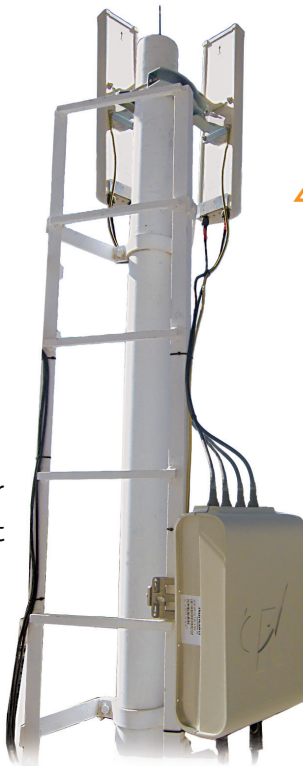




RNU4000BS

Mobile 4G 4x4 MIMO Base Station



4G End-to-End Solutions



Runcom's **RNU4000BS** is a highly integrated, fully outdoor WiMAX Base Stations. The unit features transmission power of 4x1W and four receive chains, on a 4x2 DL MIMO and collaborative MIMO of 2x4 in UL. The unit provides fast, flexible, cost-effective WiMAX network deployment solutions where increased capacity and coverage is required.

'All-in-one' architecture combined with simple, single-handed installation and fast rollout make this member of Runcom family of base stations an ideal solution for operators that want to get in on the ground floor of WiMAX deployment at significant CAPEX reductions and maximum return on their network deployment.

The **RNU4000BS** can operate with omni or sectorized antennas.

RNU4000BS provide an adaptable solutions, allowing interoperability with most MSS devices from most chipset vendors.

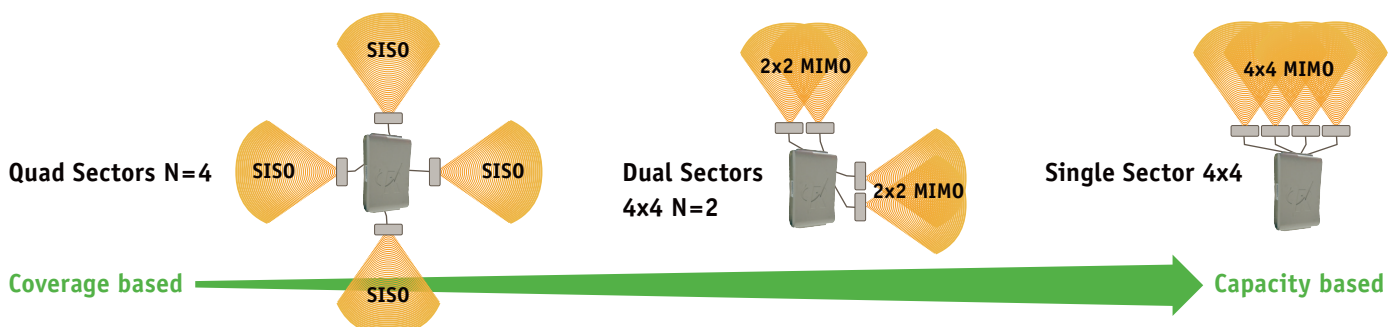
Main Features

All-in-one integrated packaging of RF, Baseband and internal antenna or external high gain antenna components.

- WiMAX forum certified IEEE802.16e Wave2
- Operates in 1.4–1.8 GHz, 2.3–2.7 GHz, 3.3–3.6 GHz, 4.9 GHz and 5.8 GHz frequency bands
- Small footprint, single-handed quick installation and simple provisioning
- Includes internal GPS module with external GPS antenna
- Fast roll-out for service providers
- A long-range Ethernet backhaul interface (for both traffic and management) and DC power
- High performance with Quality of Service (QoS) settings
- Remote NMS management via Runcom's NMS application

RNU4000BS Sectorization Options

Enables scalable evolution from "Coverage" based to "Capacity" based deployment



Radio

| | |
|--|--|
| Number of sectors | Single sector unit with four antennas or dual sector via antenna arrangement |
| Frequency | Operates in 1.4–1.8 GHz, 2.3–2.7 GHz, 3.3–3.6 GHz, 4.9 GHz and 5.8 GHz frequency bands |
| FFT | 512, 1024, (optional 2048 FFT) points |
| FEC | Convolution Code, Turbo Code and repetition |
| Channel bandwidth | 3.5 MHz, 5 MHz, 7 MHz, 8.75 MHz, 10 MHz, optional 20 MHz |
| Duplex method | TDD (Half-FDD optional) |
| Central frequency Resolution | 125 KHz |
| Maximum output power (without Antenna) | 4x1 Watt (or 4x2 watt with boosted data subcarriers) |
| Rx Sensitivity per channel | -97 dBm @ 10 Mhz channel and QPSK1/2 modulation -88 dBm @ 10 MHz channel and 16QAM 3/4 modulation |
| Noise Figure | <4dB |
| Antennas: Type Connectors | Two external dual slant antenna 4x N-Type, 50 ohm, lightning protected |
| Modulation and coding rates | DL/UL: QPSK (1/2, 3/4), 16 QAM (1/2, 3/4), 64 QAM (2/3, 3/4, 5/6) |
| Multiple antenna techniques | DL: MIMO 4x2, STC 4x2, SISO 4x2 UL: Col-MIMO two streams 1x4, SIMO 1x4 |
| Synchronization | Integrated GPS module with on board synchronization unit IEEE1588 and Backhauling self synchronization are optional |

Management

| | |
|----------------------|---|
| Network Management | SNMPv2, standard and proprietary MIB |
| System Configuration | SNMP, FTP, CLI |
| Software Upgrade | Remote TFTP upgrade of firmware and programming |

Interfaces

| | |
|--------------------|---|
| Network Interfaces | 2x10/100 BaseT, Optional 1xGE and optical interface SX/LX |
| Connectors | 4xN-Type for external antenna 50 ohm, External synchronization option, external GPS antenna option, power connector, 2xRJ-45 |

Electrical Characteristics

| | |
|-------------------|--|
| Power Source | -48 VDC (Compliant with EN60950 -1 -40 V: -59V) |
| Power Consumption | <60 W for 4x1Watt and 32/15 DL/UL WiMAX profile |

Physical and Environmental

| | |
|--------------------------------|--------------------------------|
| Dimensions | 39cm (L) x 24cm (W) x 12cm (H) |
| Weight | 5 KG |
| Operating external temperature | -45°C – 55°C |
| Estimated MTBF | >100000 hours |
| Operating humidity | 5%-95% non-condensing |

Standards Compliance

| | |
|---------------|---|
| Safety | EN 60950-1 2006, EN 60950-22 2006 (LVD, Safety), EN50385: 2002 (Human exposition to electro-magnetic field) |
| Environmental | ETS 300 019 |
| Radio | EN 302 326-2 V1.2.2, IEEE 802.16.e EN 302 623 |
| EMC | ETSI EN 301489-1 V1.8.1; EN 301489-4 V1.4.3.1 |