

RedMAX™ Base Station (AN-100U)



Features:

- High performance PMP base station platform
- Operating in the 3.3–3.5; 3.4–3.6; and 3.6–3.8 GHz RF bands
- 2nd generation 802.16 MAC
- 3rd generation OFDM PHY
- Extremely low latency
- Superior reliability
- Dynamic QoS
- Advanced encryption using DES*
- SNMP Manageable

The RedMAX™ Base Station (AN-100U) is Redline's WiMAX Forum Certified® broadband wireless solution capable of delivering high quality voice, video and data services and applications. Designed to meet WiMAX Forum specifications, the RedMAX AN-100U is completely interoperable with the emerging base of industry-wide, WiMAX-compatible equipment.

Easy and economical to deploy, the RedMAX AN-100U facilitates the rapid provisioning of new, high margin and differentiated service offerings. Its extremely low latency ensures reliable delivery of delay-sensitive services such as circuit-switched voice traffic, Voice-over-Internet Protocol (VoIP), video and prioritized data traffic. New subscribers can be dynamically provisioned while existing customers can modify their contracts 'on-the-fly' without affecting current services.

Redline's carrier-class, point-to-multipoint (PMP) base station provides an ideal, scalable solution for any WiMAX access network. The RedMAX AN-100U can be deployed in clusters of up to six (60 degree) sectors to form high capacity, multi-sector cell deployments. Its GPS time synchronization feature facilitates tight frequency reuse enabling more efficient use of available spectrum and channels, and reducing interference when operating Time Division Duplexing (TDD) radios in close proximity.

The hardware is fully field upgradeable 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 Network Equipment Building System (NEBS) Level 3 design requirements, provide high-reliability for mission critical deployments. Similar to Redline's 802.16-2004 products, the RedMAX AN-100U base station addresses all relevant access frequency bands with ease and flexibility.

RedMAX Base Station (AN-100U) System Specifications

System Capability:	LOS, Optical LOS, non LOS Cellular-based point-to-multipoint
RF Band ¹ :	3.3-3.5*; 3.4-3.6; and 3.6-3.8 GHz
Channel Size:	3.5 MHz, 7 MHz
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, rates depend on channel size)
Ethernet Data Rate:	Up to 23 Mbps (7 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 -98 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, TOS/DSCP and L2/L3 address, traffic classification DHCP client, client pass-through
Modulation/Coding Rates:	Auto-select modulation: BPSK, QPSK, 16 QAM, 64 QAM Auto-select coding: 1/2, 2/3, 3/4
Over the Air Encryption:	DES, 3DES
Synchronization:	Input for external 1 PPS GPS clock signal
MAC:	802.16-2004 compliant PMP 802.16-2004 packet convergence sub-layer mode TDMA Access
Range:	Over 28 mi (40 km) LOS; 12mi (20 km) PMP Over 2 mi (3 km) non LOS
Duplex Technique:	TDD (time division duplex) HD-FDD (half duplex frequency division duplex)
Wireless Transmission (PHY):	256 FFT Orthogonal Frequency Division Multiplexing (OFDM) (Orthogonal Frequency Division Multiplexing)
Network Connections:	Standard: 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 Redline Management Suite (RMS)
Power Requirements:	Auto-sensing 110/220/240 VAC 50/60 Hz Auto-sensing 18-72 VDC, 80 W
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, Industry Canada: RSS-192, FCC: Parts 90 & 15** Safety: IEC 60950-1, UL 60950-1
Operating Temperature:	IDU: 0 C to 40 C ODU: -40 C to 60 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

*Contact sales for availability in your region; **For RF Band 3.6-3.8 GHz only; ¹WiMAX Forum certification only applicable to 3.4 - 3.6 GHz

About Redline Communications

Redline Communications is the leading provider of fixed and mobile standards-based wireless broadband solutions. Redline's RedMAX™ WiMAX Forum Certified™ system, RedMAX 4C Mobile WiMAX™ products, and its award-winning broadband wireless infrastructure family of products – RedCONNEX™ and RedACCESS™ – enable service providers and other network operators to cost-effectively deliver high-bandwidth services, including voice, video and data communications. Redline is committed to maintaining its wireless industry leadership with the continued development of WiMAX and other advanced wireless broadband products. With more than 75,000 installations in 80 countries, and a global network of over 140 partners, Redline's experience and expertise helps service providers, enterprises and government organizations roll out wireless broadband networks to support advanced communications.

