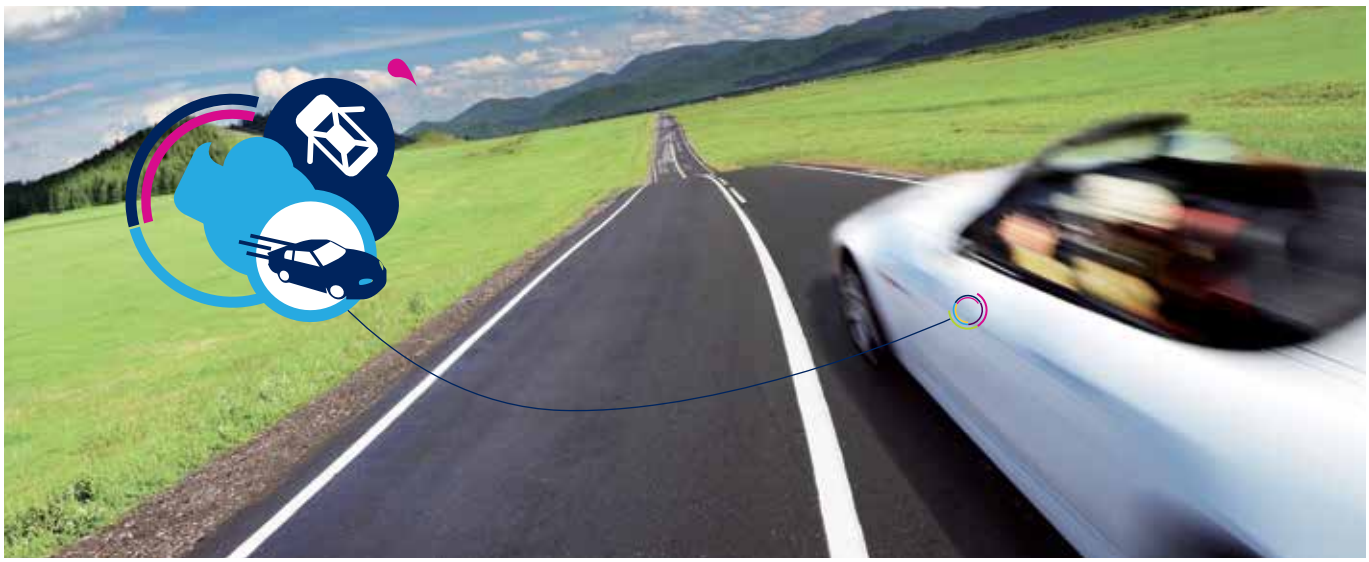
L99PM72GXP

CO_2 reduction enabled by innovative car networking



L99PM72GXP extends ST's automotive portfolio and is among the first ICs in the market to support HS-CAN bus systems with Partial Networking

Car ECUs do not need to be permanently active, for this reason the concept of partial de-activation of bus systems (Partial Networking) has been introduced.
A dedicated specification for the selective wake-up of HS-CAN transceivers has been defined (ISO 11898-6) supporting the novel bus concept.
STMicroelectronics has actively participated in the group working on the ISO specification, developing one of the first products that support Partial Networking.

KEY FEATURES

Automotive Power Management

- LIN and HS-CAN transceiver
- Dual low drop regulator
- Low power modes
- Fail safe functionality
- High-side drivers for LEDs or hall sensors
- Low-side drivers for relay control
- Control and diagnostics provided through SPI
- Wake-up inputs
- Cyclic contact monitoring
- Two operational amplifiers for current sensing
- Programmable window watchdog
- Programmable PWM channels and timers for high-side drivers

KEY APPLICATIONS

- Door electronics
- Climate control
- Seat adjustment
- Sunroof
- Power trunk module
- Trailer module
- Convertible soft top



DEVICE AT A GLANCE

The L99PM72GXP is a power management system IC providing electronic control units with enhanced power supply functions including various standby modes as well as LIN and HS-CAN physical communication layers. It contains two low drop voltage regulators to supply the system microcontroller and external peripheral loads (sensors) and provides superior system standby functionality with programmable local and remote wake up capabilities.
In addition, four high-side drivers, two low-side drivers and two operational amplifiers increase the system integration level.
ST's standard SPI Interface allows control and diagnosis of the device and enables generic software development. The L99PM72GXP, by integrating both High-Speed CAN (11898-6), and LIN physical layers, provides all the functions needed to build a complete Electronic Control Unit (ECU) for Car Body applications. Its features are tailored to specific uses such as climate control modules and door control units, as well as seat, sunroof, trunk and trailer modules to name a few.

Unlike standard CAN transceivers or system basis chips currently on the market, the L99PM72GXP is able to monitor the CAN bus autonomously, without the module's main processor being active. The module is activated only when a pre-configured wake-up frame is received. It enables tight control of the power consumption of the on-board electronics thus helping manufacturers reach their goal of higher fuel efficiency and reduced CO_2 emission.

DEVICE BLOCK DIAGRAM



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