

BROCADE MOBILITY 5181 ACCESS POINT



CAMPUS NETWORK

An Enterprise-Class 802.11a/b/g Outdoor Access Point

HIGHLIGHTS

- Provides a robust, reliable enterprise-class access point designed to withstand the physical elements in harsh outdoor environments
- Extends the reach of corporate networks in a highly cost-effective manner
- Simplifies management by enabling a flexible, mesh network design
- Integrates router, firewall, and DHCP server Wi-Fi multimedia Quality of Service (QoS) and voice prioritization in a single device

The Brocade® Mobility 5181 Access Point, specifically designed for outdoor use, provides enterprise-class wireless networking in harsh physical environments. In addition to a National Electrical Manufacturers Association (NEMA) 4X-modified housing, severe-weather features include integrated lightning arrestors, surge protectors, extreme temperature range operation, and a variety of antenna and power accessories.

A self-assembling, self-healing mesh capability supports Wi-Fi Multimedia (WMM) extensions to help ensure Quality of Service (QoS) while cost-effectively extending corporate networks beyond and between

buildings—with no need to install additional Ethernet cable or fiber. With integrated router, firewall, Dynamic Host Configuration Protocol (DHCP), AAA, and hotspot services, the Brocade Mobility 5181 provides a robust outdoor Wireless LAN (WLAN) solution.

When used as either an access port or a mesh node, the Brocade Mobility 5181 can operate wirelessly, even in harsh conditions. Organizations do not need to sacrifice security or manageability of outdoor applications—support for standards-based security protocols helps ensure enterprise-level network protection, while administration options provide simple, yet powerful management tools.



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COST-EFFECTIVE NETWORK EXTENSION IN HAZARDOUS LOCATIONS

The Brocade Mobility 5181 has the certifications required for safe operation in the hazardous environments commonly found in the petrochemical, oil and gas, aerospace, and utilities industries. It provides the real-time wireless voice and data connection required to help workers involved in inspecting and servicing mission-critical infrastructure improve their productivity and reduce errors. A real-time connection to plant machinery—such as sensors and metering devices that report temperature, humidity, pressure, and more—helps improve process control, optimizing operations and reducing costs.

The ability to support video in these challenging environments helps improve the safety of personnel and critical infrastructure. In addition, the dual-radio and mesh capabilities enable point-to-point bridges as well as complex multinode, multilink networks that are ideal for extending wireless voice and data services to remote locations.

MESH CAPABILITIES FOR SELF-HEALING WIRELESS LINKS

Using its mesh capability, the dual-radio Brocade Mobility 5181 can connect to other access points for data backhaul while providing network access to local users. Enabling an array of applications—from simple point-to-point bridges connecting two wired networks to complex multinode, multilink networks—this feature simplifies network extension to outdoor or remote locations.

The self-assembling and self-healing aspects of a mesh network make the network more flexible and easier to manage. This, combined with the straightforward configuration interface, greatly simplifies the deployment and maintenance of secure wireless networks of access points.

BUILT TO WITHSTAND THE HARSHTEST ELEMENTS

Because the Brocade Mobility 5181 is specifically designed for outdoor use in harsh conditions, it can withstand wind, rain, and extreme temperatures. It comes standard with integrated lightning arrestors and surge protection. The optional protective heavy weather mounting kit is designed to protect it from windblown debris at velocities of up to 130 mph, while the surge-protected power tap kit converts high voltage on light poles to low voltage in order to run the access point. In fact, Brocade offers everything required for a complete outdoor access point solution, including outdoor dual-band antennas and full product support capabilities.

ADAPTIVE CONTROLLER-ASSISTED MESH

The Brocade Mobility 5181 supports an adaptive mesh mode of operation in which the mesh access points can be centrally configured from the wireless controller. Local bridging of mesh traffic enables the mesh network to remain fully operational even if connectivity to the wireless controller is lost.

WIRELESS IPS SENSOR

The Brocade Mobility 5181 integrates with the AirDefense® Intrusion Prevention System (IPS) for Brocade Mobility sensor firmware, enabling organizations to deploy the access points with one radio configured for WLAN coverage and the second radio configured as a sensor for 24×7 compliance monitoring, rogue detection and termination, and troubleshooting. Dedicating a radio for this sensor helps ensure the highest level of security. The integrated sensor also eliminates the need for dedicated sensor hardware and associated cabling, thereby reducing the overall deployment cost.

