

Wheelchair Ramp / Mobility Gateway Module



Vehicle Network Interface for Mobility Van Upfitter Applications

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 will be 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 safety features such as disabling ramp deployment when the vehicle is in gear and convenience features like controlling sliding doors. 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.

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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.

Application 1

- High-Speed CAN bus interface
- LIN bus interface (up to 20 Kbps)
- CAN to LIN Message Translation
- DBC-file based CAN messages
- Wakes on CAN message traffic

Application 2

- Single Wire CAN (GM-LAN) bus interface
- LIN bus interface (up to 20 Kbps)
- CAN to LIN Message Translation
- Power-on via battery feed, switched battery (ignition), or via bus wakeup
- Enhanced functionality with chime control and driver information display (DID) messaging
- 1 relay/high side driver
- 4 low side drivers



Specifications

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