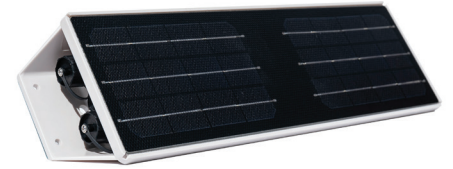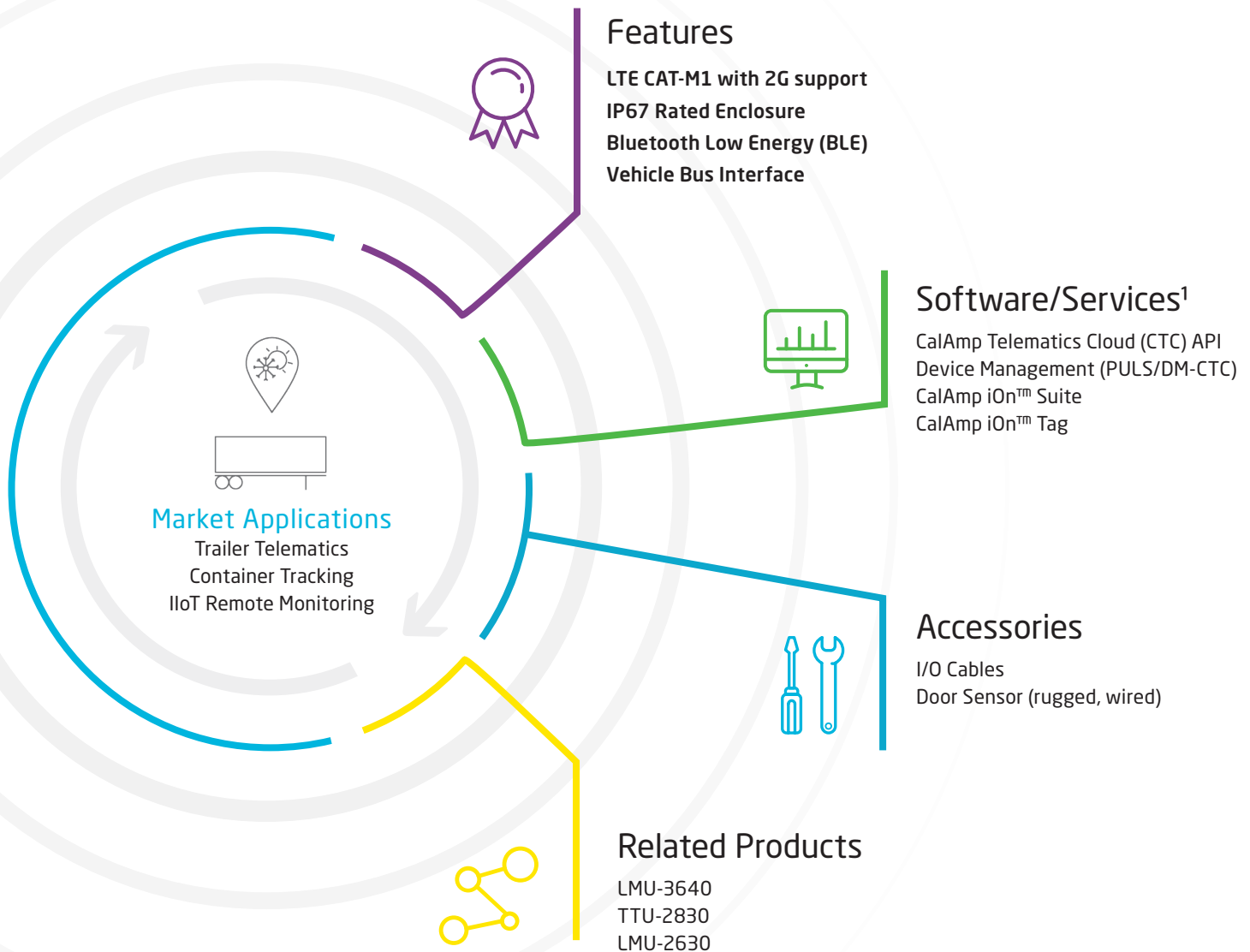# TTU-2900™
## LTE CAT-M1 | Solar-Tracker

## Weatherproof Solar Powered
## Asset Tracker for Rugged Environments

The TTU-2900™ is a next-generation solar regenerative telematics gateway built for extreme environments. Enabling a comprehensive asset visibility solution through wired and wireless sensor networks to deliver optimal asset utilization, safety, security, and efficient operations.

