

Data Sheet

Meru AP440 Access Point Four Radio 802.11n Access Point



AP440

Key Product Benefits:

- Four 802.11abgn radios for highest capacity and network resiliency
- Optimised performance in mixed 802.11a/b/g/n environments
- Investment protection with standard power and radio modularity
- Adaptive power management system for multiple power options: external power supply or single high power PoE (802.3at) or two standard 802.3af sources
- Integrated USB host for application flexibility
- Lowest cost per square foot of coverage
- Enterprise Mesh capable for high bandwidth wireless backhaul

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

The Meru AP440 Access Point is the industry's highest capacity 802.11abgn AP delivering the highest throughput and best performance. This four-radio IEEE 802.11n draft 2.0 compliant access point provides the data rates and functionality to let enterprises replace aging wired infrastructures with wireless networks without compromising access speed, throughput capacity, security or resiliency. Each of the AP440's four IEEE 802.11n radios supports access at up to 300 megabits per second (Mbps), for total of 1.2 gigabit-per-second (Gbps) aggregate capacity. Because the four radios work together to provide RF robustness, load-balancing and security, enterprise users can dramatically reduce the number of access points and additional security sensors they need, realizing significant savings on cabling, connection and deployment/installation costs.

Product Overview:

- Air Traffic Control technology provides high performance full-speed 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.
- Unique design with four 802.11abgn radios supports up to 512 clients per AP and offers up to 1.2Gbps data rates with layered channels
- Multiple radios and integrated USB hosts enable the greatest application flexibility
- All four radios may be simultaneously powered by standard 802.3af PoE for investment protection of the wired core
- Enables deployment of 802.11n using 40 MHz channel in 2.4 GHz spectrum enabling full 300 Mbps speed
- Enterprise Class solution includes integrated dual band 2.4/5 GHz radio for simultaneous serving and scanning of traffic on all channels for complete security
- Integrated multi radio antenna provides interference free operation for 3 radios with external antenna options for the 4th radio
- Uniquely designed hinge allows for flexible orientation of the antenna for either 180 degree or 360 degrees of coverage based on deployment requirements
- Part of the Meru Mobile SCALE™ Solution which includes Meru Controller platforms and Access Points without the need for complex channel planning and zero touch configuration for simple and easy deployment
- By eliminating the need for multiple APs and associated deployments costs, the Meru AP440 delivers the lowest cost per square foot of coverage, enabling the All Wireless Enterprise
- Modular AP design allows swapping out radios to provide investment protection from future standard changes or new radio card design
- Dual gigabit ethernet ports provide link level redundancy for true redundancy

About Meru Networks

Meru Networks is the global leader in 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 state, local and federal government agencies. Meru's award winning Air Traffic Control technology brings the benefits of the cellular world to the wireless LAN environment. The Meru Wireless LAN 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 for converged voice and data services over a single WLAN infrastructure.



AP440

Technical Specifications

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

Or email your questions to: info@merunetworks.com

AP440 PART NUMBER	
MN-AP440	Four radio 802.11n capable AP with four 802.11a/b/g/n radios

APPLICATION SUPPORT AND OVER-THE-AIR QoS

SIP and H.323 support	Support for SIP and H.323v1 applications and codecs
QoS Rules	Configurable dynamic QoS rules Over-the-air upstream and downstream 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

SECURITY

Authentication Support	Combination of captive portal, 802.1x and open authentication 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 128
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	Any radio can scan 802.11n, 802.11a and 802.11b/g for rogues

MOBILITY

Zero-loss Handoffs	Infrastructure-controlled zero-loss handoff mechanism for standard Wi-Fi clients
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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, Cisco-like 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 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 access points Co-channel interference management

WIRELESS SPECIFICATIONS

Wireless Standards	IEEE 802.11 a/b/g/n, IEEE 802.11i (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
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 Sleep Mode drivers for Wi-Fi voice handsets

IEEE802.11n

Frequency Band	2.402 to 2.485 GHz, 5.15 to 5.25 GHz, 5.725 to 5.825 GHz
Operating Channels	2.4GHz band: 1 through 14 5 GHz band: 32 through 160
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 adaptation

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

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-overlapping channels
802.11b Data Rates	11, 5.5, 2 and 1 Mbps with automatic rate adaptation
802.11g Data Rates	54, 48, 36, 24, 18, 12, 11, 9, 6, 5.5, 2, 1 Mbps

PHYSICAL SPECIFICATIONS

Dimensions	11.75" x 11.75" x 2.5" without mounting bracket 11.75" x 11.75" x 3.75" with mounting bracket
Weight	4 lbs (with bracket)
Power	30W, IEEE 802.3at PoE compatible 48V DC input, 1A
Environmental	Operating temp 0° to 50° C (32° F to 122° F) Operating Humidity: 90% (non condensing) at 40 degrees C Storage Temperature: -10° to +70° C ambient Storage Humidity: 95% (non condensing)
Interfaces	Two Auto Sensing 10/100/1000 Base-TX Ethernet (RJ-45) Four Radios supporting 802.11n, 802.11a, 802.11b, 802.11g 3 External antenna interfaces (reverse polarity SMA) 1 RJ45 console serial port (Reserved for engineering use) Kensington Lock compatible Tamper proof bracket locking mechanism Tool Free Mounting bracket USB 2.0 Host interface with 2.5W power draw.
Antenna	Aesthetically designed and integrated Omni Directional interference-free multi-radio antenna using 3x3 MIMO. Supports 3 MIMO radios within a single unit providing 4dBi gain for 2.4 and 5.0 spectrums Externally mounted 3 dual-band omni-directional patch antenna for Radio4, providing 4dBi gain for 2.4 and 5.0 spectrums
Indicators	7 LEDs total, 1 for monitoring power, 2 for Ethernet activity, 4 for 802.11 activity
Standard Warranty	Hardware 1 year; Software 90 days



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