

### Overview

### Models

HP Indoor Omnidirectional Dual Band 2.5/6dBi MIMO 6 Element Antenna	J9659A
HP Indoor Omnidirectional Dual Band 3/4dBi MIMO 3 Element Antenna	J9171A
HP Indoor-Outdoor Point-to-Point Dual Band 10/13dBi MIMO 3 Element Antenna	J9170A
HP Indoor-Outdoor Narrow Sector Dual Band 8/10dBi MIMO 3 Element Antenna	J9169A
HP Outdoor Omnidirectional 6dBi at 2.4GHz MIMO 3 Element Antenna	J9719A
HP Outdoor Omnidirectional 8dBi at 5GHz MIMO 3 Element Antenna	J9720A

### Key features

- Indoor aesthetically pleasing housing
- Indoor MIMO antennas ideal for ceiling mount
- Indoor antennas include ceiling mounting hardware
- Outdoor antenna includes pole mount hardware

### Product overview

These MIMO antennas support both the 2.4GHz and 5GHz bands and have been specifically tested with the EMSM466 and MSM466-R three spatial stream AP. This is specifically designed to meet the needs of today's most demanding wireless LAN deployments. The MSM MIMO external antennas support the MSM466 and the MSM466-R dual band access point deployments, providing maximum flexibility to help optimize coverage and radio signal predictability. Each external antenna includes the necessary installation hardware to extend a robust wireless network across an entire campus, or for in-building environments.

### Features and benefits

#### Mobility

- **High-gain omnidirectional or directional antennas:** provide specific RF pattern characteristics to increase wireless coverage and signal gain or overcome physical/RF interference
- **Choice of indoor and outdoor antennas:** extend the reach of a wireless LAN within an office, warehouse, or retail environment or for campus-wide indoor and outdoor coverage
- **Choice of mounting options:** for ease of deployment, each antenna includes the necessary mounting hardware to quickly get a wireless LAN up and running
- **Certified external antennas:** specifically designed and certified for use with wireless access points
- **MIMO Antennas have three or six embedded elements:** each antenna has either three or six dual band elements for an easy and clean installation



## Technical Specifications

### HP Indoor Omnidirectional Dual Band 2.5/6dBi MIMO 6 Element Antenna (J9659A)

Electrical characteristics	Frequency range 1	2400 - 2500
	Gain 1 dBi (with antenna cable)	2.5
	Frequency range 2	5150 - 5850
	Gain 2 dBi (with antenna cable)	5.9
	VSWR max	2:0
	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	8.58(d) x 1.69(h) in. (21.79 x 4.29 cm)
	Weight	1.5 lb. (0.68 kg)
	Mounting style	Single 1 inch diameter hole
	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 Indoor Omnidirectional Dual Band 3/4dBi MIMO 3 Element Antenna (J9171A)

Electrical characteristics	Frequency range 1	2400 - 2500
	Gain 1 dBi (with antenna cable)	3
	Frequency range 2	4900 - 5900
	Gain 2 dBi (with antenna cable)	4
	VSWR max	2:1
	E-Plane (3 dB beamwidth)	60 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)	



### Technical Specifications

Physical characteristics	Dimensions	3.6(d) x 12.14(w) x 0.87(h) in. (9.14 x 30.84 x 2.21 cm)
	Weight	0.86 lb. (0.39 kg)
	Mounting style	Ceiling
	Enclosure	White ASA IP-67 rated
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 Indoor-Outdoor Point-to-Point Dual Band 10/13dBi MIMO 3 Element Antenna (J9170A)

Electrical characteristics	Frequency range 1	2400 - 2500
	Gain 1 dBi (with antenna cable)	10.9
	Frequency range 2	5100 - 5900
	Gain 2 dBi (with antenna cable)	13.5
	VSWR max	2:1
	E-Plane (3 dB beamwidth)	45/20 degrees
	H-Plane (3 dB beamwidth)	45/20 degrees
	Polarization	Linear (vertical)
	Impedance (Ohms)	50
	RF connector	N (male)
Cable length	2.75 ft. (0.84 m)	
Physical characteristics	Dimensions	1.4(d) x 16.2(w) x 14.7(h) in. (3.56 x 41.15 x 37.34 cm)
	Weight	2.43 lb. (1.1 kg)
	Mounting style	Pole Mount
	Enclosure	White ASA IP-67 rated
Environment	Operating temperature	-22°F to 149°F (-30°C to 65°C); IP-67 rated for outdoor use
	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.	



