

# CANgate™

# dataTaker®

## 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.



Specifications

PGN/SPN	Parameter	Units	B'cast
61444-512	Drivers Demand Engine	%	Yes
61444-190	Engine Speed	rpm	Yes
61444-1483	Source Address of Controlling Device for Engine currently co...	Adr	Yes
61443-974	Remote accelerator	%	Yes
61443-92	Percent Load at Current Speed	%	Yes
61443-91	Accelerator Pedal Position	%	Yes
61443-559	Accelerator Pedal Kickdown Switch	state	Yes
61443-558	Accelerator Pedal Low Idle Switch	state	Yes
61443-1437	Road Speed Limit Status	state	Yes
61442-607	Progressive Shift Disable	state	Yes
61442-606	Momentary Engine Overspeed Enable	state	Yes
61442-574	Shift in Process	state	Yes
61442-573	Retarder Enable, Shift Assist Switch, Torque Converter	state	Yes
61442-560	Driveline Engaged	state	Yes
61442-522	Percent Clutch Slip	%	Yes
61442-191	Output Shaft Speed	rpm	Yes
61442-161	Input Shaft Speed	rpm	Yes
61442-1482	Source Address of Controlling Device for Transmission Contr...	Adr	Yes
61441-973	Engine Retarder Selection	%	Yes
61441-972	Accelerator Interlock Switch	state	Yes

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



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## 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](http://www.datataker.com) or contact your nearest Datataker office or distributor.



[www.datataker.com](http://www.datataker.com)



Your local distributor

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**Warranty:** The *CANgate* is covered by a 3 year warranty on workmanship and parts.

**Quality Statement:** Datataker operates a Quality Management System complying with ISO9001:2000. It is Datataker's policy to supply customers with products which are fit for their intended purpose, safe in use, perform reliably to published specification and are backed by a fast and efficient customer support service.

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**Specifications:** Datataker Pty Ltd reserves the right to change product specifications at any time without notice.

**Manufactured and designed in Australia.**

**dataTaker®**