The AP832 is the industry’s first 802.11ac access point capable of supporting two concurrent 5 GHz 3x3:3ss radios, designed for high-density deployments in large offices, schools, universities, hospitals, hotels, and large retail stores. The AP832 supports an aggregate 2.6 Gbps data rate for the most demanding business applications like video and voice.

The AP832 access point allows administrators to prioritize applications to improve the user experience with Meru’s unique Context Aware Layers technology. For schools, this means Learning Management System applications can be assigned to one dedicated channel layer, while online classroom video feeds can be dedicated to another channel layer. For healthcare, life-critical applications such as patient monitoring can be dynamically assigned to one channel layer, doctor and nursing applications can be assigned to a second layer, and patient applications can be placed on a third channel layer.

The AP832 also provides unique roaming support because Meru enables the network (not the client) to control roams 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 AP832 to leverage the 802.11ac design for pervasive deployment of 80 MHz channels in real-world deployments, which effectively doubles the available data rate and dramatically increases throughput availability for Meru customers.

Like other Meru access points, the AP832 integrates seamlessly with our E(2)RF® network management system, Identity Manager, and other application solutions to bring intelligent management and resilient wireless services to your network.

### Features

- Supports IEEE 802.11ac—with dual radios and three spatial streams
- Supports multiple wireless deployment options
- Support for multiple operating modes: centralized, distributed, mesh, bridged, and VPN tunnel modes
- Integration with Meru controllers and management software applications
- Supports either internal or external antennas

### Benefits

- Provides an optimized 802.11ac experience in the industry with Very High Throughput (VHT) capabilities
- No channel planning, and delivers seamless mobility
- Offers flexible deployment options for diverse customer requirements
- Offers full management and security assurances
- Provides a choice of two models to suit your needs
AP832

TECHNICAL SPECIFICATIONS

QoS

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

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]

AP82.1K 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

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/E(z)RF® Network Manager
Support for SNMP

WIRELESS SPECIFICATIONS

Model Introduction
AP832 dual-radio, dual-band IEEE 802.11a/b/g/n/ac-access point with six internal omnidirectional antennas
AP832e dual-radio, dual-band IEEE 802.11a/b/g/n/ac-access point with six RP-SMA connectors and six external omnidirectional antennas

Supported radio technologies

Dual-band, dual-radio access point
3x3:3SS [three spatial streams]
Indoor application

Supported 2.4 GHz (TurboQAM Mode) and 5 x GHz for dual-band, dual-radio operation, data rate up to 1.9 Gbps
Supported dual 5 x GHz IEEE 802.11ac operation with RF collocation (FCC Permit by Ask provision), data rate up to 2.6 Gbps
Supported transmit beam-forming (TxBF)
IEEE Std 802.11ac standard
IEEE Std 802.11n/ac with Orthogonal Frequency Division Multiplexing (OFDMA)
IEEE Std 802.11ab 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/b/g/n with 20 MHz channel
IEEE Std 802.11b with 5 MHz channel

Supported Modulation

IEEE Std 802.11ab: BPSK, QPSK, 16-QAM, 64-QAM
IEEE Std 802.11n/ac: BPSK, QPSK, 16-QAM, 64-QAM
IEEE Std 802.11b with 60 MHz (HT40) channel width
IEEE Std 802.11a with 20 MHz channel
IEEE Std 802.11b with 5 MHz channel

Supported MCS Index

Supported MCS—MC59 for IEEE 802.11ac
Supported MCS—MC55 for IEEE 802.11n

Supported Frequency Bands

2.4GHz—2.4835 GHz [ISM]
5GHz—5.150 ~ 5.825 GHz [UNII]

Supported Data Rate [Mbps]

IEEE Std 802.11ac: 3 streams: 19.5 ~ 1100 Mbps [MC50-HT20/g@800nS-MC59-HT40/g@400nS]
IEEE Std 802.11ac: 5 streams: 6.5 ~ 433.3 Mbps [MC50-HT20/g@800nS-MC59-HT40/g@400nS]
IEEE Std 802.11n: 5 streams: 13 ~ 450 Mbps [MC59-HT20/g@800nS to MC63-HT40/g@400nS]
IEEE Std 802.11n: 1 stream: 6.5 ~ 150 Mbps [MC50-HT20 @ 800nS to MC67-HT40@g@400nS]
IEEE Std 802.11a: 6 streams: 2.6 Gbps [IEEE Std 802.11ac standard]
IEEE Std 802.11b: 1, 2, 5.5, 11 Mbps

