

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 dual linear 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 wholly owned subsidiary of Radisys, 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 2023 by Radisys Corporation, a wholly owned subsidiary of Jio Platforms Limited.