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.

Features

LTE Cat 1 Connectivity
Extensive Power Management Features
Large (5.3 Ah) Rechargeable Battery
Weatherproof (IP67) with Extended Battery Performance
500 Message Cycles on Fully Charged Battery

Software/Service

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

Market Applications

Asset Tracking
Trailer Tracking
IIoT Remote Monitoring

Accessories

I/O Wiring Harness with Connector (included)

Related Products

TTU-2830
TTU-1230

About ThinAir

ThinAir Telematics, based in Houston, Texas, is the premier provider of fleet management and GPS tracking solutions for any size business. Our solutions offer real-time insight into mobile and fixed assets to reduce operational costs and improve customer service, safety, and security. Our intuitive web-based and mobile applications empower users to quickly adopt and realize rapid ROI. For more information, please visit www.thinair.co

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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

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

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 9-32 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

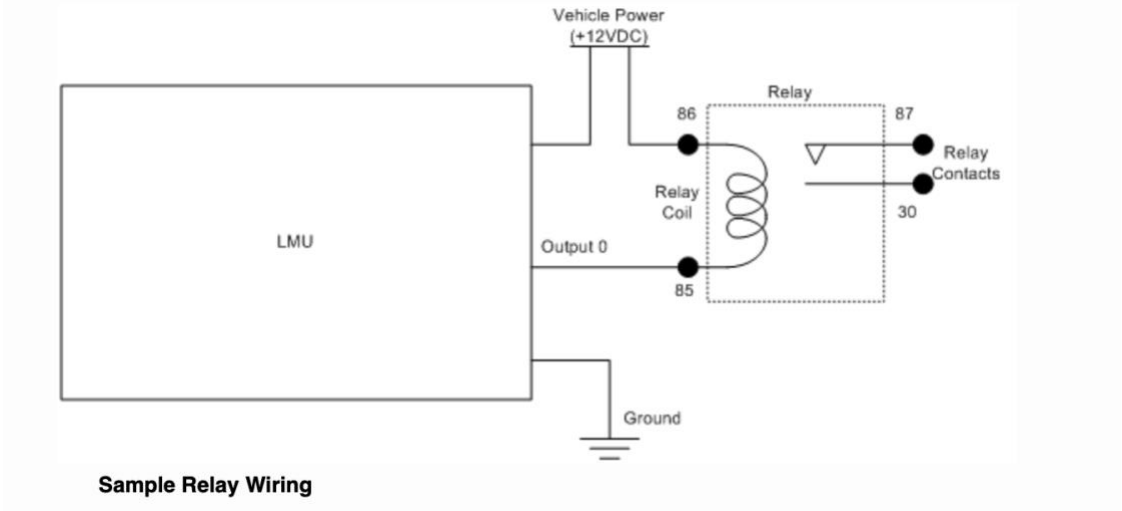
Power, I/O	12 wire connector with detachable harness
SIM Access	Internal (2FF SIM)

Product Options

Customized hardware and software development

Trailer Tracker Application
Temperature Sensor Probe

- Digital temperature probe can be attached to TTU unit to measure temperature in real time and instantly react when temperature goes above or below specified thresholds
- Receive real-time alert (SMS/Email) when temperature goes above or below threshold. Alert would detail when/where this occurred.
- Trigger events on-board including applying voltage to any of three digital outputs (connected to open relay can switch on/off other equipment)



Sample Relay Wiring

- Probes can be easily daisy-chained providing multiple temperature probes for each unit
- Digital inputs can detect/monitor to ensure external equipment is on/off or opened/closed