Reliable Unlicensed Gigabit Performance
B24 Backhaul

Breaking through the barriers of price, size, and power requirements, the B24 delivers up to 1.5 Gbps of aggregate speed in the less crowded and unlicensed 24 GHz frequency band. By dynamically adjusting bandwidth based on upstream and downstream demand, the B24 efficiently delivers the most usable bandwidth possible with 1 ms low-latency, to meet modern internet traffic needs. The B24 is revolutionizing the industry, satisfying the needs of customers in multiple applications and verticals.

Lightweight, Low Power
At a fraction of the weight, size and power of alternative solutions, the B24 is incredibly easy to install and fits into any setting. At 6 lbs and consuming 19.5 W, the B24 is great for battery backup installations.

Fiber Ready
For flexibility, redundant ethernet and fiber connections are supported, a feature that was previously only available in stratospherically priced outdoor products.

GPS Sync for Collocation
Like other Mimosa products, GPS synchronization allows collocated B24 radios to share the same channel, permitting up to eight links to operate on the same rooftop, each running at 1.5 Gbps.

Reliable Shorthaul
With superior reliability compared to the congested 5 GHz band, the B24 goes the distance even in the rain with reliable links up to 3 km (2 mi), and reaching farther than other 60/70/80 GHz alternatives.

Applications
- Fixed Wireless Broadband Backhaul
- Business and MDU Rooftop Connections
- Campus Building Interconnecting
- Video Surveillance and WiFi Hotspot Distribution
- Smart City Connectivity

Technical Specifications

Performance

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

Radio

- **MIMO and Modulation:** 4x4:4 MIMO OFDM up to 256 QAM
- **Bandwidth:** Single or dual channel; 20/40/80 MHz channel width
- **Channel Spacing:** Single channel allows 5 MHz channel spacing; Dual channel allows separate, no-overlapping 5 MHz spacing increments
- **Frequency Range:** 24.00–24.25 GHz (restricted by country of operation)
- **EIRP:**
  ~20 dBm (CE)
  ~33 dBm (FCC/IC)
  ~37 dBm (other regions)
- **Min Output Power:** -20 dBm
- **Power Increment Level:** 1 dB
- **Sensitivity (MCS0):**
  -84 dBm @ 80 MHz
  -87 dBm @ 40 MHz
  -90 dBm @ 20 MHz

Antenna

- **Gain:** 33 dBi
- **Beamwidth (3dB):** 3.0°
- **Elevation Adjust:**
  +-2.5° azimuth mechanical adjust
  +-15° elevation mechanical adjust
- **Front to Back Ratio:** >30 dB
- **Cross-Polar Isolation:** >20 dB
- **Polarization:** Dual-linear (slant 45°)

Power

- **Max Power Consumption:** 19.5 W
- **System Power Method:** 48V DC 802.3at compliant
- **System Lightning & ESD Protection:** 6 kV
- **PoE Power Supply:** Passive POE compliant, 50V 1.2A power over Ethernet (included)

Physical

- **Dimensions:**
  Height: 260 mm (10.24")
  Width: 260 mm (10.24")
  Depth: 134 mm (5.3") without bracket; 252 mm (9.9") with bracket
- **Weight:** 2.76 kg (6 lbs) including mount
- **Enclosure Characteristics:**
  Outdoor UV stabilized plastic; Powder-coated, aluminum mounting panel
- **Wind Survivability:** 200 km/h (125 mph)
- **Wind Loading:** 12.52 kg @ 160 km/h (27.61 lbs @ 100 mph)
- **Mounting:** Precision lightweight aiming pole mount with +-15° elevation and +-2.5° horizontal adjustment screws
- **Network Interfaces:** Gigabit Ethernet (RJ45) and gigabit fiber (SFP cage); Operation modes: Hot standby

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:** 4,420 m (14,500') max
- **Shock & Vibration:** ETS 300-019-2-4 class 4M5

Regulatory and Compliance

- **Approvals:**
  FCC 15.249
  IC RSS210
  ETSI EN 300-440 V2.1.1
  CE
- **RoHS Compliance:** Yes; WEEE
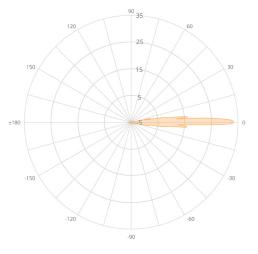- **Safety:** EC/EN/ 60950-1

Features

- **Gigabit Ethernet:** 10/100/1000-BASE-T
- **Fiber Capable:** Supports SFP interface for fiber operation
- **Ethernet Redundancy:** Dual-Link failover; Does not support simultaneous ethernet + fiber 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 monitoring
  HTTPS
  HTML5 based web UI
  2.4 GHz 802.11b/g/n radio for local management access
- **Smart Antenna Alignment:**
  Hands-free, dedicated 2.4 GHz WiFi management radio
- **Smart Spectrum Management:**
  Active scan monitors/logs ongoing RF interference across channels with no service impact; Dynamic auto-optimization of bandwidth, power, and modulation
- **Security:** 128-bit AES PSK with hardware acceleration
- **QoS:** Supports 4 pre-configured QoS levels
- **GPS Location:**
  GNSS-1 (GPS + GLONASS)
- **Collocation Synchronization:**
  1PPS GPS TX/RX synchronization for collocated co-channel radios; Adjustable up/downstream bandwidth ratio

B24 Polar Plot

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