## Features

**LTE CAT-M1 with 2G support**
**IP67 Rated Enclosure**
**Bluetooth Low Energy (BLE)**
**Vehicle Bus Interface**

## Software/Services[1]

CalAmp Telematics Cloud (CTC) API
Device Management (PULS/DM-CTC)
CalAmp iOn™ Suite
CalAmp iOn™ Tag

## Market Applications
Trailer Telematics
Container Tracking
IIoT Remote Monitoring

## Accessories

I/O Cables
Door Sensor (rugged, wired)

## Related Products

LMU-3640
TTU-2830
LMU-2630

Cal/Amp®

# TTU-2900™ LTE CAT-M1 | Technical Specifications

## Cellular/Network

**Global Variant**

| | |
|---|---|
| LTE CAT-M1 | 2100 (B1)/1900 (B2)/1800 (B3)AWS 1700 (B4)/850 (B5/B26)/900 (B8)/700 (B12/B13/B28)/800 (B18/B19/B20)/1900 (B39/B25) MHz |
| GSM/GPRS | 850/900/1800/1900 MHz |

## Data Support

SMS, UDP, TCP, CalAmp Telematics Cloud API

## Satellite Location (GNSS)

| | |
|---|---|
| Constellation Support | GPS/GLONASS/BeiDou/Galileo/QZSS |
| Tracking Sensitivity | -157 dBm |
| Acquisition Sensitivity | -157 dBm (hot start) -146 dBm (cold start) |
| Location Accuracy | <2.5m CEP Open Sky |
| Location Update Rate | Up to 5 Hz |

## Comprehensive I/O

| | |
|---|---|
| Ignition Input | 1 (fixed bias) |
| Digital Inputs | 3 (high/low bias selectable 0-30 VDC) |
| Digital Outputs | 2 (open collector relay 150mA) |
| Analog Inputs | 2 external ADC inputs |
| 1-Wire® Interface | 1 (driver ID/temperature sense) |
| DC Power Outputs | 1 switched VCC_SYS (3.5V – 4.2V), 1 switched 3.3V |
| Accelerometer | Built in, triple-axis (driver behavior, impact detection, motion sensing, tilt detection) |
| Button/LED | 1 (Multi-function Push Button Switch w/LED indicator) |
| Serial Interface | 1 TTL Port, 1 RS-232 Port |

## Certifications

| | |
|---|---|
| Industry Certifications | FCC, IC, PTCRB, RoHS |

## Cloud/Software Services[1]

| | |
|---|---|
| PULS/DM-CTC | Monitor, manage, upgrade firmware, configure and troubleshoot devices remotely |
| CTC | Device data stream via RESTful APIs |
| iOn™ | Monitor and protect your fleet operations with CalAmp iOn™ fleet management software |
| iOn™ Tag | Track and protect valuable equipment and assets of any size with iOn™ Tag, our smart proximity sensor |

## Edge Intelligence[1]

| | |
|---|---|
| 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) |
| Battery Technology | 6W @ 12.5V |
| Power Consumption | Typical 400uA @ 12V (deep sleep) Typical 15mA @ 12V (radio-active sleep) Typical 60mA @ 12V (active tracking with GPS and cell enabled) |

## Battery Pack

| | |
|---|---|
| Battery Capacity | 6.2 Ah |
| Battery Technology | Lithium-Ion |
| Charging Temperature | -10° to +50° C |

## Environmental

| | |
|---|---|
| Temperature | -30° to +60° C (connected to primary power) -20° to +60° C (operating on internal battery) -30° to +45° C ≤ 6 months (long term storage with battery) |
| Humidity | 75% RH @ 50° C non-condensing |
| Shock and Vibration | U.S. Military Standards 202G, SAEJ1455 |
| ESD | IEC 61000-4-2 (4KV test) |
| Ingress Protection Rating | IP67 |

## Physical/Design

| | |
|---|---|
| Dimensions | 463mm x 128mm x 48mm (18.2in x 5in x 1.9in) |
| Weight | 38 oz. (1084 g) (w/ 6 Ah Battery) |

## Connectors/SIM Access

| | |
|---|---|
| Power, I/O | 1x 12-Pin round connector, 1x 14-Pin round connector |
| SIM Access | External (4FF) |

## Interface Standards

| | |
|---|---|
| Bluetooth | Bluetooth Low Energy (BLE) |
| VBUS Truck Data | CAN (J1939), TrailerCAN |

## Wireless Interfaces

| | |
|---|---|
| GPS Antenna | Internal |
| Cellular Antenna | Internal |
| BLE Antenna | Internal |

[1] Subscription service enabled. Contact sales rep for additional details.

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### CALIFORNIA PROPOSITION 65

⚠ **WARNING:** This product can expose you to chemicals including Carbon black and Nickel, which are known to the State of California to cause cancer, and including Bisphenol A and 1,3-Butadiene, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov