

# Redefining Licensed Backhaul

## B11 Point-to-Point Backhaul Radio

10.0–11.7 GHz



The Mimosa B11 backhaul radio is designed for the modern Internet era, adapting instantly to variable upstream and downstream bandwidth requirements. The B11 is fiber-ready—simply add your preferred SFP module and you'll be lit up with gigabit fiber speeds. If you are not quite ready for fiber, the B11 also comes with a standard gigabit Power-over-Ethernet connection.

We've simplified the licensing process and offer instant visibility into the FCC ULS database to quickly assess surrounding links, providing an early indication of coordination viability. A single B11 can support an entire 10.0–11.7 GHz band, maximizing your ability to find a clear, licensable channel.

### Superior Performance

Our speeds will blow you away. With up to 1.5 Gbps aggregate speed and under 1 ms latency, high performance has never been this affordable. The B11 has the lowest cost per Mbps in the industry with link distances over 100 km.

### Ultra Rugged

Carrier grade IP67 design allows the B11 to withstand the harshest of environmental conditions.

### Night and Day

The B11 dynamically adapts to bandwidth demand using auto-TDMA technology, maximizing spectrum utilization throughout the day.

### Monitor with Ease

Assessing link health and identifying potential problems has never been easier. Links are continuously monitored by our Mimosa Cloud service with rich data collection and analysis.

## Technical Specifications

### Performance

- **Max Throughput:** Up to 1.5 Gbps IP aggregate UL/DL (1.7 Gbps PHY)
- **Low Latency:** <1 ms
- **Supported MAC:** TDMA, TDMA-FD

### Radio

- **MIMO & Modulation:** 4x4:4 MIMO OFDM up to 256 QAM
- **Bandwidth:** Dual 20/40/80 MHz channels
- **Frequency Range:** 10000–11700 MHz restricted by country of operation
- **Max Output Power:** 27 dBm
- **Sensitivity ( MCS 0 ):**
  - 87 dBm @ 80 MHz
  - 90 dBm @ 40 MHz
  - 93 dBm @ 20 MHz

### Power

- **Max Power Consumption:** 30 W
- **System Power Method:** 48 V DC 802.3 at compliant power injectors
- **System Lightning & ESD Protection:** 6 kV
- **PoE Power Supply:** Passive POE compliant, 48-56 V Power over Ethernet supply with IEC61000-4-5 surge protection

### Physical

- **Dimensions:**
  - Height: 260 mm (10.2")
  - Width: 158 mm (9.6")
  - Depth: 70 mm (2.8")
- **Weight:** 2.5 kg (4.5 lbs)
- **Enclosure Characteristics:** Outdoor UV stabilized plastic Aluminum mounting panel
- **Wind Survivability:** 200 km/h (125 mph)
- **Wind Loading:** 9.8 kg @ 160 km/h (21.8 lbs @ 100 mph)
- **Mounting:** Direct mount to compatible antenna
- **Antenna Connection:** Direct connect to circular dual polarized antenna
- **Network Interfaces:** Single connection ethernet or fiber

### Environmental

- **Outdoor Ingress Protection Rating:** IP67
- **Operating Temperature:** -40°C to +55°C (-40°F to 131°F)
- **Operating Humidity:** 5 to 100% condensing
- **Operating Altitude:** 4420 m (14500') maximum
- **Shock & Vibration:** ETS 300-019-2-4 class 4M5

### Features

- **Gigabit Ethernet:** 10/100/1000-BASE-T
- **Fiber Capable:** SFP Cage included  
Radio accepts either copper Ethernet or SFP but does not support simultaneous operation
- **Dual Protocol Operation:** 2 dual-stream radios operating on non-contiguous frequencies allow for traditional FDD-like performance or TDMA; Automatic load balancing of traffic across 4 total MIMO streams with individual stream encoding up to 256 QAM
- **Management Services:** Mimosa cloud monitoring and management; SNMPv2 & Syslog legacy monitoring; HTTPS; HTML 5 based Web UI; (2.4 GHz WiFi management module no longer available as of February 2021)
- **Smart Spectrum Management:** Active scan monitors/logs ongoing RF interference across channels (no service impact); Dynamic auto-optimization of channel and bandwidth use
- **Security:** 128-bit AES PSK with hardware acceleration
- **QoS:** Supports 4 pre-configured QoS levels
- **GPS Location:** GNSS-1 (GPS + GLONASS)
- **Colocation Synchronization:** 1PPS GPS TX/RX synchronization for colocated co-channel radios; Adjustable up/downstream bandwidth radio

### Regulatory + Compliance

- **Approvals:** FCC Part 101 and EN 302 217
- **RoHS Compliance:** Yes
- **Safety:** UL/EC/EN/ 60950-1 + CSA-22.2

---

Mimosa Networks, a division of Airspan, is the global technology leader in wireless broadband solutions, enabling service providers to connect dense urban and hard-to-reach rural homes at a fraction of the cost of fiber. Mimosa Networks was acquired in 2018 by Airspan, the leading vendor of 4G/5G LTE small cells and backhaul technologies.