

CANplus[®] Messenger Telemetry System

A Complete J1939 Wireless Telemetry Solution with Web Based Tracking

DESCRIPTION

The CANplus[®] Messenger Telemetry System provides fleet owners and maintenance staff nearly real time location and operational conditions of valuable remotely deployed equipment. The compact, ruggedized telemetry module can monitor, record, report, and alarm for any requested information available on the SAE J1939 CANbus (up to 32 conditions/PGNs (parameter group numbers)). Whether embedded into a CANplus 750 control panel or housed in a weatherproof enclosure, the powerful 32 bit processor, integrated cellular modem and GPS receiver connects seamlessly to virtually any equipment brand. The fleet owner can remotely monitor engine specific parameters, alarm conditions, GPS mapping information and much, much more.

The standard CANplus Messenger includes digital and analog inputs as well as two serial interfaces for direct connection to your equipment's systems.¹ Optional input/output modules allow additional parameters to be transmitted over the J1939 bus, monitored by the Messenger and then transmitted wirelessly to CANplus[®] Tracking, the Web-based GIS (Geographic Information System). This flexible hardware platform also supports mechanically governed engines when embedded in a CANplus 750 control panel. CANplus Tracking allows all of these parameters to find their way back to your phone, PDA or computer using a powerful exception-based alerting system. In the event of equipment malfunctions, low fuel conditions or service intervals expiration, equipment owners and end users can be quickly notified from the Web via computer-generated voice phone messages, text messages and/or email to a list of pre-determined phone numbers and email addresses. Users can easily view from the Web an entire fleet of equipment monitored by Messengers. Interfacing to Back-end applications other than CANplus Tracking is possible via either UDP or TCP connections.²

This simple, integrated, wireless equipment management solution has been designed for ease of use by OEM's & equipment owners. This wireless fleet management solution consists of a plug-and-play hardware module, designed specifically for construction and rental markets, combined with our bundled CANplus Tracking monitoring service.

CANplus Tracking provides near real time information seamlessly from our configurable secure web portal. This compiled historical information becomes "valuable knowledge" that empowers companies to take action on equipment issues immediately, as well as to schedule cost effective preventive maintenance. CANplus Tracking knowledge offers a long list of user benefits from improved equipment security and loss prevention, via virtual geo-fencing and GPS tracking, to improved equipment utilization and equipment reporting.

The CANplus Messenger offers equipment owners multiple asset management from one hardware platform resulting in a good return on investment. It is easy to transfer the Messenger from one piece of equipment to another. Its user friendly Web based configurability allows owners to change the equipment registration and monitoring profile to meet differing equipment requirements. And the plug-and-play wiring connectivity of the Messenger makes it an ideal hardware platform for rental companies and large fleet owners.

¹ Serial interfaces may require application specific programming.

² Software customization may be required



Messenger



Plug & Play Antenna



Standard Conditions Monitored

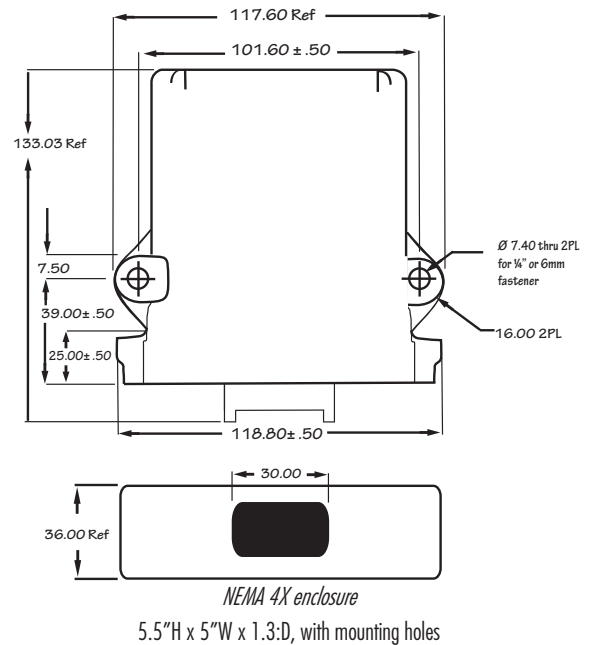
Electronic Controller:

- GPS Coordinates (location)
- 1- General purpose on/off input
- 1 - Analog input
- Standard values read via CANbus
 - Engine hours
 - RPM
 - Battery Voltage
 - Oil Pressure
 - Oil Temperature
 - Coolant Level
 - Coolant Temperature
 - All fault conditions reported by PGN 65226 (DM1 - Diagnostic Message)
 - All fault conditions reported by PGN 60416 (TPCM used to report multiple diagnostic messages in a single CAN message)
- Optional values read via CANbus
 - Up to 8 User-specified PGN/FMI analog values
 - Up to 32 User-specified PGN/FMI on/off values

Custom OEM Capabilities

- Virtual real-time transfer of monitored conditions
- Local computations from monitored conditions
- User-specified J1939 trouble codes and (PGNs) to be monitored
- Event and data logging
- Exception reporting to Internet-based applications
- Tunneling into the Messenger or equipment attached to the Messenger via a wireless connection
- SMS messaging sent on monitored conditions
- Parameter setting via SMS messaging
- Interfacing to back-end applications other than CANplus® Tracking is possible via either UDP or TCP connections.

DIMENSIONS



SPECIFICATIONS

Physical Characteristics

Electrical

Sleep Mode: 12 VDC @ 8mA

Monitoring Mode: 12 VDC @ 120mA

GPRS Transmit mode: 12 VDC @ 800 mA peak

Temperature

Industrial temperature range: -40 to +70C

Vibration & Shock:

Testing according to SAE J1455

- 3.0g Vibration in all three axes
- Multiple 25g drop in all three axes

Messenger Board Specifications

- 3.25" x 3.95"
 - GSM/GPS board piggy-backs on top of Messenger board
 - 4 mounting holes
- CAN controller
 - Supports J1939
 - 32 independent PGN message objects
- Port 1 - RS232 or RS485 - Modbus RTU Slave
- Port 2 - RS232 or RS485 - Modbus RTU Master or Special
- Battery Backed up Real-Time Clock, event log, data log, and more - 10 year life
- GSM-GPRS with SIM card holder embedded on Messenger
- Certified with FCC, PTCRB and ATT for GSM/GPRS end-user applications
- Extreme low power mode when engine is not running or other user-specified mechanism
- 32-bit processor

- 512 FLASH memory for application - downloadable via serial port or via GSM connection
- 512 Low-low power battery backed up SRAM
- DIP switches to select:
 - Serial port function
 - Modbus Slave, Debug, None
 - Serial port interface
 - RS232 or RS485 per port
 - Modbus Slave ID
 - 126- 133
 - Port 2 baud rate
 - 4800 - 38400
- Event logger accessible via serial port or via GSM connection
- 8 LEDs on-board indicate:
 - GSM status
 - GPS status
 - CAN status
 - Serial port status
 - Power
 - 2 available for user-specified conditions
- General purpose inputs
 - 1 digital/ 1 analog on 12-pin Deutsch connector
 - Digital inputs are contact closures to ground
 - Analog input is 10-bit, 0-3VDC or 0-20ma or resistive input for fuel sender
- Receive SMS messages for reconfiguration or on-demand reporting

Antenna Specifications

- Type
 - Dual function external antenna - dome cap 1.875" DIA x .625"H with .50" screw mount and 9.5 ft cable
- Antenna

- SMA	Function
- SMA-RP (reverse polarity)	GPS antenna connection
	GSM/GPRS antenna connection