iBridge B5 Backhaul PTP Radio
Gigabit Backhaul Made Easy

INCREDIBLE SPEED
With 1.5+ Gbps (IP), the iBridge B5 is recognized as the fastest unlicensed backhaul in the industry with 160 MHz of combined dual channel bandwidth

ULTRA RUGGED
Carrier-grade IP67 design for harsh conditions

SPECTRUM REUSE SYNC
High-precision GPS sync technology enables same-site collocation and relay site channel reuse

EASY INSTALLATION
Lightweight design to simplify installation

EXTREMELY RELIABLE
Dual-Link and Auto Everything provide two bonded channels on separate frequencies with smart interference avoidance and low packet loss (less than .0001%)

LOW LATENCY
Low latency, less than 1 ms

FREQUENCY
Extended frequency range of 5.15 to 5.875 GHz

SHORT TO MID-RANGE LINKS
Built for short to mid-range applications including towers, relay sites, and building-to-building links

EASY TO ADD NEW LINKS
Keep adding more capacity to more sites and waste less spectrum.

iBridge B5

The iBridge B5 backhaul radio is the highest capacity unlicensed 5 GHz backhaul solution for short and mid-range link applications such as relay sites, building-to-building settings, and collocation applications. The iBridge B5 is fast, flexible, and incredibly reliable.

Technical Specification

Performance

- **Max Throughput:** Up to 1.5 Gbps IP aggregate UL/DL (1.7 Gbps PHY)
- **Low Latency:** Configurable to 5ms+
- **Wireless Protocols:** TDMA, TDMA-FD, Auto-TDMA

Radio

- **MIMO and Modulation:** 4x4:4 MIMO OFDM up to 256QAM
- **Bandwidth:** Single or Dual 20/40/80 MHz channels
- **Frequency Range:** 5150-5875 MHz restricted by country of operation (*new* US/FCC 5600-5650 support)
- **Max Output Power:** 30 dBm (2-stream), 27 dBm (4-stream)
- **Sensitivity (MCS0):** -87 dBm @ 80 MHz, -90 dBm @ 40 MHz, -93 dBm @ 20 MHz

Antenna

- **Gain:** 25 dBi
- **Beamwidth (3dB):** 8° (HPOL and VPOL)
- **Elevation Adjust:** ±20° mechanical adjust
- **Front-to-Back Ratio:** >30 dB
- **Cross-Polar Isolation:** >20 dB
- **Polarization:** Dual-linear (horizontal & vertical)

Power

- **Max Power Consumption:** 20W
- **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:** Diameter - 442 mm (17.4”); Depth - 362 mm (14.3”) with bracket
- **Weight:** 4.9 kg (10.8 lbs) with bracket
- **Enclosure Characteristics:** Single enclosure with radome Outdoor UV stabilized plastic, Painted steel bracket plate
- **Wind Survivability:** 200 km/h (125 mph)
- **Wind Loading:** 39 kg @ 160 km/h (86 lbs @ 100 mph)
- **Mounting:** Pole mounting kit included for 30mm (1.18”) to 90mm (3.54”) OD pipes

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’) maximum
- **Shock & Vibration:** ETS 300-019-2-4 class 4M5 Features

Features

- **Gigabit Ethernet:** 10/100/1000-Base-T
- **Dual Link Operation:** 2 independent dual-stream radios operating on non-contiguous frequencies; Automatic load balancing of traffic across 4 total MIMO streams with individual stream encoding up to 256 QAM
- **Management Services:** Option to use Private or Public Cloud monitoring and management - SNMPv2/v3; Syslog; HTTPS; SFTP; Local HTML 5 based Web UI or optional application for configuration and software upgrade
- **Smart Antenna Alignment:** Hands-free dedicated 2.4 GHz WiFi management radio
- **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)
- **Collocation Synchronization:** 1PPS GPS TX/RX synchronization for collocated co-channel radios; Adjustable up/downstream bandwidth ratio

Regulatory + Compliance

- **Approvals:** FCC Part 15.407, IC RSS210, CE, ETSI 301 893/302 502
- **RoHS Compliance:** Yes
- **Safety:** UL/EC/EN/ 60950-1 + CSA-22.2

* 4.9 GHz uses 20 MHz channel width