

# S12 MagniV® Mixed-Signal MCUs S12VR Family

Integrated Solution for Relay Driver (e.g., Windowlift/Sunroof)

## Features



Relay Driver



V<sub>REG</sub> for 12 V Supply



Integrated LIN Phy



Ultra-Reliable Industrial

Product One-Sheet

Get Sample

Data Sheet

Tools

**System in a package**—Highly integrated part ideal for space-constrained relay driven DC motors on LIN Bus

**Low system cost**—Direct connection with battery, integrated LIN Phy, LS & HS drivers and EVDD reduce system, qualification and manufacturing cost.

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

**Enablement**—Supported by comprehensive hardware and software solution, which reduces development costs and time-to-market

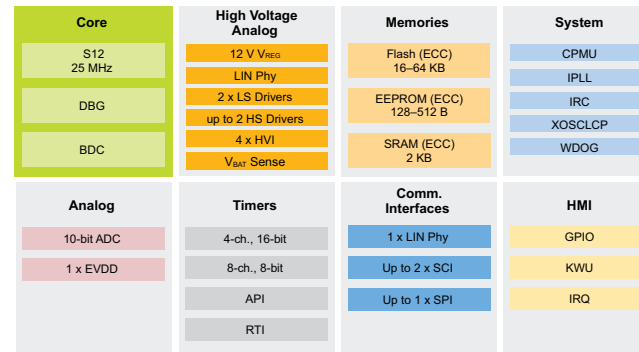
## S12VR Specifications

Flash	16-64 KB	LS/HS Driver	2/up to 2
RAM	2 KB	V <sub>REG</sub>	70 mA at 12 V
EEPROM	128-512 B	EVDD	1-ch. 5 V/20 mA (source)
Core	S12, 25 MHz	SCI/SPI	Up to 2/1
ADC	10-bit, 10-ch.	Packages	32 LQFP, 48 LQFP
HVI	4	Timer/PWM	4-ch., 16-bit/4-ch., 16-bit
LIN Phy	1	Op Range	5.5 V-18 V

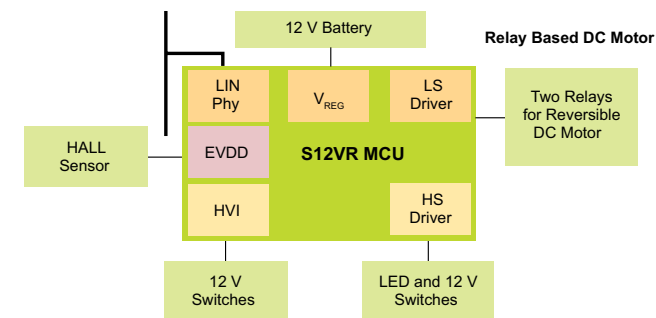
## Part Numbers

Part Number	Temp Range	Package
S9S12VR64AF0MLF	-40 °C to 125 °C	48 LQFP
S9S12VR64AF0MLC	-40 °C to 125 °C	32 LQFP
S9S12VR32F0MLC	-40 °C to 125 °C	32 LQFP

## Product Block Diagram



## Application Example Block Diagram



## Success Stories

- ▶ Anti-pinch window lift and sunroof
- ▶ Power lift gate
- ▶ Seat heating
- ▶ Small LIN node

## Target Applications

- ▶ Anti-pinch window lift
- ▶ Sunroof
- ▶ Automatic doors
- ▶ Power lift gate
- ▶ Seat adjustment
- ▶ Seat heating
- ▶ Small LIN node

## Enablement Tools

- ▶ Evaluation boards/hardware
  - S12VR64EVB
  - S12VR32EVB
  - DEVKIT-S12ZVR64
- ▶ Reference solutions
  - Anti-pinch window lift reference design
- ▶ Compiler/Debugger
  - CodeWarrior® IDE
  - Cosmic IDE
- ▶ LIN stack

[www.NXP.com/S12VR](http://www.NXP.com/S12VR)

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