S12 MagniV S12ZVL

Smallest Integrated LIN Slave MCU

Features

- Operates from car battery
- Ultra-reliable industrial
- Integrated LIN transceiver
- Fast ADC

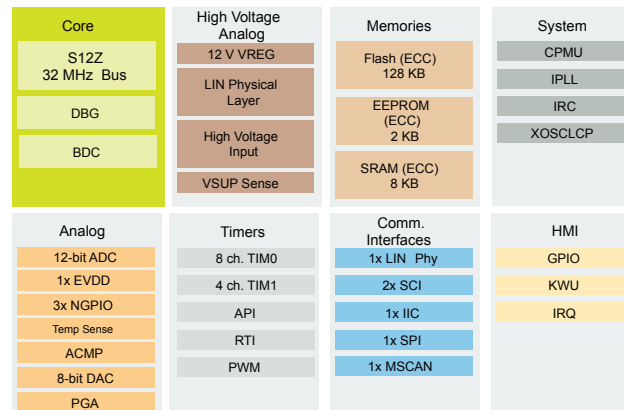## Product One-Sheet

[Get Sample] [Data Sheet] [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	8 ch. + 4 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/I²C	2/1/1
HVI	1	Packages	32LQFP, 32QFN, 48LQFP
LIN Phy	1	Op Range	5.5 V–18 V

Part Numbers

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

Block Diagram

Core
- S12Z 32 MHz Bus
- DBG
- BDC

High Voltage Analog
- 12 V VREG
- LIN Physical Layer
- High Voltage Input
- VSUP Sense

Memories
- Flash (ECC) 128 KB
- EEPROM (ECC) 2 KB
- SRAM (ECC) 8 KB

System
- CPMU
- IPLL
- IRC
- XOSCLCP

Analog
- 12-bit ADC
- 1x EVDD
- 3x NGPIO
- Temp Sense
- ACMP
- 8-bit DAC
- PGA

Timers
- 8 ch. TIM0
- 4 ch. TIM1
- API
- RTI
- PWM

Comm. Interfaces
- 1x LIN Phy
- 2x SCI
- 1x IIC
- 1x SPI
- 1x MSCAN

HMI
- GPIO
- KWU
- IRQ

Switch Panel

Switch Panel
- 12 V Battery Voltage
- Sensor
- LIN Phy, VREG, HVI
- Off Board Switches
- EVDD, S12ZVL, ADC
- Dials
- GPIO, NGPIO
- On Board Switches
- LED Backlight

Product Longevity

SAFE ASSURE by NXP

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
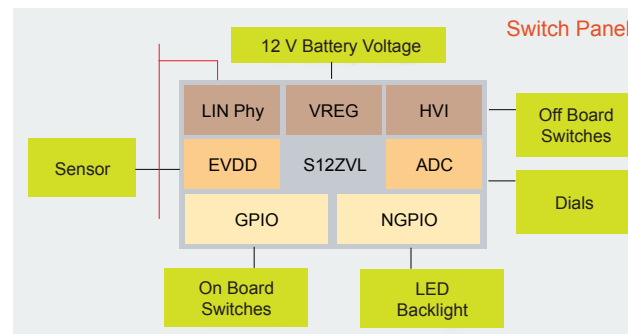- Ambient lighting
- Seat positioning
- Ultrasonic sensors

Enablement Tools

Evaluation boards/hardware
- TRK-S12ZVL
- DEVKIT-ZVL128
- DEVKIT-S12ZVL - Q3-2016

Reference solutions
- Ultrasonic distance measurement
- LIN RGB LED

CodeWarrior, Cosmic
LIN drivers

www.NXP.com/S12ZVL

Document Number: S12ZVLFS REV 3

S12 MagniV Mixed-Signal MCUs S12ZVL Family
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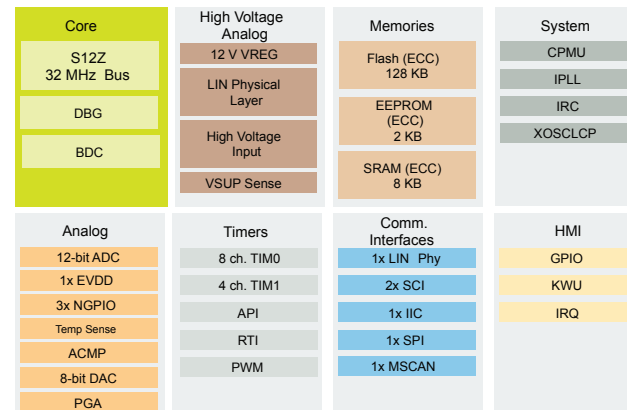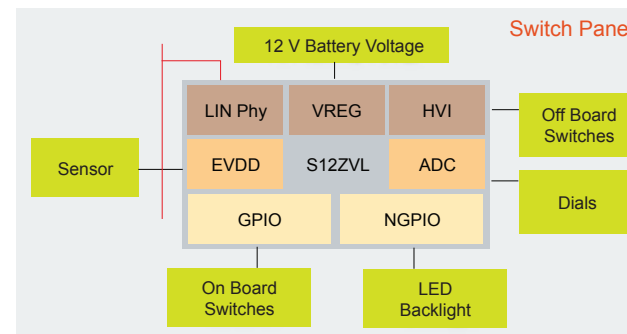| 32LQFP	32QFN-EP	48LQFP
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单击下面可查看定价，库存，交付和生命周期等信息

>>NXP Semiconductors(恩智浦)