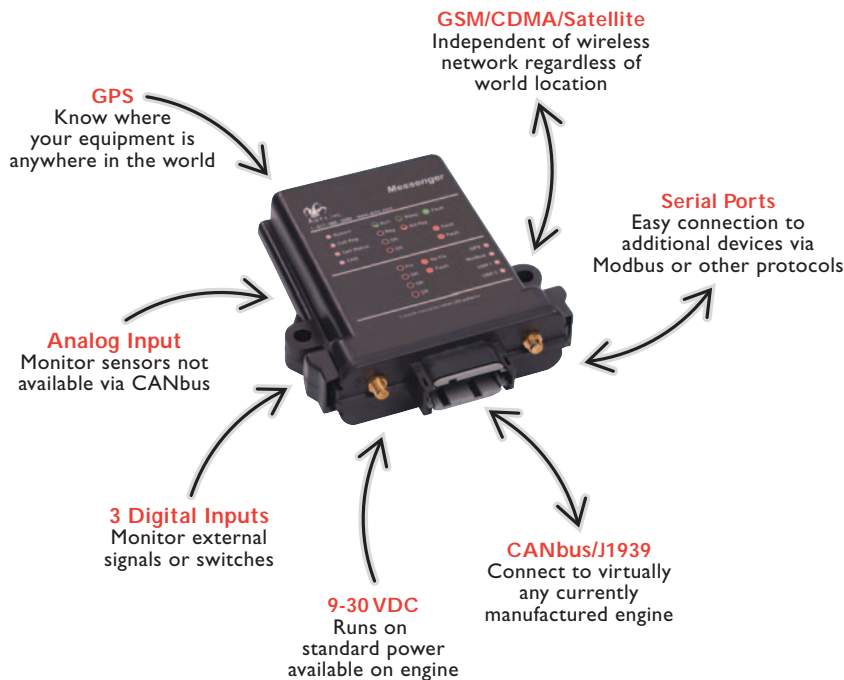




# Antx Messenger

## Diesel Engine Remote Monitor

Telemetry system enables improved fuel efficiency and lower operating costs



### Messenger Improves Fuel Management by Reporting:

- Idle time and fuel used
- Work time and fuel used
- Engine diagnostics
- Excessive RPM
- Excessive coolant temperature
- Idling too long
- Fuel level
- Service intervals

### Messenger Lowers Operating Costs by Reporting:

- Location, tracking and history
- Service intervals
- Geofencing
- Engine diagnostics
- Work time per day
- Engine hours
- Fuel level

### Messenger Features:

- Supports CANbus J1939 protocol
- Reports all CANbus diagnostic messages
- Simple “plug-in” installation
- Reports GPS location/tracking
- Supports GEOfence settings
- Over-the-air programmability (OTAP)
- Over-the-air tunneling (OTAT)
- GSM-CDMA-Satellite support
- Compact, rugged, weatherproof design
- Store and forward capability
- Meets or exceeds SAE specifications for temperature, vibration, shock, and humidity
- Low power mode

The Messenger is an integrated remote telemetry hardware device that allows customers to collect and track multiple types of information about their diesel engine based equipment — from machine location and service usage hours to health and productivity information.

Designed specifically as an integrated telemetry and alarm notification system, the Messenger works seamlessly with electronic engine controllers, ECUs and other devices that support CANbus communications. The Messenger gathers data from a machine's on-board system and transmits it wirelessly to the network operations center providing you critical information on your machinery in near real-time! As diagnostic messages are generated from the engine and put on the J1939 CANbus the Messenger is capable of notifying you of these occurrences, right when they happen, with location, date and time.

By providing remote access to machine information owners can now manage their field equipment assets more effectively. The results are improved fuel efficiency, lower operating costs and a better return on investment!

