MERU®

OAP832e DATA SHEET

802.11ac, Dual-radio, Three-stream Wi-Fi Outdoor Access Point

High-performance wireless connectivity for high-density and outdoor environments

The OAP832e is an 802.11ac outdoor access point (AP) capable of supporting a variety of external antennas. Designed for high-density deployments such as stadiums, arenas, university campuses, hospitals, convention centers, and warehouses. The OAP832e supports an aggregate 1.75 Gbps data rate for demanding business applications like video and voice.

The OAP832e access point allows administrators to prioritize applications with Meru's unique channel-layering technology to improve the user experience. For schools, this means Learning Management System applications can be assigned to a dedicated channel layer, while online classroom video feeds can be carried on another channel layer. For healthcare, life-critical applications such as patient monitoring can be dynamically assigned to one channel layer, doctor and nursing applications to a second layer, and patient applications to a third.

The OAP832e also provides unique roaming support because Meru enables the network (not the client) to control AP client hand-off via our Air Traffic Control® technology, resulting in the industry's lowest roaming latency figures– a true zero-handoff.

Additionally, Meru's single-channel technology allows the OAP832e to leverage the 802.11ac design for pervasive, real-world deployments of 80MHz channels, effectively doubling the available data rate and dramatically increasing throughput.

As with other Meru APs, the OAP832e integrates seamlessly with Meru Center, Meru Connect, Spectrum Manager, and other applications to bring intelligent management and resilient wireless services to your network.

Features	Benefits
• Dual radio, three-stream IEEE 802.11ac AP with 2.4GHz and 5GHz support. Supports multiple operating modes: centralized, distributed, mesh, bridged, and VPN tunnel • Integrates with Meru controllers and management software applications • Supports omni-directional, low beam-width, and high beam-width antennas for a variety of applications	• Provides an optimized 802.11ac experience with Very High Throughput (VHT) capabilities • Delivers seamless mobility, with no channel planning • Offers flexible deployment options for different customer requirements • Offers full management and security assurances

MANAGEMENT
- Centrally managed by any Meru controller running System Director
- Automatically discovers controllers and downloads configuration settings for plug-and-play deployment
- Upgrades and management using System Director / Network Manager
- Support for SNMP

OPERATING MODES
- Centralized deployment mode
- Distributed deployment mode
- Remote VPN tunnel mode

SECURITY
- WEP, WPA-PSK, WPA-TKIP, WPA2-AES, 802.11i, 802.1X (EAP-TLS, EAP-TTLS, PEAP, LEAP, EAP-FAST, EAP-SIM, EAP-AKA, and EAP-MD5)
- 802.1X and captive portal authentication against local database on the controller, RADIUS, and Active Directory
- RADIUS-assisted per-user and per-ESSID access control via MAC filtering

WIRELESS SPECIFICATIONS
Model Introduction
OAP832e IEEE802.11a/b/g/n/ac access point
- Dual radio with six N-type connectors for external antennas

Supported Radio Technologies
- 2.4GHz and 5GHz radio access point
- 3x3:3SS (three spatial streams)
- Outdoor application
- Supported 2.4 GHz (TurboQAM Mode)
- Supported transmit beam-forming (TxBF)
- IEEE Std 802.11ac standard
- IEEE Std 802.11n/ac with Orthogonal Frequency Division Multiplexing (OFDM)
- IEEE Std 802.11b with Direct Sequence Spread Spectrum (DSSS)
- IEEE Std 802.11ac with 20/40/80 MHz (VHT20/40/80) channel width
- IEEE Std 802.11n with 40 MHz (HT40) channel width
- IEEE Std 802.11a/g with 20 MHz channel
- IEEE Std 802.11b with 5 MHz channel

Supported Modulation
- IEEE Std 802.11ac : BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
- IEEE Std 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM
- IEEE Std 802.11b: BPSK, QPSK, CCK
- Featured 256-TurboQAM modulation for 2.4 GHz and 5 GHz operations

Supported MCS Index
- Supported MCS0~MCS9 for IEEE Std 802.11ac
- Supported MCS0~MCS23 for IEEE Std 802.11n

Supported Frequency Bands
- 2.400 ~ 2.4835 GHz (ISM)
- 5.150 ~ 5.250 GHz (UNII-1)
- 5.250 ~ 5.350 GHz (UNII-2, upon DFS approval)
- 5.470 ~ 5.725 GHz (UNII-2 Extended, upon DFS approval)
- 5.725 ~ 5.825 GHz (UNII-3)
- Country-specific restrictions apply: adjusted by controller upon approval

