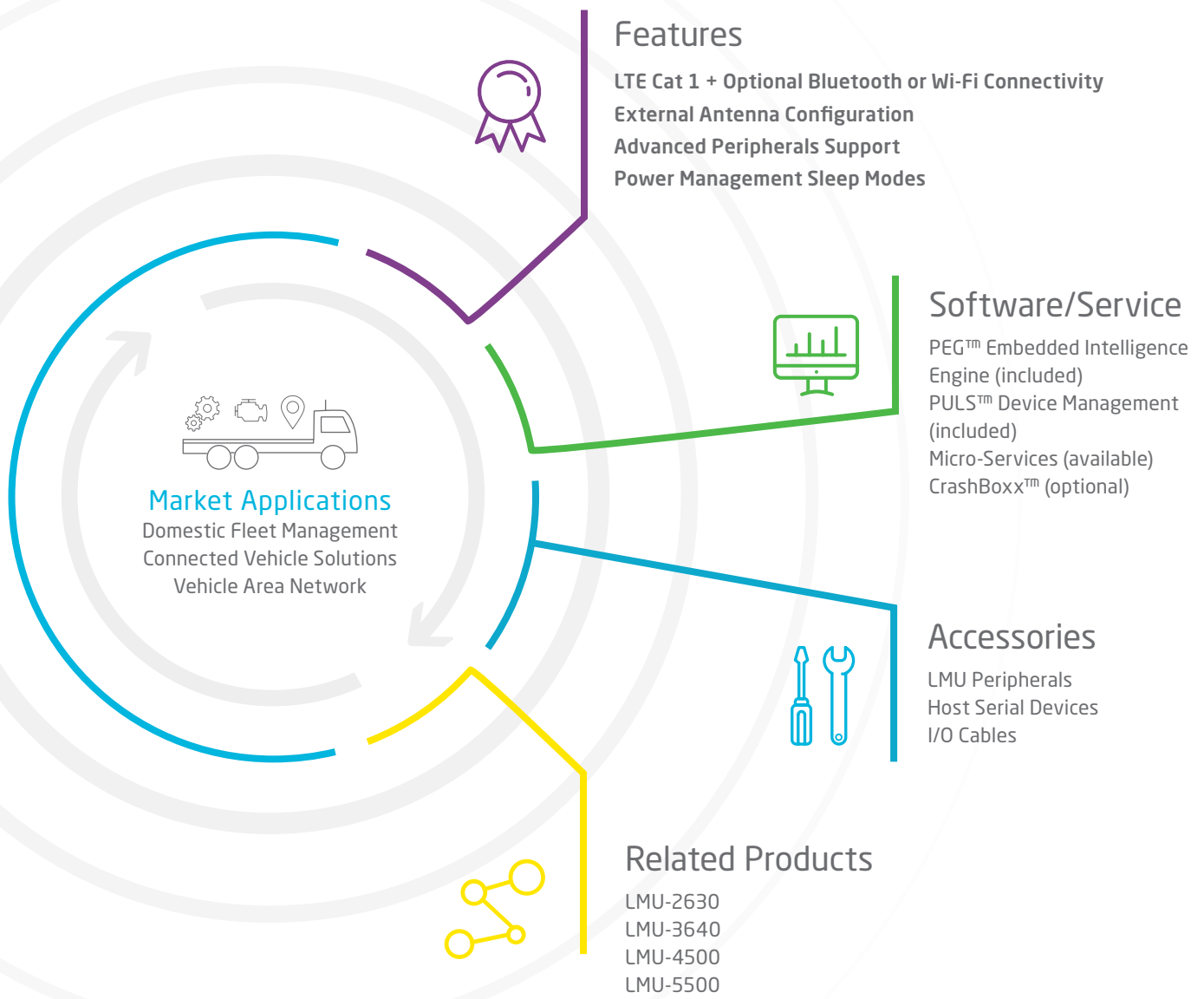# LMU-4233™

A Full-Featured Telematics Gateway Built for Optimal Flexibility

The LMU-4233™ is a full-featured telematics gateway designed to support enterprise applications requiring a range of wireless and peripheral connectivity options. Equipped with built-in ECU (Engine Control Unit) vehicle interface technologies for both light and heavy duty vehicles.