### Messenger also Provides “Green” Benefits

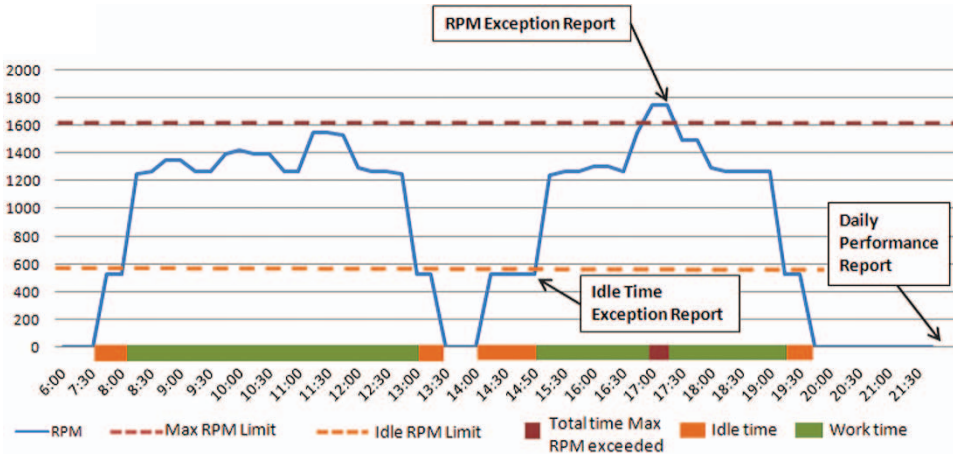
- Lower equipment emissions by reducing idle time
- Keep equipment operating at top efficiency by knowing when service is required
- Better route optimization of service fleets by knowing what equipments needs what service
- Prolonged equipment life cycle through improved equipment maintenance





# Antx Messenger

## Diesel Engine Remote Monitor



**Automatic Reporting —**  
Based on how you want your equipment to run!

**Idle time exception report** – transmits idle duration and fuel used while idling

**RPM exception report** – transmits total time engine exceeds specified RPM limit

**Daily performance report** – at the end of the day, transmits total hours and fuel used while running and idle

### Physical Characteristics

#### Electrical:

Sleep Mode: 12VDC @ 3ma

Monitoring Mode: 12VDC @ 120mA

GPRS Transmit mode: 12VDC @ 800ma peak

#### NEMA 4X enclosure:

5.5”H x 5”W x 1.3”D, with mounting holes

#### Temperature:

Industrial temperature range: -40 to +70C

### Messenger Board Specifications

- 3.25” x 3.95”
  - 4 mounting holes
- CAN controller
  - Supports protocol version 2.0 part A and B/Active
  - Bit rates up to 1.25M bit/second
- Serial ports – RS232/RS485
  - Modbus Master/Slave/Custom
- Battery Backed up Real-Time Clock, event log, data log, and more – 10-year life
- Certified with FCC, PTCRB and ATT for GSM/GPRS end-user applications
- Exceeds SAE J1455 shock and vibration levels
- FLASH memory for application – downloadable via serial port or via GSM connection
  - 512K
- Low-low power SRAM
  - 512K
  - battery backed up
- Event logger accessible via serial port or via GSM connection
- 8 LEDs on-board
- General purpose inputs
  - 3 digital/1analog
  - Digital inputs are contact closures to ground
  - Analog input is 10-bit, 0-3VDC or 0-20ma or resistive input, e.g. fuel sender
- Receive SMS messages for reconfiguration or on-demand reporting
- Extreme low power mode when engine is not running or other user-specified mechanism

### Capabilities that provide real benefits:

- Virtual real-time transfer of monitored conditions
- On-board computations and limit evaluations
- Exception-based reporting to back-end applications
- Over-the-air configuration changes and application re-flashing
- Over-the-air tunneling to other equipment connected to Messenger
- SMS messages to change configuration and operation
- Notifications to back-end based on time, events and computations
- Standard and user-specified PGNs to be monitored
- Event and data logging
- Very low power mode

### What makes the Messenger better:

- Messenger performs complex computations internally
- Provides instant notification when any condition exceeds your operational limits
- Reduces over-the-air transmissions
- Keeps network costs to a minimum
- Provides over-the-air tunneling into other equipment

Since 1997, Antx, Inc., based in Austin, Texas, has become a leading supplier of systems for remote asset monitoring, control, data logging and automatic alarm notification throughout the world. Antx’ products are designed and manufactured to perform at the highest levels of reliability in the most demanding industrial and commercial markets. With over 45,000 installations utilizing land-based and wireless communication to build on, Antx continues to develop powerful new systems and solutions to meet customer’s immediate and future needs.

