Data sheet

HP M220 802.11n Access Point Series

Key features

- IEEE 802.11a/b/g/n access point
- Single-radio, dual-band (2.4 GHz or 5 GHz)
- Simplified wireless LAN administration with clustering technology
- Powered by IEEE 802.3af PoE or included power supply
- Lifetime warranty

Product overview

HP M220 802.11n Access Points are dual-band, single-radio devices supporting high-speed wireless networking at 5 GHz or 2.4 GHz. They are fully compatible with the high-speed IEEE 802.11n wireless standard and backward-compatible for legacy IEEE 802.11a/b/g support. They can run standalone or can be "clustered" for simplified administration of multiple M220 access points. With clustering, configuration changes automatically propagate across all M220 access points in your network. Clustering technology requires no wireless controller or additional hardware, enabling you to keep your network easily accessible yet secure. HP M220 802.11n Access Points come with a lifetime warranty.

Features and benefits

Management

- **Centralized wireless LAN management (clustering)**
  - **Simplified access point management**
    configuration parameters enabled on one access point pass to all members (up to 10 APs) of the cluster, eliminating the need to individually configure each AP
  - **Auto channel planning**
    access points in a cluster are automatically assigned to a channel that reduces interference between adjacent APs
  - **Client connection list**
    access any member of the cluster to view information about clients connected to any clustered AP
- **Secure and easy-to-use Web UI**
  - **Quick setup page**
    consolidates key settings into one page for simple and rapid configuration for common deployment scenarios
  - **HTTPS secured management sessions**
    prevent management sessions from being observed on the network

Connectivity

- **Fully IEEE 802.11n-compliant dual-band access point**
  - **2.4 GHz frequency band support**
    uses your IEEE 802.11n wireless clients alongside legacy IEEE 802.11b/g devices
  - **5 GHz frequency band support**
    operates your IEEE 802.11n and 802.11a devices in the 5 GHz spectrum, which has less interference from microwave ovens, Bluetooth devices, and cordless phones
- **IEEE 802.3af PoE-powered device (PD) option**
  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 10/100/1000 port
- **Spanning Tree Protocol (IEEE 802.1D)**
  prevents network loops
- **IPv6 support**
  the M220 Access Point provides native support for IPv6, the newest version of the Internet Protocol, as well as the previous IPv4 standard

Mobility

- **Service-class segmentation**
  - **Up to eight SSIDs (one per wireless community)**
    allows administrator to identify multiple service sets for clients to access
  - **Up to eight VLANs (one per wireless community)**
    IEEE 802.1Q VLAN tagging provides security and traffic control between workgroups
- **Auto channel select**
  helps reduce radio co-channel interference by automatically selecting an unoccupied radio channel
- **Wireless Distribution System (WDS)**
  allows the M220 access point to connect wirelessly to other HP M220 access points without a wired backbone; this is useful for extending the network across areas where no wired infrastructure exists
- **Internal MIMO omni-directional antennas**
  provides omni-directional radio coverage without the need to manually adjust antenna placement
- **Interoperability**
  meets Wi-Fi Alliance certifications, including IEEE 802.11n Wi-Fi and WPA2 to help provide multivendor interoperability

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
- **RADIUS-based user authentication**
  authenticates a user with a RADIUS server based on user credentials
- **RADIUS-based MAC authentication**
  authenticates a wireless client with a RADIUS server based on the MAC address of the client; this is useful for clients with minimal or no user interface
- **RADIUS-based VLAN assignment**
  places wireless client on RADIUS-assigned VLAN
- **Secure Sockets Layer (SSL)**
  encrypts all HTTP traffic, allowing secure access to the browser-based management interface of the access point
- **Closed system**
  restricts broadcast of SSID as a security measure to conceal presence of the wireless network
- **Management password**
  provides security so that only authorized access to the Web browser interface is allowed
- **Wired Equivalent Privacy (WEP) using 64- and 128-bit encryption**
  provides backward compatibility for legacy clients

- **Rogue AP detection**
  identifies all access points in range; known or trusted access points can be saved, allowing network administrators to identify unauthorized access points
- **Local wireless bridge client traffic filtering**
  when enabled, prevents communication between wireless devices associated with the same access point

Warranty and support

- **Lifetime warranty**
  for as long as you own the product with advance replacement and next-business-day delivery (available in most countries)†
- **Electronic and telephone support**
  limited electronic and telephone support is available from HP; 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**.

