



## OEM-Safe Aftermarket Gateway (Patent Pending)

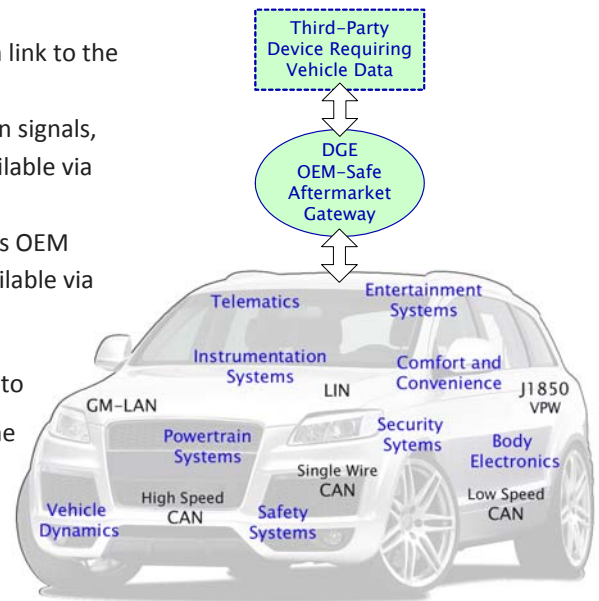
### Features and Benefits

- OEM-approved vehicle bus access
- Gateway completely isolates the aftermarket device from OEM network, maintaining vehicle warranty
- Wakes on vehicle CAN message traffic
- Sleeps when inactive to reduce battery drain
- Designed against OEM specs (EMC, Environmental)
- Extensive vehicle integration testing
- Interface with various aftermarket devices such as iPod, iPhone, GPS, etc.
- Interface to aftermarket device via CAN, LIN, serial, I/O

DGE Inc. designs OEM-approved vehicle gateway modules for vehicle upfitter and aftermarket applications. Our OEM-Safe Aftermarket Gateway (OSAG) provides:

- OEM-approved access to the vehicle network signals required for proper operation of added equipment or CE devices
- A cost-effective data communication link to the OEM data bus
- Analog / digital control and indication signals, including functions and data not available via standard OBD-II
- Aftermarket device control of various OEM features, including functions not available via standard OBD-II

DGE Inc. works closely with OEM engineering to secure approved access to vehicle signals -- the actual vehicle bus. Connecting to the vehicle safely and securely *satisfies the OEMs and enables the Aftermarket Supplier.*



As a highly-respected OEM Tier1 supplier, DGE Inc. designs modules for the aftermarket by:

- Leveraging its vehicle electronics knowhow with OEM engineering support
- Providing the aftermarket with vehicle connectivity that is OEM approved
- Reducing costly connectivity rework and eliminating the need for constant reverse engineering
- Creating connectivity to the car that protects and addresses the



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



DGE Inc.

## Wheelchair Ramp / Mobility Gateway

### Vehicle Network Interface for Mobility Van Upfitter Applications

#### Features and Benefits

- OEM-approved vehicle bus access
- Wakes on vehicle CAN message traffic
- Sleeps when inactive to reduce battery drain
- Isolates the aftermarket devices from OEM network, maintaining vehicle warranty
- Designed and tested against OEM specs (EMC, Environmental)
- Extensive vehicle integration testing

#### Specifications

- -40 °C to +85 °C operation
- 9V to 18V operation (<35mA typical)
- 4.3" x 3.3" x 1.2" plastic housing

DGE Inc. has teamed with the Braun Corporation, the world's largest producer of automotive mobility products, to develop an interface for accessing data from OEM vehicle networks. The Wheelchair Ramp Gateway Module (WRGM) allows Braun's wheelchair and scooter ramp systems to utilize information which is already present on the vehicle data network to provide better accessibility.

The technology was introduced in the Braun Entervan conversion of the 2008 Chrysler Town and Country minivan. The WRGM provides access to OEM door lock, safety, and vehicle status information.



This permits the implementation of convenience features like ramp interaction with the power sliding doors and safety features such as disabling ramp deployment while the vehicle is in gear.

The advantage to the OEM is that the WRGM provides a single non-intrusive access point to the vehicle network.

The WRGM draws upon DGE's extensive experience in designing network gateway modules and vehicle bus interfaces for development applications as a Tier 1 automotive supplier. The WRGM is a custom module based upon DGE's Gateway3 Development Platform which utilizes the industry standard CAN and LIN networking protocols and is available to third party suppliers who wish to access and utilize OEM network data.

DGE has developed the WRGM for production. Our role in the project has included WRGM hardware and software design, creation of the communications/control protocol, and design and build of module testers. DGE has also performed EMC, Environmental, and CAN and LIN validation testing on the WRGM according to OEM specifications and requirements.

Please visit our website for ordering info: <http://www.dgeinc.com/inquiry.htm>

