

All-indoor Point-to-Point E3/Ethernet Digital Microwave Radios

KEY PRODUCT FEATURES

- Two license-free versions available: 5.8GHz ISM Band or 5.3GHz UNII Band
- 34 Mb/s Full Duplex, Frequency Division Duplexing (FDD) operation for low latency and symmetrical backhaul
- User software selectable for E3 or 10/100BaseT Ethernet modes
- Three distinct software selectable channel pairs for industry leading frequency coordination
- Advanced security settings allow three levels of user access
- Rack-mountable indoor unit for easy access
- Standard N-type female connector supports external flat or parabolic directional antennas
- 16 QAM modulation allowing up to 12 co-located radios without interference
- SNMP, FTP, Telnet, and Web Interface provided for ease of management, configuration, installation, and operation of the radio
- Low part count contributing to a High Mean Time Between Failure Rate (MTBF) > 7 years
- Telecommunication Class Reliability
- Built-in BERT tester for local and far end loopback testing
- 5 Years Product Warranty and Advance replacement Service options
- Specifications are guaranteed over the full temperature range and for the life of the product

WHAT IS THE WAVELINK 3400I FAMILY OF RADIOS?

The WaveLink 3400i family is a line of high capacity, all-indoor, point-to-point microwave radios. Each radio supports 34 Mb/s bandwidth, full-duplex, with Telco grade performance.

The WaveLink 3400i family of radios operate in the license-free band, and operators can select a version offering transmission in the 5.3 GHz UNII band or a version supporting the 5.8 GHz ISM band. Each radio offers a standard N-type connector in front to support an external antenna. All WaveLink 3400i radios include both E3 and 10/100BaseT interfaces, which are user software selectable.

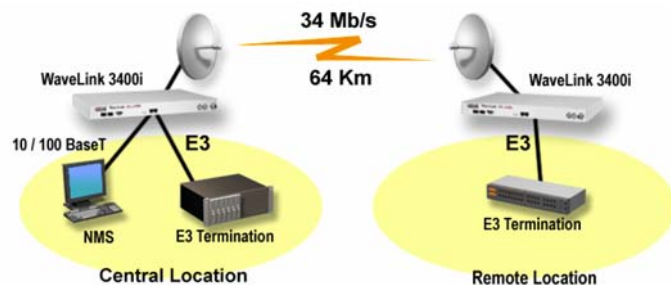
WaveLink radios are easy to deploy, with convenient indoor rack-mounting brackets which eliminate the need for tower climbers. WaveLink radios are optimized for Ethernet backhaul or traditional telecommunication converging voice and data services.

WHY AERAS WIRELESS BROADBAND?

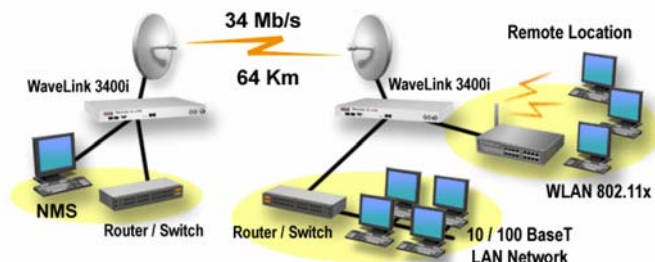
Aeras Networks' WaveLink 3400i family of wireless solutions delivers 34Mb/s full duplex backhaul bandwidth with powerful Forward Error Correction (FEC). The UNII versions reach up to 11 Km, while the ISM versions carry up to 64 Km. By combining superior ease of installation, next-generation license-free wireless technology with sophisticated remote management capabilities, Aeras delivers a powerful alternative to expensive traditional E3 leased lines and even other older wireless broadband systems.

Aeras Networks offers wireless customers:

- Faster return on investment
- Next day deployment (no limitations or delays)
- Carrier Class reliability 'Five Nines'
- Easy installation and maintenance with high MTBF rate
- Field proven design



E3 Backhaul Application



Ethernet Backhaul Application

GENERAL PRODUCT INFO

FREQUENCY BAND	Full Duplex Operation in the UNII or ISM Bands, depending on the model.
SPECTRUM OPTIONS	5.250-5.350 GHz or 5.725-5.825 GHz
CAPACITY OPTIONS	1xE3 Payload OR 2x10/100BaseT Ethernet switched ports
CHANNEL BANDWIDTH	14 MHz

DIGITAL INTERFACES

1) <u>E3</u>	
TYPE	1xE3 per G.703
LINE RATE	34.368 Mb/s
LINE CODE	HDB3
INTERFACE	75 Ω Unbalanced Coax
CONNECTORS	TNC (75Ω)
2) <u>10/100BaseT</u>	
TYPE	2x10/100BaseT per IEEE802.3
ETHERNET MODE THROUGHPUT	34 Mb/s
MAX DISTANCE (CPE to WaveLink)	100 meters

TRANSMITTER

FREQUENCY RANGE (Frequency Agile)	5.250-5.350 GHz or 5.725-5.825 GHz
OUTPUT POWER AT FREQUENCY (Adjustable)	<u>5.3GHZ</u> <u>5.8GHZ</u> +10dBm max +22dBm max
TRANSMIT ATTENUATION	1-30dB adjustable below max power
FREQUENCY STABILITY MODULATION MODULATION	±5 ppm 16 QAM with built in Equalization

RECEIVER

TYPE	Double Heterodyne
SENSITIVITY, BER 10 ⁻⁶	-79 dBm or better, including Forward Error Correction (FEC)
MAX RF INPUT LEVEL	-35 dBm
FREQUENCY STABILITY	±5 ppm
ADJACENT CHANNEL REJECTION	≥40 dB (RF bandwidth of ≤14 MHz)

NETWORK MANAGEMENT

SNMP	MIB II and private WaveLink functions
NMS/EMS	Standard SNMP based NMS, or Web Browser Interface
CRAFT INTERFACE	RS232, 9600bps, CLI
REMOTE ACCESS	HTTP, FTP and Telnet

STATUS INDICATORS/DIAGNOSTICS

EXTERNAL LEDs	Power, Local Alarm, RF Link, 1xE3 Input, 2xEthernet links
ALARMS	E3 LOS, AIS, Radio TX, Radio RX, BER Threshold
STATUS	NMS IP addresses, BER, TX Power, RX Signal Level, Loopback Test Status, E3 Input, Ethernet Input
CONFIGURATION CMDS	NMS IP addresses, TX Power, TX Mute, Frequency, RSL, BER Alarm, Loopback Tests, BER Tests
DIAGNOSTIC TEST FEATURES	BER, Local/Remote/RF Loopbacks
PERFORMANCE MONITORING	Receive Signal Strength Indicator (RSSI), Ethernet Statistics

POWER

INPUT POWER RANGE	±21 to 60 VDC
POWER CONSUMPTION	36 Watts max

MECHANICAL

DIMENSIONS (HxWxD) (CM)	4.4x44.5x30 cm
WEIGHT	6.6 lbs (3.0Kg)

ENVIRONMENTAL

TEMP. RANGE	-10°C to +50°C
ALTITUDE	15,000 feet
HUMIDITY	96% Non-condensing

ANTENNAS

	FORWARD GAIN	FRONT/BACK RATIO
PARABOLIC:		
-2 feet (.61m)	28.1dBi	38dB
-4 feet (1.22m)	34dBi	46dB

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