



AP1000 SERIES

Dual or Single Radio 802.11n Access Point

With the AP1000 802.11n wireless access point, Meru redefines what is possible in the distributed enterprise by taking an uncompromising approach to world-class connectivity and performance while meeting aggressive budget requirements.

- Businesses rely on connectivity, and the AP1000 is engineered to provide the world's most reliable mobile connectivity.
- Supporting both the 2.4 GHz and 5 GHz spectrum, and backwards compatible with 802.11a, 802.11b, and 802.11g, the AP1000 is an ideal solution to transition your network to 802.11n without leaving your legacy clients behind.
- The AP1000 features zero-touch configuration and optimization of airspace for warehousing, manufacturing, and remote schools, offices, or retail branches.
- Stop worrying about the RF plan and how to maintain it: the AP1000 eliminates the need for RF planning at remote sites at installation, or if the remote site is reconfigured.
- Ceiling or wall mounting with a security lock allows for the most flexible mounting options available.

Product Features

- Plug-and-play deployment using centralized Meru controller
- Powered by a standard 802.3af power source
- Supports 802.11a/b/g/n devices
- 802.11n support in both 2.4 GHz and 5 GHz frequency bands using 40 MHz channel bonding

Feature	AP1010i AP1010e	AP1020i AP1020e
Maximum Data Rate ¹	300 Mbps	600 Mbps
Connectivity	128 clients	254 clients

¹Maximum data rate requires 40 MHz channel bonding.

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TECHNICAL SPECIFICATIONS

SECURITY

Authentication

Combination of captive portal, 802.1x, and open authentication
Advanced security using WPA2
802.1x with EAP-Transport Layer Security (EAP-TLS), Tunneled TLS (EAP-TTLS), Protected EAP (PEAP) MS-CHAPv2, Smartcard/Certificate, Lightweight EAP (LEAP), EAP-FAST and EAP-MD5, with mutual authentication and dynamic, per user, per session unicast and broadcast keys
Secure HTTPS with customizable captive portal utilizing RADIUS

Encryption Support

Static and dynamic 40-bit and 128-bit WEP keys, TKIP with MIC, AES

Security Policy

RADIUS-assisted, per user and per ESSID Access control via MAC filtering
Multiple ESSID/BSSID, each with flexibility of separate and shared security policy

Rogue Detection and Suppression

All radios capable of scanning 802.11n, 802.11a, and 802.11b/g for rogue devices

MOBILITY

Zero-loss Handoffs Infrastructure-controlled zero-loss handoff mechanism for standard Wi-Fi clients
Preemptive roaming and load balancing with band steering is built in by design

CENTRALIZED MANAGEMENT

Zero-configuration

Automatically selects power and channel settings
Automatically discovers controllers and downloads configuration settings
Zero-touch, plug-and-play deployments

System Management

Centralized and remote management and software upgrades via System Director web-based GUI, SNMP, command line interface (CLI) via serial port, SSH, Telnet, centrally managed via E(z)RF™ Management Suite
Centralized security policy for WLAN, multiple ESSIDs and VLANs with their own administrative/security policies

Intelligent RF Management

Coordination of access points with load balancing for predictable performance
Centralized auto-discovery, auto-channel configuration, and auto-power selection for APs
Co-channel interference management

WIRELESS SPECIFICATIONS

Wireless Standards

IEEE 802.11 a/b/g/n, IEEE 802.11i support (AES, WEP, WPA, WPA2), IEEE 802.11e, WMM

Power Management

Ability to disable unused radios via software to lower power consumption

AP1000i Antenna

Internal, MIMO, Dual Band, Omni-directional antennas.
Antenna Gain - 4.0 dBi for 2.4 GHz and 5.0 dBi for 5 GHz. (Antenna gain not included in Average Transmit Power specified) Beam Width - Azimuth = 360 degrees, Elevation ~ 110 degrees

AP1000e Antenna

Extended RPSMA connectors with off-white Omni-directional antennas included

Client Support

Support for clients that perform active scanning and passive scanning
Support for clients that pre-authenticate
Support for clients that change to and from power save mode rapidly
Power save mode for mobile battery operated clients

IEEE802.11

Frequency Band

802.11bgn: 2.412 to 2.472 GHz, 13 channels
802.11an: 5.18 to 5.320 GHz, 8 channels; 5.500 to 5.700 GHz, 8 channels (excluding 5.600 to 5.640 GHz); 5.745 to 5.825 GHz, 5 channels