Transmission Power (TX) and Receive Sensitivity (RX) per Stream

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Maximum conductive point transmit power per stream (dBm)</th>
<th>Maximum EIRP per stream (dBm)</th>
<th>Maximum EIRP per stream (dBm)</th>
<th>RX (dBm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>802.11b</td>
<td>21.0</td>
<td>25.0</td>
<td>24.0</td>
<td>-85</td>
</tr>
<tr>
<td>802.11g</td>
<td>20.0</td>
<td>24.0</td>
<td>23.0</td>
<td>-70</td>
</tr>
<tr>
<td>802.11n, 2/4 GHz HT20</td>
<td>19.0</td>
<td>23.0</td>
<td>22.0</td>
<td>-65</td>
</tr>
<tr>
<td>802.11n, 2/4 GHz HT40</td>
<td>18.0</td>
<td>22.0</td>
<td>21.0</td>
<td>-64</td>
</tr>
<tr>
<td>802.11a</td>
<td>18.0</td>
<td>24.0</td>
<td>22.0</td>
<td>-69</td>
</tr>
<tr>
<td>802.11n, 2/4 GHz HT20</td>
<td>17.0</td>
<td>23.0</td>
<td>21.0</td>
<td>-67</td>
</tr>
<tr>
<td>802.11n, 2/4 GHz HT40</td>
<td>16.0</td>
<td>22.0</td>
<td>20.0</td>
<td>-64</td>
</tr>
<tr>
<td>802.11ac, 5 GHz HT20</td>
<td>17.0</td>
<td>23.0</td>
<td>21.0</td>
<td>-69</td>
</tr>
<tr>
<td>802.11ac, 5 GHz HT40</td>
<td>16.0</td>
<td>22.0</td>
<td>20.0</td>
<td>-64</td>
</tr>
<tr>
<td>802.11ac, 5 GHz VHT80</td>
<td>16.0</td>
<td>22.0</td>
<td>20.0</td>
<td>-64</td>
</tr>
</tbody>
</table>

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

AP832: Six integrated dual-band omnidirectional PIFA antennas
AP832e: Six extended reverse polarized SMA connectors; shipment comes with six omnidirectional rubber duck antennas

Specification of Default Antenna

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 MIERU-P1633</td>
<td>Internal antenna [Default in AP832] MIERU-P1633 2.4/5 GHz dual-band omnidirectional antenna, 3dBi gain @ 2.4 GHz and 4 dBi @ 5 GHz</td>
</tr>
<tr>
<td>2 ANT-01ABGN-0406-0</td>
<td>External antenna [Default in AP832e] ANT-01ABGN-0406-0, 2.4/5 GHz 4/6 dBi omnidirectional antenna with 1x RP-SMA jack</td>
</tr>
</tbody>
</table>

Specification of Optional External Antennas [Sold Separately]

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ANT-0ABGN-24</td>
<td>2.4/5 GHz 2.5/4 dBi directional patch wall/pole-mount antenna, with 36-inch external coaxial cables and 6x RP-SMA male jacks</td>
</tr>
<tr>
<td>2 ANT-01ABGN-0304-0</td>
<td>2.4/5 GHz 3/4 dBi omnidirectional ceiling mount antenna, with 36-inch external coaxial cables and 3x RP-SMA male jacks</td>
</tr>
<tr>
<td>3 ANT-0ABGN-23</td>
<td>2.4/5 GHz 3/4 dBi directional patch wall/pole-mount antenna, with 60-inch external coaxial cables and 6x RP-SMA male jacks</td>
</tr>
<tr>
<td>4 ANT-0ABGN-23W</td>
<td>2.4/5 GHz 2/3 dBi omnidirectional rubber duck antenna with 1x RP-SMA male jacks</td>
</tr>
<tr>
<td>5 ANT-0ABGN-470</td>
<td>2.4/5 GHz 4.7/4.7 dBi omnidirectional rubber duck antenna with 1x RP-SMA male jack</td>
</tr>
<tr>
<td>6 ANT-02ABGN-0304-0</td>
<td>2.4/5 GHz 3/4 dBi omnidirectional ceiling mount antenna, with 36-inch external coaxial cables and 2x RP-SMA male jacks</td>
</tr>
<tr>
<td>7 ANT-04ABGN-0607-PT</td>
<td>2.4/5 GHz 6/7 dBi directional patch wall/pole-mount antenna, with 36-inch external coaxial cables and 4x RP-SMA male jacks</td>
</tr>
<tr>
<td>8 ANT-06ABGN-0607-PT</td>
<td>2.4/5 GHz 6/7 dBi directional patch wall/pole-mount antenna, with 36-inch external coaxial cables and 6x RP-SMA male jacks</td>
</tr>
<tr>
<td>9 ANT-06ABGN-0605-0</td>
<td>2.4/5 GHz 6/6 dBi omnidirectional wall/pole-mount antenna, with 36-inch external coaxial cables and 6x RP-SMA male jacks</td>
</tr>
</tbody>
</table>
AP832

