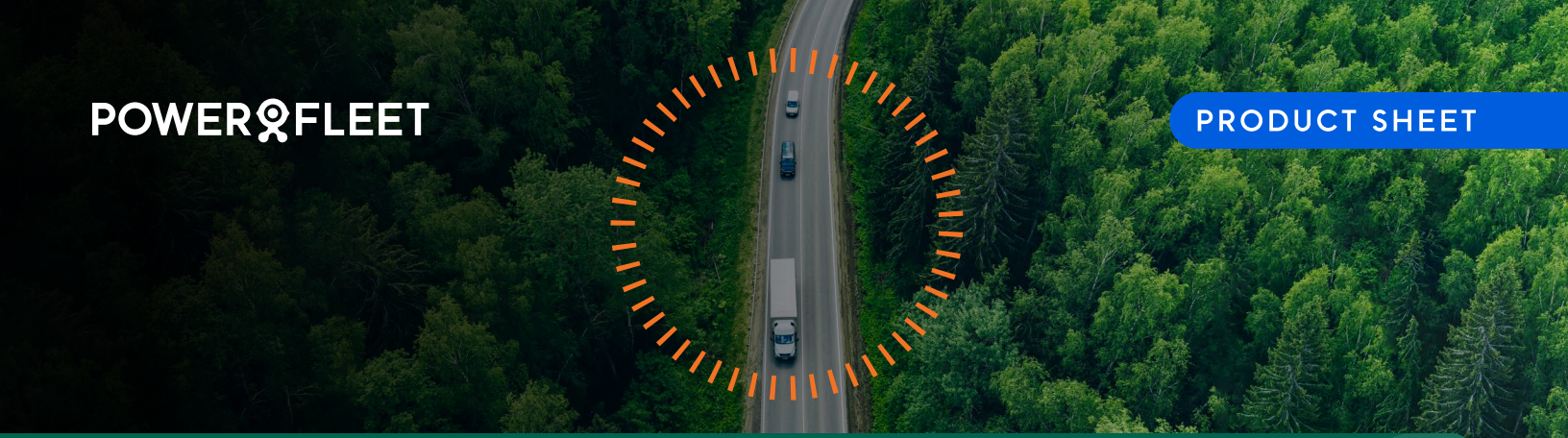
POWERFLEET

PRODUCT SHEET



VEHICLE TELEMATICS

Vehicle Gateway L

LTE-Based On-Road IoT Enabler with CAN Capabilities and Short-Range Communication (Low Energy) Connectivity

Description

The **Vehicle Gateway L** is Powerfleet's mid-level fleet IoT and security enabler, operating on the LTE network. This high quality, cost-effective, and easy- to-install device features LED indicators, CAN capabilities, and built-in short range communication (low energy) connectivity to support sensor integration and advanced mobilization control with short range communication (low energy) fobs.

Designed for security applications, it is purpose-built to communicate even without relying on a dedicated power source. It includes features such as collision detection, enhanced driver behavior monitoring, and built-in motion sensors, which enable movement and towing detection to ensure improved compliance with vehicle security requirements.

Powerfleet's Vehicle Gateway L, integrates with Unity, our SaaS-based fleet intelligence platform that ingests, processes, and enriches data from every asset, vehicle, and person, and helps increase visibility, identify safety risks, reduce theft, meet compliance, enhance billing, simplify maintenance and more.

Key Features

- LTE CAT M1 with 2G fallback (worldwide), LTE CAT 1 with 2G fallback (EMEA, SA), LTE CAT 1 with 2G+3G fallback (LATAM).
- CAN 2.0 OBD-II and J1939-compatible to obtain data from the vehicle's CANBUS (vehicle status, fuel level, tire status etc.) with configurable data sampling rules.
- Enhanced driver behavior monitoring capabilities including harsh acceleration, harsh braking, harsh turn, over speeding and accident detection powered by onboard accelerometer.
- A large capacity rechargeable backup battery(1000mAh).
- Dual color LED for Cellular/GNSS installation validation indication.
- Memory that can store up to 7400 logged events in offline scenarios.
- I/Os: configurable inputs and outputs including
  - Ignition switch
  - RS-232 serial port
  - 1-wire interface
  - One multipurpose GPIO, configurable either as digital input or output (supports gradual immobilization)
  - One multipurpose input, that can be configured as digital/analog/frequency
- Additional advanced capabilities:
  - Up to 100 Geo-Fences
  - Up to 100 Driver IDs (whitelisting)
  - Cell-ID based geo location (alternative to GNSS when not available)
  - Curve smoothing

Supports wireless personal area networks (WPAN) for Powerfleet and third-party sensor integration, supporting long-range connectivity of up to16 paired or 100 broadcast sensors, plus short-range communication (low energy) fob presence detection for mobilization control.

Crash detection, enhanced driver behavior & towing detection.

Designed to **Revolutionize Your Fleet Operations**

The **Vehicle Gateway L** offers a broad array of business-relevant fleet management features designed to revolutionize your operations:

- Improve security
- Enable recovery capabilities
- Reduce safety incidents
- Shrink operating costs
- Mitigate liability
- Increase longevity of assets
- Achieve sustainability goals
- Adhere to compliance standards

