CANgate™

CAN to ASCII Gateway

Collect CAN bus data with the *dataTaker* DT80 range of data loggers.

- **2 high speed CAN bus ports**
- **Serial port for GPS**
- **Serial port for data logger or PC**
- **J1939, OBD, ISO and Raw CAN**

Description

The *dataTaker CANgate* CAN to ASCII gateway filters and converts CAN (Controller Area Network) and GPS (Global Positioning System) data to serial ASCII data. It has been designed to capture the real-time data available on CAN and GPS networks (e.g. temperatures, RPM, brake/throttle settings, latitude, longitude, speed etc.) and pass that information on to either a *dataTaker* data logger or host computer system.
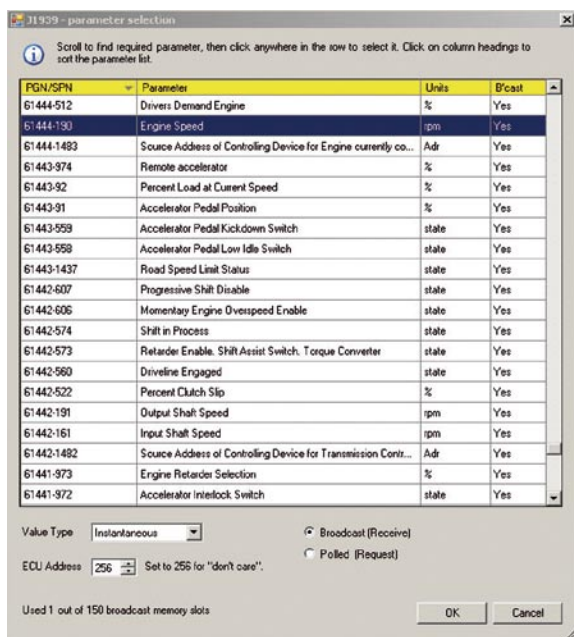
Two CAN interface ports are included, which allow connection of two independent CAN networks. *CANgate's* versatile configuration options allow you to select the parameters of interest, apply statistical functions (average, minimum, maximum) and control the format in which data are returned. *CANgate* supports widely used protocols such as ISO-15765 and SAE-J1939, as well as raw CAN frames.

Many CAN networks are used in vehicle, transport and marine applications where positional information can be an important part of the data collected. *CANgate* includes a GPS interface to allow integration of the positional and other information available from GPS systems.

The *dataTaker DeLogger*™ host software application supports the use of *CANgate* in conjunction with the *dataTaker DT80* range of data loggers. CAN and GPS parameters of interest may be selected from a predefined database of SAE J1939, OBD-II and NMEA-0183 (GPS) parameters. This database may be modified or extended by the user, allowing custom parameters and protocols to be supported. *DeLogger* allows easy integration of CAN and GPS data collected via *CANgate* with traditional analog and digital measurements.

When interfaced to a host computer system directly, *CANgate* can be configured by simple ASCII commands. This allows a terminal software application such as *dataTaker DeTransfer* or *HyperTerminal* to be used to configure and collect data from *CANgate*.

Applications Include:

Engine and Equipment development and diagnostics
- Automotive, Transport, Construction, Stationary
- Log real time data
- Log fault codes
- Sensor input/output control

Resource Management
- Monitor fleet vehicles, equipment and assets
- Log GPS information
- Historical operating conditions and behaviour

ECU development and testing
- Capture broadcast and requested CAN data
- Send arbitrary CAN frames

Remote Monitoring/Control
- Send/receive CAN messages over modem

CAN Interfaces
2 independent CAN ports
Configurable Port Speeds: 10, 20, 50, 125, 250, 500 or 1000 kbit/s
Physical Layer Supported: ISO 11898-2 (High speed CAN, two wire)
Protocols Supported: Raw CAN; SAE-J1939; ISO-15765-2 based protocols e.g. J1979/ISO-15031-5 (Legislated OBD), ISO-14230-3 (manufacturer diagnostics)
Maximum broadcast parameters: 150
Maximum polled parameters: No Limit.
Statistical functions for broadcast parameters: Average, Minimum, Maximum.

GPS Interface
1 RS232 port
Configurable Port Speeds: 300, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 baud
Protocols Supported: NMEA-0183

Host (Data Logger/Computer) Interface
1 RS232 port
Configurable Port Speeds: 9600, 19200, 38400, 57600, 115200 baud
Flow Control: Hardware (RTS/CTS) or Software (XON/XOFF)
Protocols Supported: ASCII

LED indicators
Power
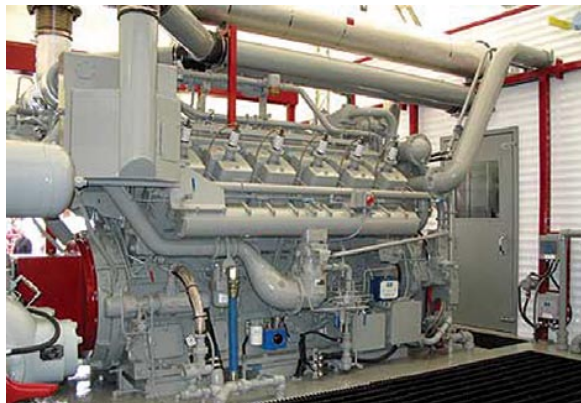CAN1 Data Receive
CAN2 Data Receive
GPS Data Receive
HOST Data Receive
HOST Data Transmit

Connectors
1 DE9 male (Host) – standard PC/AT DTE pin-out
1 DE9 female (CAN1, CAN2, GPS, power)

Host Software
DeLogger supports use of *CANgate* with *dataTaker DT80* range of data loggers. Includes built in parameter databases for J1939, OBD, NMEA-0183 and supports user developed custom parameter databases.

Power Supply
External Input Range +10 to +30VDC
+5V power output (200mA max) is also provided, for powering GPS modules

Power Consumption
Idle: 0.75W (15V 50mA)
Maximum: 3.75W (15V 250mA)

Physical and Environment
Construction: Anodised Aluminium
Dimensions: 57x95x27mm
Weight: 110g
Temperature Range: -20+70°C
Humidity: 85% RH, non-condensing

Accessories Included
DE9 to Screw Terminal Adaptor
DT80 communications cable (DE9<->5 way screw terminal plug)
Host PC communication cable (DE9<->DE9)
Datataker double-ended screwdriver
Resource CD: Includes User's Manual and Host Software Getting Started Guide.

For further information on *dataTaker* products, or for useful downloads, visit the Datataker web site at www.datataker.com or contact your nearest Datataker office or distributor.

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