area0.11 sq. ft. (0.01 sq. m)			RF connector	N (male)	
Wind surface area0.11 sq. ft. (0.01 sq. m)			Cable length	2.75 ft. (0.84 m)	
		Physical characteristics	Dimensions	25.25(h) in. (64.14 cm)	
Wind survival 125 mph (201.13 km/hr)			Wind surface area	0.11 sq. ft. (0.01 sq. m)	
			Wind survival	125 mph (201.13 km/hr)	



Accessory Product	Details		
		Weight	0.5 lb. (0.23 kg)
		Mounting style	Mast
		Enclosure	Polycarbonate
	Environment	Operating temperature	-22ºF to 131ºF (-30ºC to 55ºC)
		Nonoperating/Storage temperature	-40ºF to 149ºF (-40ºC to 65ºC)
	Services	the service-level descriptio	www.hp.com/networking/services for details on ons and product numbers. For details about services r area, please contact your local HP sales office.
HP 3 dBi Dual-Band	Electrical characteristics	Frequency range 1	2400 - 2500
Diversity Antenna (J8997A)		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)
Physical character Environment	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	-22ºF to 131ºF (-30ºC to 55ºC)
		Nonoperating/Storage temperature	-40ºF to 149ºF (-40ºC to 65ºC)
	Services	the service-level description	www.hp.com/networking/services for details on ons and product numbers. For details about services r area, please contact your local HP sales office.



Accessory Product Details

HP 7 dBi Dual-Band	Electrical characteristics	Frequency range 1	2400 - 2500		
Directional Antenna (J8999A)		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	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	-22ºF to 131ºF (-30ºC to 55ºC)		
		Nonoperating/Storage temperature	-40ºF to 149ºF (-40ºC to 65ºC)		
	Services	the service-level description	www.hp.com/networking/services for details on on sand product numbers. For details about services rarea, please contact your local HP sales office.		
HP Antenna Lightning	Electrical characteristics	VSWR max	1.4:1		
Arrester (J8996A)	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: www.hp.com/networking/services for details the service-level descriptions and product numbers. For details about ser and response times in your area, please contact your local HP sales office			



Accessory Product Details

HP Dual Band Indoor Short Physical characteristics		Dimensions	3.78(h) in. (9.59 cm)
Omnidirectional Antenna		Base diameter	0.37 in. (0.93 cm)
(J9401A)	Notes	2.1 dBi (2.45 GHz), 2.4 dBi Polarization: vertical, omn VSWR 2:1 max. across all t	
	Electrical characteristics	Connector	RP-SMA
	Services	the service-level description	: www.hp.com/networking/services for details on ons and product numbers. For details about services r area, please contact your local HP sales office.

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