

RADWIN 1000 3GHz BAND

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The RADWIN 1000 3GHz BAND, RADWIN 2000 3GHz BAND and RADWIN 3000 3GHz BAND are high-capacity carrier-grade radio devices, designed to meet the requirements of current and next generation markets and applications. The radio devices operate in the 3.5 and 3.65 GHz band and comply with the FCC and IC regulations. They feature software configurable antenna port activation enabling single (RADWIN 1000 3GHz BAND) or dual (RADWIN 2000 3GHz v) antenna port operation. Devices configured as RADWIN 2000 and RADWIN 3000 have the advanced air-interface based on MIMO, antenna diversity. The RADWIN 3000 3GHz BAND are software configured Point to Multipoint devices.

Operational Description

The RADWIN 1000 3GHz BAND, RADWIN 2000 3GHz BAND and RADWIN 3000 3GHz BAND product features:

- Powered by 48VDC through an indoor unit (IDU) or PoE device.
- The radio link is established within 1 minute after power applied to device.
- Software controlled limitations determine the maximum transmission power permitted according to the FCC/IC regulations.
- The radio device features up to 130 Mbps @ 20 MHz channel bandwidth (net throughput, full duplex)
- The modulation technique used by the device is OFDM (BPSK/QPSK/16QAM/64QAM)
- The antennas used for this device are 25 dBi dish, 21 dBi integral flat and 22 dBi external flat.
- The external antennas are connected to the device via RF feeder cable.

Product Highlights

- 130 Mbps Ethernet throughput and up to 16 E1s/T1s
- Long range – up to 120 km/75 miles
- Adaptive asymmetric throughput – dynamic allocation between uplink and downlink
- Single radio supporting multiple bands (3.45 to 3.70 GHz)
- Advanced MIMO, OFDM and Diversity technologies
- Robust and reliable to operate in tough conditions, extreme temperatures and non line-of-sight scenarios
- Ease of operation and maintenance

Product Specifications

| Configuration | |
|---|--|
| Architecture | Outdoor Unit with Integrated Antenna or Connectorized for External Antenna |
| IDU to ODU Interface | Outdoor CAT-5e cable; Maximum cable length: 100 m |
| Radio | |
| Capacity | 130 Mbps throughput (up to 16 x E1s/T1s plus Ethernet) |
| Range | Up to 120 km / 75 miles |
| Channel Bandwidth | 5, 10, 20 MHz |
| Modulation | 2x2 MIMO-OFDM (BPSK/QPSK/16QAM/64QAM) |
| Adaptive Modulation & Coding | Supported |
| Automatic Channel Selection | Supported |
| Diversity | Supported |
| Spectrum View | Supported |
| Max Tx Power | 26 dBm (3.5 GHz band) 25.66 dBm (3.65 band @ 20MHz channel bandwidth) |
| Duplex Technology | TDD |
| Error Correction | FEC k = 1/2, 2/3, 3/4, 5/6 |
| Encryption | AES 128 |
| Supported Indoor Units | IDU-C IDU-E PoE device |

| Supported Bands | | |
|-----------------|--------------------------|---|
| Band | Occupied Frequency Range | Radio Compliance |
| 3.65 GHz | 3.65- 3.70 GHz | FCC 47CFR, Part 90, IC RSS 197, issue-1 |
| 3.5 GHz | 3.475 - 3.650 GHz | IC RSS 192, issue-3 |

| Mechanical | |
|-------------------------------|---|
| Dimensions | 19.5(w) x 27.0(h) x 8.0(d) cm |
| Weight | 1.8 kg / 3.6 lbs |
| Power | |
| Power Feeding | Power provided over ODU-IDU cable |
| Power Consumption | <35W (IDU + ODU) |
| Environmental | |
| Operating Temperatures | -35°C ~ 60°C / -31°F ~ 140°F |
| Humidity | 100% condensing, IP67 (totally protected against dust and against immersion up to 1m) |
| Safety | |
| FCC/IC (cTUVus) | UL 60950-1, UL 60950-22, CAN/CSA C22.2 60950-1, CAN/CSA C22.2 60950-22 |
| ETSI | EN/IEC 60950-1, EN/IEC 60950-22 |
| EMC | |
| FCC | CFR47 Class B, Part15, Subpart B |
| ETSI | EN 300 386, EN 301 489-1, EN 301 489-4 |
| CAN/CSA-CEI/IEC | CISPR 22-04 Class B |
| AS/NZS | CISPR 22-2004 Class B |

ODU with Integrated Antenna



Connectorized ODU for External Antenna

