



CAROLINA ADVANCED DIGITAL, INC.  
IT INFRASTRUCTURE | SECURITY | MANAGEMENT

www.cadinc.com | 800.435.2212



## HP E-802.11n Dual Radio Access Point Series

Data sheet

### Product overview

This highest-performing family of access points improves productivity and is the first in the industry to offer three spatial stream MIMO technology, bringing IEEE 802.11n near Gigabit Ethernet performance to 900 Mbps and enhancing coverage areas with beamforming technology. These APs deliver the highest performance in 802.11n AP technology in the market today with the best price and performance in the industry. Each dual radio 802.11n access point operates in the 2.4 GHz and 5 GHz bands, providing backward compatibility for IEEE 802.11a/b/g legacy technologies. These APs can operate with or without a wireless controller and support all the same enterprise features as the prior HP E-series MSM wireless products, in addition to new features, such as beamforming, bandsteering, and concurrent 5 GHz operation. The E-MSM466 access point also supports a range of indoor and outdoor MIMO antennas.

### Key features

- First three spatial stream MIMO AP in the industry
- Up to 450 Mbps per radio on the E-MSM460 and 466
- E-MSM466 supports a range of antenna options
- E-MSM430 is two stream, price/performance leader
- All APs use standard IEEE 802.3af PoE power



## 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 802.11 a/b/g/n
- **Network management:**
  - Fully manageable using HP Manager and HP Mobility Manager
  - 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

### Intrusion detection/prevention system (IDS/IPS)

- **Protection against rogue IEEE 802.11a/b/g/n access points and wireless clients:** HP RF Manager and MSM415 RF Security Sensors continuously scan for detection, classification, and prevention of wireless threats on IEEE 802.11a/b/g and 802.11n wireless networks
- **Provides 24 x 7 detection, classification, and prevention capabilities:** HP RF Manager and MSM415 RF Security Sensors continuously protect your wireless network from security threats

## Connectivity

- **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
- **Auto-MDIX:** automatically adjusts for straight-through or crossover cables on the Ethernet interface

## Mobility

- **Three spatial stream MIMO technology:**
  - The latest in Wi-Fi technology allows for 450 Mbps of signaling per radio
  - More than a 50% increase in performance over any two spatial stream product
- **Beamforming:**
  - Better coverage area
  - Better performance at distances from the AP
- **Bandsteering:**
  - Steers wireless clients to the 5 GHz band for outstanding performance
- **Concurrent operation in the 5 GHz band:** provides ability to run both radios in the 5 GHz band for best performance (E-MSM466 Only)
- **Antenna:**
  - E-MSM430/460 embedded antenna: 4 dBi antenna at 2.4 GHz and 7 dBi antenna at 5 GHz
  - E-MSM466 external antenna: includes six RP-SMA connectors for attaching an external antenna to fit the deployment application
  - Two indoor ceiling mount antennas and two pole/wall mount indoor/outdoor antennas fit specific needs
  - Maximum power listed doesn't include the embedded antenna; review HP documentation for your AP to understand the maximum output setting for your AP based on your country limit
- **Anywhere, anytime wireless coverage:**
  - Dual-radio IEEE 802.11a/b/g/n and 802.11a/n 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 IEEE 802.11a/b/g/n client devices
  - IEEE 802.3af PoE
- **Medical standards:** meets the European EN60601-1-2 standard for healthcare

- **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 an unoccupied radio channel

## 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 [www.hp.com/networking/warranty](http://www.hp.com/networking/warranty) for details on the support provided and the period during which support is available
- **Software releases:** refer to [www.hp.com/networking/warranty](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)

## 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 Authentication:** provides port-based user authentication with support for Extensible Authentication Protocol (EAP) MD5, TLS, TTLS, and PEAP with the choice of AES and TKIP encryption for protecting wireless traffic between authenticated clients and the access point



\*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 z1 Module, HP Threat Management Services z1 Module, HP PCM+ Agent with AllianceONE Services z1 Module, and HP E-MSM765 z1 Mobility Controller. For details, refer to the HP Software License, Warranty, and Support booklet at [www.hp.com/networking/warranty](http://www.hp.com/networking/warranty).

