

# Airvenue BA100C Wireless Mesh Node

The BA100C Wireless Mesh Node is a fixed dual-radio platform supporting point-to-multipoint backhaul for cost-effective and flexible deployments. It offers an alternative to the high-performance, point-to-point backhaul of the BA100 Wireless Multi-service Node.

The BA100C is pre-configured with an Access Radio Module (ARM), a Backhaul Radio Module (BRM), and two external 8dBi Omni Antennas with mounting brackets. The BA100C provides mobile broadband support for the Wi-Fi spectrum and offers true standards-based seamless mobility, ensuring that subscribers do not experience service interruptions to critical applications, like voice and video, as they move throughout the wireless mesh network.

## Dual-radio architecture

The dual-radio design of the BA100C provides both access and backhaul support utilizing the BRM and ARM to deliver dedicated bandwidth for greater performance and capacity. The BRM supports point-to-multipoint connections to other Airvenue Wireless Mesh Nodes and provides an economical alternative to a point-to-point backhaul mesh.

## Wireless radio modules

The Access Radio Module (ARM3) provides access device support for the BA100C. The ARM3 supports the IEEE 802.11b/g (Wi-Fi) standard and operates in the unlicensed 2.4 – 2.4835 GHz frequency band to deliver up to 11 Mbps of bandwidth to any IEEE 802.11 b/g compliant device including access points, laptops, and Wi-Fi phones.

The Backhaul Radio Module (BRM3) provides point-to-multipoint backhaul support for the BA100C. The BRM3 supports IEEE 802.11a (Wi-Fi) standard and operates in the unlicensed 5.25 GHz – 5.85 GHz frequency band to deliver up to 54 Mbps of bandwidth.

## Layer 2 networking capabilities

The BA100C has an integrated Layer 2 Switch engine that provides extensive QoS, VLAN, Network Security and Traffic Management capabilities that are necessary for transporting mission critical, time-sensitive applications like voice and video.

## Network Management

The BA100C can be managed via a Command Line Interface (CLI), WEB GUI or with Airvenue Networks View Network Management System (NMS). Both CLI and WEB GUI provide device level support, and View NMS provides complete network-wide support for Fault, Configuration and Performance Management. View NMS works on either Windows XP or SUN Solaris platforms and can also be integrated into other management systems like HP OpenView or IBM NetView.



### Features

- Fixed dual-radio architecture
- Cost-effective point-to-multipoint backhaul solution
- Network Management via CLI, WEB or View NMS
- Electrical and optical Ethernet interface options

### Radio module options

- Access Radio Module (ARM) IEEE
- 802.11 a/b/g & 4.9 Public Safety
- Backhaul Radio Module (BRM) IEEE 802.11a pre-WiMAX & 4.9 Public Safety
- Radios available in multiple frequency bands
  - licensed: 2.3 GHz, 2.5 GHz and 4.9 GHz
  - unlicensed: 2.4 GHz and 5.25-5.85 GHz

Airvenue Networks is the leading provider of mobile broadband mesh networking solutions. Cities around the world rely on Airvenue to deliver industry-leading broadband performance and scalability, and carrier-class capacity and reliability. Airvenue Networks teams with world-class global partners to deploy proven, cost-effective wireless broadband mesh networks.

## Networking

- 1-port 10/100BASE-TX (Cat.5 RJ-45)
- 1-port 100BASE-FX (SMF)
- IEEE 802.1D MAC Bridging
- IEEE 802.1Q VLANs
- IEEE 802.1w (RSTP) and IEEE 802.1s (MSTP)
- IEEE 802.1p prioritization with 4 queues
- L2TP Tunneling for seamless mobility
- 15 SSIDs per access radio. MBSSID support for 8 virtual APs per access radio
- Support for SNMP, ICMP, HTTP, ARP, TCP, UDP, Telnet, TFTP and IP traffic

## Management

- Secure local and remote access
- Command line, HTTP and HTTPS Web GUI, SNMPv1/v2/v3 and SSHv2 management interfaces
- MIBs: MIB-II, SNMPv2, 802.11, Ethernet-like, Interface Group
- Multiple user privilege levels with RADIUS authentication
- Firmware upgrade through TFTP with support for automatic rollback
- RADIUS accounting

## Security

- Authentication: 802.1x (RADIUS) and EAP methods
- Encryption: WEP 64 and 128 bit, TKIP / MIC per 802.1x, 802.11i AES
- MAC address access control lists
- Rogue AP detection

## Protection circuits

- IEC 60000-4-5 level 4 surge
- GR1089 - 6 kV (3000 A) surge

## Approvals

- Radio: FCC part 15 and part 27, EN 300 328, EN 300 440, EN 301 893 and Industry Canada RSS 210 Issue 5
- EMC: FCC 47 CFR part 15, subpart B Class B and EN 301 489-1/-17 Class B
- Safety: ANSI/UL std no.60950-1, CSA-C22.2 std no. 60950-1, CB-60950-1
- Laser safety: Class 1 laser product complies with 21CFR 1040 and IEC60825
- RF safety: FCC OET Bulletin 65, Health Canada Safety code 6
- Outdoor use: IP56/NEMA4/NEMA4X for wet and dusty conditions
- CE! mark
- Mexico: NOM
- Korea: MIC2003-15
- Russia: GOST-R
- India: ETA-74/2005, ETA-78/2005
- Taiwan: LP00002, ETC094LP0425, ETC094LPD0426, ETC094LPD0426a

## Physical and Electrical

- Size: 7.25 in. (18 cm) high x 12 in. (30.5 cm) wide x 6 in. (15.3 cm) deep
- Weight: 10 lbs (4.5 kg)
- Typical power consumption: 23 Watts
- Power supply: 100 to 240 V ac, 47 to 63 Hz
- Backup 8 V battery
- Battery backup time: 40 minutes typical
- Available wall or pole mounting kits with theft deterrent anti-tamper screws
- Power, radio and Ethernet lamps

## Environmental

- Operating temperature: -40°C to +50°C
- Storage temperature: -40°C to +80°C
- Operating humidity: 5 to 95% non-condensing
- Shock and vibration: ETSI300-019-1-4

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