TECHNICAL SPECIFICATIONS (continued)

**Power**
- Operated at IEEE 802.3af power
- Powered by IEEE Std 802.1af or at PoE (Power over Ethernet) injector or switch
- 12V external power adapter (sold separately)

**Other Interfaces**
- Networks: One 10/100/1000 BASE-T Ethernet RJ45-uplink (G1), one 10/100/1000 BASE-T Ethernet RJ45 (G2) for downlink, auto-sensing link speed and MDI/MDX
- Six RP-SMA RF connectors for external antenna SKU (AP832e)
- One USB 2.0 port (Type-A) for future feature
- One console port
- One reset button
- One Kensington security slot

**LED Indicators**
- One tri-color LED over facade for AP status
- Additional LEDs for Ethernet activity over two RJ45 ports (G1 & G2)

**Mounting**
- Wall, desktop, or ceiling mount
- Three mounting kits included with access point:
  - 650-00232, 15/16” T-bar & wall-mount combo adapter
  - 650-00233, 9/16” T-bar adapter
  - Flat-surface wall-mount bracket (used with 650-00232)
  - Option (ordered separately): CBL-SERIAL-DB9-35, DB9-stereo console cable
  - CBL-RJ45-ADAPT-X5, GbE extension adapter
  - MNT-FEET-SET-X5, rubber feet for desktop staging

**Installation in the Air-Handling Space**
- AP832e metal enclosure only by removing plastic façade

**Dimensions**
- AP832i or AP832e (with mounting bracket): 7.1” x 7.1” x 2.7” (18.0 cm x 18.0 cm x 6.8 cm)
- AP832e without plastic façade: 6.3” x 6.3” x 2.1” (16.1 cm x 16.0 cm x 5.2 cm)

**Weight**
- AP832i (with mounting bracket): 2.3 lb (1.1 kg)
- AP832e (with mounting bracket): 1.9 lb (0.9 kg)
- AP832e without façade and mounting bracket: 1.5 lb (0.7 kg)

**Environmental**
- Operating temperature: 32˚ F to 122˚ F (0˚ C to 50˚ 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)

---

### Antenna Radiation Patterns (Internal Antenna Model)

<table>
<thead>
<tr>
<th>Internal Antenna (MERU-P1633)</th>
<th>2.4 GHz ~ 2.5 GHz</th>
<th>4.9 GHz ~ 5.9 GHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Antenna Gain</td>
<td>3.0 dBi</td>
<td>4.0 dBi</td>
</tr>
<tr>
<td>Polarization</td>
<td>Linear</td>
<td>Linear</td>
</tr>
<tr>
<td>Azimuth Beam-width</td>
<td>195°</td>
<td>190°</td>
</tr>
<tr>
<td>Elevation Beam-width</td>
<td>98°</td>
<td>100°</td>
</tr>
<tr>
<td>VSWR</td>
<td>1.20</td>
<td>1.20</td>
</tr>
</tbody>
</table>
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.

### AP832

**Antenna Radiation Patterns [External Antenna Model]**

<table>
<thead>
<tr>
<th></th>
<th>2.4 GHz - 2.5 GHz</th>
<th>4.9 GHz - 5.9 GHz</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External Antenna</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average Antenna Gain</strong></td>
<td>3.3 dBi</td>
<td>6.0 dBi</td>
</tr>
<tr>
<td><strong>Polarization</strong></td>
<td>Linear</td>
<td>Linear</td>
</tr>
<tr>
<td><strong>Azimuth Beam-width</strong></td>
<td>360°</td>
<td>360°</td>
</tr>
<tr>
<td><strong>Elevation Beam-width</strong></td>
<td>75°</td>
<td>55°</td>
</tr>
<tr>
<td><strong>VSWR</strong></td>
<td>1.15</td>
<td>1.15</td>
</tr>
</tbody>
</table>

For more information, visit [www.merunetworks.com](http://www.merunetworks.com) or email your questions to: meruinfo@merunetworks.com

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