

LTE CAT M1 · DATA SHEET

TTU-2830M™

Weatherproof LTE CAT M1 asset tracker with 12-wire harness



DIMENSIONS

114 × 80 × 39 mm
(4.49 × 3.15 × 1.54 in)

WEIGHT

580 g
(20.5 oz)

Overview

The TTU-2830M is a weatherproof LTE CAT M1 tracker designed for long-term deployment on powered assets that may remain disconnected for extended periods. Global cellular coverage, Bluetooth Low Energy 5.0, a large rechargeable battery, expansive I/O, and CalAmp edge intelligence provide flexible asset management.

Highlights



Global LTE CAT M1 connectivity with GSM and GPRS fallback



Bluetooth Low Energy 5.0 supports peripheral integration



Rechargeable 5.2 Ah battery supports up to 500 message cycles



12-wire harness provides digital, analog, serial, and 1-Wire I/O



Triple-axis motion sensor detects movement, impact, and tilt



IP66 enclosure and CalAmp edge intelligence support rugged deployments

PHYSICAL DESIGN

Dimensions	114 × 80 × 39 mm (4.49 × 3.15 × 1.54 in)
Weight	580 g (20.5 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 Packet Data, TCP

GNSS

Constellation Support	GPS, GLONASS, SBAS (WAAS, EGNOS, MSAS)
GNSS 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
A-GPS Assistance	Yes
Anti-Jamming Detection	Yes

WIRELESS INTERFACES

Bluetooth	Bluetooth 5.0
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VEHICLE BUS

Serial Interface	TTL
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ANTENNAS & SIM

Cellular Antenna	Internal
GPS Antenna	Internal
SIM Access	Internal (2FF SIM)

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 w/GPS and cell enabled)
Battery Capacity	Up to 5200 mAh
Battery Technology	Lithium-ion (Li-ion)
Battery Life	500 message cycles on a fully charged battery
Charging Temperature	0° to +45° C

ENVIRONMENTAL

Temperature	-30° to +60° C (connected to primary power) -20° to +60° C (operating on internal battery) -20° to +25° C (storage > 3 months)
Humidity	85% RH @ 50° C non-condensing
Shock & Vibration	MIL-STD-202G, SAE J1455
ESD	IEC 61000-4-2, 4 kV
Environmental Rating	IP66

SENSORS

Motion Sensor	3-axis accelerometer
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I/O

Power / I/O Connector	12 wire captive harness
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
Serial Interface	1 TTL port
DC Power Outputs	1 switched VIN*
1-Wire Interface	1 (driver ID/temperature sense)
Status LEDs	2 (GPS and cellular)

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, CE, PTCRB, RoHS, BT SIG, RCM
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ACCESSORIES

Accessories	• 5C351: CABLE, BOARD, GROMMET, 12-PIN DUAL ROW • 5C800: CABLE, BOARD, GROMMET, 11-WIRE, CONNECTORIZED • 5C824: CABLE, BOARD, GROMMET, 4-PIN DEUTCH • 5C902-10: CABLE, BOARD, GROMMET, 10-WIRE • 5C902-12: CABLE, BOARD, GROMMET, 12-WIRE • 5C949: CABLE, BOARD, GROMMET, 12-WIRE • 5C952: CABLE, BOARD, GROMMET, 12 WIRE, FUSED • 5C969-12: CABLE, BOARD, GROMMET, 8-WIRE, DEUTSCH • 5C969-TMB: CABLE, DEUTSCH, 4-WIRE, FUSED • 5C969: CABLE, BOARD, GROMMET, 8-WIRE, DEUTSCH • 5C986: CABLE, 7-WIRE, EYELET CRIMP, CLOSED END SPLICE • 5C988: CABLE, BOARD, GROMMET, M19 12-PIN • 5C989: 3 meters, CABLE, M19 12-PIN, FEMALE
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