



AN-100 Broadband Wireless System

High performance point to point and multipoint backhaul solutions



AN-100 features:

- Industry leading spectral efficiency ensures high data rates
- Services sensitive over-subscription
- Low latency for delay sensitive traffic
- Long range capabilities minimize the required number of repeater hops
- GPS Time Sync facilitates frequency planning for in-band Backhaul
- Versatile QoS for multi-services, including voice and video over IP
- Optional eight port TDM E1/T1 full and fractional (nx64)

Redline's award-winning AN-100 is a scalable carrier-class broadband wireless solution for point-to-point and multipoint backhaul networks. The AN-100 uses OFDM for optical line-of-sight and non line-of-sight technology to overcome typical urban obstacles such as trees and buildings. The long-range capabilities and high-capacity of the AN-100 allow wireless connectivity to remote locations with a minimum number of repeater stations.

The low latency AN-100 system provides reliable delivery of delay sensitive services including circuit switched voice traffic, voice-over-Internet Protocol (VoIP), optimized transport for video, and prioritized data traffic - all converged over a single robust wireless link. The time division multiplexed (TDM) option can be an alternative to expensive leased full and fractional E1/T1 circuits while supporting legacy TDM traffic and increasing network capacity.

The AN-100 operates in a range of channel sizes within the 3.4 - 3.8 GHz spectrum, with an industry-leading 14 MHz channel providing up to 43 Mbps average Ethernet rate.

Redline's AN-100 is the perfect backhaul solution for any wireless broadband access network, including WiMAX-based systems. The AN-100 is 802.16-compliant, and shares classes of service with 802.16-2004 making it an excellent solution for providing high-capacity multi-services backhaul to WiMAX base stations. Redline's AN-100 family of products provide a complete range of 802.16 broadband wireless backhaul and multipoint solutions.

Long range, high-throughput, configurable latency, scalability to multipoint and Redline's industry-wide reputation for high availability and quality make the AN-100 an excellent choice for extending your wireless networking services.

High-throughput, scalability, and Redline's industry-wide reputation for quality make the AN-100 an excellent choice for extending your wireless networking services.



AN-100 System Specifications

System Capability:	LOS, optical-LOS, non-LOS (256 FFT OFDM)
RF Band:	3.400-3.800 GHz, TDD, HD-FDD
Channel Size:	7 and 14 MHz (250 KHz steps)
Data Rate:	Up to 43 Mbps average Ethernet rate (@ 14 MHz channel)
Max Tx Power:	SC 23 dBm, SS 16 dBm (region specific)
Rx Sensitivity:	-90 dBm @ 7MHz, QPSK 1/2 (BER of 1x10e-6)
IF Cable:	Up to 300 m (984 feet) using high-grade cable
Network Attributes:	PTP transparent bridge, 802.1Q VLAN, DES encryption
MAC:	802.16 compliant: cell-based PMP and packet convergence sub-layer mode, PTP, TDMA access, ARQ, dynamic adaptive modulation (QPSK to 64 QAM)
Range:	Beyond 45 km (28 mi) LOS, Beyond 3 km (2 mi) non LOS
Network Connections:	10/100 Ethernet (RJ-45) data and management ports
System Configuration:	HTTP (Web) interface, SNMP
Network Management:	SNMP; Proprietary MIBs
Power:	110-240 VAC 50/60 Hz, 18-72 VDC, dual
Compliance:	Radio frequency: EN 301 021, EN 301 753 EMC: EN 301 489-1, EN 301 489-4, EN 55022/CISPR 22 Safety: IEC 60950, EN 60950, UL 60950 Industry Canada: RSS-192
Operating Temperature:	IDU: 0 to 40 C ODU: -40 to 60 C

TDM

Clocking:	Internal, network, adaptive
Diagnostics:	Local, remote and traffic loopback testing, detects LOS, OOF, detects/generates AIS, RAI
Ports:	1 to 8 TDM ports

E1 Interface

Connector:	RJ-48c
Data Rate:	2.048 Mbps
Framing:	Unframed, PCM 31
Jitter:	ITU-T G.823
Standards:	ETS TBR 12/13, ITU-T Rec. G.703, G.704, G.706, G.732, G.821, G.826

T1 Interface

Connector:	RJ-48c
Data Rate:	1.544 Mbps
Framing:	Unframed, D4 (SF), ESF
Jitter:	AT&T TR-62411, ITU-T G.824
Standards:	ANSI T1.403, ITU-T Rec. G.703, G.704, G.733, G.821, G.826

Superior Support

When you choose Redline, you receive the easiest solution to install and manage, and the best customer support in the industry. We meet our global commitments by selling through our fully qualified partners - professionals who meet our rigorous requirements for world-class service and support. All Redline partners are fully committed to customer satisfaction and are supported by our series of structured service programs and stringent quality and efficiency requirements.

Ease of Installation and Management

Redline products are easier and less expensive to install, maintain, and manage. The split architecture places the transceiver beside the antenna - eliminating cable losses, and enabling the use of low cost cables and small, easy to align antennas. Redline products can maintain a reliable link in challenging environments, allowing antennas to be placed in convenient locations such as building rooftops and small towers. This minimizes installation costs and reduces location rentals.

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.

