

AN-50e features:

- Average Ethernet rates up to 49 Mbps
- Ranges beyond 25km/15 miles
- Non line-of-sight capabilities
- 5.470 - 5.725 GHz and 5.725 - 5.825 GHz bands
- DFS and ATPC support
- Advanced error correction achieves 99.999% reliability

AN-50e

Broadband Wireless System

ETSI Version



Now available with Dynamic Frequency Selection and Automatic Transmission Power Control

The award winning AN-50e

Redline's AN-50e system is a high speed wireless Ethernet bridge configured for point-to-point (PTP) operation, upgradeable to point to multipoint (PMP) operation. Accommodating both backhaul and access functions, the AN-50e system is the industry's first true high performance, high capacity, multi-services OFDM platform. The RedAccess Network Management System (NMS) and web interface is remarkably easy to use and install.

The AN-50e system delivers an over the air rate of up to 72 Mbps, equivalent to 49 Mbps at the Ethernet level. With a robust non line of sight (NLOS) capability, long IF cable support for tower and high rise installations, audible antenna alignment and diagnostic capabilities for Ethernet and wireless, the AN-50e addresses the most challenging of deployment scenarios and makes installation and support easy. The AN-50e boasts software selectable channels that can be assigned during deployment on a best-performance basis.

The AN-50e system operates in the license exempt 5.470 - 5.725 GHz and 5.725 - 5.825 GHz bands and includes advanced technologies to address potential inter cell interference issues. Maximizing spectral efficiency is a critical factor that directly impacts the bottom line. In PTP mode the AN-50e rises to this challenge with a unique patented bi-directional adaptive modulation technique, automatically selecting any of eight modulation schemes (from BPSK to 64 QAM) in order to adjust to link quality degradation while providing the highest throughput for a given deployment scenario.

The AN-50e employs several techniques to address propagation anomalies associated with fixed wireless deployments, the most critical of which is multipath. The system utilizes OFDM to increase robustness in NLOS and near LOS links, ARQ to efficiently correct bit errors at the RF level, and adaptive coding to optimize performance on a burst to burst basis. The AN-50e also supports Dynamic Frequency Selection and Automatic Transmission Power Control features to minimize the impact of interference. All of these advanced features provide a robust and high performance solution that help to reduce operational costs and accelerate return on investment.



SuperQuest Award

AN-50e System Addresses:

- Building to building connectivity for enterprises
- Backhaul for ISPs and Wireless ISPs
- High capacity surveillance and telemetry
- Facilities based service providers
- Campus networking
- Disaster recovery/Business Continuity
- Large enterprise VPN
- MTU (multi tenant units)
- Wireless private networks
- Extensions/alternatives to fiber optic networks

About Redline Communications Inc.

Redline Communications is an innovative provider of broadband fixed wireless solutions, helping companies reduce costs, extend and enhance networks and increase customer satisfaction. Redline is a leader in using OFDM technology to provide robust high speed wireless connectivity even in partial or non line of sight conditions. Redline is a principal member of IEEE 802.16 and Wimax, committed to establishing global standards for the fixed wireless industry.

Redline's products are recognized for their unique capabilities in providing backhaul links and high speed access links to urban and rural service providers. Redline has more than 5,000 systems installed by customers in over 30 countries in industries as diverse as school boards, manufacturing, Internet providers, transportation, government, and health care facilities.

AN-50e Application Areas

Wireless technology has existed for many years, proving itself to be a reliable communication medium, primarily for long haul point to point applications supporting critical links for telephony and broadcast services. With the surge in broadband two way Ethernet and Internet use, fixed wireless systems are playing an even more important role in supporting today's growing network infrastructures.

AN-50e System Specifications

System Capability:	Clear, optical and non line of sight
RF Band:	5.725 - 5.825 GHz 5.470 - 5.725 GHz
Channel Size:	20 MHz
RF Dynamic Range:	> 50 dB
Data Rate:	Up to 49 Mbps average Ethernet rate
Max TX Power:	-20 to + 20 dBm (region specific)
Rx Sensitivity:	-86 dBm @ 6 Mbps (based on BER of 1x10 ⁻⁹)
IF Cable:	Maximum length up to 76 m (250 ft) using RG6U Maximum length up to 152 m (800 ft) using high-grade cable
Network Attributes:	Multiplexed IF, DC power, control (Tx/Rx, AGC, APC) Transparent bridge DHCP pass through Automatic Link Distance Ranging ¹ VLAN pass through 802.3x Ethernet flow control ¹ 802.1p network traffic prioritization ¹
Dynamic Channel Control:	Dynamic Frequency Selection (DFS), Automatic Transmit Power Control (ATPC)
Modulation/Coding Rates:	Adaptive Modulation (bi-directional burst to burst) auto selects; 1/2 BPSK, 3/4 BPSK, 1/2 QPSK, 3/4 QPSK, 1/2 16QAM, 3/4 16QAM, 2/3 64QAM and 3/4 64QAM
Over The Air Encryption: MAC:	Proprietary 64-bit encryption TDMA Concatenation / Fragmentation ² Automatic Repeat Request (ARQ) error correction Dynamic adaptive modulation (BPSK to 64 QAM)
Range (Europe):	Over 18 km / 10 miles optical line of sight @ 33 dBm EIRP Over 25 km / 15 miles line of sight @ 33 dBm EIRP
Network Services:	Transparent to 802.3 services and applications
Duplex Technique:	Dynamic TDD (time division duplex)
Wireless Transmission:	OFDM (orthogonal frequency division multiplexing)
Backhaul Connection:	10/100 Ethernet (RJ45)
System Configuration:	Web interface and SNMP CLI via Telnet and Local Console
Power Requirements:	110/220/240 VAC or 24/48 VDC (auto-sensing single/dual), 50/60 Hz, 39 W maximum
Redundant Power:	Optional Dual AC/DC Power Supply with automatic fail over
Compliance:	EN 60950, EN 301 893, EN 301 390, EN 301 489-1 & 17

¹Point to Point Mode only

²Point to Multipoint mode only

Contact sales for feature availability