

# HP M210 802.11n Access Point Series



## Key features

- IEEE 802.11a/b/g/n Access Point (AP)
- Single-radio, dual-band (2.4GHz or 5GHz)
- Simplified wireless LAN administration with clustering technology
- Powered by IEEE 802.3af PoE or included power supply
- HP Lifetime Warranty 2.0

## Product overview

Ideal for small businesses, the HP M210 802.11n Access Points Series are dual-band, single-radio devices supporting high-speed wireless networking at 5GHz or 2.4GHz. Dual-band operation gives you flexibility to use the less congested 5.0GHz spectrum for better wireless performance, better user experience and faster delivery of mobile applications. They are fully compatible with the high-speed IEEE 802.11n wireless standard and backward-compatible for legacy IEEE 802.11a/b/g support.

HP M210 802.11n Access Points support standalone operation ideal for smaller sites, with “clustering” of up to 4 M210 Access Points, should additional access pointed be desired for better coverage. Clustering technology propagates wireless network configurations across all access points for consistent security and uninterrupted wireless client roaming. It simplifies network set-up for a small site should a second or third access point be installed to improve wireless connectivity. Clustering technology requires no wireless controller or additional hardware, enabling you to keep your network easily accessible.

HP M210 802.11n Access Points come with the HP Lifetime Warranty 2.0. This warranty provides next-business-day advance hardware replacement (in most countries), limited 24x7 telephone support is available from HP for the first 3 years, and limited electronic and business hours telephone support is available from HP for the entire warranty period.

## Features and benefits

### Management

- Centralized wireless LAN management
  - Simplified access point management
    - Configuration parameters enabled on one AP pass to all members (up to 4 APs) of the cluster, reducing the need to configure each AP individually.
  - Auto channel planning
    - APs 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 reduce the time and cost involved in supplying local power at each AP location.
- Spanning Tree Protocol (IEEE 802.1D)
  - Prevents network loops.
- IPv6 support
  - The M210 Access Point provides native support for IPv6, the newest version of the Internet Protocol (IP), as well as the previous IPv4 standard.

### **Mobility**

- Service-class segmentation
  - Up to 4 SSIDs
    - Allows administrator to identify multiple service sets for clients to access.
  - Up to 4 VLANs
    - IEEE 802.1Q VLAN tagging provides security and traffic control between workgroups.
  - SSID to VLAN mapping
    - Permits segmenting traffic on each SSID to a specific VLAN.
- Auto channel select
  - Helps reduce radio co-channel interference by automatically selecting an unoccupied radio channel.
- 2x3:2 MIMO support
  - Provides up to 300 Mbps performance and supports a maximum of 32 wireless clients per AP.
- Two internal MIMO omni-directional antennas
  - Provides excellent coverage through use of embedded high-gain antennas (4.56 dBi antenna at 2.4 GHz and 5.43 dBi antenna at 5 GHz); no need for the added cost of external antennas.
- Wireless Distribution System (WDS)
  - Allows the M210 802.11n Access Point to connect wirelessly to other HP M210 802.11n Access Points without a wired backbone; this is useful for extending the network across areas where no wired infrastructure exists.
- Interoperability
  - Meets Wi-Fi Alliance certifications, including IEEE 802.11n Wi-Fi and WPA2 to help provide multivendor interoperability.

### **Security**

- Rogue AP detection
  - Identifies all APs in range; known or trusted APs can be saved, allowing network administrators to identify unauthorized APs.
- Secure Sockets Layer (SSL)
  - Encrypts all HTTP traffic, allowing secure access to the browser-based management interface of the AP.
- Management password
  - Provides security so that only authorized access to the Web browser interface is allowed.
- 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.
- Closed system  
Restricts broadcast of SSID as a security measure to conceal presence of the wireless network.
- Wired Equivalent Privacy (WEP) using 64- and 128-bit encryption  
Provides backward compatibility for legacy clients.
- 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  
Prevents communication between wireless devices associated with the same AP.

