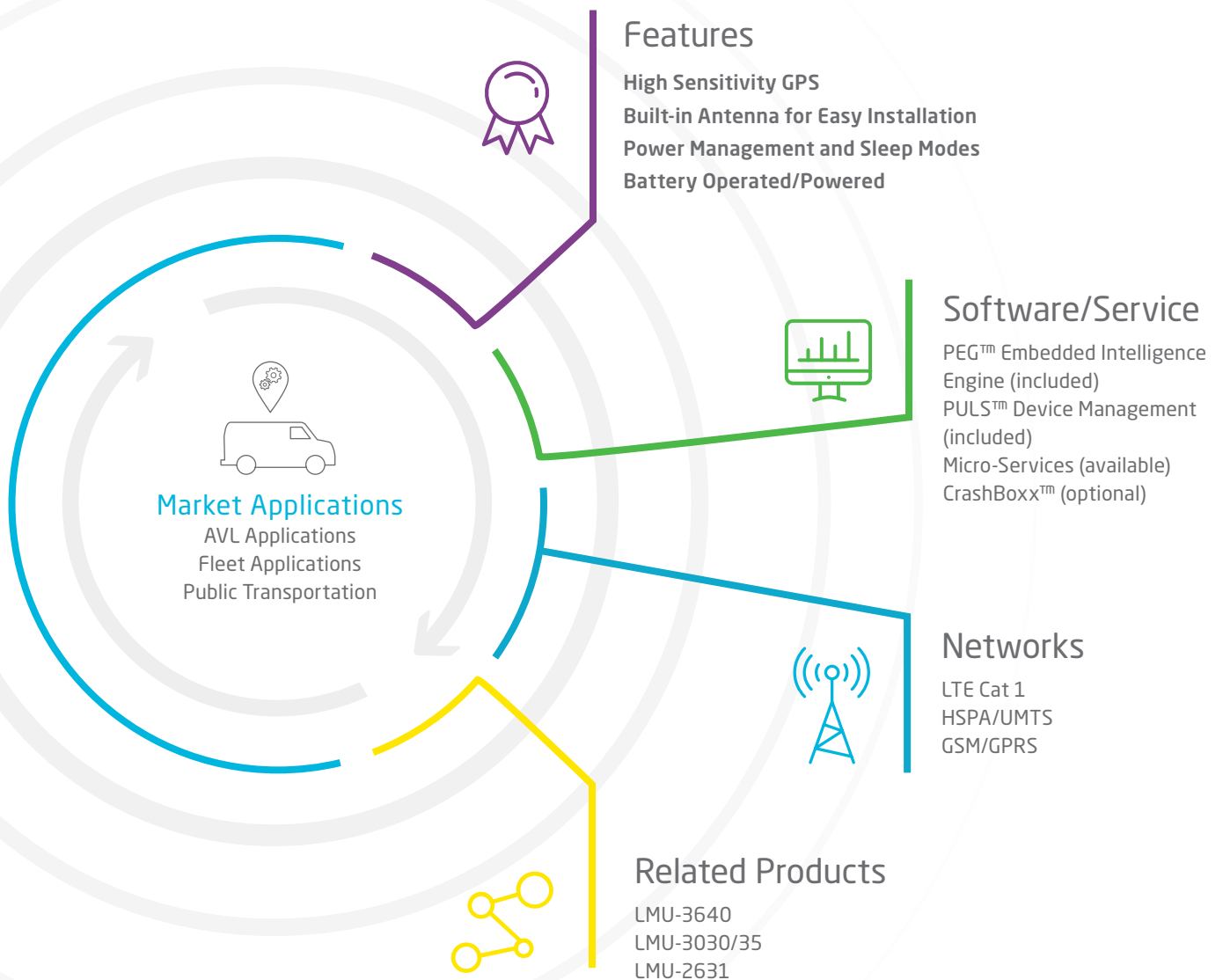


LMU-2630™



Leading Edge Fleet Tracker for Advanced Fleet Management with Extensive Capabilities

The LMU-2630™ is a fleet tracking device incorporating a powerful processing engine, LTE Cat 1 connectivity and built-in triple-axis accelerometer for measuring driver behavior and vehicle impact. Best suited for AVL and fleet applications.



