

EUM3006

900 MHz Unlicensed, Non-Line-of-Sight
Integrated Outdoor Modem

www.vecimanetworks.com



The WaveRider LMS4000 by Vecima Networks is the world's most advanced NLOS (non-line-of-sight) broadband wireless system designed specifically for the 900 MHz spectrum. The EUM3006 Integrated Outdoor Modem is a major step in the evolution of the LMS4000 system and significantly enhances key system capabilities.

Designed for outdoor installations, the EUM3006 provides operators a cost-effective solution for subscribers who require an outdoor antenna. The EUM3006 also comes with new software features, Power over Ethernet and installation tools that enhance system performance and simplify installations.

Features

Smart Diversity Antenna

- Provides superior performance in a multipath environment by automatically switching to either a vertical or horizontal polarization on a per packet basis
- High-gain (10 dBi) antenna, enables the EUM3006 to generate the full +36 dBm EIRP average transmit power allowed by the FCC

Weatherproof Package

- Tested to meet ETSI 300-019 environmental standards for outdoor installations, with an extended temperature range of -40° C to 50° C plus solar loading

Power over Ethernet (PoE)

- The EUM3006 is powered by standard 48 VDC Power over Ethernet (802.3af Mode B compatible)

Configuration Capabilities

- Auto CCU discovery – EUM3006 selects CCU with best RF signal.
- DHCP Client – EUM3006 can obtain its IP address, subnet mask and gateway information from a DHCP server
- Automatic remote configuration - EUM3006 will accept parameters from a RADIUS server to set other configurable parameters in the modem

Installation Tools

- MDB1000 – hand-held device provides detailed key signal quality information to facilitate installation and alignment by a single installer
- SETUP Menu – allows any user to align the antenna or troubleshoot the RF link.

LMS4000 Advantages

- Over-the-air data rates of 2.75 Mbps and access speeds up to 2 Mbps
- Average range of 5 miles NLOS, outdoor
- LOS range up to 25 miles
- Up to 300 users per base station radio
- Dynamic Polling MAC
- VoIP support
- Mobile-survey utility
- Supports RADIUS AAA
- SNMP monitoring
- PPPoE support
- Supports a profitable business model



WaveRider EUM3006 Integrated Outdoor Modem

Technical Specifications

Radio Specifications

Operating Frequency	902 to 928 MHz
Radio Type	DSSS
Radio Modulation	Complementary Code Keying (CCK)
Average Output Power	+36 to 25 dBm EIRP (software selectable)
RF Rx Threshold	-89 dBm (BER<10 ⁻⁶) internal antenna port, not including antenna gain
Minimum/Maximum Center Channel Frequency	905/925 MHz
Channel Bandwidth	5.5 MHz
Center Frequency Spacing Increment	0.2 MHz
Orthogonal Channels	4
Orthogonal Channel Separation	6.6 MHz

Radio Performance

Maximum Over-the-Air Raw Data Rate	2.75 Mbps
User Data Rate	Up to 2.0 Mbps
Maximum Link Path Distance	> 25 miles (40 km)

Antenna Specification

Antenna Package	Integrated with modem in single outdoor package
Antenna Gain	10 dBi
Antenna Beamwidth	45 degrees for both Horizontal and Vertical Polarization
Front-Back Min. Ratio	15 dB
Diversity	Automatic Diversity Selection of Horizontal and Vertical Polarization per packet

Power Specifications

Supply Type	48 VDC 802.3af Mode B compatible Power over Ethernet (PoE)
PoE Power Injector Input	Auto-sensing 100-240 VAC, 47-63 Hz
PoE Power Injector Output	48 VDC, 350 mA max
PoE Power Consumption (typical)	10W

Interface Specifications

Physical Interface	10BaseT RJ-45 HDX Ethernet Jack (TIA - T568A)
Power Over Ethernet	+48 VDC on pins 4 & 5 (pair 1) / 0 VDC on pins 7 & 8 (pair 4)
Max. Ethernet Cable Length	330 feet (100 m)

Dimensions

L x W x H	16.25" x 8.25" x 3.5" (41.5 cm x 21 cm x 9 cm)
Weight	6.4 lb (2.9 kg)
Materials	Aluminum base , plastic radome

Environmental Specifications

Operating Temperature	-40° C to 50° C plus solar loading
Storage Temperature	-40° C to 70° C
Operating Humidity	0% to 95% RH (non-condensing @ 50° C)
Standards	Compliant with ETSI-300-019-1-4, Class 4.1 with extended temp. range
Wind Loading	Better than 110 mph (180 kph) - maintains alignment to better than 56 mph (90 kph)
Ice Loading	Better than 1.25" (32 mm)
Mounting Interface	Mounts to any secure pole from 1" to 3" (2.5 cm to 7.6 cm)
Orientation	Mounts horizontally or vertically

Approvals

Radio Transmitter	FCC Class A, CFR 47 Part 15. FCC
Safety	UL, CSA

Vecima Networks' Continuous Improvement Policy means that specifications are subject to change without notice.



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