# HP E-802.11n Dual Radio Access Point Series

## Specifications



**HP E-MSM430 Dual Radio 802.11n AP (AM) (J9650A)**  
**HP E-MSM430 Dual Radio 802.11n AP (WW) (J9651A)**  
**HP E-MSM430 Dual Radio 802.11n AP (JP) (J9652A)**  
**HP E-MSM430 Dual Radio 802.11n AP (IL) (J9653A)**



**HP E-MSM460 Dual Radio 802.11n AP (AM) (J9590A)**  
**HP E-MSM460 Dual Radio 802.11n AP (WW) (J9591A)**  
**HP E-MSM460 Dual Radio 802.11n AP (JP) (J9589A)**  
**HP E-MSM460 Dual Radio 802.11n AP (IL) (J9618A)**



**HP E-MSM466 Dual Radio 802.11n AP (AM) (J9621A)**  
**HP E-MSM466 Dual Radio 802.11n AP (WW) (J9622A)**  
**HP E-MSM466 Dual Radio 802.11n AP (JP) (J9620A)**

<b>Ports</b>	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); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only  1 RJ-45 serial console port	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); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only  1 RJ-45 serial console port	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); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only  1 RJ-45 serial console port
<b>AP characteristics</b>			
Radios	Dual (n/a/b/g)	Dual (n/a/b/g)	Dual (n/a/b/g)
Radio operation modes	Client access, Local mesh, Packet capture	Client access, Local mesh, Packet capture	Client access, Local mesh, Packet capture
AP operation modes	Autonomous and controlled	Autonomous and controlled	Autonomous and controlled
WiFi Alliance Certification	a/b/g/n Wi-Fi Certified	a/b/g/n Wi-Fi Certified	a/b/g/n Wi-Fi Certified
<b>Physical characteristics</b>			
Dimensions	6.16(d) x 5.19(w) x 1.94(h) in. (15.64 x 13.17 x 4.94 cm)	6.16(d) x 5.19(w) x 1.94(h) in. (15.64 x 13.17 x 4.94 cm)	6.16(d) x 5.19(w) x 1.94(h) in. (15.64 x 13.17 x 4.94 cm)
Weight	0.72 lb. (0.33 kg) mounting bracket	0.72 lb. (0.33 kg) mounting bracket	0.72 lb. (0.33 kg) mounting bracket
Enclosure	Indoor, plenum rated	Indoor, plenum rated	Indoor, plenum rated
<b>Mounting</b>	Includes two ceiling mounting clips	Includes two ceiling mounting clips	Includes two ceiling mounting clips
<b>Environment</b>			
Operating temperature	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)
Operating relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing	5% to 95%, noncondensing
Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity	5% to 95%, noncondensing	5% to 95%, noncondensing	5% to 95%, noncondensing
<b>Electrical characteristics</b>			
Description	IEEE 802.3af PoE compliant for Gigabit Ethernet	IEEE 802.3af PoE compliant for Gigabit Ethernet	IEEE 802.3af PoE compliant for Gigabit Ethernet
Maximum power rating	12.9 W	12.9 W	12.9 W
Antenna	6 Integrated, dual-band 2.4/5 GHz omnidirectional antennas	6 Integrated, dual-band 2.4/5 GHz omnidirectional antennas	External antennas only. Six RP-SMA connectors
Number of internal antennas	6	6	
Number of external antennas			6
<b>Frequency band and operating channels</b>			
Americas	2.412 - 2.462 GHz (1 - 11 channels) 5.180 - 5.240 GHz (36 - 48 channels) 5.260 - 5.320 GHz (52 - 64 channels) 5.500 - 5.700 GHz (100 - 140 (excluding 120, 124 and 128) channels) 5.745 - 5.825 GHz (149 - 165 channels)	2.412 - 2.462 GHz (1 - 11 channels) 5.180 - 5.240 GHz (36 - 48 channels) 5.260 - 5.320 GHz (52 - 64 channels) 5.500 - 5.700 GHz (100 - 140 (excluding 120, 124 and 128) channels) 5.745 - 5.825 GHz (149 - 165 channels)	2.412 - 2.462 GHz (1 - 11 channels) 5.180 - 5.240 GHz (36 - 48 channels) 5.260 - 5.320 GHz (52 - 64 channels) 5.500 - 5.700 GHz (100 - 140 (excluding 120, 124 and 128) channels) 5.745 - 5.825 GHz (149 - 165 channels)
European Union	2.412 - 2.472 GHz (1 - 13 channels) 5.180 - 5.240 GHz (36 - 48 channels) 5.260 - 5.320 GHz (52 - 64 channels) 5.500 - 5.700 GHz (100 - 140 channels)	2.412 - 2.472 GHz (1 - 13 channels) 5.180 - 5.240 GHz (36 - 48 channels) 5.260 - 5.320 GHz (52 - 64 channels) 5.500 - 5.700 GHz (100 - 140 channels)	2.412 - 2.472 GHz (1 - 13 channels) 5.180 - 5.240 GHz (36 - 48 channels) 5.260 - 5.320 GHz (52 - 64 channels) 5.500 - 5.700 GHz (100 - 140 channels)
Rest of World (Actual channels designated by selecting country in UI)	2.412 - 2.472 GHz (1 - 13 channels) 5.180 - 5.240 GHz (36 - 48 channels) 5.260 - 5.320 GHz (52 - 64 channels) 5.500 - 5.700 GHz (100 - 140 channels) 5.745 - 5.825 GHz (149 - 165 channels)	2.412 - 2.472 GHz (1 - 13 channels) 5.180 - 5.240 GHz (36 - 48 channels) 5.260 - 5.320 GHz (52 - 64 channels) 5.500 - 5.700 GHz (100 - 140 channels) 5.745 - 5.825 GHz (149 - 165 channels)	2.412 - 2.472 GHz (1 - 13 channels) 5.180 - 5.240 GHz (36 - 48 channels) 5.260 - 5.320 GHz (52 - 64 channels) 5.500 - 5.700 GHz (100 - 140 channels) 5.745 - 5.825 GHz (149 - 165 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)	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)	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; UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1	UL 2043; UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1	UL 2043; UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1
<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	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	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	FCC Bulletin OET-65C; RSS-102	FCC Bulletin OET-65C; RSS-102

