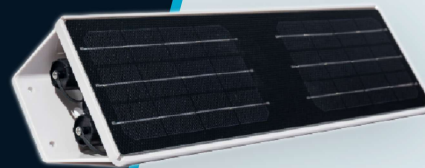


LTE CAT M1 · DATA SHEET

TTU-2900MB™

Solar-powered LTE CAT M1 gateway for rugged asset tracking



DIMENSIONS

463 × 128 × 48 mm
(18.23 × 5.04 × 1.89 in)

WEIGHT

1,084 g
(38.2 oz)

Overview

The TTU-2900MB is a solar-regenerative LTE CAT M1 telematics gateway built for extreme environments. Its IP67 enclosure, 6.2 Ah battery, Bluetooth Low Energy, wired sensor interfaces, and CalAmp cloud and device management support asset utilization, safety, security, and efficient operations.

Highlights



LTE CAT M1 connectivity with 2G support



Solar power and a 6.2 Ah lithium-ion battery extend operation



IP67-rated enclosure supports rugged, weatherproof deployments



Bluetooth Low Energy and VBUS support wireless and vehicle sensors



Multiple digital, analog, 1-Wire, TTL, and RS-232 interfaces



CalAmp Telematics Cloud and PULS support remote management

PHYSICAL DESIGN

Dimensions	463 × 128 × 48 mm (18.23 × 5.04 × 1.89 in)
Weight	1,084 g (38.2 oz)

CELLULAR

LTE CAT M1 Bands	B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B28, B39
2G Bands	B2, B3, B5, B8
Data Support	SMS, UDP, TCP

GNSS

Constellation Support	GPS, GLONASS, Galileo, BeiDou, QZSS
GNSS Channels	55 Channel
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

WIRELESS INTERFACES

Bluetooth	BLE
-----------	-----

VEHICLE BUS

Vehicle Connector Type	NEED TO CHECK WITH ENGINEERING
Heavy-Duty Protocols	CAN (J1939), TrailerCAN
Serial Interface	TTL, RS-232

ANTENNAS & SIM

Cellular Antenna	Internal
GPS Antenna	Internal
SIM Access	External

POWER

Operating Voltage	12/24 VDC Vehicle Systems 9-30 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 with GPS and cell enabled)
Battery Capacity	6.2 Ah
Battery Technology	Lithium-ion (Li-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 & Vibration	MIL-STD-202G, SAE J1455
ESD	IEC 61000-4-2, 4 kV
Environmental Rating	IP67

SENSORS

Motion Sensor	3-axis accelerometer
---------------	----------------------

I/O

Power / I/O Connector	1x 12-Pin round connector, 1x 14-Pin round connector
Ignition Inputs	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
Serial Interface	1 TTL Port, 1 RS-232 Port
DC Power Outputs	1 switched VCC_SYS (3.5V – 4.2V), 1 switched 3.3V
1-Wire Interface	1 (driver ID/temperature sense)

EDGE INTELLIGENCE

Firmware	32-Bit
Edge Programming	PEG

CLOUD / SOFTWARE SERVICES

Device Management	Manage, configure, and deploy OTA software updates to connected assets at scale
CalAmp Telematics Cloud	Stream telematics data into proprietary systems with flexible API integration
CalAmp App	Fleet and asset management software for tracking, monitoring, and managing vehicles, equipment, drivers, assets, and cargo.

CERTIFICATIONS

Certifications	FCC, IC, PTCRB, RoHS
----------------	----------------------

ACCESSORIES

Accessories	• 5C989 : 3 meters, 12-pin, Mating Cable Assembly, M19-Female • Go to CalAmp.com for full accessories.
-------------	---