Operating Channels

802.11bgn: 1-11 US/Canada, 1-13 Europe, 1-13 Japan (AP1020i 2nd radio works for channel 14), non-overlapping channels
802.11an: 5 GHz Band: 36 through 165
5.180-5.240 GHz, 8 channels (36, 38, 40, 42, 44, 46, 48); 5.280-5.320 GHz; 4 channels (52, 56, 60, 64); 5.745-5.825 GHz, 5 channels (149, 153, 157, 161, 165); 5500-5700: 11 channels (100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140)

Data Rates(Mbps)

802.11b data rates: 11, 5.5, 2, and 1 Mbps with automatic rate adaptation
802.11g and 802.11a data rates: 54, 48, 36, 24, 18, 12, 9, 6, Mbps with automatic rate adaptation
802.11n+20: 130, 117, 104, 78, 65, 58.5, 54, 52, 48, 39, 36, 26, 24, 19.5, 18, 13, 12, 11, 9, 6.5, 5.5, 2, 1 Mbps
802.11n+40: 300, 270, 243, 216, 162, 135, 121.5, 108, 81.5, 81, 54, 48, 40.5, 36, 27.5, 27, 24, 18, 13.5, 12, 11, 9, 6, 5.5, 2, 1 Mbps with automatic rate adaptation

Average Transmit Power

802.11b 18 dBm, 802.11g 17 dBm
2.4n (20HT): 16 dBm, 2.4n (40HT): 16 dBm
802.11a 17 dBm
5.0n (20HT): 15 dBm, 5.0n (40HT): 15 dBm

Receive Sensitivity at highest data rates

802.11b = -89 dBm
802.11g = -74 dBm
802.11g(n+20) = -70 dBm
802.11g(n+40) = -70 dBm
802.11a = -68dBm
802.11a(n+20) = -67 dBm
802.11a(n+40) = -67 dBm

PHYSICAL SPECIFICATIONS

AP1010i and AP1020i Dimensions

171mm wide x 171mm deep x 57mm high
6 3/4" wide x 6 1/2" deep x 2 1/2" high

AP1010i Weight

437 grams / 15.4 oz.

AP1020i Weight

457 grams / 16.2 oz.

AP1010e Dimensions

161mm wide x 114mm deep x 38mm high
6' 1/3" wide x 4' 1/2" deep x 1' 1/2" high

AP1020e Dimensions

167mm wide x 114mm deep x 38mm high
6' 1/2" wide x 4' 1/2" deep x 3' 1/2" high

AP1010e Weight

494 grams / 17.4 oz.

AP1020e Weight

512 grams / 18.1 oz.

Power

802.3af PoE or 802.3at
Draws 9.5W (two radio operation)

Environmental

Operating Temperature: 0° to 50° C (32° F to 122° F)
Operating Humidity: 90% (non-condensing)
Storage Temperature: -10° to +70° C ambient Storage
Humidity: 95% (non-condensing)

Interfaces

1 Auto sensing 10/100/1000 Base-TX Ethernet (RJ-45) Dual-band Radios support a combination of 802.11n, 802.11a, 802.11b, 802.11g
1 RJ45 console port (reserved for future use)
2 LEDs for monitoring power, Ethernet activity, 802.11 activity and 802.11 receive
1 USB port

Standard warranty

Limited lifetime warranty

AP1000 Series Part Numbers

AP1010i Single radio 802.11a/b/g/n AP, includes integrated dual band 802.11 b/g/n antennas

AP1020i Dual radio 802.11a/b/g/n AP, includes integrated dual band 802.11a/b/g/n antennas

AP1010e Single radio 802.11b/g/n AP with external antenna connectors. Includes separate dual band 802.11b/g/n antennas

AP1020e Dual radio 802.11a/b/g/n AP with external antenna connectors. Includes separate dual band 802.11a/b/g/n antennas

Certifications

Standards Safety

UL 60950-1
CAN/CSA-C22.2 No. 60950-1
IEC 60950-1

For full radio approvals, please contact your local Meru representative.

Meru Networks develops and markets wireless infrastructure solutions that enable the All Wireless Enterprise. Its industry-leading innovations deliver pervasive, wireless service fidelity for business-critical applications to major Fortune 500 enterprises, universities, healthcare organizations, and local, state, and federal government agencies. Meru's award-winning Air Traffic Control® technology brings the benefits of the cellular world to the wireless LAN environment, and its WLAN System is the only solution on the market that delivers predictable bandwidth and over-the-air quality of service with the reliability, scalability, and security necessary to deliver converged voice and data services over a single WLAN infrastructure.



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