RedMAX Base Station (AN-100U)

Features:

- PMP base station platform

- 2nd generation 802.16 MAC

- 3rd generation OFDM PHY

- WiMAX Forum Certified™ design

- Can be deployed in clusters of up to six sectors

- Compliance with 802.16-2004

- Strong encryption using AES or DES

- Hardware accelerated performance

The RedMAX Base Station (AN-100U) is an 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 provisioning of new services by services providers. Its very low latency ensures reliable delivery of delay-sensitive services in particular, including circuit-switched voice traffic, voice-over-Internet Protocol (VoIP), video and prioritized data traffic. New subscribers can be provisioned dynamically with no downtime for existing users. Existing subscribers can have their contract changed dynamically.

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 (up to six RedMAX BS can be co-located to form high capacity multisector cell deployments). The GPS time synchronization feature facilitates tight frequency reuse to make the most efficient use of available spectrum and channels, reducing interference when operating Time Division Duplexing (TDD) radios in close proximity.

The hardware is fully upgradeable in the field by software download, to accommodate future enhancements including IPv6 support, scalability, additional classifiers, alternative encryption standards, and continued development of the 802.16 standard. Adherence to stringent carrier-class NEBS Level 3 requirements provide high-reliability for mission critical deployments. Like all of Redline's 802.16-2004 products, the RedMAX Base Station addresses all of the relevant access frequency bands with ease and flexibility.

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RedMAX Base Station System Specifications

System Capability:	LOS, Optical LOS, non LOS
	Cell-based point-to-multipoint
RF Band:	3.400-3.600 GHz (FWA band), TDD
Channel Size:	3.5, 5, 7, 10 MHz[1]
RF Dynamic Range:	> 40 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:	Better than -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)[1]
Wireless Transmission (PHY):	256 FFT OFDM
	(Orthogonal Frequency Division Multiplexing)
Network Connections:	Standard: 10/100 Ethernet (RJ-45); Optional: TDM (RJ-48c)
System Configuration:	HTTP (Web) interface, SNMP
	CLI via Telnet and Local Console
Network Management:	SNMP, standard and proprietary MIBs
	Full management by RedMAX Management Suite (RMS)
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:	EMC: EN 301 489-1, EN 301 489-4, EN 55022/CISPR 22; RF: EN 302 326; Safety: IEC 60950-1, EN 60950-1, UL 60950-1; Industry Canada: RSS-192
Operating Temperature:	IDU: 0 C to 40 C
	IDU Short-term: to 55 C (reduced performance)
	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 15,000 installations in 75 countries across six continents through a global distribution network of 80+ partners.