Features

LTE Cat 1 + Optional Bluetooth or Wi-Fi Connectivity
External Antenna Configuration
Advanced Peripherals Support
Power Management Sleep Modes

Software/Service

PEG™ Embedded Intelligence Engine (included)
PULS™ Device Management (included)
Micro-Services (available)
CrashBoxx™ (optional)

Market Applications

Domestic Fleet Management
Connected Vehicle Solutions
Vehicle Area Network

Accessories

LMU Peripherals
Host Serial Devices
I/O Cables

Related Products

LMU-2630
LMU-3640
LMU-4500
LMU-5500

LMU-4233™ Technical Specifications

Cellular/Network

North American Variant I

LTE Cat 1	1900 (B2)/AWS 1700 (B4)/850 (B5)/700 (B12) MHz
HSPA/UMTS	850 (V)/1900 (II) MHz

North American Variant II

LTE Cat 1	AWS 1700 (B4)/700 (B13) MHz

Global Variant

HSPA/UMTS	800 (VI)/850 (V)/900 (VIII)/1800 (III)/1900 (II) MHz
GSM/GPRS	850/900/1800/1900 MHz

Americas Variant

HSPA/UMTS	850 (V)/1900 (II) MHz
GSM/GPRS	850/1900 MHz

Data Support

SMS, TCP, UDP Packet Data, CalAmp Telematics Cloud API

Satellite Location (GNSS)

Constellation Support	Hybrid GPS, GLONASS, SBAS Engine (WAAS, EGNOS, MSAS)
Channels	55 Channel
Tracking Sensitivity	-162 dBm
Acquisition Sensitivity	-156 dBm (hot start)
	-148 dBm (cold start)
Location Accuracy	~2.0m CEP Open Sky (GPS SBAS 24 hours static)
Location Update Rate	Up to 4 Hz
AGPS Location assistance capable	

Comprehensive I/O

Ignition Inputs	1 fixed bias
Digital Inputs	7 (high/low selectable 0-30 VDC)
Digital Outputs	5 (open collector relay 150mA)
Current Limited Outputs	2 (20mA)
Analog Inputs	4 (0-30VDC, +/-0.1V accuracy)
Accelerometer	Built in, triple-axis (driver behavior, impact detection, motion sensing, tilt detection)
1-Wire® Interface	2 (driver ID, temperature sense)
Status LEDs	2 (GPS, cellular)

Certifications

Industry Certifications	FCC, CE, IC, PTCRB, RoHS

Device Management

PULS™	Monitor, manage, upgrade firmware, configure and troubleshoot devices remotely

Embedded Intelligence Engine

PEG™	Update device functionality or develop new on the edge applications

Electrical

Operating Voltage	12/24 VDC Vehicle Systems 9-30 VDC (start-up, operating) 7-32 VDC (momentary)
Power Consumption	Typical 4mA @ 12V (deep sleep) Typical 10mA @ 12V (sleep on network w/ SMS) Typical 20mA @ 12V (sleep on network w/ GPRS) Typical 70mA @ 12V (active tracking)

Battery Pack

Battery Capacity	Up to 1000 mAh
Battery Technology	Lithium-Ion
Charging Temperature	0° to +45° C

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, 810F, SAE J1455
ESD	SAE J1113-13 (4 KV Limit)

Physical/Design

Dimensions	4.3 x 3.2 x 0.86" (110 x 81 x 22mm)
Weight	4 oz. (113 g)

Connectors/SIM Access

External Cellular	SMC
External GPS	SMA (with tamper monitoring, 3.0v)
Power, Ground, Ignition, A/D	4-Pin Molex
I/O Connection	Two 5-Pin Molex
Cellular Antenna	22-Pin Molex
Wi-Fi Option	RP-SMA
Vehicle BUS	DB-15
SIM Access	Internal (2FF SIM)

Interface Standards

Bluetooth	4.0 Dual-Mode Classic, BLE
Wi-Fi	a/b/g/i client mode
jPOD™ Truck	J1939, J1708
vPOD Light Duty	J1850 PWM, J1850 VPW ISO 9141-2, KWP 2000, ISO-15765, CAN

Product Options

External antennas (GPS, cellular, combined GPS/cellular)

Serial adapter cable RS-232 8-wire (PPP, AT Commands, NMEA GPS output)

jPOD dongle for truck ECU interface

Connectorized I/O wiring harness

Built-in or external backup batteries

Customized hardware and software development