Data Sheet

Meru AP300 Access Point

Dual Radio 802.11n Access Point

AP300

Key Product Benefits:

- Best investment protection; upgrade to 11n with software—no need to change out radios
- Interoperable with all 802.11 devices
- Best performance in mixed 802.11n and 802.11a/b/g environments
- Draft 2.0 802.11n support in both 2.4GHz and 5GHz frequency bands using 40MHz channel bonding
- Dual-band External Antenna options optimized for MIMO
- Plug and Play deployment using centralized Meru Controller platforms
- Multi-layered security including standards based WPA2 security and automatic 802.11n rogue detection out of the box
- Powered by a standard 802.3af power source, no need for high power devices

Highest-Performance Access Point for Large Converged Voice, Video and Data Wireless Networks

The Meru AP300 Series Access Point is the industry's first 802.11n AP delivering high performance and full speed draft 2.0 802.11n while simultaneously supporting legacy 802.11a/b/g devices. As a key component of Meru's unique channel spanning architecture, the AP300 provides the maximum coverage for 802.11n without compromising performance or network capacity. This software upgradeable access point allows enterprises to reap the benefits of 802.11n wireless technology today, while providing flexible and simple deployment options. This flagship access point is available in three different configurations:

- AP320: Dual 802.11n radio with 3x3 MIMO antenna array.
- AP310: Single 802.11n radio with 3x3 MIMO antenna array.
- AP311: Dual radio with one 802.11n radio with 3x3 MIMO and one 802.11a/b/g radio (a/b/g radio is field upgradable to 802.11n via software).
- AP302: Dual 802.11abg radios, software upgradeable to 11n.
- AP301: Single 802.11abg radio, software upgradeable to 11n.

The AP300 is ideally suited for enterprises with bandwidth intensive applications and for businesses that simultaneously require high capacity, scale and speed from their wireless network. The Meru AP300 is the only Enterprise Class AP allowing customers to protect their investment in legacy 802.11b/g client infrastructure by enabling both 802.11n and 802.11b/g on the same AP without compromising speed, performance and capacity using Meru's Air Traffic Control™ technology.

Product Overview:

- Air Traffic Control technology provides high performance full-speed draft 2.0 802.11n while supporting legacy a/b/g devices, allowing the WLAN to effectively meet bandwidth demands and support the highest possible wireless client density.
- 3x3 MIMO (Multiple Input, Multiple Output) technology delivering up to 300 Mbps data rates with flexible configuration options.
- When combined with a Meru Controller, there is no need for complex channel planning , enjoy zero touch configuration for simple and easy deployment.
- WiFi Certified Enterprise Class solution supports advanced security using WPA2, WMM Quality of Service and multiple powering options including PoE.
- Only AP in the industry that enables deploying 11n in 2.4GHz with higher speed 40MHz, enabling full 300 Mbps speeds.
- Only AP in the industry to provide ultimate flexibility for migrating to 802.11n. Buy abg now, upgrade to 11n in the future with additional software license. No new hardware needed. No need to physically touch the AP.
- Flexible hardware allows multiple deployment options with both radios dual-band capable (2.4 GHz and 5GHz). Deployment options with both radios enabled include an+bgn, bg+an, bgn+a. Also capable of supporting an+an, bgn+bgn.
- Both radios may be simultaneously powered by standard 802.3af PoE, protecting investments in wired infrastructure while providing up to 300 Mbps data rates.

About Meru Networks

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.

AP300

Technical Specifications

For more information about the Meru AP300, visit: www.merunetworks.com

Or email your questions to: info@merunetworks.com

AP300 PART NUMBERS	
MN-AP310	Single radio 802.11a/b/g/n AP, includes three dual band 802.11a/b/g/n omni-directional antennas
MN-AP311	Dual radio 802.11a/b/g/n AP with one a/b/g radio and one a/b/g/n radio, includes six dual band 802.11a/b/g/n omni-directional antennas*
MN-AP320	Dual radio 802.11a/b/g/n AP, includes six dual band 802.11a/b/g/n omni-directional antennas
MN-AP302	Dual radio 802.11n capable AP with two 802.11a/b/g/n radios, includes 6 dual band 802.11a/b/g/n omni-directional antennas*
MN-AP301	Single radio 802.11n capable AP with one 802.11a/b/g/n radio, includes 3 dual band 802.11a/b/g/n omni-directional antennas.*

