RNU4000PB

Full Outdoor PicoPlus BS

End-to-End WiMAX Mobile Solutions

by Runcom Technologies Ltd.

Runcom's family of wave 2 certified **full outdoor PicoPlus BSs** consists of highly integrated WiMAX Base Stations that provide fast, flexible, cost-effective WiMAX network deployment solutions where increased capacity and coverage is required.

The unit features a unique configurable sectorization capability: Using 4x4 antennas, a single PicoPlus unit can cover either a single sector N=1 reuse, two sectors with N=2 reuse or four sectors N=4.

Runcom **PicoPlus BS** performs all the required capabilities of the Mobile BS next generation such as: WiMAX Modem PHY and MAC functions, SNMP based management protocol and fully supports the latest R6 interface over GRE tunneling towards the ASN-GW.

'All-in-one' architecture combined with simple, single-handed installation and fast rollout make these BSs 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.

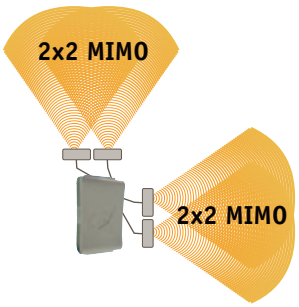
Based on Runcom's RNx2000 chip set architecture, PicoPlus BSs provide adaptable solutions, allowing interoperability with other MSS devices as well as ASN-GW vendors.

Main Features

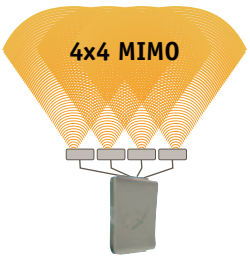
- All-in-one integrated packaging of RF and Baseband components
- WiMAX Forum Certified IEEE802.16e Wave 2
- Frequency Bands (model dependant): 2.3GHz, 2.5GHz, 3.5GHz - other bands are optional
- Small footprint, single-handed quick installation and simple provisioning
- Fast roll-out for service providers
- Seamless and cost-effective integration with a Backhaul network
- Integrated 4 RF cards for 1W per port
- Advanced MIMO techniques
- Supports two sectorization modes
- High performance with Quality of Service (QoS)
- Support the latest R6 interface and GRE tunneling to ASN-GW
- Remote NMS management via Runcom's NMS application
- Integrated GPS and synchronization circuit

RNU4000PB Sectorization Modes

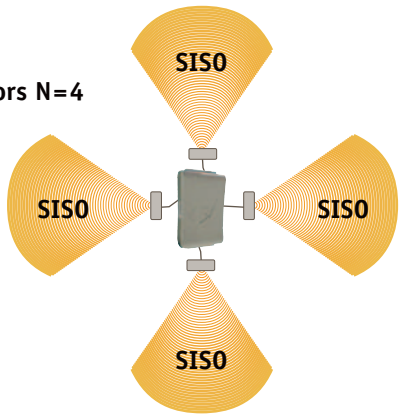
Dual Sectors 4x4 N=2

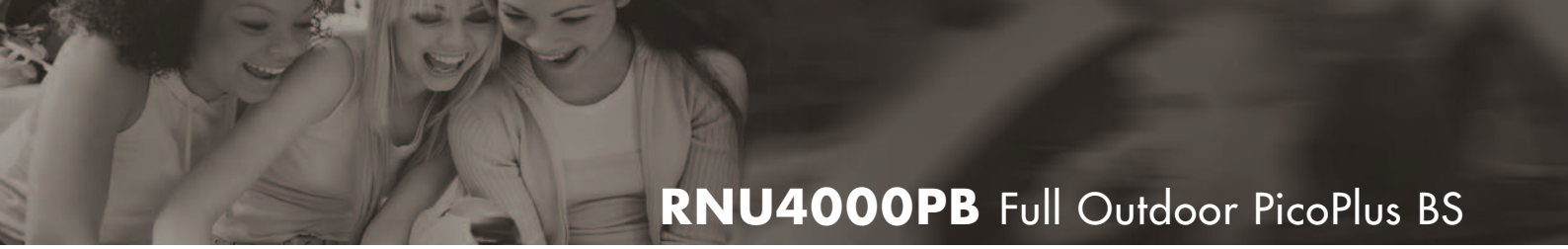


Single Sector 4x4



Quad Sectors N=4





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Radio

Number of sectors	single or dual (with frequency reuse technique)
Frequency	2.3-2.7GHz, 3.3–3.8GHz (other frequencies are optional)
FFT	512, 1024, 2048
FEC	Convolution Code and Turbo Code
Channel bandwidth	3.5 MHz, 5 MHz, 7 MHz, 8.75 MHz, 10 MHz, optional 20 MHz
Duplex method	TDD
Central frequency Resolution	125 KHz
Maximum output power (without Antenna)	4 x 30 dBm, EIRP 50 dBm for 65° sector
Antennas	Integrated Dual slant sector antenna 110° with 12dbi gain or external dual-slant antennas Antenna connectors 4x N-Type, 50 ohm connectors, lightning protected
Sectorizatino Modes	1x4x1 - Single unit - four MIMO (A/B) antennas – single sector 1x2x2 – Single unit – two MIMO 2x2 antennas per sectors – two sectors 1x1x4 – Single unit – Single SISO antenna per sector – four sectors
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) (64 QAM is optional for UL)
Diversity Supported	4x4 MIMO A/B , STC, MRC
GPS	Integrated with external active antenna
Synchronization	Integrated GPS module with on board synchronization unit orexternal source synchronization Optional: IEEE1588 or Backhauling self synchronization

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 or optical interface SX/LX Second Ethernet port for local and out-of-band management. Can also function as a serial port
Northbound Interface	Profile C, R6 with GRE tunnel per SF or Standalone proprietary mode Optional: Profile B

Electrical Characteristics

Power Source and consumption	48VDC (operation range -36 to -72VDC);Max Power consumption 40Watt

Physical and Environmental

Dimensions	39cm (L) x 24cm (W) x 12cm (H)
Weight	less then 5 KG
Operating external temperature	Industrial -40°C to 65° C
Operating humidity	5%-95% non-condensing

Standards Compliance

Safety	EN 60950-1, EN 60950-22
Environmental	IEC 60529-1, IP66
Radio	FCC Part 27
EMC	FCC part 15, class A
Certified WiMAX Forum IEEE802.16e-2009 Wave 2 and beyond	

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