

KEY BENEFITS

- Enhances diagnostic capabilities
- Promotes rapid design
- Easy mechanical to electrical system transition
- Allows cost-efficient designs

OVERVIEW

The body control system showcases new and innovative Motorola devices in a powerful, reliable solution with enhanced diagnostic capabilities.

These innovative products allow automotive engineers to design faster, more cost-efficiently, and to make an easy transition from mechanical to electrical systems

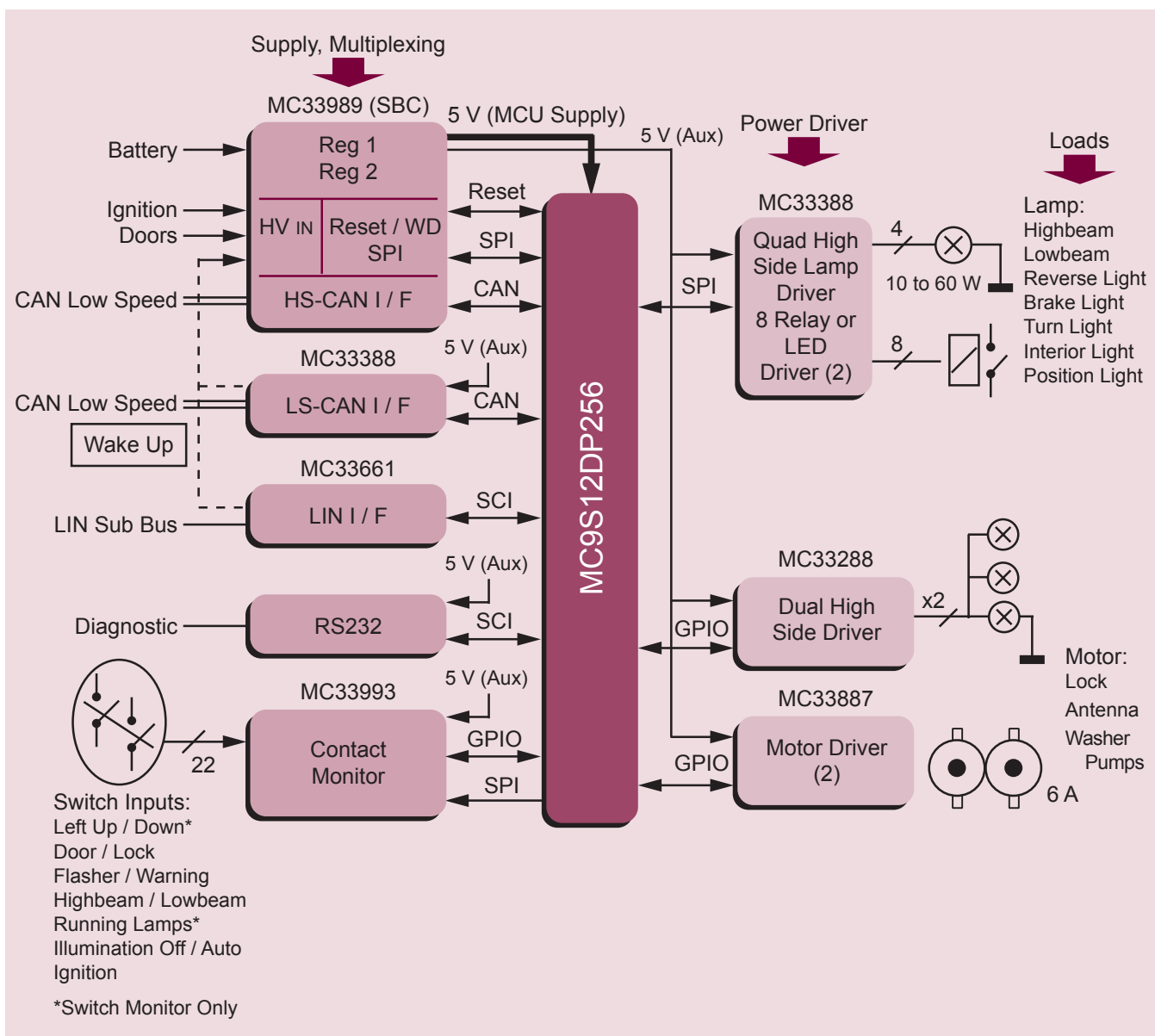


Figure 1. Body Control Block Diagram

MOTOROLA ORDERING INFORMATION

Part Number	Product Highlights	Additional Information
MC33288	Solid state relay for flasher applications	www.motorola.com/semiconductors ^{NOTE}
MC33388	CAN low speed fault tolerant physical interface	www.motorola.com/analog ^{NOTE}
MC33661	ELIN physical interface	www.motorola.com/semiconductors ^{NOTE}
MC33887	Integrated H-bridge with sleep mode	www.motorola.com/analog ^{NOTE}
MC33989	System Base Chip with High Speed CAN	www.motorola.com/analog ^{NOTE}
MC33993	Multiple switch detection interface	www.motorola.com/analog ^{NOTE}
MC9S12DP256	16-Bit microcontroller	www.motorola.com/semiconductors ^{NOTE}

NOTE: Search on the listed part number.

DESIGN CHALLENGES

Automotive body control presents interesting design challenges to the system engineer. These challenges include jump start, reverse battery, high current control, and large I/O requirements. Motorola's Analog products help solve these automotive-specific issues with integrated automotive capabilities. These new solutions provide the control functions and advanced diagnostic capabilities unavailable in older mechanical systems.

MOTOROLA SOLUTION

Motorola's leading-edge body control IC solutions are "smart" products providing designers with superior diagnostic abilities, high reliability, and reduced part counts. These IC system capabilities are optimized for rugged automotive environments. Motorola's first advanced, high performance HC12, 16-bit MCU with automotive Flash and six multiplex network modules is the master governing unit in a system where all ICs have intelligence. Designed to demonstrate the expanding demands of body control architecture, the body control system includes a hub for two CAN networks, a LIN sub-bus, a short range/RF receiver, high current silicon switches, and up to 30 switch inputs. This reliable, low-power solution has self-protected switching devices meeting the high power demands of lighting.

DEVELOPMENT TOOLS

Tool Type	Product Name	Vendor	Description
Software	CodeWarrior development systems	Metrowerks	www.metrowerks.com
Software	Low-cost debugger	P&E Microcomputer Systems	www.pemicro.com
Software	Flash programming tools	P&E Microcomputer Systems	www.pemicro.com
Software	In-circuit emulator	Nohau Corporation	www.nohau.com
Hardware and Development Kits	Contact vendor	Axiom Manufacturing	www.axman.com
Hardware and Development Kits	Contact vendor	Diavarre	www.diaverre.com
Hardware and Development Kits	Contact vendor	Elektronikladen	www.elektronikladen.de
Hardware and Development Kits	Contact vendor	Metrowerks	www.metrowerks.com
Hardware and Development Kits	Contact vendor	P&E Microcomputer Systems	www.pemicro.com
Hardware and Development Kits	Contact vendor	Technological Arts	www.technologicalarts.com

RELATED INFORMATION

For inquiries about Motorola products, contact the Technical Information Center at 1-800-521-6247 or 480-768-2130, or visit us online at www.motorola.com/semiconductors.

Document Number	Description
BR1871/D	BR1871 Automotive Body Control

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