elmos

Free Programmable LIN2.x Relay Node for 6/5 Relays

E523.05/15

Preliminary Information - Apr 6, 2016

RoHS compliant

Features

- Voltage range 7V to 28V (5V to 42V peak)
- Controls 6 relays either high-side or low-side driven or 5 bistable relays
- Relay pull-in and holding current can be controlled by PWM generators
- The PWM generator has to limit the relay current to 400mA(peak), 75mA(continuous)
- LIN2.x(1.3)(SAE-J2602) interface or PWM interface with error feedback capability
- Several Diagnostic and Protection Functions
- 16 bit RISC CPU assisted by 2 Co-Processors
- 32kByte FLASH, 16kByte SysROM, 4kByte SRAM
- 10 bit 1 Msample SAR ADC
- 4x 16 bit PWM generation (edge/center aligned)
- Adjustable window watchdog (independent silicon and clock)
- T_{Junc} peak = +150°C

Ordering Information

Ordering-No.:	Version	Package
E52305A78B	LIN 2.x or PWM	QFN48L7
E52315A78B	PWM only	QFN48L7

General Description

The Elmos **S**ystem-**o**n-a-**C**hip (SoC) family E523.05/15 controls six relays either high-side or low-side driven or five bistable relays (activation in sequential order). The relay holding current can be programmed depending on actual battery voltage by integrated PWM generators. The IC is controlled over a LIN 2.x(1.3), SAE-J2602 compliant communication interface or a PWM-interface with error feedback.

The IC core is a 8-48Mhz, 16 bit RISC CPU, assisted by a set of peripheral digital modules.The IC features a wide range of diagnostic functions. The relay status can be read in digitally or with ADC at the GPIO inputs.

The IC FLASH memory is programmable via JTAG interface or via LIN boot loader function in normal or high speed mode. The LIN boot loader is placed in SysROM area for max. programming security and reducing the code size of the application program.

For fast time-to-market Elmos provides demo-boards as well as design-in support, LIN hardware library routines placed in SysROM (reducing code size), demo code and training on the software development tool-chain. Alternatively, you can use the CANbedded LIN Communication software components from Vector for the Elmos E523.05 family

Applications

- LIN2.x or LIN1.3 relay nodes

Typical Application Circuit
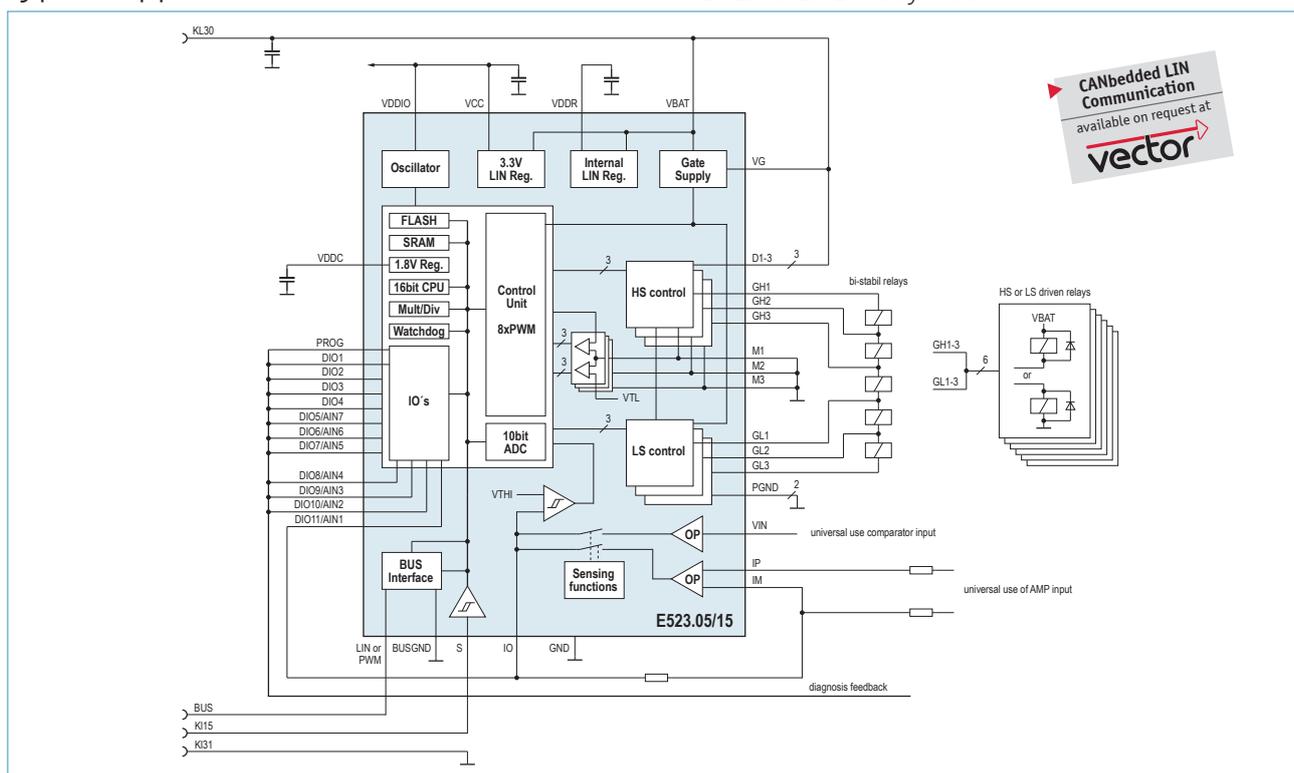
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