



TTU-2820™ GPRS/CDMA/HSPA Series

Rechargeable Trailer Tracking Unit



EXPERIENCE THE ADVANTAGE

- GSM/GPRS, CDMA 1xRTT or HSPA configurations
- Superior cellular and GPS performance
- 3-axis precision accelerometer for driver behavior and impact detection
- 1 month with single message cycle per day on fully charged battery pack
- 3 Inputs/ 3 Outputs/ 1-Wire interface for driver ID, temperature sensors, and more
- IP66 sealed enclosure
- OBD II and JBus ECU interface support
- Built-in cellular and GPS antenna for easy installation
- Over-the-air configuration and firmware updates

The TTU-2820 weatherproof trailer tracking product is designed for reliable, long-term deployments. The TTU-2820's rechargeable battery pack makes it an ideal solution for managing assets that are normally tethered to 12 or 24 volt systems but may sit disconnected for periods of time.

COMPETITIVE PRICE, COMPETITIVE TECHNOLOGY, COMPETITIVE EDGE

The TTU-2820 high-value tracking unit from CalAmp features a small size, superior GPS performance, an internal 3.8 Ah battery and three Inputs/ three Outputs (I/O). The TTU-2820 is a complete vehicle tracking and communications device incorporating next-generation, super-sensitive GPS technology on GPRS, CDMA 1xRTT and HSPA cellular networks for installation in or on any 12 or 24 volt mobile vehicle. Superior internal antennas for both cellular and GPS eliminate the need for wired antennas and make the TTU-2820 mountable virtually anywhere on the vehicle for easy, inexpensive installations. Messages are transported across the cellular network using enhanced SMS or UDP messaging providing a reliable communications link between the device and your application servers. The TTU-2820 is designed to dramatically reduce cost of ownership, power and size while providing excellent field reliability.

FLEXIBILITY

The TTU-2820 employs CalAmp's industry leading on-board alert engine, PEG™ (Programmable Event Generator). This advanced engine monitors external conditions and supports customer-defined exception-based rules to help meet the needs of your application. PEG continuously monitors the vehicle environment and responds instantaneously to pre-defined threshold conditions related to time, date, motion, location, geo-zone, input and other event combinations. With PEG, your unique application will meet demanding customer requirements. This behavior can be programmed by CalAmp before shipment, at a customer's facility, or over-the-air once the unit has been fielded.

OVER-THE-AIR SERVICEABILITY

The TTU-2820 also leverages CalAmp's industry leading over-the-air device management and maintenance system, PULS™ (Programming, Updates, and Logistics System). Configuration parameters, PEG rules, and firmware can all be updated over the air. PULS offers out-of-the-box hands free configuration and automatic post-installation upgrades. You can also monitor unit health status across your customers' fleets to quickly identify issues before they become expensive problems.

TTU-2820 SPECIFICATIONS

GENERAL

| | |
|---------------------|--|
| Communication Modes | GPRS/EDGE/HSPA and CDMA 1xRTT packet data, UDP and SMS |
| Location Technology | 50-channel GPS |
| Operating Voltage | 12 and 24 volt vehicle systems |

GPS

| | |
|-------------------------|--------------------------------|
| Location Technology | 50-channel GPS (with SBAS) |
| Location Accuracy | SBAS: WAAS, EGNOS, MSAS, GAGAN |
| Tracking Sensitivity | 2.0 meter CEP (with SBAS) |
| Acquisition Sensitivity | -162dBm |
| AGPS Capable | -147dBm |

BATTERY PACK

| | |
|----------------------------|---------------------------------|
| Battery Capacity | 3.8 amp hour |
| Battery Operating | 3.6 volts |
| Voltage Battery Technology | Lithium ion |
| Back-up Battery | 3.8Ah mAh 4 Hour Charge Time |