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Specifications

	HP M220 802.11n AM Access Point (J9798A)	HP M220 802.11n WW Access Point (J9799A)
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 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
AP characteristics		
Radios	Single (a/b/g/n)	Single (a/b/g/n)
Radio operation modes	Client access, Client bridge	Client access, Client bridge
AP operation modes	Autonomous	Autonomous
Wi-Fi Alliance Certification	a/b/g/n Wi-Fi Certified	a/b/g/n Wi-Fi Certified
Physical characteristics		
	7.62(w) x 5(d) x 1.5(h) in (19.35 x 12.7 x 3.81 cm)	7.62(w) x 5(d) x 1.5(h) in (19.35 x 12.7 x 3.81 cm)
Weight	0.75 lb (0.34 kg)	0.75 lb (0.34 kg)
Enclosure	Indoor	Indoor
Environment		
Operating temperature	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)
Operating relative humidity	15% to 95% @ 104°F (40°C), noncondensing	15% to 95% @ 104°F (40°C), noncondensing
Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity	15% to 95% @ 149°F (65°C), noncondensing	15% to 95% @ 149°F (65°C), noncondensing
Altitude	up to 15,000 ft (4.6 km)	up to 15,000 ft (4.6 km)
Acoustic	Low-speed fan: 0 dB, High-speed fan: 0 dB (no fan)	Low-speed fan: 0 dB, High-speed fan: 0 dB (no fan)
Electrical characteristics		
Description	IEEE 802.3af PoE Compliant or included 110-240 V 50/60 Hz external power supply	1EEE 802.3af PoE Compliant or included 110-240 V 50/60 Hz external power supply
Voltage	100-240 VAC	100-240 VAC
Current	0.4 A	0.4 A
Maximum power rating	4.8 W	4.8 W
Antenna	Internal 2.4/5 GHz MIMO omni-directional antennas	Internal 2.4/5 GHz MIMO omni-directional antennas
Number of internal antennas	2	2
Frequency band and operating channels		
US	2.412 - 2.462 GHz (11 channels) 5.180 - 5.240 GHz (4 channels) 5.745 - 5.825 GHz (5 channels)	
European Union		2.412 - 2.472 GHz (13 channels) 5.180 - 5.240 GHz (4 channels) 5.500 - 5.700 GHz (8 channels)
Rest of World (Actual channels designated by selecting country in UI)		2.412 - 2.472 GHz (13 channels) 5.180 - 5.240 GHz (4 channels) 5.260 - 5.320 GHz (4 channels) 5.500 - 5.700 GHz (11 channels) 5.745 - 5.825 GHz (5 channels)
Radio	FCC Part 15.247; FCC Part 15.407 (no DFS); RSS-210, Issue 8; RSS-Gen, Issue 3	EN 300 328; EN 301-489-1; EN 301-489-17; EN 301 893 (EU); NCCLP0002 (Taiwan)
Safety	UL 60950-1 2nd Edition; CSA C22.2 No. 60950-1-07 2nd Edition	EN 60950-1; IEC 60950-1 (ed.2); IEC 60950-1 (ed.2): am1
RF Exposure	Canada RSS-102; FCC Bulletin OET-65 Supplement C	EN 50385
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.	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.

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Specifications (continued)

HP M220 802.11n AM Access Point (J9798A)	HP M220 802.11n WW Access Point (J9799A)

Radio characteristics:
HP M220 802.11n AM Access Point (J9798A)

IEEE 802.11n 5 GHz @ 20 MHz

Data rate	MCS 0 Mbps	MSC 7 Mbps	MSC 8 Mbps	MSC 15 Mbps
Receiver sensitivity	-86 dBm	-67 dBm	-86 dBm	-68 dBm
Transmit power	15 dBm	11 dBm	15 dBm	11 dBm

IEEE 802.11n 5 GHz @ 40 MHz

Data rate	MCS 0 Mbps	MCS 7 Mbps	MCS 8 Mbps	MCS 15 Mbps
Receiver sensitivity	-83 dBm	-64 dBm	-84 dBm	-65 dBm
Transmit power	15 dBm	11 dBm	15 dBm	11 dBm

IEEE 802.11n 2.4 GHz @ 20 MHz

Data rate	MCS 0 Mbps	MCS 7 Mbps	MCS 8 Mbps	MCS 15 Mbps
Receiver sensitivity	-87 dBm	-69 dBm	-86 dBm	-68 dBm
Transmit power	17 dBm	13 dBm	17 dBm	13 dBm

IEEE 802.11n 2.4 GHZ @ 40 MHz

Data rate	MCS 0 Mbps	MCS 7 Mbps	MCS 8 Mbps	MCS 15 Mbps
Receiver sensitivity	-84 dBm	-65 dBm	-84 dBm	-65 dBm
Transmit power	17 dBm	13 dBm	17 dBm	13 dBm

IEEE 802.11a

Data rate	6 Mbps	54 Mbps
Receiver sensitivity	-86 dBm	-71 dBm
Transmit power	15 dBm	11 dBm

IEEE 802.11b

Data rate	1 Mbps	11 Mbps
Receiver sensitivity	-96 dBm	-87 dBm
Transmit power	17 dBm	17 dBm

IEEE 802.11g

Data rate	6 Mbps	54 Mbps
Receiver sensitivity	-87 dBm	-72 dBm
Transmit power	17 dBm	13 dBm

Radio characteristics:
HP M220 802.11n WW Access Point (J9799A)

IEEE 802.11n 5 GHz @ 20 MHz

Data rate	MCS 0 Mbps	MCS 7 Mbps	MCS 8 Mbps	MCS 15 Mbps
Receiver sensitivity	-86 dBm	-67 dBm	-86 dBm	-68 dBm
Transmit power	15 dBm	11 dBm	15 dBm	11 dBm

IEEE 802.11n 5 GHz @ 40 MHz

Data rate	MCS 0 Mbps	MCS 7 Mbps	MCS 8 Mbps	MCS 15 Mbps
Receiver sensitivity	-83 dBm	-64 dBm	-84 dBm	-65 dBm
Transmit power	15 dBm	11 dBm	15 dBm	11 dBm

IEEE 802.11n 2.4 GHz @ 20 MHz

Data rate	MCS 0 Mbps	MCS 7 Mbps	MCS 8 Mbps	MCS 15 Mbps
Receiver sensitivity	-87 dBm	-69 dBm	-86 dBm	-68 dBm
Transmit power	17 dBm	13 dBm	17 dBm	13 dBm

HP M220 802.11n Access Point Series

Specifications (continued)

	HP M220 802.11n AM Access Point (J9798A)				HP M220 802.11n WW Access Point (J9799A)
IEEE 802.11n 2.4 GHz @ 40 MHz					
Data rate	MCS 0 Mbps	MCS 7 Mbps	MCS 8 Mbps	MCS 15 Mbps	
Receiver sensitivity	-84 dBm	-65 dBm	-84 dBm	-65 dBm	
Transmit power	17 dBm	13 dBm	17 dBm	13 dBm	
IEEE 802.11a					
Data rate	6 Mbps	54 Mbps			
Receiver sensitivity	-86 dBm	-71 dBm			
Transmit power	15 dBm	11 dBm			
IEEE 802.11b					
Data rate	1 Mbps	11 Mbps			
Receiver sensitivity	-96 dBm	-87 dBm			
Transmit power	17 dBm	17 dBm			
IEEE 802.11g					
Data rate	6 Mbps	54 Mbps			
Receiver sensitivity	-87 dBm	-72 dBm			
Transmit power	17 dBm	13 dBm			

HP M220 802.11n AM Access Point (J9798A)

MCS Index	800 nS		400 nS	
	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)

HP M220 802.11n AM Access Point (J9798A)			HP M220 802.11n WW Access Point (J9799A)	
HP M220 802.11n WW Access Point (J9799A)				
MCS Index	**800 nS**		**400 nS**	
	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

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.

To learn more, visit hp.com/networking

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