LMU-1230™ GPRS/CDMA/HSPA Series

Economical Battery Backup GPS Tracking Unit

EXPERIENCE THE ADVANTAGE

- GSM/GPRS, CDMA 1xRTT or HSPA configurations

- Economical and flexible device

- 12/24 volt vehicles

- Superior cellular and GPS performance

- Built-in 3-axis accelerometer for motion, and tilt sense

- Low power sleep power modes

- Up to four inputs and four outputs

- Optional built-in battery backup

- 10 geo-fences

- Built-in or external cellular and GPS antenna for easy installations

- Built-in or connectorized harness

- Over-the-air configuration and firmware updates

The LMU-1230 is a full-featured vehicle tracking product designed for easy and reliable installation in automobiles. The LMU-1230 is an ideal solution for basic fleet, automotive insurance, stolen vehicle, vehicle finance, auto rental and other vehicle track and trace applications where an internal back-up battery is required.

COMPETITIVE PRICE, COMPETITIVE TECHNOLOGY, COMPETITIVE EDGE

The LMU-1230 high-value tracking unit from CalAmp features a small size with superior GPS performance, an optional internal 200 mAh or 1000 mAh back-up battery, 3-axis accelerometer for motion and tilt sense, ultra low sleep modes, and four Inputs/Outputs (I/O). The LMU-1230 is a complete vehicle tracking and communications device incorporating next-generation, super-sensitive GPS technology on GSM/GPRS/HSPA/CDMA 1xRTT cellular networks for installation in any 12 or 24 volt vehicle. Superior internal antennas for both cellular and GPS eliminate the need for wired antennas and make the LMU-1230 mountable virtually anywhere in the vehicle for easy, inexpensive installations. Messages are transported across the cellular network using SMS or UDP messaging providing a reliable communications link between the device and your application servers. The LMU-1230 is designed to dramatically reduce cost, power and size while providing excellent reliability.

FLEXIBILITY

The LMU-1230 employs CalAmp's advanced industry leading on-board alert engine, PEG™ (Programmable Event Generator) to monitor external conditions and support customer-defined exception-based rules to meet your application requirements. PEG 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. This behavior can be programmed by CalAmp before shipment, at a customer's facility, or over-the-air once the unit has been fielded.

OVER-THE-AIR SERVICEABILITY

The LMU-1230 leverages CalAmp's management and maintenance system, PULS™ (Programming, Updates, and Logistics System), for over-the-air configuration parameters, PEG rules, and firmware. The LMU-1230 offers out-of-the-box hands free configuration and automatic post-installation upgrades that can monitor unit health status across your customers' fleets and identify issues before they become expensive problems.

LMU-1230 SPECIFICATIONS

GENERAL

Network Technologies	GPRS/EDGE/HSPA and CDMA 1xRTT
Data Modes	UDP packet data and SMS
Location Technology	50 channel GPS
Operating Voltage	12 and 24 volt vehicle systems

GPS

Location Technology	GPS; GLONASS, and QZSS capable
Enhancement Technology	SBAS: WAAS, EGNOS, MSAS
Receiver Type	56 channels
Tracking Sensitivity	-162 dBm
Acquisition Sensitivity	-148 dBm
Location Accuracy	2.0m
Location Update Rate	up to 10 Hz
Anti-jamming	
AGPS / Location assistance capable	

CELLULAR

Data Support	SMS, UDP packet data
Operating Bands (MHz)	
GSM/GPRS	850/900/1800/1900
CDMA/1XRTT	850/1900
HSPA/UMTS	800(VI)/850(V)/900(VII)/
	1700(IV)/1900(II)/2100(I)
Transmitter Power	
GSM/GPRS	850/900 32.5 dBm
	1800/1900 29.3 dBm
	850 24 dBm
CDMA/1XRTT	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
	EDGE MCS1-MCS9
	3GPP Release 6

COMPREHENSIVE I/O

Digital Inputs	up to 4 fixed bias/ programmable bias
Digital Outputs	up to 4 open collector (150mA)
Analog Input	1 External ADC input (with 20 pin Molex configuration)
	1 Internal VCC monitor
Status LED's	GPS and Cellular

CERTIFICATIONS

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

DEVELOPMENT SUPPORT OPTIONS

Customized hardware and software development available on request

ENVIRONMENTAL

Temperature	-30° to +75° C (connected to primary power)
	-40° to +85° C (storage)
Humidity	95%RH @ 50° C non-condensing
Shock and Vibration	U.S. Military Standards 202G and 810F, SAE J1455
EMC/EMI	SAE J1113; FCC-Part 15B; Industry Canada
RoHS Compliant	

ELECTRICAL

Input Voltage	9-32 VDC (start-up, operating)
	7-32 VDC (momentary)
Power Consumption	<2mA @ 12/24 VDC (deep sleep)
	<20mA @ 12/24 VDC (radio-active sleep)
	<25mA @ 12/24 VDC (idle IP connection open)
	<115mA @ 12/24 VDC (continuous transmit)
Battery Back Up	Optional Lithium-Ion 200 mAh or 1000 mAh (See online technical specifications for latest details regarding battery options)

PHYSICAL

Dimensions	2.125 x 3.5 x 0.93", (54 x 89 x 24mm)
Weight	2.9 oz, (82 g)

CONNECTORS, SIM ACCESS

SIM Access	Internal
External GPS	optional SMA (with tamper monitoring, 3V)
External Cellular	optional SMC
Connection Type	Captive 8 wire harness or 20 pin Molex-type fused power harness

MOUNTING

Standard tie-wrap or adhesive; Screw mount bracket

KEY FEATURES

- GPRS/EDGE/HSPA and CDMA 1xRTT packet data, UDP and SMS
- Internal or external cellular and GPS antennas
- Super-sensitive GPS (-168dBm)
- Optional Internal back-up 200 mAh or 1000mAh battery
- Ultra-low power sleep mode (<2mA)
- 3-axis accelerometer for motion sense and tilt
- Up to 4 inputs and 4 outputs
- Voltage monitoring and low battery notification
- 2,000 buffered messages
- 10 Built-in geo-fences
- PEG™ Exception-Based Rules
- Automatic, Over-The-Air Unit Configuration on Power-up (PULS™)
- Over-The-Air Firmware Download (PULS™)
- Web-Based Device Management (PULS™)
- Optional starter interrupt harness
- Optional ODBII easy install harness
- Optional external and internal GPS and cellular antennas
- Optional external backup battery
- Optional serial cable