CANmod.gps

GPS-to-CAN with 3D Inertial Sensor & UDR

PLUG & PLAY: Standalone - no PC required. Integrate with any CAN bus to add GNSS/IMU data. DBC included

INERTIAL DATA: Built-in gyroscope (roll, pitch, yaw) and accelerometer (X, Y, Z). 100 Hz frequency

COMPACT: Only 7 x 2 x 5 CM. 70G. Alu enclosure. 4 LEDs. 5-26 V DC via DB9. USB for config/firmware/stream

SENSOR FUSION: High precision position and attitude data via sensor fusion of the GNSS/IMU

USE GLOBALLY: 1 Hz GNSS position. Hot start via battery backup. GPS, Galileo, BeiDou, GLONASS

CONFIGURABLE: Configure CAN IDs, bit rate, data frequency & geofences via JSON config and GUI

This standalone GPS-to-CAN module produces GNSS position and 3D inertial data (via a gyroscope & accelerometer) and outputs it via configurable CAN bus frames.

The module supports 'Untethered Dead Reckoning' - meaning that even if the GNSS signal is lost entirely, the module can deliver continuous positioning through IMU-based estimates (no external inputs required).

You can integrate the module with any CAN bus, e.g. vehicle networks or CAN hardware. As an example, you can use it as a plug & play add-on module for the CANedge.

Incl. antenna. Optional adapters (dropdown).

Easily add GNSS/IMU data to any CAN bus

The CANmod.gps makes it easy to add position and 3D inertial data to your CAN bus - e.g. for use by ECUs or CAN hardware.

- Compatible with any high speed CAN bus (2.0A, 2.0B)
- Fully configure CAN IDs, bit rate and message frequency
- Power at 5-26 V DC via standard DB9 adapter cables
- Optionally record data via any CAN interface/logger/...
- Ex: Use as add-on for the CANedge (power via 2nd port)
- DBC included for decoding to human-readable form
- Optionally stream sensor data via USB in real-time
- White label e.g. for inclusion in your production

Example: Add GNSS/IMU data to your CANedge log files

Easily enhance your CANedge2 CAN/LIN data with GNSS/IMU information by connecting the CANmod.gps to the 2nd port.

Technical specs

GENERAL

Safety	CE, FCC, IC certified
Functionality	The device produces GNSS/IMU data and outputs it via CAN bus and/or USB
Warranty	1-year warranty
Support	Free, fast & high quality support
Origin	Denmark
Software	100% free & open source
Documentation	Online/PDF documentation

CAN BUS

Channels	1 x CAN/CAN FD
CAN IDs	Fully configurable (CAN 2.0A/2.0B)
Bit-rate	Fully configurable (up to 1 Mbit/s)

SENSOR GNSS/IMU

Module	NEO M8U (GNSS + gyro + accelerometer)
Sensor Fusion	Enhanced precision in GNSS hostile areas
Accuracy	Position: 2.5 m CEP Heading: 1 degree (50% at 30 m/s) Velocity: 0.05 m/s (50% at 30 m/s)
Battery Backup	Battery enables 'aided starts' (3s)

SIGNALS

CAN Signals	Position: Longitude & latitude [1 Hz] Time: Precise epoch timestamp [1 Hz] GNSS status and satellite count [1 Hz] Speed: Travel speed in m/s [1 Hz] Altitude: Altitude in meters [1 Hz] Attitude: Roll, pitch, heading [1 Hz] Distance since power on and total [1 Hz] Geofences: Status of geofences [1 Hz] IMU:Angular/acceleration rates [100 Hz]

MECHANICAL/SUPPLY

Connectors	1 x DB9 (adapter cables available)
Input sup y	+5V to +26V DC via DB9 (pin 1 or 9)
Consumption	<1W
Dimensions	52.5 x 70.0 x 24.5 mm (L x W x H)
Weight	70 G
LEDs	4 external LEDs (PWR, CAN, MEM, SIG)
Temperature	-25 degC to +70 degC
IP rating	IP40
Antenna	u-blc.. ANN-MS-0-005 (magnetic base, 5m)

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