



Gateway 5

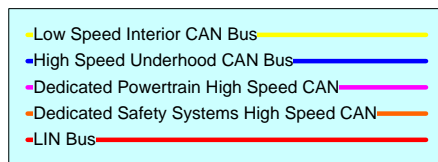
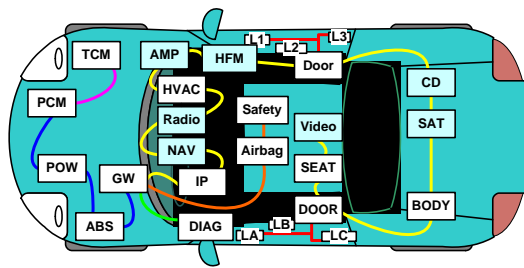
Features and Specs

- Up to four CAN bus interfaces with configurable termination
- Two LIN interface (9.6 - 20 Kbps, configurable as Master or Slave)
- Flash re-programming interface
- DBC-file based CAN messages
- Transmit message enable and disable capability
- 8 status/activity indicator LEDs
- Up to 8 digital inputs, 16 digital outputs
- Up to 8 analog inputs
- Eight counter-timer input
- Separate sensor, power grounds
- Configurable to power-on via battery feed, switched battery (ignition), or via bus wakeup
- Daughterboard support for increased flexibility
- -40 °C to +85 °C for standard automotive interior operation
- 9V to 16V operation (200mA typ.)
- 6.5" x 4.2" x 1.6" metal housing

Overview

The Gateway 5 is DGE's fifth-generation CAN / LIN gateway and general purpose development module. It provides message translation across differing vehicle networks, such as high speed CAN, low speed fault tolerant CAN, single-wire CAN, and LIN. In addition to message translation, the Gateway 5 can also be used to emulate a module, transmitting messages and signals based upon switch or sensor I/O and data received over the bus. It can also control I/O (relay drivers, LEDs, etc.) based upon message and signals received from the vehicle network. The Gateway 5 is capable of supporting all major OEM vehicle networking protocols.

Flash re-programmability via USB or CAN allows for Gateway 5 software updates supplied by DGE to be easily uploaded. The user can easily enable or disable specific transmit messages in the field.



Gateway Software

DGE will customize the Gateway 5 software to meet customer requirements for specific applications. The Gateway 5 can act as a "glue module", controlling motors, relays, switches and LEDs based upon network messages. Software customization allows:

- Periodic message transmission with signals based on sensor (analog) or switch inputs
- Ability to control digital, analog and PWM outputs based on received message content
- Translation of messages between vehicle buses (CAN-to-CAN, CAN-to-LIN, LIN-to-CAN)





Solutions for Vehicle Electronics

DGE Inc.

Providing electrical engineering design and consulting services to the automotive OEMs, Tier and Aftermarket Suppliers.

Integration

With our experience and expertise, we assist our partners in integrating their products into the OEM vehicle. We focus on the entire vehicle system.

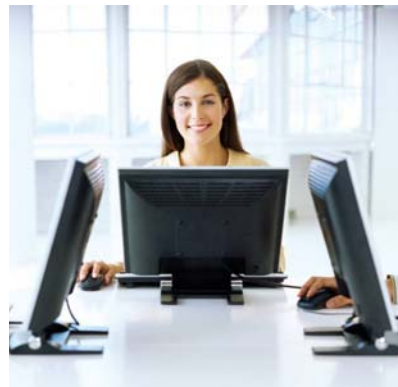
Consulting

We collaborate with OEMs and Tier suppliers to develop and validate electronic designs. We support your EE activities by providing prototype design and consulting services. We speed the process by advising regarding the OEM product development cycles and provide project management and coordination.

Design

Areas of expertise include:

- Embedded Software and Hardware
- Telematics
- Vehicle Networks
- Testers and Simulators
- Communication Gateways
- ECU/Subsystem Hardware
- System Integration and Validation



Products

- **Automotive Network Gateways**
 - CAN / GM-LAN/ Ford FNOS
 - Ethernet
 - LIN
- **Vehicle Bus Interfaces**
 - ECU subsystem for seamless access to OEM vehicle network
 - OEM-Safe Aftermarket Gateway
- **Custom Automotive Development Tools**
 - Engine Simulator
 - Transmission Simulator
 - Telematics HIL Vehicle Drive Simulator
 - High Speed Data Acquisition System
 - Load Boxes (design or build to print)
- **Custom Automotive Designs**
 - Body Control Modules
 - Telematics / Infotainment Control Modules
 - Motor Control Modules
 - Hybrid/BEV Battery Control Modules
- **Telematics Designs**
 - GPS
 - GSM/CDMA
 - Bluetooth, WiFi
 - DSRC / Car2x On-Board Equipment

Services

- **Hardware Design**
 - Embedded Circuit Design (MCU, ASIC, FPGA, CPLD, Power, and RF Technologies)
 - Prototype and Production Vehicle Module Design
 - ECU Test, Validation, and Simulation Equipment Design
- **Software Development**
 - Embedded Solutions
 - PC Solutions
 - C, C++, and Assembly Language
 - Real Time Operating Systems Application Design (Linux, OSEK, and Others)
 - National Instrument LabVIEW (Real Time, PDA, FPGA)
- **Testing and Validation**
 - Vehicle Bus Software and Hardware Design Validation
 - Vehicle-Level Bus Validation
 - ECU Diagnostics Validation
 - End-to-End System Integration and Validation
- **CAD and Lab Services**
 - Schematics and PCB Layout
 - Electronic Packaging Design – Solid Modeling
 - Complete Electronic Box Builds
 - Prototype Vehicle Modifications
- **Project Management**
 - Coordination / Management of Entire Customer Projects
- **Vehicle Electronics Troubleshooting and Consulting**



2870 Technology Dr.
Rochester Hills, MI 48309
Phone: 248.293.1300
Fax: 248.293.1309
<http://www.dgeinc.com>