Operating Channels
- 2.4 GHz channels
  - CH1~11 for U.S., Canada
  - CH1~13 for Japan, Europe, rest of world
- 5 GHz HT20 (20 MHz) channel
  - Non-DFS channel: CH36, 40, 44, 48, 144, 149, 153, 161, 165
  - DFS channel upon approval: CH52, 56, 60, 64, 100, 104, 108, 112, 116, 120*, 124*, 128*, 132*,136, 140, 144 (*weather radar)
- 5 GHz HT40 (40 MHz) center channel
  - Non-DFS channel: CH38, 46, 151, 159
  - DFS channel upon approval: CH54, 62, 102, 110, 118*, 116*, 134* 134, 142 (*weather radar)
- 5 GHz VHT80 (80 MHz) center channel
  - Non-DFS channel: CH42, 155
  - DFS channel upon approval: CH58, 106, 122* (*weather channel)
- Platform supports Dynamic Frequency Selection (DFS & DFS/TPC) for future 5 GHz channel adoption
- Country-specific restrictions apply: configured on controller upon approval

Supported Data Rate (Mbps)
- IEEE Std 802.11ac three streams: 19.5 ~ 1300 Mbps (MCS0-HT20@800nS~MCS9-HT40@400nS)
- IEEE Std 802.11ac per stream: 6.5 ~ 433.3 Mbps (MCS0-HT20@800nS~MCS9-HT40@400nS)
- IEEE Std 802.11n three streams: 13 ~ 450 Mbps (MCS9-HT20@800nS to MCS23-HT40@400nS)
- IEEE Std 802.11n per stream: 6.5 ~ 150 Mbps (MCS0-HT20 @ 800nS to MCS7-HT40@400nS)
- IEEE Std 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
- IEEE Std 802.11b: 1, 2, 5.5, 11 Mbps

QoS
- WMM support
- Dynamic WMM rate adaptation
- Configurable QoS rules per user and application

TRANSMIT POWER (TX) AND RECEIVE SENSITIVITY (RX)

Configuration	Maximum conductive point transmit power per stream (dBm)	Maximum EIRP with external antennas	Receiver sensitivity (dBm)
802.11b	25.0	29.0	-90
802.11g	24.0	28.0	-76
802.11n, 2.4 GHz HT20	23.0	28.0	-73
802.11n, 2.4 GHz HT40	23.0	27.0	-70
802.11a	22.0	23.0	-75
802.11n, 5 GHz, HT20	22.0	23.0	-73
802.11n, 5 GHz, HT40	22.0	23.0	-70
802.11ac, 5 GHz, HT20	22.0	23.0	-69
802.11ac, 5 GHz, HT40	22.0	22.0	-64
802.11ac, 5 GHz, VHT80	21.0	21.0	-61

Note: Maximum EIRP is country specific and based on the country regulatory approvals.

Configurable Transmission Power
- Transmission power configurable in 1.0 dBm increments
- Unused radios can be disabled via software for lower power consumption

PHYSICAL SPECIFICATIONS SKU
- OAP832e: Six extended Type N female connectors

ANTENNAS
- Specification of Optional External Antennas (Sold Separately)

	Model Number	Description
1	ANT-06ABGN-0606-O	2.4/5.x GHz 6/6 dBi Omni directional wall/pole-mount antenna, with 36-inch external coaxial cables and 6x RP-SMA male connector
2	ANT-O6ABGN-0607-PT	2.4/5.x GHz 6/7 dBi directional patch wall/pole-mount antenna, with 36-inch external coaxial cables and 6x RP-SMA male connector
3	ANT-BG080-NM	2.4 GHz 8 dBi Omni directional outdoor antenna with 1 N type male connector
4	ANT-A08O-NM-2	5.0 GHz UNII-2 & 3 Band 8 dBi Omni directional outdoor antenna with 1 N type male connector

Power
- Operates at IEEE 802.3at power
- Powered by IEEE Std 802.1at PoE (Power over Ethernet) injector or switch

TECHNICAL SPECIFICATIONS

Other Interfaces
- Networks: One 10/100/1000 BASE-T Ethernet RJ45 uplink (LAN1).One 10/100/1000 BASE-T downlink (LAN2).
- Ethernet RJ45 (LAN 1 and LAN2) support auto- negotiation in all three speeds and automatic MDI/MDIX detection and polarity correction.
- LAN1: PoE input support IEEE Std 802.3at, either 2-pair or 4-pair.
- LAN2: PoE output support IEEE Std 802.3af.
- Six N-type RF connectors for external antennas.

