

LTE CAT 1 · DATA SHEET

HMU-3640LB™

Rugged LTE CAT 1 telematics gateway for heavy-duty equipment



DIMENSIONS

178 × 76 × 41 mm
(7.01 × 2.99 × 1.61 in)

WEIGHT

250 g
(8.8 oz)

Overview

The HMU-3640LB is engineered for heavy-duty machinery in construction, industrial, oil, mining, and agricultural applications. Its sealed IP66/IP67 design, global LTE CAT 1 connectivity, flexible wired interfaces, and edge programming deliver dependable data in demanding environments.

Highlights



Global LTE CAT 1 connectivity with 3G and 2G fallback



IP66- and IP67-rated sealed, MIL-STD-certified design



Bluetooth Low Energy 5.2 connectivity for wireless peripherals



RS-232, RS-485, dual CAN, and multiple I/O interfaces



Modbus protocol support for industrial equipment integration



Built-in accelerometer and gyroscope support motion intelligence



PEG and EdgeApp32 enable programmable edge intelligence

PHYSICAL DESIGN

Dimensions	178 × 76 × 41 mm (7.01 × 2.99 × 1.61 in)
Weight	250 g (8.8 oz)

CELLULAR

LTE CAT 1 Bands	B1, B2, B3, B4, B5, B7, B8, B12, B13, B18, B19, B20, B25, B26, B28, B32, B38, B39, B40, B41, B66
3G Bands	B1, B2, B4, B5, B6, B8, B19
2G Bands	B2, B3, B5, B8
Data Support	SMS, UDP Packet Data, TCP, TLS

GNSS

Constellation Support	GPS, GLONASS, SBAS (WAAS, EGNOS, MSAS)
GNSS Channels	55 Channels (with SBAS)
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	BLE 5.2
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VEHICLE BUS

Vehicle Connector Type	J1939
Heavy-Duty Protocols	J1939
Serial Interface	RS232/RS485, Modbus

ANTENNAS & SIM

SIM Access	Internal (2FF SIM)
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POWER

Operating Voltage	12/24 VDC Vehicle Systems 9-32 VDC (start-up, operating) 7-32 VDC (momentary)
Power Consumption	Typical 300uA @ 12V (deep sleep) Typical 20mA @ 12V (radio-active sleep) Typical 100mA @ 12V (GPS tracking and cell enabled)
Battery Capacity	500 mAh
Battery Technology	Nickel-metal hydride (NiMH)
Charging Temperature	0° to +40° C

ENVIRONMENTAL

Temperature	-30° to +75° C (connected to primary power) 0° to +50° C (operating on internal battery) -20° to +25° C ≤ 6 months (long term storage with battery)
Humidity	95% RH @ 50° C non-condensing
Shock & Vibration	MIL-STD-202G, MIL-STD-810F, SAE J1455
ESD	IEC 61000-4-2, 4 kV
Environmental Rating	IP66 & IP67

SENSORS

Motion Sensor	3-axis accelerometer
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I/O

Power / I/O Connector	12-Pin Mini-Deutsch Connector
Ignition Inputs	1 fixed bias
Digital Inputs	1 (high/low bias selectable 0-32 VDC)
Digital Outputs	1 (open collector relay 150mA)
Analog Inputs	1 (external ADC inputs, 0-32 VDC)
Serial Interface	1 (RS232/RS485)
Status LEDs	4 (GPS, cellular, Wi-Fi/BT, CAN)

EDGE INTELLIGENCE

Firmware	32-Bit
Edge Programming	PEG & EdgeApp32 SDK
Geofences	Rectangle or radial zone: 21 Radial zones or vertices: 5400
Buffered Messages	Up to 20,000

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
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ACCESSORIES

Accessories	Go to CalAmp.com for full accessories.
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