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L2630Q319DS V1-A

Cal/Amp®

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LMU-2630™ 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

Americas, EU, APAC Variant	
HSPA/UMTS	850 (V)/1900 (II)/2100 (I) MHz
GSM/GPRS	850/900/1800/1900 MHz

Americas Variant	
HSPA/UMTS	850 (V)/1900 (II) MHz
GSM/GPRS	900/1800 MHz

Global Variant	
GSM/GPRS	850/900/1800/1900 MHz

Data Support

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

Satellite Location (GNSS)

Constellation Support	Hybrid GPS, SBAS Engine (WAAS, EGNOS, MSAS)
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Channels	31 Channel
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Tracking Sensitivity	-162 dBm
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Acquisition Sensitivity	-156 dBm (hot start) -148 dBm (cold start)
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Location Accuracy	~2.0m CEP Open Sky (GPS SBAS 24 hours static)
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Location Update Rate	Up to 4 Hz
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AGPS Location assistance capable

Comprehensive I/O

Ignition Inputs	1 fixed bias
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Digital Inputs	4 (high/low bias selectable 0-32 VDC)
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Digital Outputs	3 (open collector relay 150mA)
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Analog Inputs	1 (external ADC input 0-32 VDC)
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Accelerometer	Built in, triple-axis (driver behavior, impact detection, motion sensing, tilt detection)
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Serial Interface	2 TTL ports
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DC Power Output	1 (switched 3.3V)
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1-Wire® Interface	1 (driver ID/temperature sense)
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Status LEDs	2 (GPS and cellular)
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Certifications

Industry Certifications	FCC, IC, PTCRB, RoHS
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Electrical

Operating Voltage	12/24 VDC Vehicle Systems 9-30 VDC (start-up, operating) 7-32 VDC (momentary)
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Power Consumption	Typical <3mA @ 12V (deep sleep) Typical 25mA @ 12 V (radio-active sleep) Typical 50mA @ 12 V (GPS tracking and cell idle)
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Battery Pack

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

Temperature	-30° to +60° C (connected to primary power) -10° to +60° C (operating on internal battery) -20° to +25° C ≤ 6 months (long term storage with battery)
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Humidity	95% RH @ 50° C non-condensing
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Shock and Vibration	U.S. Military Standards 202G, 810F, SAE J1455
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ESD	IEC 61000-4-2 (4KV test)
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Physical/Design

Dimensions	3.7 x 2.0 x 0.8" (94 x 53 x 20 mm)
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Weight	2.8 oz. (80 g) (w/ 1000 mAh Battery)
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Connectors/SIM Access

Power, I/O	20-Pin 3mm Pitch
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GPS Antenna	Internal/External options (w/ tamper monitoring on external, 3V)
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Cellular Antenna	Internal/External options
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SIM Access	Internal (2FF SIM)
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Device Management

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

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

I/O wiring harness

200 mAh battery

IP66 enclosure (captive harness)

