# BROCADE MOBILITY 7131 ACCESS POINT


## CAMPUS NETWORK

## The Industry's First 802.11n Access Point with Tri-Radio Design

### HIGHLIGHTS

- Maximizes wireless network throughput to support virtually any enterprise application, including voice and video
- Provides 24×7 network protection through instant identification and reporting of unauthorized users
- Supports mesh networking for extension of campus networks to remote or outdoor locations
- Enables site survivability for remote locations with 802.11a/b/g/n networks, providing unparalleled resiliency
- Simplifies provisioning of network services and public access

The 802.11a/b/g/n Brocade® Mobility 7131 Access Point provides the throughput, coverage, and resiliency required for wireless enterprises. The tri-radio expandable design simultaneously supports three major networking functions:

- High-speed wireless voice and data services for client access
- Self-healing mesh networking
- Non-data applications, including wireless Intrusion Prevention System (IPS) sensor functionality for protection of wireless and wired networks

Fully compliant with 802.11n Draft 2.0 Dynamic Frequency Selection (DFS), the Brocade Mobility 7131 delivers speeds of up to 600 Mbps—six times the bandwidth of an 802.11a/g access point. The adaptive architecture enables the device to offer two modes of operation without changing the firmware—as a standalone access point or as a wireless controller-adopted access point for centralized management. The ability for self-configuration in an 802.3af environment further simplifies deployment. The efficient yet elegant industrial design with an optional snap-on antenna façade enables enterprise-wide deployment—from the warehouse to the front lobby.

As a standalone access point, the Brocade Mobility 7131 provides small and medium-sized organizations with a consolidated wired and wireless networking infrastructure, all in a


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single device. The integrated router, firewall, Dynamic Host Configuration Protocol (DHCP), AAA, VPN, hotspot services, and Power over Ethernet (PoE) capabilities reduce the costs of networking by eliminating the need to purchase and manage multiple pieces of equipment.

## CENTRALLY MANAGED ACCESS POINT: ADAPTIVE MODE

The Brocade Mobility 7131 is designed to cost-effectively meet the needs of large, distributed enterprises by converging the functionality of a thick access point and thin access port into a single device. This mode enables the deployment of a full-feature, intelligent access point that can be centrally configured and managed via a Brocade wireless controller in either corporate headquarters or a Network Operations Center (NOC).

All traffic between the adaptive access points and the wireless controller is secured though an IPsec tunnel. In the event of a WAN, distribution, or core network failure, this fully independent configuration provides a Remote Site Survivability (RSS) feature to deliver secure uninterrupted wireless service in the remote location—offering unparalleled network resiliency.

In addition, a lower-cost, dependent-mode access point configuration is also available. While this model requires a central controller for normal operation, it also offers RSS capabilities, providing up to 72 hours of uninterrupted service in remote locations during network outages.

## COST-EFFECTIVE MESH NETWORKING IN CHALLENGING LOCATIONS

Mesh functionality enables cost-effective wireless network extension to areas where Ethernet or fiber cabling is cost-prohibitive or otherwise impractical. Mesh functionality includes multinode, multilink networks as well as simple point-to-point bridging to connect two wired networks. Self-healing capabilities help ensure continuity of service in the event of a wired or wireless network failure. In addition, the self-forming highly resilient, VLAN and WMM QoS-aware mesh technology enables organizations to wirelessly extend reliable high-performance voice and data services to workers in remote and outdoor locations.

## ENTERPRISE-CLASS SECURITY

The Brocade Mobility 7131 stateful firewall supports key standards-based security protocols that help ensure enterprise-level protection for the wired and wireless network infrastructure, as well as for data in transmission over the wireless LAN. Only authorized users can access the network, protecting the network perimeter and valuable resources.

The powerful feature set enables security administration by either local, non-technical staff or remote IT professionals at the headquarters or NOC. The Brocade Mobility 7131 is designed to function as a wireless IPS sensor, enabling automatic 24×7 monitoring of wireless networks.

## A FAST ROI

The multifunction, multipurpose Brocade Mobility 7131 provides a fast return on investment. It can be deployed as a standalone or centrally managed device to deliver wireless voice and data services, along with mesh backhaul and wireless IPS sensor functionality, in a single device. This built-in flexibility simplifies the mobility architecture because there is less equipment to purchase and manage—reducing capital and operational expenditures.

