PCAN-GPS Pro FD (IPEH-003105)

Product Description

The PCAN-GPS Pro FD is a configurable sensor module designed to detect position, orientation, and acceleration. It integrates a magnetic field sensor, accelerometer, gyroscope, and satellite receiver, enabling update rates of up to 25 Hz. Sensor data is transmitted via CAN or CAN FD, with dual interconnected LEMO circular connectors for seamless integration into measurement chains. The device's robust aluminum housing ensures reliable use under demanding environmental conditions. Configuration is done through USB using included Windows software, after which the device functions as an independent CAN node.

Technical Specifications

Feature	Specification
Microcontroller	STM32H745 (Arm Cortex M7 and M4 dual-core, 2 MB flash)
CAN Connection	High-speed CAN (ISO 11898-2), compliant with CAN 2.0 A/B and CAN FD
CAN FD Bit Rates	40 kbit/s to 10 Mbit/s (64-byte data field)
Classic CAN Bit Rates	40 kbit/s to 1 Mbit/s
CAN Transceiver	NXP TJA1043
CAN Termination	DIP switch configurable
CAN Connectors	Dual 9-pin LEMO circular connectors, Alpha coding (30°), M-CAN pinout
USB Interface	High-speed USB 2.0 via USB-C
GNSS Receiver	u-blox NEO-M9N, supports GPS, Galileo, BeiDou, GLONASS, SBAS, QZSS

GNSS Features	Simultaneous 4-system reception, max 25 Hz update rate, USB access to u-blox, 3.3V/5V active antenna supply
Gyroscope/Accelerometer	ISM330DLC (STMicroelectronics), 3-axis
Magnetic Field Sensor	IIS2MDC (STMicroelectronics), 3-axis
Memory	8 MB QSPI flash, 4 GB eMMC
LEDs	2 RGB status LEDs
RTC Backup	Supercap to preserve GPS/RTC data and shorten TTFF
Voltage Supply	8 to 32 V via LEMO connectors (operation), 5 V via USB (configuration only)
Casing	Aluminum, IP50 ingress protection
Operating Temperature	-40 °C to +85 °C (-40 °F to +185 °F)

Scope of Supply

• PCAN-GPS Pro FD module in aluminum casing

• External GPS antenna

• PCAN-GPS Pro FD Configuration Tool (Windows 11 x64/ARM64, Windows 10 x64)

• PDF manual

Ordering Information

• PCAN-GPS Pro FD – Part No.: IPEH-003105