TW400

CALIAN ®
Confidence. Engineered.

Sprite™ TW400, Fleet Tracker
LTE Cat M1

Overview

The Sprite TW400 is a robust telematic development platform, that incorporates a LTE CAT M1 modem, multi-constellation GNSS/GPS receiver, powerful processing engine, and a triple-axis accelerometer for monitoring operator driving behaviour.

Competitive Edge

The TW400 is designed for fleet tracking applications. The TW400 puts you in the passenger seat of every vehicle. The cellular tracking device provides configurable event reporting of location, I/O, Odometer, Engine Idle times and driving behaviour.

The TW400 fleet tracking application offers our proprietary Contrails data compression algorithm which provides a superior location reporting resolution while minimizing network data usage offering you operational savings.

Accelerate your development cycle

Our telematics devices and fleet-tracking solutions make connecting to cellular networks easy, eliminating the complexities associated with cellular design and certification. The TW400 fleet tracker provides developers accelerated time-to-market which significantly reduces development costs. The TW400 embedded asset management application is available with either the Tallymatics proprietary messaging or the ISO standard MQTT Message Queuing Telemetry Transport protocol enabling easy integration with either Amazon Web Services or Microsoft Azure IoT.

Tallymanager Portal

Easily manage the configuration and firmware updates of all your devices with the Tallymanager Device Management Portal. The web application provides an intuitive interface for easy of configuration and management of your devices. Updates are automatically pushed to devices over the air.

Status and diagnostic information for the TW400 devices are updated periodically in the portal so you can confirm operation. A map display provides feedback on the location of your devices.

Features

- Multi-regional LTE Cat M1
- High sensitivity GNSS (GPS/Glonass/Galileo) receiver
- 20 Pin Molex locking connector, pin for pin compatible with CapAmp devices
- Internal/External antenna options
- Out of the box support for AWS & Azure with MQTT
- Integrated RS232 for direct Peripheral connectivity
- Store and forward data integrity
- Available CANbus for OBDII direct connect
- Excellent multi-path signal rejection
- Industrial grade IP67 enclosure
- RoHS, REACH, RED compliant. CE marking

Benefits

- Easy to install and provision
- High resolution fleet tracking to the block level
- Motion sensing, hard braking, impact detection
- Automatic over-the-air configuration and firmware downloads
- Comprehensive Management Reports
- Access to Tallymanager Device Management Portal
- Assured message delivery with up to 20K persisted messages
- Global acesss with carrier agnostic global SIM cards
- Proprietary lossless data compression lowers operating cost

Specifications

Cellular Network

LTE module for multi-regional Cat M1/NB1
North America . . . . .LTE Cat M1, (Bands: 2,4,5,12 and 13)
Micro Sim Acess . . . . .Ordered separatley (3FF)
 Contact for Global regional network compatability.

GNSS Satellites

GNSS (3–concurrent) . . . . .72 channel support
Aquisition Sensitivity . . . .–160 dBm Hot start -148 dBm Cold start
Tracking Sensitivity . . . .–167 dBm
Location Accuracy . . . .~ 2.5 m CEP 50%
Location rate . . . . .Up to 10Hz

Antennas

Integrated GNSS antenna. . . . .Dual feed w/ excellant mutipatch rejection
Integrated Cellular . . . . .Multi-band w/ 100mm ground plane
 for Superior performance
External Antennas . . . . .Optional

System Features

3–axis Accelerometer . . . . .Event monitor, crash detection, behaviour insurance
 Status LED's . . . . .GPS and Cellular status

Certifications

. . . . .PTCRB-CTIA, FCC, AT&T, CE, RoHS

Connectors

20 Pin Molex Locking . . . . .Compatible with CalAmp devices
Optional external antennas . . .SMA for GPS & SMC for Cellular

Signal I/O

Ignition Input . . . . .Active high (8V to 32V)
4× Digital Input . . . . .Active High (0.7V minimum Active
3× Digital Output . . . . .Open collector (200mA sink)
1× Analog Input. . . . .(0V to 32V)
2× Serial Ports . . . . .2 wire RS-232 (option: 1×CAN / 1×Ser)
1–Wire (Dallas) . . . . (ie: Driver ID or Temperature Sensor)
3V3 DC Output . . . . .Switched (50 mA)

Electrical

Operating voltage . . . . .8V to 32V
Power Consumption . . . . .Active nominal (60 mA)
 Standby (1 mA)

Environmental

Temperature . . . .–35C to + 70C
Humidity . . . . .95% RH non-condensing
Shock & Vibration. . . . . .3 Axis sweep –15 min
 100 - 200 Hz log sweep 3G

Mechanical

Dimensions . . . . .4.625" x 2.15" x 0.87" (L/W/H)
Weight . . . . .110 gm

Ordering Information:

TW400 (Internal Antennas)	33–0400–000
TW400 (External antenna)	33–0400–010
TW400 (Internal w/CAN)	33–0400–100
TW400 (External w/CAN)	33–0400–110

About Calian GNSS Ltd.: With global headquarters and manufacturing in Ottawa, Canada, Calian GNSS is a leading manufacturer of high-precision antennas and components for Global Navigation Satellite System (GNSS) applications. Calian GNSS' mission is to support the needs of a new generation of positioning systems by delivering unprecedented antenna precision at competitive prices. Learn more at www.calian.com/GNSS

Contact us:

info.gnss@calian.com
T: +1 613 591–3131

Calian GNSS Ltd.
36 Steacie Drive,
Ottawa ON
K2K 2A9 Canada

www.calian.com/GNSS