Technical Specifications

Cellular Communication

Modem	LTE CAT M1 with 2G Fallback (Worldwide)	LTE CAT-1 with 2G Fallback (EMEA, SA)	LTE CAT-1 with 2G+3G Fallback (LATAM)
Supported Technologies & Bands	• CAT M1: B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B25, B26, B27, B28, B66, B71, B85 • 2G Bands: B2, B3, B5, B8	• CAT-1: B1, B3, B5, B7, B8, B20 B28, B38, B40, B41 • 2G Bands: B3, B8,	• CAT-1: B1, B2, B3, B4, B5, B7, B28 • 3G Bands: B1, B2, B4, B5 • 2G Bands: B2, B3, B5, B8
Data Rates	LTE CAT M1: uplink up to 375 kbps, downlink up to 300 kbps LTE CAT-1: uplink up to 5 Mbps, downlink up to 10 Mbps 2G (EGPRS): uplink up to 236 kbps, downlink up to 296 kbps		
SIM Card Compatibility	Nano SIM		
Antenna	Internal		
Pocket Data	TCP/IP or UDP/IP		
SMS	PDU		

Local Communication Interfaces

Short-range communication (low energy)	Shor-range communication (low energy), Wireless Connectivity, with PC & Smartphones
RS-232 Port	Wired Serial Communication, 9600 bps or 115000 bps, 8 bits; 1 Stop Bit; No Parity. May be used for Configuration Update/Firmware Upgrade.
1-Wire™ (Dallas Port)	DS1990A, DS1971 compliant for driver management. Extended bus current soruce with 7mA driving capability, DS18B20 compliant for temperature sensors.
CAN	CAN-H / CAN-L ISO 11898-1 to -6 Standard Data Bus interface (CAN variant only)

Global Positioning

Sensitivity	Acquisition: -148 dBm Tracking: -165 dBm Reacquisition: -162 dBm

Technical Specifications (cont'd)

TTFF	Cold Start: <30s Warm Start: <2s Hot Start: <2s
Antenna	Internal

Configurable Inputs / Outputs

Configurable GPIO Connector Pin 3	• As Input: Digital "Wet" Input: 0-30V DC • As Output: Open Drain Sink Output (250 mA max)
Configurable Analog Input Connector Pin 5	• Dry Contact Input: Sink to GND • Digital "Wet" Input: 0-30V DC range, Configurable Threshold • Frequency Counter: 0-5kHz (speed and RPM) range

Accelerometer

Internal	3D, 16g range, 12-bit representation, 1mg resolution

User Interface

Dual Color LED	GNSS Status LED & Cellular Connectivity Status LED. Operates only during installation and shuts off after installation completion.

Power

Input Voltage (Vehicle Power)	9-32VDC
Average Current Consumption, 12V Power Installation	Normal (during idle with short-range communication (low energy) on): 19mA Hibernation with short-range communication (low energy) ON: 3.3mA Hibernation with short-range communication (low energy) OFF: 2.1mA Shipment (Off): <20uA (Internal Battery)
Internal Backup Battery	Li-Ion Polymer, 3.7V, 1000mAh, rechargeable Embedded NTC for temperature-controlled charging Operating Temperature: -20°C (65% charge) to +60°C Charging Temperature: 0°C to +45°C Autonomy: 140 messages from a fully charged battery in a TX Rate of once per 5 Minutes @ room temperature

Technical Specifications (cont'd)

Vehicle Environment Immunity

Immunity	Compliant with ISO 7637 till test level #4 (in accordance with E-mark directive)

Applicable Environmental Conditions

Charge	0~55°C (32~131°F) 60±25% R.H.
Discharge	-20~60°C (-4~140°F) 60±25% R.H.
Humidity	95% non-condensing
Ingress Protection	IP40
Protector Sleeve	Upgradable to IP 66 with added protector accessory
Climatic, Vibration, Impact	ISO 16750

Vehicle Installation Methods

Harnesses	Plug-n-play OBD-II Peripheral OBD-II Wired *Y-adapters and converters available
Mounting	Tie-Wraps and/or Double-Sided Adhesive Tape

Certifications

FCC	Part 15 Subpart B + C, part 22/24 compliant
PTCRB	All Applicable Bands
CE	Radio Equipment directive (RED) 2014/53/EU CE EMC Article 3.1 (b) Electromagnetic Compatibility CE Radio Article 3.2 Effective use of Spectrum CE Safety Article 3.1 (a) Health & Safety Automotive Directive 2004/104/EC (E-Mark)
IC	Industrial Canada

Technical Specifications (cont'd)

Environmental Protection

RoHS	Directive 2011/65/EU, including Directive (EU) 2015/863 amendment
Conflict Minerals Law	Production Conformity with U.S. Conflict Materials provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act, HR 4173, Section 1502 (Conflict Minerals Act)

Dimensions and Weight

Dimensions	90.8 x 70.5 x 22.9 mm (3.57 x 2.77 x 0.90in)
Weight	130gr (4.58 oz) (unpacked, without harness, battery included)

Features

Movement	3D Accelerometer
Use Cases	Vehicle utilization reporting class 1-6 vehicles, driver productivity and safety reporting, fuel efficiency and usage reporting, backup recovery/SVR
Capabilities	OBD-II and J1939 CAN signal detection (up to 35 parameters), Trip Detection, Driver Identification with white listing, Driver Behavior event detection, Ignition Status (motion or ignition wire), Speeding, Idling, Odometer, Open short-range communication (low energy) Sensor Integration, GPIO Integration, FOTA
Geofence	Up to 100 Geofences, Up to 100 driver whitelist

Powerfleet (Nasdaq: AIOT; JSE: PWR; TASE: PWFL) is a global leader in the artificial intelligence of things (AIoT) software-as-a-service (SaaS) mobile asset industry. With more than 30 years of experience, Powerfleet unifies business operations through the ingestion, harmonization, and integration of data, irrespective of source, and delivers actionable insights to help companies save lives, time, and money. Powerfleet's ethos transcends our data ecosystem and commitment to innovation; our people-centric approach empowers our customers to realize impactful and sustained business improvement. The company is headquartered in New Jersey, United States, with offices around the globe. Explore more at www.powerfleet.com.

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