

BelAir200D Wireless Multi-service Switch Router

The BelAir200D Wireless Multi-service Switch Router is the industry's highest performance and most flexible multi-radio node offering mobile broadband over 2.4-2.835 GHz ISM, 2.3-2.36 and 2.5-2.7 GHz WiMAX, 4.4-4.94 GHz Military, 4.94-4.99 GHz Public Safety, 5.25-5.725 GHz U-NII, 5.725-5.85 GHz ISM, and 5.85-5.925 GHz ITS frequency bands. The BelAir200D leverages a leading-edge modular design to deliver switched backhaul capabilities for greater network performance, lower latency, and resiliency via built in self healing features. Offering true standards-based seamless mobility, the BelAir200D ensures that subscribers do not experience service interruptions to critical applications, such as voice and video, as they move throughout the wireless mesh network.

Modular Architecture

The BelAir200D modular architecture provides four radio slots that can contain any combination of Access Radio Modules (ARMs), Backhaul Radio Modules (BRMs), Enhanced Radio Modules (ERMs), Public Safety Modules (PSMs), Military Radio Modules (MRMs), ITS band Transport System Radios (TRMs), and WiMAX Radio Modules (WRMs) in the same wireless mesh node. The ARMs, BRMs, PSMs, MRMs, TRMs, and WRMs support a broad range of Wi-Fi (IEEE 802.11a/b/g/n) and WiMAX (IEEE 802.16d) technologies. A Circuit Emulation Module (CEM) module is also available to enable wireless packet based transport of data or timing T1/E1 services. For large scale wireless mesh networks, the industry leading BelAir200D provides the ideal flexibility and capacity in a multi-service solution.

Layer 2/3 Networking Capabilities

The BelAir200D has an integrated Layer 2/3 Switch Router engine that provides extensive QoS, VLAN, Network Security and Traffic Management capabilities that are necessary for transporting mission critical, time-sensitive applications such as voice and video.

Network Management

The BelAir200D can be managed via a Command Line Interface (CLI), WEB GUI or with BelAir Networks BelView Network Management System (NMS). Both CLI and WEB



Features

- Modular multi-service, multi-radio, multi-interface architecture
- Supports Wi-Fi (802.11a/b/g/n), and WiMAX (802.11d)
- Seamless mobility for uninterrupted service
- Network Management via CLI, WEB or BelView NMS

Radio and Interface Module Options

- Access Radio Module (ARM) - IEEE 802.11b/g
- Backhaul Radio Module (BRM) - IEEE 802.11a
- Enhanced Radio Module (ERM) - IEEE 802.11a
- Military Radio Module (MRM) - IEEE 802.11n
- Public Safety Radio (PSM) - 4.9 GHz IEEE 802.11a
- WiMAX Radio Module (WRM) - IEEE 802.16d
- Transport Radio Module (TRM) - IEEE 802.11p
- Security Processor Module (SPM) - FIPS 140-2
- Circuit Emulation Module (CEM) - CESoPSN, SAToP
- Single or Dual Line Interface Module (LIM/DLIM) - 10/100 BASE-TX

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- or 2-port 10/100BASE-TX (Cat. 5 RJ-45) Ethernet Interface
- 1-port 100BASE-FX (SMF) Ethernet Interface
- 4 x T1 (CEM) Interface
- 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
- Ingress/Egress Rate Limiting
- IP TOS Re-write
- IP Filtering
- Flow Accounting
- 16 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, IP Forwarding Table, OSPFv2
- 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, Part 27 and Part 90, and Industry Canada RSS 210 Issue 5
- CE Mark; EN 300 328, EN 300 440, EN 301 893 and UK: IR2005; IR2006; IR2007
- 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 21CFR 1040 and IEC60825
- CEM Card: CS-03; ICES-003; TIA-968-A; ITU G.703-/706/812/824; ANSI T1.403
- RF safety: FCC OET Bulletin 65C, Health Canada Safety Code 6
- Outdoor use: IP66/NEMA4X for wet and dusty conditions
- Mexico: NOM and COFETEL certificates
- Korea: MIC 2003-15: R-LARN-05-0003
- India: ETA-74/2005, ETA-78/2005; ETA-051/2007
- Taiwan: LP00002, ETC094LP0425, ETC094LPD0426, ETC094LPD0426a
- Japan BelAir100: D07-0113004; BelAir200: D07-0114004
- Russia: Hygienic Certificate

Physical and Electrical

- Size: 11.5 in. (29.2 cm) diameter x 16 in. (40.6 cm) high
- Weight: 28 lbs (12.7 kg)
- Typical power consumption: 58 Watts
- Power supply: 100 to 240 Vac, 47 to 63 Hz
- Backup 12V battery
- Battery backup time: 20 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 (3k 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: ETSI 300-019-1-4

BelAir
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