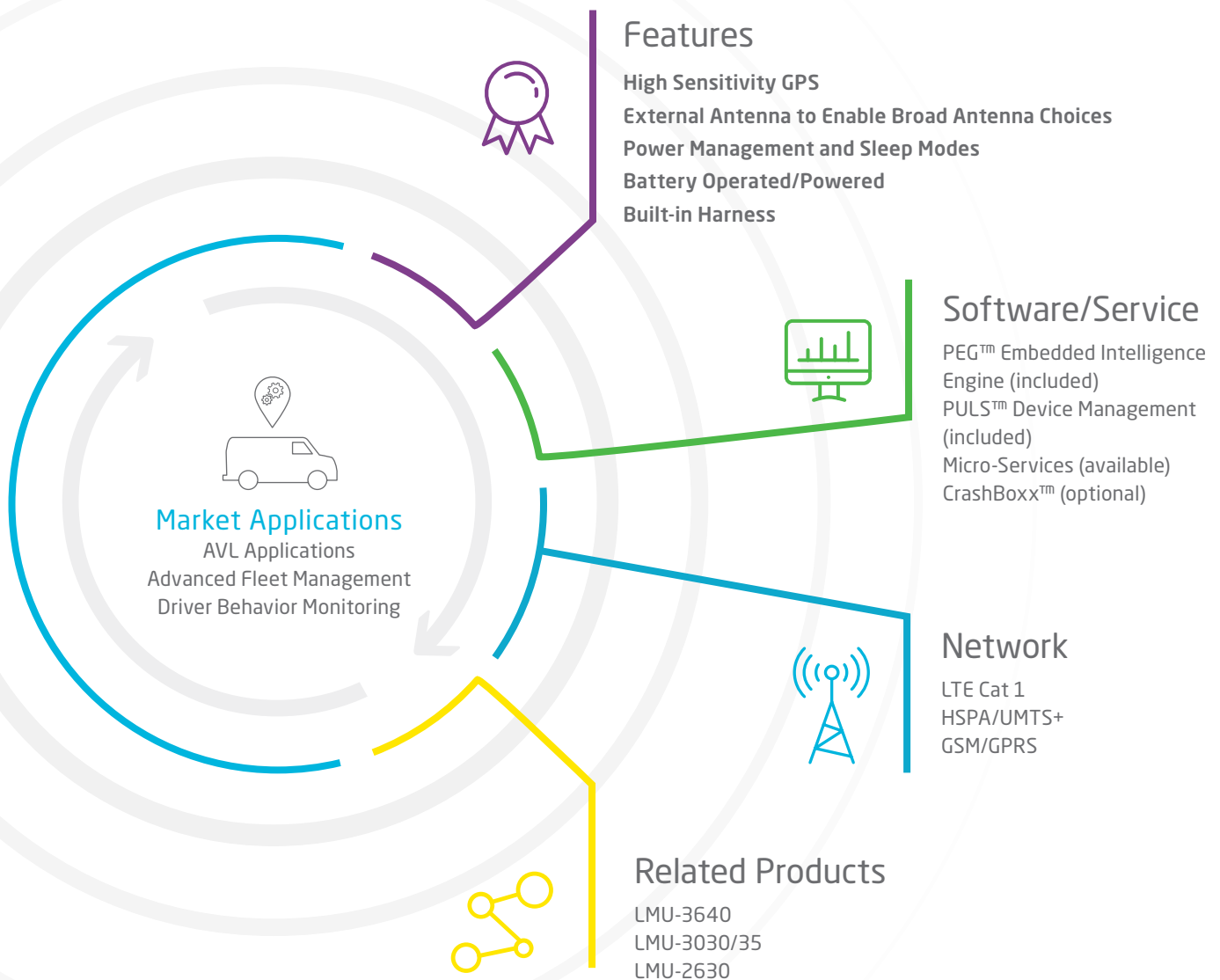
Customized hardware and software development

LMU-2631™



Leading Edge Fleet Tracker for Advanced Fleet Management with Extensive Capabilities and External Antenna

The LMU-2631™ is a fleet tracking device incorporating a powerful processing engine, LTE Cat 1 network connectivity and built-in triple-axis accelerometer for measuring driver behavior and vehicle impact with a versatile external antenna design.



