LMU-4520™ Weatherproof Dual Mode GPRS/ CDMA/HSPA/Iridium® Satellite Series

Heavy Duty Weatherproof Enterprise Location Messaging Unit

EXPERIENCE THE ADVANTAGE

- Heavy Duty weatherproof IP67 rated enclosure

- Built-in 3-axis accelerometer for driver behavior, motion sensing, hard braking, and impact detection

- Dual reporting 20,000 event buffered message logs to manage cellular, satellite or WiFi communications channels

- Low power sleep modes

- Optional Internal Iridium® satellite transceiver that provides backup global coverage outside cellular regions with LEO satellite performance advantages

- Backup battery

- 32 built-in geo-fences, plus any combination of circle or polygon zones up to 5,400 points

- Optional built-in heavy duty engine control interface

- Garmin®, MDT, and other advanced peripherals support

- Comprehensive I/O system

- Switched power serial ports

CalAmp's LMU-4520 is a fully weatherproof dual-mode location and messaging device for mining and construction markets that features both Iridium® satellite and cellular communications as well as connection to the vehicles ECU. The LMU-4520 offers a full set of fleet management features, comprehensive I/O system and expandable accessories, along with an IP67 environmental rating, that makes it an industry leading value proposition. The LMU-4520 expandability and flexibility lowers the cost of delivering, supporting, and growing fleet management solutions.

COMPETITIVE PRICE, COMPETITIVE TECHNOLOGY, COMPETITIVE EDGE

The LMU-4520 is designed to support customers with market leading fleet management features, 16G accelerometers for measuring motion, driver behavior and impact events and a multitude of interfaces such as two switched power serial ports, Mobile Data Terminal (MDT) support, and a comprehensive I/O system. The optional jPOD™ ECU (Engine Control Unit) interface reads and transmits heavy-duty engine conditions and data such as engine temperature along with fault codes providing a real-time picture of vehicle health. In addition to cellular based communications, The LMU-4520 offers optional Iridium® satellite or WiFi technologies providing a dual mode solution for global coverage outside cellular regions. This expandable architecture saves upfront costs while allowing your solutions to grow with customers' changing needs.

FLEXIBILITY

The LMU-4520 employs CalAmp's Industry leading on-board alert engine, PEG™ (Programmable Event Generator). This advanced engine monitors external conditions and supports customer-defined exception-based rules to help meet the needs of your application. PEG continuously monitors the vehicle environment and responds instantaneously to pre-defined threshold conditions related to time, date, motion, location, geo-zone, input and other event combinations. PEG also provides seamless and independent reporting on cellular and satellite communication links. With PEG, your unique application will meet demanding customer requirements. This behavior can be programmed by CalAmp before shipment, at a customer's facility, over-the-air once the unit has been fielded.

OVER-THE-AIR SERVICEABILITY

The LMU-4520 also leverages CalAmp's industry leading over-the-air device management and maintenance system, PULS™ (Programming, Updates, and Logistics System). Configuration parameters, PEG rules, and firmware can all be updated over-the-air. PULS offers out-of-the-box hands free configuration and automatic post-installation upgrades. You can also monitor unit health status across your customer's fleets to quickly identify issues before they become expensive problems.

LMU-4520 SPECIFICATIONS

GPS

Location Technology	56 channel GPS (with SBAS SBAS: WAAS, EGNOS, MSAS, GAGAN
Location Accuracy	2.0 meter CEP (with SBAS)
Tracking Sensitivity	-162dBm
Acquisition Sensitivity	-147dBm
AGPS Capable	

CELLULAR

Data Support	SMS, IP Packet Data

Operating Bands:	MHz (Band)
GSM/GPRS	850/900/1800/1900
CDMA/1xRTT	850/1900
HSPA/UMTS	800(VI)/850(V)/900(VIII)/ 1700(IV)/1900(II)/2100(I)

Transmitter Power:			
GSM/GPRS	850/900	32.5	dBm
	1800/1900	29.5	dBm
CDMA/1xRTT	850	24	dBm
	1900	23	dBm
HSPA/UMTS	(all bands)	23	dBm
HSPA data rates	5.6 Mbps upload / 7.2 Mbps download		
HSPA Fallback	EDGE/GPRS/GSM quad band		

COMPREHENSIVE I/O

Ignition Input	1 (fixed low bias)
Digital Inputs	7 (selectable high/low bias, 0-30 VDC)
Digital Outputs	5 (open collector 200mA relay driver) 2 (20mA current source / LED drivers)
A/D Inputs	4 (0-30 VDC, +/- 0.1V accuracy)
1-Wire® Interface	2 (Temperature Sense, Driver ID)
Status LEDs	GPS and Cellular

ENVIRONMENTAL

Temperature*	-30° to + 75° C (connected to primary power) -40° to + 85° C (storage) Except Battery*
Humidity	95% R.H. @ 50° C non-condensing
Shock and Vibration	U.S. Military Standard 202G and 801G, SAE J1455
EMC/EMI	SAE J1113
IP67 Rating	
RoHS Compliant	

About CalAmp

CalAmp Corp. (NASDAQ: CAMP) is a proven leader in providing wireless communications solutions to a broad array of vertical market applications and customers. CalAmp's extensive portfolio of intelligent communications devices streamline otherwise complex machine-to-machine (M2M) deployments. These solutions enable customers to optimize their operations by collecting, monitoring and efficiently reporting business critical data and desired intelligence from high-value remote assets. For more information, please visit www.calamp.com.

ELECTRICAL

Operating Voltage	7-32 VDC (momentary) 9-30 VDC (start-up, operating)
Power Consumption	7mA @ 12V (deep sleep) 37mA @ 12V (radio-active sleep) 90mA @ 12V (continuous transmit)
Back Up Battery	Lithium-Ion 1000mAh (See online technical specifications for latest details regarding battery options)

CONNECTORS, SIM ACCESS

Cellular Antenna	SMA
GPS Antenna	SMA
Power, GND, Ignition, ADC	34-pin JAE Weatherproof Connector
Serial Interlaces	2 switched power TTL level Interfaces
Vehicle Bus Option	12-pin JAE Weatherproof Connector
WiFi Option Antenna	RP-SMA
SIM Access	Internal

PHYSICAL

Dimensions	4.3"x5.9"x1.8" (110.80x151.27x47.41mm)
With mounting feet	4.3"x6.8"x1.8"(110.80x175.13x47.41mm)
Weight	12oz/340g (with 1000mAh battery)

MOUNTING

Molded mounting feet

CERTIFICATIONS

Fully certified FCC, CE, IC, PTCRB, GCF and Applicable Carriers

OPTIONAL FEATURES/FUNCTIONS

- Built-in SBD9602 Iridium® Transceiver
- Built-in J1939/J1708 vehicle bus reader
- Built-in OBD2 vehicle bus interface
- Built-in WiFi modem
- External Antennas (GPS, cellular, combined GPS/cellular)
- Serial RS232 Adapter Cable
- Connectorized I/O wiring harness

DEVELOPMENT SUPPORT OPTIONS

Customized hardware and software development available on request