

POWERFUL. VERSATILE. RELIABLE.



AN-80i

Datasheet

AN-80i Broadband Radio Platform

The AN-80i radio platform can be software configured to create either point-to-point (PTP) communication links between network locations or high speed point-to-multipoint (PMP) access links between business users and their corporate networks. The AN-80i's enhanced IEEE 802.16 radio delivers high capacity, high throughput, long range and industry leading lowest latency making it ideal for 3G and 4G / LTE networks and for specialized applications in the oil and gas industry, military organizations and local and state governments.

The AN-80i is powered by Redline's innovative third-generation IEEE 802.16 orthogonal frequency-division multiplexing (OFDM) technology and uses powerful hardware accelerators to achieve high throughput, industry-leading low latency and excellent line-of-sight (LOS) and non-line-of-sight (NLOS) ranges in the most challenging urban and industrial environments.

Available in the 4.9 GHz public safety band, the 5.2 GHz to 5.8 GHz band, the 3.65 to 3.7 GHz band, and the 3.3 GHz to 3.8 GHz band, the AN-80i is configured via software options and speed keys, allowing you to purchase the features and throughput performance you need today and upgrade later without having to replace any hardware. With a simple software download, the AN-80i can be configured as point-to-point or point-to-multipoint, and it can run specialized applications, from video surveillance to data acquisition, from high performance to ultra-high performance. This common radio platform approach simplifies network design and logistics while providing a high level of future-proofing.

In the PTP configuration, the AN-80i delivers up to 90 Mbps Ethernet data rate — more than double that of the nearest competitor — making it an ideal choice for high-capacity backhaul applications. It has excellent range and is deployed in hundreds of links over 80 kilometers. In the PMP configuration, the AN-80i delivers up to 48 Mbps Ethernet data rate — the highest in its class — and it supports a full range of Quality of Service (QoS) controls to enable business access services for voice, data and video services. Its industry-leading capacity also supports the largest number of video cameras with the highest video quality. With either configuration, the AN-80i assures ultra-low latency — as low as one millisecond — up to 10 times better than the competition.

The AN-80i provides AES-128 and AES-256 encryption options and X.509 certificate-based authentication. As the only broadband wireless solution

AT A GLANCE

Optimized for 4G / LTE networks

Software configured for either PTP or PMP applications

Operates in 3.5 GHz band, 4.9 GHz public safety band and the 5.2 to 5.8 GHz band

High throughput — 90 Mbps Ethernet PTP, 48 Mbps Ethernet PMP

Exceptional long-range capabilities

High capacity point-to-multipoint system

Lowest end-to-end latency

Flexible software controlled channel size and speed selections

QoS controls to differentiate and prioritize traffic groups

Dynamic time-division duplex (TDD) transmission

Easy install with IEEE 802.3af PoE

Highest security protection

in its class to achieve FIPS 140-2 certification, it delivers unparalleled security.

Designed to meet stringent carrier-class requirements, HALT accelerated life tested and IP67-certified for outdoor deployment, the AN-80i delivers industry-leading 29-year Mean Time Between Failures (MTBF) and the industry's lowest documented field failure rate.

Available with a wide variety of antennas, the AN-80i is quick and easy to install. The product is manageable over-the-air (OTA) via a standard web browser or through Redline's powerful ClearView NMS management software.

The powerful, versatile and reliable AN-80i is ideal for specialized point-to-point and point-to-multipoint wireless applications where high capacity, long range, security and reliability are paramount.

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 is the innovator of Virtual Fiber™, a rugged broadband wireless solution used by companies and governments worldwide to cost effectively deploy and manage distributed services and applications. Redline's resilient products provide machine-to-machine connectivity over wide areas in even the harshest environments, and are used to facilitate and enhance public safety networks, deploy and extend secure networks, and connect digital oil fields and smart grids. Redline has been delivering powerful, versatile and reliable wireless systems to governments, the military, oil and gas, and the telecom industry for over a decade through certified partners in the Americas, Middle East, and Africa.

TECHNICAL SPECIFICATIONS

System Capability	LOS, optical-LOS, and non-LOS (802.16 OFDM)
RF Band	3.300–3.800 GHz TDD band ¹ , 3.650–3.700 GHz FCC / IC ¹ , 4.940 – 4.990 GHz TDD band ¹ , 5.250–5.350 GHz TDD UNII band ¹ , 5.470–5.725 GHz TDD band ¹ , 5.725–5.850 GHz TDD band ¹
Channel Size (software selectable)	PTP: 3.5, 5, 7, 10, 14, 20, 28, 40 MHz ¹ PMP: 3.5, 5, 7, 10, 14, 20 MHz ¹
Data Rate	PTP: Up to 108 Mbps UBR Up to 90 Mbps Ethernet Rate PMP: Up to 54 Mbps UBR Up to 48 Mbps Ethernet Rate
Processing Speed	176,000 PPS
Max Range	80 km (50 mi)
Network Attributes	PTP: Transparent bridge, automatic link distance ranging, 802.3x, 802.1p, DHCP pass-through PMP: Transparent bridge, automatic link distance ranging, DHCP pass-through, 802.1Q VLAN, CIR,PIR support
Modulation	BPSK to 64 QAM
MAC	TDMA, Dynamic ARQ (per-link), Dynamic adaptive modulation (per-link), Dynamic TDD (per link)
Over the Air Encryption	Proprietary private key encryption, AES-128 and AES-256
QoS	Multiple service flows per subscriber
Dynamic Channel Control	DFS, ATPC
Max Tx Power	+25 dBm (region specific)
Rx Sensitivity	-85 dBm @ 3 Mbps max.
PoE Cable	Up to 91m (300 ft)
Network Connection	10/100 Ethernet (RJ-45)
Management	HTTP (Web) interface, SNMP v2 / v3, Telnet, HTTPS (SSL), SSH, ClearView NMS
Operating Temp	-40 °C to 60 °C (-40 °F to 140 °F)
Humidity	100% humidity, condensing
Power Consumption	Standard IEEE 802.3af (15.4 W max.)
Power Supply	110/220/240 VAC 50/60 Hz, 18-60 VDC
Compliance	Safety: IEC, EN, and UL/CSA 60950 EMC: EN 301 489-1, EN 301 489-17 5.8 GHz: IC RSS-210, FCC Part 15, ETSI EN 302 502 5.4 GHz: IC RSS-210, FCC Part 15, ETSI EN 301 893 4.9 GHz: IC RSS-111, FCC Part 15, FCC Part 90, ETSI EN 301 893 3.5 GHz: IC RSS-192, FCC Part 15, FCC Part 90, ETSI EN 302 326-2
Dimensions	289 mm x 190 mm x 51.5 mm (11.38 in x 7.50 in x 2.03 in)
Weight	2.0 Kg (4.5 lbs) without bracket or antenna

¹ Availability restricted by regional regulations

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