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L2631Q319DS V2

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LMU-2631™ 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
Americas Variant	
HSPA/UMTS	850 (V)/1900 (II) MHz
GSM/GPRS	9000/1900 MHz
Global Variant	
GSM/GPRS	850/900/1800/1900 MHz

Data Support

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

Satellite Location (GNSS)

Constellation Support	Hybrid GPS, SBAS Engine (WAAS, EGNOS, MSAS)
Channels	31 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	4 (high/low bias selectable 0-32 VDC)
Digital Outputs	3 (open collector relay 150mA)
Analog Inputs	1 (external ADC input 0-32 VDC)
Accelerometer	Built in, triple-axis (driver behavior, impact detection, motion sensing, tilt detection)
Serial Interface	2 TTL Ports
DC Power Output	1 (switched 3.3V)
1-Wire® Interface	1 (driver ID/temperature sense)
Status LEDs	2 (GPS, cellular)

Certifications

Industry Certifications FCC, IC, PTCRB, RoHS

Electrical

Operating Voltage	12/24 VDC Vehicle Systems 9-30 VDC (start-up, operating) 7-32 VDC (momentary)
Power Consumption	Typical <3mA @ 12V (deep sleep) Typical 25mA @ 12 V (radio-active sleep) Typical 50mA @ 12 V (GPS tracking and cell idle)

Battery Pack

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

Environmental

Temperature	-30° to +60° C (connected to primary power) -10° to +60° C (operating on internal battery) -20° to +25° C ≤ 6 months (long term storage with battery)
Humidity	95% RH @ 50° C non-condensing
Shock and Vibration	U.S. Military Standards 202G, 810F, SAE J1455
ESD	IEC 61000-4-2 (4KV test)

Physical/Design

Dimensions	3.7 x 2.0 x 0.8" (94 x 53 x 20 mm)
Weight	2.8 oz. (80 g) (w/ 1000 mAh battery)

Connectors/SIM Access

Power, I/O	20-Pin 3mm Pitch
GPS Antenna	External (w/ tamper monitoring, 3V)
Cellular Antenna	External
SIM Access	Internal (2FF SIM)

Embedded Intelligence Engine

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

Device Management

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

Product Options

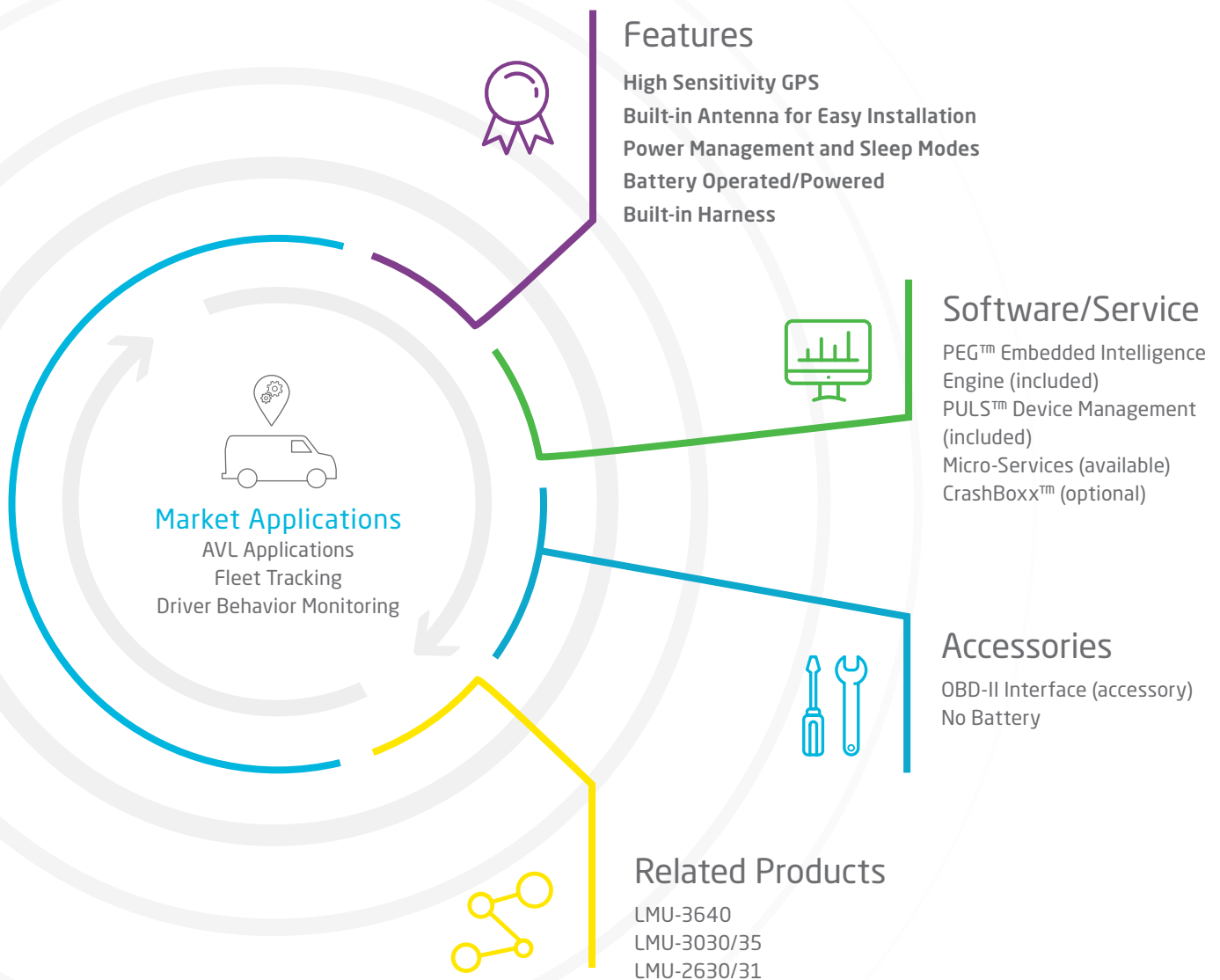
I/O wiring harness
200 mAh battery
IP66 enclosure
Customized hardware and software development

