

POWERFUL. VERSATILE. RELIABLE.



AN-100UX

Datasheet RedMAX™ AN-100UX Base Station

AT A GLANCE

Operates in the 3.3–3.5; 3.4–3.6;
3.6–3.8 GHz and 3.65–3.7 GHz FCC/
IC RF bands

36 dBm Tx Power

Uplink Sub-channelization

2nd generation 802.16 MAC

3rd generation OFDM PHY

Dynamic QoS

Can be deployed in clusters of up to
six sectors

Compliance with 802.16-2004

Strong encryption

High Reliability

Hardware accelerated performance

SNMP Manageable

The RedMAX™ AN-100UX base station is a high-powered version of Redline's popular RedMAX™ AN-100U. The AN-100UX is designed in compliance with WiMAX standards to be fully interoperable with a range of WiMAX Forum Certified™ devices. With an industry-leading 36 dBm of power, the AN-100UX significantly extends capacity and range for fixed and nomadic broadband wireless access to information, wireless video surveillance, wireless data acquisition and wireless Smart Grid connectivity.

The extremely low latency of the AN-100UX ensures reliable delivery of delay-sensitive services such as circuit-switched voice, Voice-over-Internet protocol (VoIP), video and prioritized data traffic. Uplink sub-channelization automatically gives each subscriber the highest throughput possible under varying subscriber loading conditions. A full suite of Quality of Service (QoS) controls can be applied individually and on the fly to each subscriber according to their Service Level Agreement (SLA).

Available in 3.3 GHz to 3.5 GHz, 3.4 GHz to 3.6 GHz, 3.6 GHz to 3.8 GHz and the 3.65 to 3.7 GHz FCC / IC, the RedMAX™ AN-100UX can be deployed in clusters of up to six (60-degree) sectors to form high-capacity, multi-sector cell sites. Its Global Positioning System (GPS) time-synchronization feature facilitates tight frequency reuse and enables more efficient spectrum and channels usage when operating time-division duplex (TDD) radios in close proximity. Each RedMAX™ AN-100UX supports as many as 511 users, for a total capacity of more than 3,000 subscribers per cell site.

The RedMAX™ AN-100UX is fully upgradeable in the field by software download to accommodate updates and future enhancements. Over-the-air (OTA) provisioning simplifies control, improves customer service and lowers cost. Its robust design is highly reliable and meets stringent carrier class Network Equipment-Building System (NEBS) Level 3 requirements, making it the perfect choice for mission-critical deployment.

Easy and economical to deploy, fully featured and scalable, the RedMAX™ AN-100UX base station is the ideal solution for any WiMAX access network where high capacity and range are required.

REDCARE SUPPORT

Redline's products are backed by RedCARE, one of best support programs in the industry, providing responsive customer and solution support everywhere that Redline's products are available. RedCARE ensures consistent, broadband wireless connectivity for our customers.

ABOUT REDLINE COMMUNICATIONS

Redline Communications (www.rdlcom.com) is a leading provider of specialized broadband wireless systems used to cost-effectively deploy distributed applications and services. Redline systems are used by local and state governments to quickly and easily deploy or extend their public safety networks; by oil and gas companies to connect their digital oil fields; by service providers and enterprises to bring dedicated Internet access to business users; and by the military to rapidly deploy secure networks. For more than 10 years, Redline has been delivering powerful, versatile and reliable wireless solutions through certified partners in the Americas, the Middle East, and Africa.

TECHNICAL SPECIFICATIONS

System Capability	LOS, Optical LOS, non LOS Cellular-based point-to-multipoint
RF Band	3.3–3.5 GHz, 3.4–3.6 GHz, 3.6–3.8 GHz, 3.65–3.7 GHz FCC / IC
Channel Size	3.5 MHz, 7 MHz
Spectral Efficiency	Up to 5 bps/Hz (over-the-air)
Sector Capacity	18 Mbps (7 MHz channel size); 9 Mbps (3.5 MHz channel size) user rates 37,400 packets per second (tested with 64 byte packets)
Latency	6–18 msec (depends on channel size, OFDM frame duration)
Maximum Tx Power	+36 dBm (region specific with HTB transceiver)
Rx Sensitivity	Better than -98 dBm @ BPSK 1/2 (based on BER of 1x10e-6)
IF Cable	Maximum length up to 170 m (560 ft) using Redline recommended high-grade IF cable
Scheduling Classes	UGS, rtPS (for VoIP), nrtPS, Best Effort
Network Attributes	Layer 2 bridging; 802.1Q (VLAN tagging, QinQ, VLAN filtering); wireless VPN; DHCP Option 82 and PPPoE PADI tagging for scalable service activation and provisioning
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
Range	Up to 72 km (45 mi)
Duplex Technique	TDD (time-division duplex) HD-FDD (half duplex frequency-division duplex)
Wireless Transmission (PHY)	26 FFT OFDM (orthogonal frequency division-multiplexing) (Uplink Sub-channelization)
Network Connections	Standard: 10/100 Ethernet (RJ-45); separate Ethernet ports for management and data traffic
Management	HTTP (Web), SNMP, Telnet, RedMAX EMS
Power Requirements	Optional AC (Auto-sensing 90-264VAC, 50/60 Hz) or DC (Auto-sensing 21 - 60 VDC)
Redundant Power (automatic fail-over)	Optional external AC or DC available with RPS
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 (for USA 3.65 GHz operation) Safety: IEC 60950-1, UL 60950-1
Operating Temperature	IDU: 0 °C to 40 °C (32 °F to 104 °F) ODU: -40 °C to 60 °C (-40 °F to 140 °F)
Dimensions	IDU: 431.8 mm x 304.8 mm x 44.45 mm (17 in x 12 in x 1.75 in) ODU: 482 mm x 203 mm x 101 mm (19 in x 8 in x 4 in)
Weight	IDU: 2.9 Kg (6.5 lbs) ODU: 5.4 Kg (12 lbs) without bracket or antenna
Humidity	Up to 90% non-condensing

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