CELLULAR

| | | |
|-----------------------|---|----------|
| Data Support | SMS, GPRS, CDMA 1xRTT or HSPA packet data | |
| Operating Bands (MHz) | | |
| GSM/GPRS | 850/900/1800/1900 | |
| CDMA/1XRTT | 850/1800 | |
| HSPA/UMTS | 800(VI)/850(V)/900(VIII)/ 1700(IV)/1900(II)/2100(I) | |
| Transmitter Power | | |
| GSM/GPRS | 850/900 | 32.5 dBm |
| | 1800/1900 | 29.3 dBm |
| | 850 | 24 dBm |
| CDMA/1XRTT | 1800 | 23 dBm |
| HSPA/UMTS | (all bands) | 23 dBm |
| HSPA data rates | 5.6 Mbps upload/7.2 Mbps download | |
| HSPA fallback | EDGE/GPRS/GSM quad band EDGE MCS1-MCS9 3GPP Release 6 | |

COMPREHENSIVE I/O

| | |
|-----------------|----------------------------------|
| Digital Inputs | 3 (1 fixed, 2 programmable bias) |
| Digital Outputs | 3 open collector (150mA) |
| Analog Input | 1 External ADC input |
| Status LEDs | GPS and cellular |

CERTIFICATIONS

Fully certified FCC, CE, IC, PTCRB, Applicable Carriers

About CalAmp

CalAmp Corp. (NASDAQ: CAMP) is a proven leader in providing wireless communications solutions to a broad array of vertical market applications and customers. CalAmp's extensive portfolio of intelligent communications devices, robust and scalable cloud service platform, and targeted software applications streamline otherwise complex machine-to-machine (M2M) deployments. These solutions enable customers to optimize their operations by collecting, monitoring and efficiently reporting business critical data and desired intelligence from high-value remote assets. For more information, please visit www.calamp.com.

ENVIRONMENTAL

| | |
|---------------------|--|
| Temperature | -30° to +75° C (operating) -40° to +85° C (storage) |
| Humidity | 95%RH @ 50° C non-condensing |
| Shock and Vibration | U.S. Military Standards 202G and 810F, SAE J1455 |
| EMC/EMI | SAE J1113; FCC-Part 15B; Industry Canada |
| RoHS Compliant | |

ELECTRICAL

| | |
|-------------------|--|
| Operating Voltage | 6-32 VDC |
| Power Consumption | 8 mA @ 12V (sleep) 20 mA @ 12V (sleep on network) 60 mA @ 12V (active standby) |

PHYSICAL

| | |
|------------|-------------------------------------|
| Dimensions | 4.3 x 3.2 x 1.6", (110 x 80 x 40mm) |
| Weight | 9.6 oz, (272 g) |

CONNECTORS, SIM ACCESS

| | |
|-------------------------|----------|
| SIM Access | Internal |
| 12 wire captive harness | |

MOUNTING

Screw Mount, Magnet Mount, Tie Wrap

KEY FEATURES

- 1 month with single message cycle per day on fully charged batteries
- 3.8 Ah lithium ion re-chargeable battery pack
- IP66 sealed enclosed
- Packet data (GPRS, CDMA 1xRTT, or HSPA) and SMS-based messaging
- Internal GSM and GPS antennas
- Super sensitive GPS (-162 dBm tracking)
- Ultra-low power safe mode (<1mA)
- 3-axis accelerometer for motion, hard braking/acceleration, and impact detection
- 3 inputs and 3 outputs
- External ADC input
- 1-Wire™ Bus interface for temp sensor(s)
- Voltage monitoring and low battery notification
- 20,000 buffered messages for data logging during coverage loss
- 32 built-in geo-fences (and 5400 vertices for polygon zones)
- PEG™ Exception-Based Rules
- Automatic, Over-The-Air Unit configuration on Power-up (PULS™)
- Over-The-Air Firmware Download (PULS™)
- Web-Based Device Management (PULS™)
- J1939 & J1708 ECU interface support (option)
- OBDII ECU interface support (option)

DEVELOPMENT SUPPORT OPTIONS

- Customized hardware and software development available on request

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All specifications are typical and subject to change without notice