LMU-2640™



A Robust, Affordable Fleet Tracker for Fleet Management with Essential Capabilities

The LMU-2640™ is a fleet tracking device incorporating a powerful processing engine, economical GSM/GPRS network connectivity and built-in triple-axis accelerometer for measuring driver behavior and vehicle impact.



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L2640Q319DS V1

Cal/Amp®

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LMU-2640™ Technical Specifications

Cellular/Network

GSM/GPRS 850/900/1800/1900 MHz

Data Support

SMS, UDP Packet Data, CalAmp Telematics Cloud API

Satellite Location (GNSS)

Constellation Support Hybrid GPS, SBAS Engine (WAAS, EGNOS, MSAS, GAGAN)

Channels 56 Channel

Tracking Sensitivity -160 dBm

Acquisition Sensitivity -156 dBm (hot start)

-148 dBm (cold start)

Location Accuracy ~2.5m CEP Open Sky (GPS SBAS 24 hours static)

Location Update Rate Up to 4 Hz

AGPS Location assistance capable

Comprehensive I/O

Digital Inputs 5 (1 fixed bias low, 4 programmable bias)

Digital Outputs 3 relay driver outputs (200mA)

Analog Inputs 2 (1 interval VCC monitor, 1 external A/D input)

Accelerometer Built in, triple-axis (driver behavior, impact detection, motion sensing, tilt detection)

Serial Interface 2 power TTL ports

1-Wire® Interface 1 (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)
6-32 VDC (momentary)

Power Consumption Typical <2mA @ 12V (deep sleep)
Typical 20mA @ 12V (radio-active)
Typical 150mA @ 12V (continuous transmit)

Battery Pack

Battery Capacity Up to 1000 mAh

Battery Technology Lithium-Ion

Environmental

Temperature -20° to +60° 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

EMC/EMI SAE J1113, Industry Canada

Physical/Design

Dimensions 1.8 x 2.1 x 0.8" (46.5 x 83.3 x 19.2mm)

Weight 3.9 oz. (110g)

Connectors/SIM Access

Power, I/O 20-Pin standard connector

GPS Antenna Internal/External options (w/ tamper monitoring on external, 3V)

Cellular Antenna Internal/External options

SIM Access Internal (2FF SIM)

Product Options

Captive 2, 6 or 10-wire harness

200 mAh backup battery

Customized hardware and software development