# HP E-802.11n Dual Radio Access Point Series

## Specifications (continued)

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<b>Features</b>	Dual radio: IEEE 802.11a/n for high-throughput applications and IEEE 802.11ab/g/n for legacy support and high-speed applications - Integrated antennas for both IEEE radios, supporting two spatial streams and 2x3 MIMO - Six embedded antennas - Both radios operate at full power and full performance on IEEE 802.3af PoE/Gigabit Ethernet	Dual radio: IEEE 802.11a/n for high-throughput applications and IEEE 802.11ab/g/n for legacy support and high-speed applications - Integrated antennas for both IEEE radios supporting three spatial streams and 3x3 MIMO reaching 450 Mb/s per radio. - Six embedded antennas - Both radios operate at full power and full performance on IEEE 802.3af PoE/Gigabit Ethernet	Dual radio: IEEE 802.11a/n for high-throughput applications and IEEE 802.11ab/g/n for legacy support and high-speed applications - Both IEEE radios, supporting three spatial streams and 3x3 MIMO reaching 450 Mb/s per radio. - Six R-SMA connectors for external MIMO antennas - Both radios operate at full power and full performance on IEEE 802.3af PoE/Gigabit Ethernet
<b>Notes</b>	Access point power information listed does not include the embedded antenna. Review the HP documentation for your AP to understand the maximum output setting for your AP based on your country regulations. Two spatial stream AP, supporting 300 Mbps per radio. Maximum transmit power varies by country.	Access point power information listed does not include the embedded antenna. Review the HP documentation for your AP to understand the maximum output setting for your AP based on your country regulations. Three spatial stream AP, supporting 450 Mbps per radio. Maximum transmit power varies by country.	Access point power information listed does not include the embedded antenna. Review the HP documentation for your AP to understand the maximum output setting for your AP based on your country regulations. Three spatial stream AP, supporting 450 Mbps per radio. Maximum transmit power varies by country.
<b>Services</b>	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) 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)  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.	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) 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)  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.	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) 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)  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.

## Specifications (continued)

HP E-MSM430 Dual Radio 802.11n AP (AM)  
(J9650A)  
HP E-MSM430 Dual Radio 802.11n AP (WW)  
(J9651A)  
HP E-MSM430 Dual Radio 802.11n AP (JP) (J9652A)  
HP E-MSM430 Dual Radio 802.11n AP (IL) (J9653A)

HP E-MSM460 Dual Radio 802.11n AP (AM)  
(J9590A)  
HP E-MSM460 Dual Radio 802.11n AP (WW)  
(J9591A)  
HP E-MSM460 Dual Radio 802.11n AP (JP) (J9589A)  
HP E-MSM460 Dual Radio 802.11n AP (IL) (J9618A)

HP E-MSM466 Dual Radio 802.11n AP (AM)  
(J9621A)  
HP E-MSM466 Dual Radio 802.11n AP (WW)  
(J9622A)  
HP E-MSM466 Dual Radio 802.11n AP (JP) (J9620A)

### Radio characteristics:

#### IEEE 802.11n 5 GHz @ 20 MHz channel

Data rate	MCS0/8/16 Mbps	MCS7/15/2 3 Mbps
Receiver sensitivity	-93 dBm	-77 dBm
Transmit power	17.5 dBm	13 dBm

#### IEEE 802.11n 5 GHz @ 40 MHz channel

Data rate	MCS0/8/16 Mbps	MCS7/15/2 3 Mbps
Receiver sensitivity	-90 dBm	-73 dBm
Transmit power	16.5 dBm	11.0 dBm

#### IEEE 802.11n 2.4 GHz @ 20 MHz channel

Data rate	MCS0/8/16 Mbps	MCS7/15/2 3 Mbps
Receiver sensitivity	-94 dBm	-77 dBm
Transmit power	22.5 dBm	17.3 dBm

#### IEEE 802.11n 2.4 GHz @ 40 MHz channel

Data rate	MCS0/8/16 Mbps	MCS7/15/2 3 Mbps
Receiver sensitivity	-91 dBm	-76 dBm
Transmit power	21.8 dBm	15.7 dBm

#### IEEE 802.11a 5 GHz

Data rate	6 Mbps	54 Mbps
Receiver sensitivity	-93 dBm	-80 dBm
Transmit power	17.8 dBm	13 dBm

#### IEEE 802.11b/g 2.4 GHz

Data rate	1 Mbps	11 Mbps	6 Mbps	54 Mbps
Receiver sensitivity	-100 dBm	-90 dBm	-94 dBm	-81 dBm
Transmit power	22.3 dBm	22.3 dBm	22.4 dBm	18.5 dBm

### 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  
IEEE 802.11n WLAN Enhancements for Higher Throughput

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## Specifications (continued)

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HP E-MSM430 Dual Radio 802.11n AP (WW) (J9651A)	HP E-MSM460 Dual Radio 802.11n AP (WW) (J9591A)	HP E-MSM466 Dual Radio 802.11n AP (WW) (J9622A)
HP E-MSM430 Dual Radio 802.11n AP (JP) (J9652A)	HP E-MSM460 Dual Radio 802.11n AP (JP) (J9589A)	HP E-MSM466 Dual Radio 802.11n AP (JP) (J9620A)
HP E-MSM430 Dual Radio 802.11n AP (IL) (J9653A)	HP E-MSM460 Dual Radio 802.11n AP (IL) (J9618A)	

HP E-MSM430 Dual Radio 802.11n AP (AM) (J9650A)  
 HP E-MSM430 Dual Radio 802.11n AP (WW) (J9651A)  
 HP E-MSM430 Dual Radio 802.11n AP (JP) (J9652A)  
 HP E-MSM430 Dual Radio 802.11n AP (IL) (J9653A)

MCS Index	800 nS Guard Interval		400 nS Guard Interval	
	20 MHz Rate (Mbps)	40 MHz Rate (Mbps)	20 MHz Rate (Mbps)	40 MHz Rate (Mbps)
0	6.5	13.5	7.2	15
1	13	27	14.4	30
2	19.5	40.5	21.7	45
3	26	54	28.9	60
4	39	81	43.3	90
5	52	108	57.8	120
6	58.5	121.5	65	135
7	65	135	72.2	157.5
8	13	27	14.4	30
9	26	54	28.9	60
10	39	81	43.3	90
11	52	108	57.8	120
12	78	162	86.7	180
13	104	216	115.6	240
14	117	243	130	270
15	130	270	144.4	300

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## Specifications (continued)

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 HP E-MSM460 Dual Radio 802.11n AP (JP) (J9589A)  
 HP E-MSM460 Dual Radio 802.11n AP (IL) (J9618A)