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 5181 SPECIFICATIONS

| Physical characteristics | | Radio specifications | | | |
|--|---|-----------------------------------|--|----------------------------------|-----|
| Dimensions | 12 in. L × 8.2 in. W × 3.55 in. H (305 mm × 210 mm × 89 mm) | Wireless medium | Direct Sequence Spread Spectrum (DSSS) and Orthogonal Frequency Division Multiplexing (OFDM) | | |
| Weight | 5.50 lbs. (2.50 kg) | Network standards | 802.11a, 802.11b, 802.11g, 802.3 | | |
| Housing | Die-cast aluminum alloy; NEMA 4X-modified; IP56 | Data rates supported | 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54 Mbps | | |
| Available mounting configurations | Pole and wall mounting kit; protective heavy weather mounting kit; light pole power transformer kit | Operating channels | Channels 36 to 165 (5180 to 5825 MHz); channels 1 to 13 (2412 to 2472 MHz) Actual operating frequencies depend on regulatory rules and certification agency | | |
| Plenum-rated | No | Operating bands | FCC | EU | |
| LED indicators | Two ports (WAN, LAN) auto-sensing 10/100 Base-T Ethernet | | 2.400 to 2.4835 GHz | 2.400 to 2.4835 GHz | |
| | | | 5.150 to 5.250 GHz ^{1*} | 5.150 to 5.250 GHz ^{1*} | |
| | | | 5.725 to 5.850 GHz | | |
| | | | <i>* Indoor use only</i> | | |
| | | Receiver sensitivity | Radio .11a (dBm) | 6 Mbps | -91 |
| | | | 10% PER for 1000 bytes | 9 Mbps | -89 |
| | | | IEEE 802.11a sect | 12 Mbps | -87 |
| | | | 17.3.10.1 (min.) and | 18 Mbps | -83 |
| | | | 17.3.10.4 (max.) | 24 Mbps | -81 |
| | | | | 36 Mbps | -78 |
| | | | | 48 Mbps | -74 |
| | | | | 54 Mbps | -73 |
| | | | Radio .11g (dBm) | 6 Mbps | -89 |
| | | | 10% PER for 1000 bytes | 9 Mbps | -88 |
| | | | IEEE 802.11g sect | 12 Mbps | -85 |
| | | | 19.5.1 (min.) and | 18 Mbps | -82 |
| | | | 19.5.3 (max.) | 24 Mbps | -80 |
| | | | | 36 Mbps | -77 |
| | | | | 48 Mbps | -72 |
| | | | | 54 Mbps | -70 |
| | | | Radio .11a (dBm) | 11 Mbps | -84 |
| | | | 8% PER for 1024 bytes | 5.5 Mbps | -88 |
| | | | | 2 Mbps | -90 |
| | | | | 1 Mbps | -94 |
| | | Available transmit power settings | 4-20 dBm | | |
| | | Antenna protection | Transient IEEE 61000-4-4, level 4, EFT; Surge IEEE 61000-4-5 Class 5, 1.2x50uS, and 8x20uS Waveform | | |
| Regulatory | | | | | |
| Standards compliance | 802.11a/b/g, 802.11i, WPA2, WMM, UAPSD | | | | |
| Product certifications | UL/cUL 60950-1, IEC/EN60950-1 | | | | |
| Radio approvals | FCC (USA), Industry Canada, CE (Europe) | | | | |
| Hazardous safety rating | | | | | |
| Class 1, Div 2 (Groups A, B, C, and D) | | | | | |

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| Weight | 5.50 lbs. (2.50 kg) |
| Housing | Die-cast aluminum alloy; NEMA 4X-modified; IP56 |
| Available mounting configurations | Pole and wall mounting kit; protective heavy weather mounting kit; light pole power transformer kit |
| Plenum-rated | No |
| LED indicators | Two ports (WAN, LAN) auto-sensing 10/100 Base-T Ethernet |

| Environmental | |
|-------------------------|--|
| Temperature | Operating: -22 °F to 131 °F (-30 °C to 55 °C) Non-operating: -40 °F to 185 °F (-40 °C to 85 °C) |
| Operating humidity | 5% to 95% (without condensation) |
| Altitude | Operating: 8000 ft. (2438 m) Non-operating: 15,000 ft. (4572 m) |
| Electrostatic discharge | IEEE 61000-4-2, 20kV air, 8kV contact |
| Weather rating | IP56 weather-tight, NEMA 4X (see Housing) |
| Wind survivability | Greater than 170 mph, 148 knots (without antenna) |
| Wind loading (165 mph) | Less than 60 lbs., 267 Newtons (without antenna) |
| Shock and vibration | MIL-STD-810F method 514 procedure 1 |
| Transportation/cargo | ASTM D775-80 D4169 level 3 |

| Power specifications | |
|--------------------------------------|------------------------------|
| Operating voltage | 48VDC |
| Operating current | 280mA |
| Integrated Power over Ethernet (PoE) | 802.3af mid-span on LAN Port |

Corporate Headquarters

San Jose, CA USA
T: +1-408-333-8000
info@brocade.com

European Headquarters

Geneva, Switzerland
T: +41-22-799-56-40
emea-info@brocade.com

Asia Pacific Headquarters

Singapore
T: +65-6538-4700
apac-info@brocade.com

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