*a/b/g radios are software upgradable to a/b/g/n in the future

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APPLICATION SUPPORT AND OVER-THE-AIR QoS

SIP and H.323 support	Dynamic out of the box support for SIP and H.323v1 applications and codecs
QoS	Configurable dynamic QoS rules Over-the-air resource reservation
	Automatic, stateful flow detectors for SIP, H.323, Cisco SCCP, SpectraLink SVP and Vocera
	User-configurable static and dynamic QoS rules per application (user-defined) and per user (stations, users, and port numbers)
	Call Admissions Control and Call Load Balancing
	WMM Support

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 w/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 Suppresion	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

CENTRALIZED MANAGEMENT

Zero-Configuration	Automatically selects power and channel settings
	Automatically discovers controllers and download 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 EzRF Management Suite
	Centralized Security Policy for WLAN, Multiple ESSIDs and VLANs with their own administra tive/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	Optimal power control in 1 dBm increments
	Ability to disable unused radios via software to lower power consumption
Antenna	Standard multiband, omni-directional white antenna (included)
	Standard Antenna Gain~ 2.2 dBi for 2.4 GHz, and 3 dBi for 5 GHz. Antenna gain not included in Avg Transmit Power specified
	RP SMA connectors for external antenna options
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 clients in both QoS mode and non-QoS mode

IEEE802.11n

Frequency Band	2.402 to 2.485 GHz, 5.15 to 5.25 GHz, 5.725 to 5.825 GHz
Operating Channels	1 through 11 for 2.4 GHz band
	32 through 160 for 5 GHz band
Data Rates (Mbps)	20MHz: 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
	40 MHz: 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 adaption
Avg Transmit Power	2.4n (20 HT): 17 dBm, 2.4n (40 HT): 16 dBm 5.0n (20 HT): 18 dBm, 5.0n (40 HT): 16 dBm
Receive Sensitivity (for max data rates)	11a: -81 dBm, 11n (5GHz) –72 dBm, 11g: -83 dBm, 11n (2.4GHz): -74 dBm

IEEE802.11a

Frequency Band	5.180 – 5.240 GHz; 8 Channels (34,36,38,40,42,44, 46,48), 5.280 – 5.320 GHz; 4 Channels (52, 56, 60 and 64), 5.745 -5.825 GHz; 5 Channels (149, 153, 157, 161, and 165), 5500-5700: 11 channels 100,104,108,112,116, 120,124,128, 132,136,140
Operating Channels	Configurable based on country regulations
Data Rates	54, 48, 36, 24, 18, 12, 9 and 6 Mbps with automatic rate adaptation
Avg Transmit Power	17 dBm
Receive Sensitivity	-81 dBm at 54 Mbps

IEEE802.11b/g

Frequency Band	Hardware supports 2.40-2.50 GHz: • 2.4 GHz – 2.4835 GHz (US, Europe) • 2.4 GHz – 2.497 GHz (Japan only)
Operating Channels	1-11 US/Canada, 1-13 Europe and 1-14 Japan 3 non-overlaping channels
Avg Transmit Power	17 dBm
802.11b Data Rates	11, 5.5, 2 and 1 Mbps with automaticrate adaptation
802.11g Data Rates	54, 48, 36, 24, 18, 12, 11, 9, 6, 5.5, 2, 1 Mbps
802.11b Receive Sensitivity	-94 dBm at 1 Mbps
802.11g Receive Sensitivity	-83 dBm at 54 Mbps

PHYSICAL SPECIFICATIONS

Dimensions	9 7/8" X 6 7/8" X 1 1/16 " (25 cm x 17.5 x 2.7 cm)
Weight Packaging	3lbs (1.36 kgs) without packaging
Power	802.3af PoE, 802.3 at (draft)
	5V DC input
	Draws 11.5W to 17W depending on configuration
Environmental	Operating temp 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 any combination of 802.11n, 802.11a, 802.11b, 802.11g
	3-6 External antenna interfaces (reverse polarity SMA)
	Kensington MicroSaver Lock compatible
	1 RJ45 console port (Reserved for future use)
	5 LEDs for monitoring power, Ethernet activity, 802.11 activity and 802.11 receive
Plenum	Compliant for installation in plenum and air handling spaces
Standard Warranty	Hardware1 year; Software 90 days