Redline communications

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RedMAX Base Station (AN-100U)

Features:

- WiMAX Forum Certified™ design
- Compliance with 802.16-2004 (802.16e ready)
- Strong encryption using AES
- Field-upgradeable firmware
- PMP base station platform
- Broadcast and multicast services

The RedMAX Base Station (AN-100U) is a 802.16-2004 compliant, broadband wireless base station capable of delivering multiple services. Fully designed as a WiMAX-based solution, the RedMAX Base Station is interoperable with an emerging base of industry-wide, WiMAX-compatible equipment.

Easy and economical to deploy, the RedMAX Base Station system facilitates the rapid provision of new services by services providers, while its very low latency ensures reliable delivery of data-sensitive services in particular, including circuit-switched voice traffic, voice-over-Internet Protocol (VoIP), video and prioritized data traffic. Individual Quality of Service (QoS) settings can be set dynamically, according to the assigned service level agreement (SLA).

Designed to be completely interoperable with WiMAX Forum Certified™ products, this carrier-class, point-to-multipoint (PMP) base station provides a scalable solution for any WiMAX access network. The RedMAX Base Station can be deployed in clusters of up to six (60 degree) sectors, supporting up to 4000 unique user-data flows. The GPS time synchronization feature ensures efficient use of available spectrum and channels, providing scalable and reliable cell deployment when operating Time Division Duplexing (TDD) radios in close proximity.

The hardware is fully upgradeable in the field by software download, to accomodate future enhancements including IPv6 support, scalability, additional classifiers, alternative encryption standards, and continued development of the 802.16 standard (i.e., 802.16e for mobility). Adherence to stringent carrier-class NEBS Level 3 specifications provide high-reliability for mission critical deployments. The frequency agnostic indoor unit has a selection of radios for operation in licensed and unlicensed bands using the 802.16-2004 specified 3.5 MHz and 7 MHz channel profiles.

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RedMAX Base Station System Specifications

System Capability:	LOS, Optical LOS, non LOS Cell-based point-to-multipoint
RF Band:	3.400-3.800[1] GHz (FWA band), TDD 5.400-5.800 GHz (License exempt bands)
Center Frequency Steps:	250 KHz
Channel Size:	3.5, 5, 7, 10 MHz
RF Dynamic Range:	> 45 dB
Spectral Efficiency:	Up to 5 bps/Hz (over the air)
Over The Air Rate:	Up to 35 Mbps (7 MHz channel), Up to 50 Mbps (10 MHz channel)
Average Ethernet Rate:	Up to 19 Mbps (7 MHz channel), Up to 27 Mbps (10 MHz channel)
Latency:	6-18 msec (depends on channel size, OFDM frame duration)
Maximum Tx Power:	+23 dBm across all modulation/coding levels (region specific)
Rx Sensitivity:	-93 dBm @ BPSK 1/2 (based on BER of 1x10e-6)
IF Cable:	Maximum length up to 984 ft (300 m)) using Redline recommended high-grade IF cable
Network Attributes:	Transparent bridge, 802.1Q VLAN, 802.1p network traffic prioritization, DHCP, client pass-through
Modulation/Coding Rates:	Dynamic adaptive modulation (bi-directional) Auto-select modulation: BPSK, QPSK, 16 QAM, 64 QAM Auto-select coding: 1/2, 2/3, 3/4
Over the Air Encryption:	DES and AES
MAC:	Cell-based PMP deployment 802.16-2004 compliant PMP 802.16-2004 packet convergence sub-layer mode TDMA Access Automatic repeat request (ARQ) error correction
Range:	Over 28 mi (45 km) LOS Over 2 mi (3 km) non LOS
Duplex Technique:	Dynamic TDD (time division duplex) HD-FDD (half duplex frequency division duplex)
Wireless Transmission (PHY):	256 FFT OFDM (Orthogonal Frequency Division Multiplexing)
Network Connections:	TDM (RJ-48c), 10/100 Ethernet (RJ-45)
System Configuration:	HTTP (Web) interface, SNMP CLI via Telnet and Local Console
Network Management:	SNMP, standard and proprietary MIBs Full management by RedAccess NMS
Power Requirements:	Auto-sensing 110/220/240 VAC 50/60 Hz Auto-sensing 18-72 VDC, 75 W maximum
Redundant Power:	Optional dual AC or dual DC power supply (dual cord) with automatic fail-over
Compliance:	FCC part 15 subpart B, EN 301 021, EN 301 489, UL 950, IEC 60950
Operating Temperature:	IDU: 0 C to 40 C IDU Short-term: 0 C to 55 C for up to 5 hours ODU: -40 C to 65 C
Dimensions	17 x 12 x 1.75 in (431.8 x 304.8 x 44.45 mm)
Weight:	5.5 lb (2.5 kg)
Humidity:	Up to 90% non-condensing

[1]Contact sales for availability.

About Redline Communications

Redline Communications is a technology leader in the design and manufacture of standards-based broadband wireless access solutions. Using industry leading OFDM technologies, Redline's award-winning products provide unmatched high-capacity non line-of-sight capabilities with proven performance, reliability and security. Ideal for a variety of access, backhaul and private network applications, Redline products are meeting the needs of carriers, service providers and enterprises worldwide. Redline has over 10,000 installations in 75 countries across six continents through a global distribution network of 80+ partners.

302 Town Centre Blvd. - Suite 100 • Markham • ON • Canada • L3R 0E8 • Phone: +1.905.479.8344 • Toll-Free: +1.866.633.6669 • Fax: +1.905.479.7432 • www.redlinecommunications.com