



# Assuring Vehicle-Friendly Accessories

## Vehicle Electronics Conformance Testing

Let DGE subject your component to custom, rigorous independent testing to verify that it plays nice with the OEM vehicle systems, ensuring vehicle safety and OEM equipment compatibility. Our seal of approval means that the vehicle system integrity remains intact.\*

### DGE Inc.

DGE is an OEM Tier1 supplier. We assist our partners with integrating their products into the OEM vehicle. We focus on the entire vehicle system. DGE collaborates with OEMs, Tiers and Aftermarket suppliers to develop and validate electronic designs.

### Areas of expertise include:

- Vehicle Networks
- Telematics
- Embedded Software
- ECU/Subsystem Hardware
- Communications Gateways
- Test Systems and Validation

### Examples of Tests

- CAN / J1939
- LIN
- IOD
- EMC
- Reverse Battery
- Device Integration
- Hardware Design
- Software Design
- Mechanical
- Many Others...



### Benefits of Independent Analysis

- Robust Design
- Greater OEM Acceptance
- Fewer Product Returns
- Higher Compatibility Accuracy
- Improved Customer Experience
- Improved Installer Confidence

\*DGE Vehicle Electronics Conformance Testing is not a substitute for OEM or SAE conformance testing.





# 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.

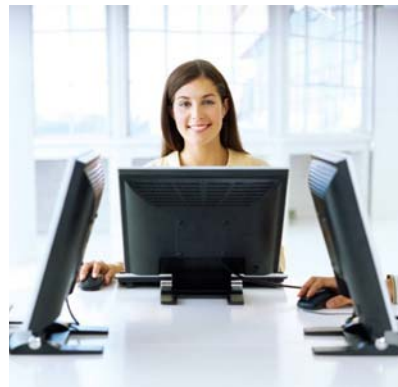
### Consulting

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**



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