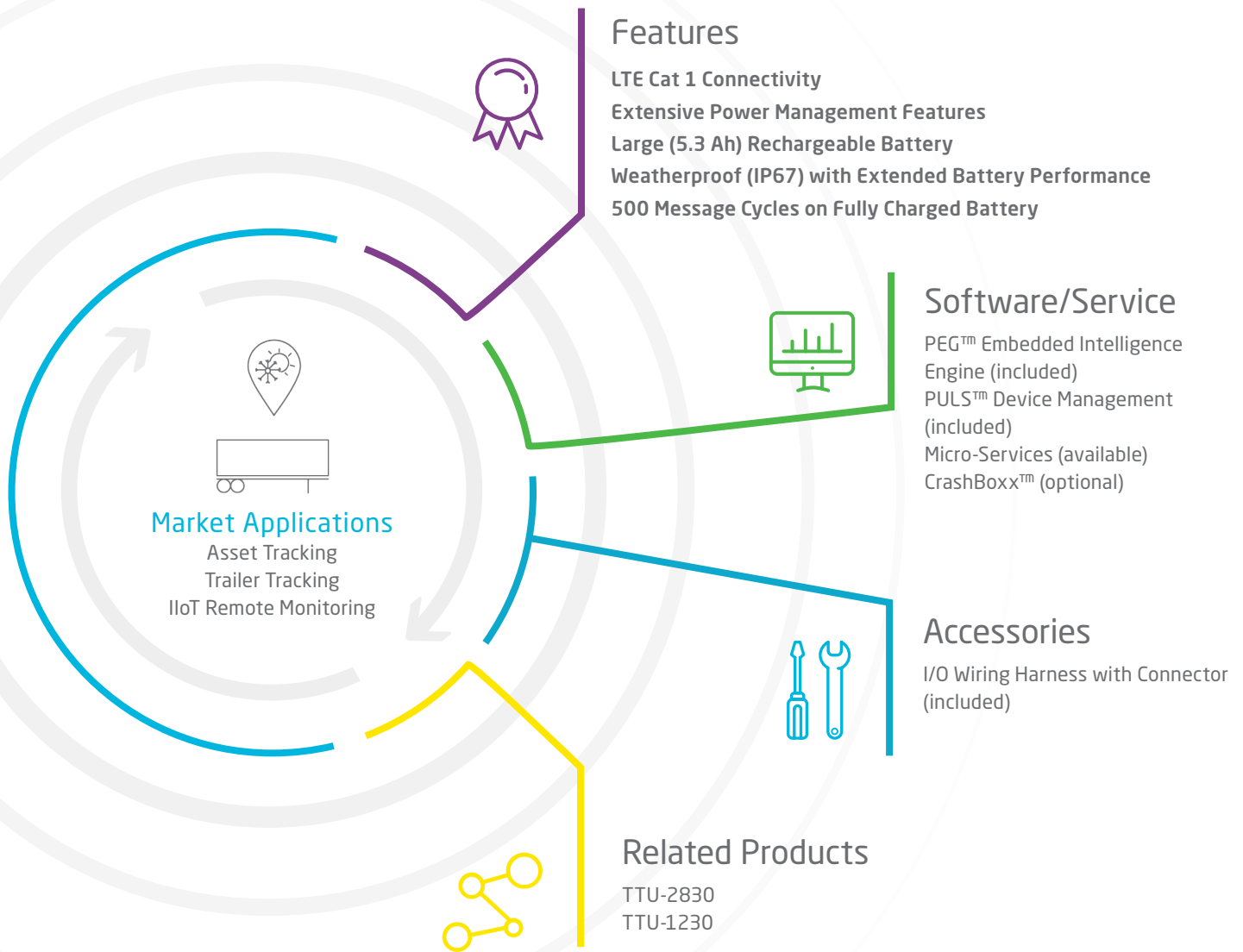


TTU-2840XTreme™



Extended Durability Asset Tracker Built for Extreme Weather Climates and Excellent Field Reliability

The TTU-2840XTreme™ is a complete asset and trailer tracking device with a rechargeable battery and an extended temperature charging range, providing an ideal solution for assets that are tethered or may sit disconnected for periods of time. PEG's powerful engine, precise GPS technology and LTE Cat 1 delivers intelligence to enable today and tomorrow's asset management solutions.



TTU-2840XTreme™ 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

Data Support

SMS, UDP Packet Data, TCP, CalAmp Telematics Cloud API
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Satellite Location (GNSS)

Constellation Support	Hybrid GPS, GLONASS, SBAS Engine (WAAS, EGNOS, MSAS)
Channels	55 Channel
Tracking Sensitivity	-167 dBm
Acquisition Sensitivity	-156 dBm (hot start) -148 dBm (cold start)
Location Accuracy	~2.0m CEP Open Sky (SBAS 24 hours static)
Location Update Rate	Up to 4 Hz
Anti-jamming	
AGPS Location assistance capable	

Comprehensive I/O

Ignition Inputs	1 fixed bias
Digital Inputs	2 (high/low bias selectable 0-30 VDC)
Digital Outputs	3 (open collector relay 150mA)
Analog Inputs	1 external ADC input
Accelerometer	Built in, triple-axis (driver behavior, impact detection, motion sensing, tilt detection)
Serial Interface	1 TTL port
1-Wire® Interface	1 (driver ID/temperature sense)
Status LEDs	2 (GPS and cellular)

Certifications

Industry Certifications	FCC, IC, PTCRB, RoHS
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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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Electrical

Operating Voltage	12/24 VDC Vehicle Systems 9-32 VDC (start-up, operating) 7-32 VDC (momentary)
Power Consumption	Typical 400uA @ 12V (deep sleep) Typical 15mA @ 12V (radio-active sleep) Typical 60mA @ 12V (active tracking w/GPS and cell enabled)

Battery Pack

Battery Capacity	Up to 5300 mAh
Battery Technology	Lithium-Ion
Charging Temperature	-15° to +55° C (extended temperature range)

Environmental

Temperature	-30° to +60° C (connected to primary power) -20° to +60° C (operating on internal battery) -20° to +35° C (storage > 3 months)
Humidity	95% RH @ 50° C non-condensing
Shock and Vibration	U.S. Military Standards 202G, SAEJ1455
ESD	SAE J1113-13 (4 KV Limit)
Ingress Protection Rating	IP67

Physical/Design

Dimensions	5.4 x 3.1 x 2.0" (137 x 80 x 52mm)
Weight	12.06 oz. (342g)

Connectors/SIM Access

Power, I/O	12 wire connector with detachable harness
SIM Access	Internal (2FF SIM)

Product Options

Customized hardware and software development
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