BelAir NETWORKS

Data Sheet

# BelAir100 Wireless Multi-service Node

The BelAir100 Wireless Multi-service Node is the industry's highest performance and most flexible dual-radio wireless mesh node. It provides mobile broadband support for Wi-Fi, WiMAX, and 4.9 GHz Public Safety spectrums. Offering true standards-based seamless mobility, the BelAir100 ensures 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 BelAir100 provides support for Backhaul Radio Modules (BRMs), WiMAX Radio Modules (WRMs) and Access Radio Modules (ARMs) in the same wireless mesh node. The BelAir100 can be configured with a backhaul radio module (BRM or WRM) and access radio module (ARM) for traditional wireless mesh; or with any combination of dual BRMs or WRMs for a resilient backhaul only deployment.

## Wireless radio modules

The BelAir100 can contain any combination of ARMs and BRMs, providing the ideal flexibility and capacity for large-scale wireless mesh networks. The ARMs and BRMs support a broad range of Wi-Fi (IEEE 802.11a/b/g), WiMAX (IEEE 802.16d), 4.9 Public Safety and Cellular (via a T1/E1 Circuit Emulation Module) applications making it the most versatile solution on the market for providing multi-service capabilities over a wireless mesh network.

## Layer 2 networking capabilities

The BelAir100 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.

### Features

- Modular dual-radio architecture
- Supports Wi-Fi and WiMAX
- Seamless mobility for uninterrupted service
- Network Management via CLI, WEB or BelView NMS
- Electrical and optical Ethernet interface options

### Radio module options

- Access Radio Module (ARM)
  IEEE 802.11a/b/g & 4.9 Public Safety
- Backhaul Radio Module (BRM)
  IEEE 802.11a pre-WiMAX & 4.9 Public Safety
- WiMAX Radio Module (WRM)
  IEEE 802.16d
- 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

## Network Management

The BelAir100 can be managed via a Command Line Interface (CLI), WEB GUI or with BelAir Networks BelView Network Management System (NMS). Both CLI and WEB GUI provide device level support, and BelView NMS provides complete network-wide support for Fault, Configuration and Performance Management. BelView 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.

BelAir Networks is the leading provider of mobile broadband mesh networking solutions. Cities around the world rely on BelAir to deliver industry-leading broadband performance and scalability, and carrier-class capacity and reliability. BelAir 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
- 16 SSIDs per access radio. MBSSID support for 8 virtual APs per access radio
- Support for SNTP, 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

## 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 21 CFR 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: 12 in. (30.5 cm) high x 7.25 in. (18 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

## Protection circuits

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

## 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

BelAir NETWORKS

Copyright© 2007 BelAir Networks. BelAir Networks products and associated technology are protected by one or more of the following US patents: 7,171,223 / 7,164,667 / 7,154,356 / 7,030,712 / D501,195. Specifications may vary by region.

To find out more, contact BelAir Networks:
info@belairnetworks.com
sales@belairnetworks.com
1-877-BelAir1 (1-877-235-2471)
1-613-254-7070
**www.belairnetworks.com**

BDMA10030-B03