## SERVICES FOR AN END-TO-END SOLUTION

Brocade Global Services offers comprehensive customer support for Brocade enterprise wireless LAN products, including hardware and 24×7 software support, along with software updates and new releases.

## MAXIMIZING INVESTMENTS

To help optimize technology investments, Brocade and its partners offer complete solutions that include education, support, and services. For more information, contact a Brocade sales partner or visit www.brocade.com.

## BROCADE MOBILITY 7131 SPECIFICATIONS

| 802.11n Draft 2.0 capabilities | |
|---|---|
| Key features | 3×3 MIMO with two spatial streams<br>20 MHz and 40 MHz channels<br>300 Mbps data rates per radio<br>Packet aggregation (AMSDU, AMPDU)<br>Reduced inter-frame spacing<br>802.11 DFS<br>MIMO power save (static and dynamic) |

| Physical characteristics | |
|---|---|
| Dimensions | 5.50 in. L x 8.00 in. W x 1.10 in. H (13.97 cm x 20.32 cm x 2.79 cm) |
| Weight | 2.22 lbs. (9.98 kg) |
| Housing | Metal, plenum-rated housing (UL2043) |
| Available mounting | No additional hardware required |
| Configuration | Above drop ceiling, under ceiling, or on wall |
| LED indicators | Six top-mounted LEDs, one bottom-mounted LED, with multiple modes indicating 802.11a/g/n activity, power, Ethernet adoption, and errors |
| Antenna connectors | RP-SMA |
| Console port | RJ-45 Console Port |

| Environmental | |
|---|---|
| Temperature | Operating: -4°F to 122°F (-20°C to 50°C)<br>Non-operating: -40°F to 158°F (-40°C to 70°C) |
| Operating humidity | 5 to 95% RH non-condensing |
| Altitude | Operating: 8000 ft. (2438 m) at 82°F (28°C)<br>Non-operating: 15,000 ft. (4572 m) at 53°F (12°C) |
| Electrostatic discharge | 15kV air, 8kV contact |

| Power specifications | |
|---|---|
| Operating voltage | 36 to 57VDC |
| Operating current | Not to exceed 600mA at 48VDC |
| Integrated Power over Ethernet (PoE) | 802.3af, 802.3at (draft) |

| Radio specifications | | |
|---|---|---|
| Wireless medium | Direct Sequence Spread Spectrum (DSSS), Orthogonal Frequency Division Multiplexing (OFDM), and spatial multiplexing (MIMO) | |
| Network standards | 802.11a, 802.11b, 802.11g, 802.3, 802.11n Draft 2.0 | |
| Data rates supported | 802.11b/g: 1, 2, 5.5, 6, 9, 12, 18, 24, 36, 48, 54 Mbps<br>802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps<br>802.11n: MCS 0 to 15 up to 300 Mbps | |
| Operating channels | All channels from 4920 to 5825 MHz<br>Channels 1 to 13 (2412 to 2472 MHz)<br>Channel 14 (2484 MHz) Japan only<br>Actual operating frequencies depend on regulations | |
| Operating bands | **FCC**<br>2.412 to 2.462 GHz<br>5.150 to 5.250 (UNII -1)<br>5.725 to 5.825 (UNII -3)<br>5.725 to 5.850 (ISM)<br><br>**JAPAN**<br>2.412 to 2.484 GHz<br>4.900 to 5.000 GHz<br>5.150 to 5.250 GHz | **EU**<br>2.412 to 2.472 GHz<br>5.150 to 5.250 GHz<br>5.150 to 5.350 GHz<br>5.470 to 5.725 GHz<br>(country-specific) |
| Maximum available transmit power | 20 dBm | |
| Transmit power adjustment | 1 dB increments | |
| Antenna configuration | 3×3 MIMO (transmit and receive on all three antennas) | |

| Regulatory | |
|---|---|
| Product certifications | UL/cUL 60950-1, IEC/EN60950-1, UL2043, RoHS |
| Radio approvals | FCC (USA), Industry Canada, CE (Europe), TELEC (Japan) |

