

S12 MagniV S12ZVL

Smallest Integrated LIN Slave MCU

Features



Operates from car battery



Ultra-reliable industrial



Integrated LIN transceiver



Fast ADC

Product One-Sheet

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[Tools](#)

System in a Package – Highly integrated part ideal for space constrained applications such as actuators, sensors, LIN nodes, etc.

Low System Cost – Direct connection with battery, integrated LIN Phy, EVDD and NGPIOs reduce system, qualification and manufacturing cost.

High Reliability – High immunity to EMI and ESD stresses, LIN 2.x compliant with +/- 8kV ESD capability.

Enablement – Supported by comprehensive hardware and software system (free low-level drivers to enterprise 3rd party tools) which reduces development costs and time to market.

S12ZVL Specifications

| | | | |
|--------------|----------------|--------------------------|--|
| Flash EEPROM | 8–128 KB, 2 KB | Timer/PWM | 6 ch. + 2 ch. 16-bit/ 8 ch. 16-bit |
| RAM | 8 KB | 12 V VREG | 12 V/70 mA, 170 mA with external ballast |
| Core | S12Z | EVDD | 1 ch. 5 V/20 mA (source) |
| Speed | 32 MHz | NGPIO | 3 ch. 5 V/25 mA (sink) |
| ADC | 10 ch. 12-bit | SCI/SPI/I ² C | 2/1/1 |
| HVI | 1 | Packages | 32LQFP, 32QFN, 48LQFP |
| LIN Phy | 1 | Op Range | 5.5 V–18 V |
| Amb Temp | Up to 150° C | | |

Part Numbers

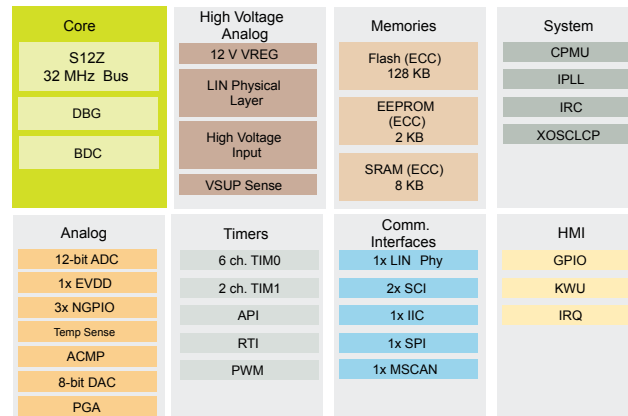
| 32LQFP | 32QFN-EP | 48LQFP |
|-----------------|-----------------|-----------------|
| S912ZVLA12F0MLC | S912ZVLA12F0MFM | S912ZVLA12F0MLF |
| S912ZVLA96F0MLC | S912ZVLA96F0MFM | S912ZVLA96F0MLF |
| S912ZVLA64F0MLC | S912ZVLA64F0MFM | S912ZVLA64F0MLF |
| S9S12ZVL32F0MLC | S9S12ZVLS3F0MFM | S9S12ZVL32F0MLF |
| S9S12ZVL16F0MLC | S9S12ZVLS1F0MFM | S9S12ZVL16F0MLF |
| S9S12ZVL8F0MLC | S9S12ZVLS8F0MFM | S9S12ZVL8F0MLF |
| | | S912ZVLA12F0WLF |
| | | S9S12ZVL32F0WLF |

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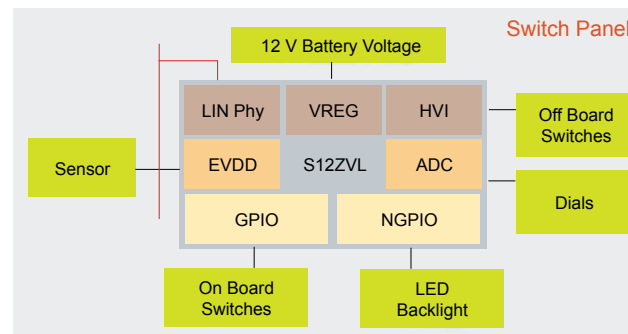
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Block Diagram



Switch Panel



Success Stories

- LIN-based user-interface in Europe and Asia
- LIN-based immobilizer receiver in US
- LIN-based mirror control in Europe
- LIN-based airquality sensor in Europe

Target Applications

- LIN nodes
- LIN switch panel/user interface
- LIN actuators, sensors
- HVAC
- Lighting controls
- Ambient lighting
- Seat positioning
- Ultrasonic sensors

Enablement Tools

Evaluation boards/hardware

- TRK-S12ZVL
- DEVKIT-ZVL128
- DEVKIT-S12ZVL

Reference solutions

- Ultrasonic distance measurement
 - LIN RGB LED
- CodeWarrior, Cosmic
LIN drivers