MCS Index	800 nS Guard Interval		400 nS Guard Interval	
	20 MHz Rate (Mbps)	40 MHz Rate (Mbps)	20 MHz Rate (Mbps)	40 MHz Rate (Mbps)
0	6.5	13.5	7.2	15
1	13	27	14.4	30
2	19.5	40.5	21.7	45
3	26	54	28.9	60
4	39	81	43.3	90
5	52	108	57.8	120
6	58.5	121.5	65	135
7	65	135	72.2	157.5
8	13	27	14.4	30
9	26	54	28.9	60
10	39	81	43.3	90
11	52	108	57.8	120
12	78	162	86.7	180
13	104	216	115.6	240
14	117	243	130	270
15	130	270	144.4	300
16	19.5	40.5	21.7	45
17	39	81	43.4	90
18	58.5	121.5	65	135
19	78	162	86.7	180
20	117	243	130	270
21	156	324	173.3	360
22	178.5	364	195	405
23	195	405	216.7	450

# HP E-802.11n Dual Radio Access Point Series

## Specifications (continued)

HP E-MSM430 Dual Radio 802.11n AP (AM) (J9650A)	HP E-MSM460 Dual Radio 802.11n AP (AM) (J9590A)	HP E-MSM466 Dual Radio 802.11n AP (AM) (J9621A)
HP E-MSM430 Dual Radio 802.11n AP (WW) (J9651A)	HP E-MSM460 Dual Radio 802.11n AP (WW) (J9591A)	HP E-MSM466 Dual Radio 802.11n AP (WW) (J9622A)
HP E-MSM430 Dual Radio 802.11n AP (JP) (J9652A)	HP E-MSM460 Dual Radio 802.11n AP (JP) (J9589A)	HP E-MSM466 Dual Radio 802.11n AP (JP) (J9620A)
HP E-MSM430 Dual Radio 802.11n AP (IL) (J9653A)	HP E-MSM460 Dual Radio 802.11n AP (IL) (J9618A)	

HP E-MSM466 Dual Radio 802.11n AP (AM) (J9621A)  
 HP E-MSM466 Dual Radio 802.11n AP (WW) (J9622A)  
 HP E-MSM466 Dual Radio 802.11n AP (JP) (J9620A)

MCS Index	800 nS Guard Interval		400 nS Guard Interval	
	20 MHz Rate (Mbps)	40 MHz Rate (Mbps)	20 MHz Rate (Mbps)	40 MHz Rate (Mbps)
0	6.5	13.5	7.2	15
1	13	27	14.4	30
2	19.5	40.5	21.7	45
3	26	54	28.9	60
4	39	81	43.3	90
5	52	108	57.8	120
6	58.5	121.5	65	135
7	65	135	72.2	157.5
8	13	27	14.4	30
9	26	54	28.9	60
10	39	81	43.3	90
11	52	108	57.8	120
12	78	162	86.7	180
13	104	216	115.6	240
14	117	243	130	270
15	130	270	144.4	300
16	19.5	40.5	21.7	45
17	39	81	43.4	90
18	58.5	121.5	65	135
19	78	162	86.7	180
20	117	243	130	270
21	156	324	173.3	360
22	175.5	364.5	195	405
23	195	405	216.7	450

# HP E-802.11n Dual Radio Access Point Series accessories

## Power Supply

HP 1-Port Power Injector (J9407A)

## HP E-MSM466 Dual Radio 802.11n AP (AM) (J9621A)

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

HP Indoor-Outdoor Point-to-Point Dual Band 10/13dBi MIMO 3 Element Antenna (J9170A)

HP Indoor Omnidirectional Dual Band 3/4dBi MIMO 3 Element Antenna (J9171A)

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

HP Dual-Band Antenna Lightning Arrester (J8996A)

## HP E-MSM466 Dual Radio 802.11n AP (WW) (J9622A)

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

HP Indoor-Outdoor Point-to-Point Dual Band 10/13dBi MIMO 3 Element Antenna (J9170A)

HP Indoor Omnidirectional Dual Band 3/4dBi MIMO 3 Element Antenna (J9171A)

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

HP Dual-Band Antenna Lightning Arrester (J8996A)

## HP E-MSM466 Dual Radio 802.11n AP (JP) (J9620A)

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

HP Indoor-Outdoor Point-to-Point Dual Band 10/13dBi MIMO 3 Element Antenna (J9170A)

HP Indoor Omnidirectional Dual Band 3/4dBi MIMO 3 Element Antenna (J9171A)

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

HP Dual-Band Antenna Lightning Arrester (J8996A)



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