#### **Warranty and support**

- HP Lifetime Warranty 2.0  
Advance hardware replacement for as long as you own the product with next-business-day delivery (available in most countries).
- Electronic and telephone support (for HP Lifetime Warranty 2.0)  
Limited 24x7 telephone support is available from HP for the first three years; limited electronic and business hours telephone support is available from HP for the entire warranty period. To reach our support centers, refer to [hp.com/networking/contact-support](http://hp.com/networking/contact-support); for details on the duration of support provided with your product purchase, refer to [hp.com/networking/warrantysummary](http://hp.com/networking/warrantysummary).

## HP M210 802.11n Access Point Series

### Specifications



|  | <b>HP M210 802.11n (AM) Access Point (JL023A)</b>   | <b>HP M210 802.11n (WW) Access Point (JL024A)</b>   |
|--|---|---|
| <b>I/O ports and slots</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); 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 |
| <b>AP characteristics</b>              |   |   |
| Radios (built-in)                      | 802.11a/b/g/n   | 802.11a/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   |
| 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   |
| <b>Physical characteristics</b>        |   |   |
| Dimensions                             | 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)   |
| <b>Mounting and enclosure</b>          | Indoor  | Indoor  |
| <b>Environment</b>                     |   |   |
| 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)  |

|   | <b>HP M210 802.11n (AM) Access Point (JL023A)</b>   | <b>HP M210 802.11n (WW) Access Point (JL024A)</b>   |
|---|---|---|
| <b>Electrical characteristics</b>                                     |   |   |
| Description   | IEEE 802.3af PoE Compliant or included 110-240 V 50/60 Hz external power supply   | IEEE 802.3af PoE Compliant or included 110-240 V 50/60 Hz external power supply   |
| AC voltage  | 100 - 240 VAC   | 100 - 240 VAC   |
| Current   | 0.4 A   | 0.4 A   |
| Maximum power rating  | 5.3 W   | 5.3 W   |
| PoE power   | 7 W PoE   | 7 W PoE   |
| <b>Notes</b>  |   |   |
|   | PoE Power is the power supplied by the internal power supply, it is dependent on the type and quantity of power supplies and may be supplemented with the use of a External Power Supply (EPS).<br>5.3 watts is the maximum power draw when the device is used with the included power adapter. | PoE Power is the power supplied by the internal power supply, it is dependent on the type and quantity of power supplies and may be supplemented with the use of a External Power Supply (EPS).<br>5.3 watts is the maximum power draw when the device is used with the included power adapter. |
| <b>Frequency band and operating channels</b>                          |   |   |
| US  | 2.412 - 2.462 GHz (11 channels)<br>5.180 - 5.240 GHz (4 channels)<br>5.745 - 5.825 GHz (5 channels)   |   |
| European Union  |   | 2.412 - 2.472 GHz (13 channels)<br>5.180 - 5.240 GHz (4 channels)<br>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)<br>5.180 - 5.240 GHz (4 channels)<br>5.260 - 5.320 GHz (4 channels)<br>5.500 - 5.700 GHz (11 channels)<br>5.745 - 5.825 GHz (5 channels)  |
| <b>Radio</b>  | 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)  |
| <b>Safety</b>   | UL 60950-1 2nd Edition;<br>CSA C22.2 No. 60950-1-07 2nd Edition   | EN 60950-1; IEC 60950-1 (ed.2); IEC 60950-1 (ed.2): am1   |
| <b>RF Exposure</b>  | Canada RSS-102; FCC Bulletin OET-65 Supplement C  | EN 50385  |
| <b>Services</b>   | Refer to the HP website at <a href="http://hp.com/networking/services">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.                 | Refer to the HP website at <a href="http://hp.com/networking/services">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 M210 802.11n (AM) Access Point (JL023A)****HP M210 802.11n (WW) Access Point (JL024A)****Radio characteristics:****HP M210 802.11n (AM) Access Point (JL023A)****HP M210 802.11n (WW) Access Point (JL024A)****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      |

**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 M210 802.11n (AM) Access Point (JL023A)****HP M210 802.11n (WW) Access Point (JL024A)****HP M210 802.11n (AM) Access Point (JL023A)****HP M210 802.11n (WW) Access Point (JL024A)**

| 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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[hp.com/networking](http://hp.com/networking)



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.

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