### Technical Specifications

#### HP Indoor-Outdoor Narrow Sector Dual Band 8/10dBi MIMO 3 Element Antenna (J9169A)

Electrical characteristics	Frequency range 1	2400 - 2500
	Gain 1 dBi (with antenna cable)	8
	Frequency range 2	5100 - 5900
	Gain 2 dBi (with antenna cable)	10.7
	VSWR max	2:1
	E-Plane (3 dB beamwidth)	75/55
	H-Plane (3 dB beamwidth)	70/60
	Polarization	Linear (vertical)
	Impedance (Ohms)	50
	RF connector	N (male)
Physical characteristics	Cable length	2.75 ft. (0.84 m)
	Dimensions	3.6(d) x 12.14(w) x 0.87(h) in. (9.14 x 30.84 x 2.21 cm)
	Weight	0.86 lb. (0.39 kg)
	Mounting style	Ceiling
Environment	Enclosure	White ASA IP-67 rated
	Operating temperature	-22°F to 149°F (-30°C to 65°C); IP-67 rated for outdoor use
	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 Outdoor Omnidirectional 6dBi at 2.4GHz MIMO 3 Element Antenna (J9719A)

Electrical characteristics	Frequency range 1	2400 - 2500
	Gain 1 dBi (with antenna cable)	6
	Impedance (Ohms)	50
	RF connector	N Type (Male) x 3
	Cable length	3 ft. (.9 m)
Physical characteristics	Dimensions	8.25(d) x 10(h) in. (20.96 x 25.4 cm)
	Wind surface area	.32 sq. ft. (0.03 sq. m)
	Wind survival	125 mph (201.13 km/hr)
	Mounting style	Pole or Wall
Environment	Operating temperature	-22°F to 158°F (-30°C to 70°C)
	Nonoperating/Storage temperature	-40°F to 185°F (-40°C to 85°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.	



## Technical Specifications

---

### HP Outdoor Omnidirectional 8dBi at 5GHz MIMO 3 Element Antenna (J9720A)

Electrical characteristics	Frequency range 1	5150 - 5875
	Gain 1 dBi (with antenna cable)	8
	Impedance (Ohms)	50
	RF connector	N Type (Male) x 3
	Cable length	3 ft. (.9 m)
Physical characteristics	Dimensions	8.25(d) x 10(h) in. (20.96 x 25.4 cm)
	Wind surface area	.32 sq. ft. (0.03 sq. m)
	Wind survival	125 mph (201.13 km/hr)
	Mounting style	Pole or Wall
Environment	Operating temperature	-22°F to 158°F (-30°C to 70°C)
	Nonoperating/Storage temperature	-40°F to 185°F (-40°C to 85°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.	



### Accessories

Wireless MIMO Antennas accessories	HP Indoor-Outdoor Point-to-Point Dual Band 10/13dBi MIMO 3 Element Antenna (J9170A)	
	<a href="#">HP Antenna Lightning Arrester</a>	J8996A
	HP Indoor-Outdoor Narrow Sector Dual Band 8/10dBi MIMO 3 Element Antenna (J9169A)	
	<a href="#">HP Antenna Lightning Arrester</a>	J8996A
	HP Outdoor Omnidirectional 6dBi at 2.4GHz MIMO 3 Element Antenna (J9719A)	
	<a href="#">HP Antenna Lightning Arrester</a>	J8996A
	HP Outdoor Omnidirectional 8dBi at 5GHz MIMO 3 Element Antenna (J9720A)	
	<a href="#">HP Antenna Lightning Arrester</a>	J8996A



## Accessory Product Details

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

---

HP Dual-Band 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.	

---

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

© Copyright 2011 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