Receiver sensitivity

| Operating band | Operating modes | Data rate | Typical receive sensitivity per antenna in 3×3 configuration (dBm) |
|---|---|---|---|
| 2.4 GHz | 802.11b | 1 Mbps | -91.4 |
| | | 2 Mbps | -90.2 |
| | | 5.5 Mbps | -88.9 |
| | | 11 Mbps | -86.7 |
| 2.4 GHz | 802.11g | 6 Mbps | -89.6 |
| | | 9 Mbps | -89.5 |
| | | 12 Mbps | -89.3 |
| | | 18 Mbps | -87.5 |
| | | 24 Mbps | -85.1 |
| | | 36 Mbps | -81.3 |
| | | 48 Mbps | -77.7 |
| | | 54 Mbps | -76.4 |

## BROCADE MOBILITY 7131 SPECIFICATIONS (CONTINUED)

| Receiver sensitivity (continued) | Operating band | Operating modes | Data rate | Typical receive sensitivity per antenna in 3×3 configuration (dBm) |
|---|---|---|---|---|
| | 2.4 GHz | 802.11n Draft 2.0 (HT20) | MCS0 | -88.9 |
| | | | MCS1 | -87.6 |
| | | | MCS2 | -84.1 |
| | | | MCS3 | -82.0 |
| | | | MCS4 | -78.5 |
| | | | MCS5 | -75.2 |
| | | | MCS6 | -73.9 |
| | | | MCS7 | -71.9 |
| | | | MCS8 | -88.5 |
| | | | MCS9 | -85.8 |
| | | | MCS10 | -82.0 |
| | | | MCS11 | -80.0 |
| | | | MCS12 | -76.4 |
| | | | MCS13 | -73.0 |
| | | | MCS14 | -70.9 |
| | | | MCS15 | -68.6 |
| | 2.4 GHz | 802.11n Draft 2.0 (HT40) | MCS0 | -82.7 |
| | | | MCS1 | -80.3 |
| | | | MCS2 | -76.5 |
| | | | MCS3 | -75.9 |
| | | | MCS4 | -70.4 |
| | | | MCS5 | -68.9 |
| | | | MCS6 | -65.1 |
| | | | MCS7 | -63.3 |
| | | | MCS8 | -82.3 |
| | | | MCS9 | -79.1 |
| | | | MCS10 | -76.3 |
| | | | MCS11 | -75.8 |
| | | | MCS12 | -69.6 |
| | | | MCS13 | -68.4 |
| | | | MCS14 | -65.3 |
| | | | MCS15 | -61.5 |
| | 5 GHz | 802.11a | 6 Mbps | -89.0 |
| | | | 9 Mbps | -89.1 |
| | | | 12 Mbps | -89.9 |
| | | | 18 Mbps | -87.7 |
| | | | 24 Mbps | -84.7 |
| | | | 36 Mbps | -81.7 |
| | | | 48 Mbps | -77.5 |
| | | | 54 Mbps | -75.9 |

| Receiver sensitivity (continued) | Operating band | Operating modes | Data rate | Typical receive sensitivity per antenna in 3×3 configuration (dBm) |
|---|---|---|---|---|
| | 5 GHz | 802.11n Draft 2.0 (HT20) | MCS0 | -88.9 |
| | | | MCS1 | -87.3 |
| | | | MCS2 | -85.1 |
| | | | MCS3 | -82.2 |
| | | | MCS4 | -78.7 |
| | | | MCS5 | -74.6 |
| | | | MCS6 | -73.1 |
| | | | MCS7 | -71.6 |
| | | | MCS8 | -88.0 |
| | | | MCS9 | -85.5 |
| | | | MCS10 | -82.9 |
| | | | MCS11 | -80.5 |
| | | | MCS12 | -76.7 |
| | | | MCS13 | -72.5 |
| | | | MCS14 | -70.9 |
| | | | MCS15 | -68.9 |
| | 5 GHz | 802.11n Draft 2.0 (HT40) | MCS0 | -85.2 |
| | | | MCS1 | -83.1 |
| | | | MCS2 | -81.2 |
| | | | MCS3 | -78.5 |
| | | | MCS4 | -75.2 |
| | | | MCS5 | -71.4 |
| | | | MCS6 | -69.5 |
| | | | MCS7 | -67.7 |
| | | | MCS8 | -84.6 |
| | | | MCS9 | -82.2 |
| | | | MCS10 | -79.0 |
| | | | MCS11 | -76.6 |
| | | | MCS12 | -73.1 |
| | | | MCS13 | -68.9 |
| | | | MCS14 | -67.2 |
| | | | MCS15 | -65.2 |

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