

LTE CAT 4 · DATA SHEET

LMU-5541™

LTE CAT 4 telematics router for advanced connected vehicle applications



DIMENSIONS

146 × 102 × 40 mm
(5.75 × 4.02 × 1.57 in)

WEIGHT

227 g
(8.0 oz)

Overview

The LMU-5541 is a feature-rich LTE CAT 4 telematics router for advanced connected vehicle applications. Its Linux platform, CalAmp PEG engine, vehicle bus support, Ethernet, Wi-Fi, Bluetooth, and extensive I/O enable edge intelligence and flexible fleet integration.

Highlights



Global LTE CAT 4 connectivity with GSM and HSPA fallback



Dual-band Wi-Fi and dual-mode Bluetooth connectivity



Dual Ethernet plus RS-232 and RS-485 interfaces



Supports OBDII, J1939, and J1708 vehicle protocols



Built-in triple-axis motion sensor supports event detection



CalAmp PEG and Linux OpenWrt SDK enable custom applications

📦 PHYSICAL DESIGN	
Dimensions	146 × 102 × 40 mm (5.75 × 4.02 × 1.57 in)
Weight	227 g (8.0 oz)
📶 CELLULAR	
LTE CAT 4 Bands	B1, B2, B3, B4, B5, B7, B8, B12, B13, B18, B19, B20, B25, B26, B28, B38, B39, B40, B41
3G Bands	B1, B2, B4, B5, B8
2G Bands	B2, B3, B5, B8
Data Support	TCP/IP, UDP/IP, DHCP, HTTP, IP Router, PPP, HTTP web server, Telnet DHCP server, DDNS, DDNS Client, NAT, NMEA, TAIP, TSIP, TFTP, IP port forwarding Product Options
📶 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
📶 WIRELESS INTERFACES	
Bluetooth	BLE 4.2
Wi-Fi	802.11a/b/g/n/ac, 2.4 GHz and 5 GHz
🚗 VEHICLE BUS	
Vehicle Connector Type	OBD-II; J1939; J1708
Serial Interface	RS232/RS485, TTL
📶 ANTENNAS & SIM	
Cellular Antenna	External
GPS Antenna	External
Wi-Fi Antenna	External
Cellular Diversity Antenna	External
SIM Access	Internal
⚡ POWER	
Operating Voltage	12/24 VDC Vehicle Systems 9-30 VDC (start-up, operating) 8-32 VDC (momentary)
Power Consumption	Typical <2mA @ 12V (deep sleep) Typical 20mA @12V (radio-active sleep) Typical ~300mA @ 12V (active tracking w/GPS and cell enabled)
Battery Capacity	Up to 1000 mAh
Battery Technology	Lithium-ion (Li-ion)
Charging Temperature	0° to +45° C
🌡 ENVIRONMENTAL	
Temperature	-30° to +60° C (connected to primary power) -10° to +60° C (operating on internal battery) -20° to +25° C ≤ 6 months (long term storage with battery)
Humidity	85% RH @ 50° C non-condensing
Shock & Vibration	MIL-STD-202G, MIL-STD-810F, SAE J1455
ESD	IEC 61000-4-2, 4 kV
📶 SENSORS	
Motion Sensor	3-axis accelerometer
↔ I/O	
General I/O Connector	22-Pin Connector
Power / I/O Connector	4-Pin Connector
Digital Inputs	7 (high/low selectable 0-30 VDC)
Digital Outputs	7 relay driver outputs (200mA)
Analog Inputs	5 general purpose A/D (0-30 VDC)
Serial Interface	1 DB-9 (RS232/RS485), 1 5-Pin TTL level with switched power
1-Wire Interface	2 (driver ID, temperature sense)
Status LEDs	5 (Pwr, COMM, GPS, Wi-Fi, BT)
Ethernet Ports	2x 10/100 Base-T RJ45
</> EDGE INTELLIGENCE	
Firmware	32-Bit
Edge Programming	PEG & EdgeApp32 SDK
Operating System	Linux
☁ 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, CE, IC, PTCRB, RoHS
📦 ACCESSORIES	
Accessories	Go to CalAmp.com for full accessories.