LED Indicators
- 1 LED for AP Power ON status.
- 2 LEDs for Ethernet activity over two RJ45 ports (LAN1 & LAN2).
- 2 LEDs for the 2.4 GHz and 5.0 GHz radio status indicator

Mounting
- 1.5–1.6 inch (5–7.5 cm) diameter pole-mounting kit (included).
- Wall-mounting kit (included).

Dimensions
- 11.0" x 8.54" x 2.0" (28.0 cm x 21.7 cm x 5.0 cm)

Weight
- OAP832e (without mounting bracket): 5 lbs (2.27 kgs)
- OAP832e (with mounting bracket): 7 lbs (3.18 kgs)

Environmental
- Operating temperature: -40˚ F to 149˚ F (-40˚ C to 65˚ C)
- Operating humidity: 5–95% (non-condensing)
- Storage temperature: -40˚ F to 185˚ F (-40˚ C to 70˚ C) ambient
- Storage humidity: 5–95% (non-condensing)

IP67 Certified

REGULATORY APPROVAL
- FCC (United States of America)
- CE Mark (European Community)
- Industry Canada (Canada)
- TELEC (Japan)
- Safety Approval (worldwide)
- EU RoHS

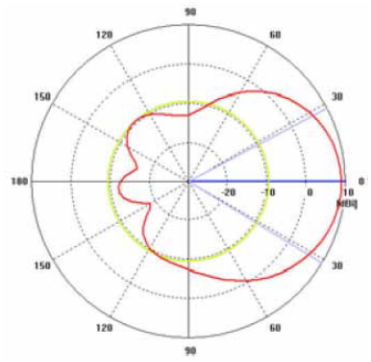
For more country-specific regulatory approval, please contact your Meru representative.

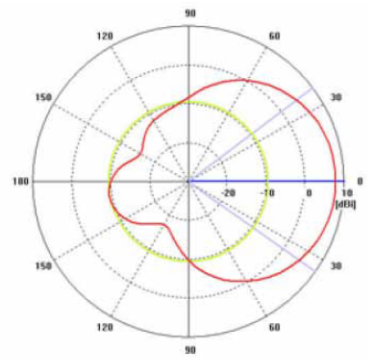
CERTIFICATIONS
Wi-Fi certification upon approval

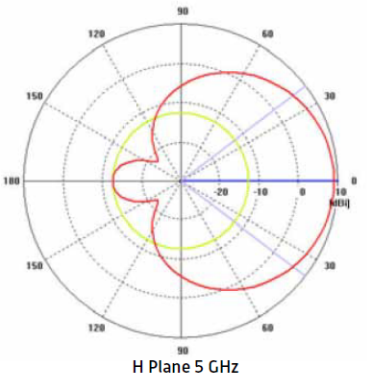
WARRANTY
One year hardware warranty

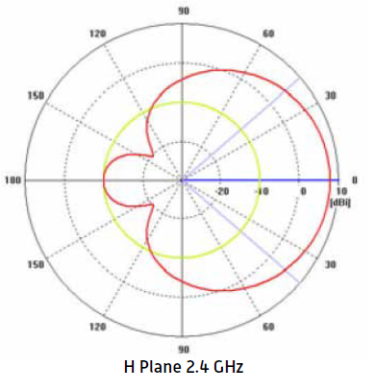
ANTENNA RADIATION PATTERNS (EXTERNAL ANTENNA MODEL)

Model: ANT-06ABGN-0607-PT	2.4 GHz ~ 2.5 GHz	4.9 GHz ~ 5.9 GHz
Average Antenna Gain	6.0 dBi	7.0 dBi
Polarization	Linear	Linear
Azimuth Beam-width	82°	75°
Elevation Beam-width	72°	60°
VSWR	1:2.0	1:2.0


E Plane 5 GHz


E Plane 2.4 GHz


H Plane 5 GHz


H Plane 2.4 GHz

Meru delivers an all-wireless network that fully supports the enterprise, delivering a consistent, interactive experience for all users. No matter what applications they are running. No matter how many other users are on the network. For more information, visit **www.merunetworks.com** or email your questions to: meruinfo@merunetworks.com.

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