

BelAir100C Wireless Mesh Node

BelAir Networks offers the industry's most comprehensive portfolio of wireless mesh products ensuring exceptional flexibility in the design and future proof growth of your network. BelAir wireless mesh products support a full range of coverage options from high-speed Internet access and other data services through to high capacity, high performance networks delivering video, wireline-quality voice, tiered business services and cellular backhaul.

The BelAir100C Wireless Mesh Node is a 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 BelAir100. Both the BelAir100 and BelAir100C can be deployed as standalone devices providing indoor or outdoor coverage or as part of a larger mesh with any combination of BelAir200, BelAir100, BelAir100C, BelAir100S, BelAir50C, and BelAir50S, all seamlessly managed by BelAir BelView NMS.

The modular BelAir100C features an attractive, rugged outdoor enclosure, a 100 Mbps Ethernet electrical interface, one access antenna and one backhaul antenna. BelAir100C nodes can be pole or wall mounted. Backup power supply and a high performance network processing core complete with an open embedded software environment are standard.

- **Rugged dual-radio node**
- **Cost effective and flexible**
- **Standalone or managed mesh deployments**



Wireless

- Multi-radio platform with up to 2 radios
- Access and backhaul radio (IEEE 802.11a/b/g)
 - Frequency and transmit power:
 - 2.4 to 2.4835 GHz, up to 36 dBm EIRP
 - 4.900 to 5.000 GHz, up to 30 dBm EIRP
 - 4.940 to 4.990 GHz, up to 30 dBm EIRP
 - 5.25 to 5.35 GHz, up to 30 dBm EIRP
 - 5.725 to 5.825 GHz, up to 32 dBm EIRP
 - 802.11b mode: rates up to 11 Mbps
 - 802.11g mode: rates up to 54 Mbps
 - Receive sensitivity: up to -100 dBm
 - Diversity
- Backhaul radio (pre-WiMAX)
 - Frequency and transmit power:
 - 4.900 to 5.000 GHz, up to 30 dBm EIRP
 - 4.940 to 4.990 GHz, up to 30 dBm EIRP
 - 5.25 to 5.35 GHz, up to 30 dBm EIRP
 - 5.47 to 5.725 GHz, up to 30 dBm EIRP
 - 5.725 to 5.850 GHz, up to 32 dBm EIRP
 - 5.825 to 5.875 GHz, up to 14 dBm EIRP
 - Rates up to 54 Mbps (20 MHz channel)
 - Receive sensitivity: up to -90 dBm
 - Multiple point-to-point, point-to-multipoint and multipoint-to-multipoint links

- Backhaul radio (WiMAX)
 - Frequency and transmit power:
 - 2.300 to 2.360 GHz, up to 30 dBm EIRP
 - 2.495 to 2.690 GHz, up to 30 dBm EIRP
 - Rates up to 36.6 Mbps (10 MHz channel)
 - Receive sensitivity: up to -93 dBm
- Transmit Power Control
- Dynamic Frequency Selection
- Layer 2 and Layer 3 mobility

Antennas

- Access
 - internal directional: 8.5 dBi
 - external directional: 8.5 dBi
 - external omni-directional: 4, 6, 8, 10, 12 dBi
- Backhaul
 - internal directional: 10.5 dBi
 - external directional: 10.5, 12, 15 dBi

Networking

- Electrical Ethernet port
- Layer 2 support
- 802.1D bridging
- 802.1Q VLANs with authentication
- QoS with traffic prioritization over 4 queues, Voice over IP, and traffic filtering
- 15 SSIDs per access radio. Full 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 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 I 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: 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

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



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