



# THE DATASHEET OF S912ZVC64F0CLF

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0086-755-83957316

# S12 MagniV S12ZVC

## Smallest Integrated CAN MCU

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

**Low System Cost** – Directly powered by battery. Integrated CAN phy, Vreg, high voltage pins, and op-amps reduce system, test, qualification and manufacturing cost.

**High Reliability** – High immunity to EMI and ESD stresses, CAN HS/LS compliant with +/- 8kV ESD capability.

**Enablement** – Supported by comprehensive hardware and software system (free low-level drivers to enterprise third party tools) reduces development cost and time to market.

### S12ZVC(A) Specifications

|          |              |            |  |
|----------|--------------|------------|--|
| Flash    | 64-192 KB    | 12V VREG   | 12V/70mA, 170mA with ballast           |
| RAM      | 4-12 KB      | EVDD       | 1ch 5V/20mA (source)                   |
| EEPROM   | 1-2 KB       | NGPIO      | 4ch 5V/25mA (sink)                     |
| Core     | S12Z         | ADC        | 10-16ch 10 bit (12 bit)                |
| Speed    | 32 MHz       | DAC        | 8 bit DAC with OpAmp                   |
| Op Range | 5.5 V-18 V   | Comparator | 2# rail to rail                        |
| HVI      | 2            | Timer      | 8ch/16B + 4ch/16B (16ns)               |
| CAN Phy  | 1            | PWM        | 4ch/16B + 4ch/16B (16ns)               |
| Op range | 5.5 V - 18 V | Comms      | 1MSCAN, 2 SCI, 2 SPI, 1 IIC, 1 SENT-Tx |
| Temp     | 150°C Ta     | Packages   | 64-LQFP-EP, 48-LQFP                    |

### Orderable Samples

| Part Number     | Temp Range     | Package    |
|-----------------|----------------|------------|
| S912ZVCA19F0MLF | -40°C to 125°C | 48 LQFP    |
| S912ZVCA19F0MKH | -40°C to 125°C | 64 LQFP-EP |
| S912ZVCA19F0WKH | -40°C to 150°C | 64 LQFP-EP |

### Features

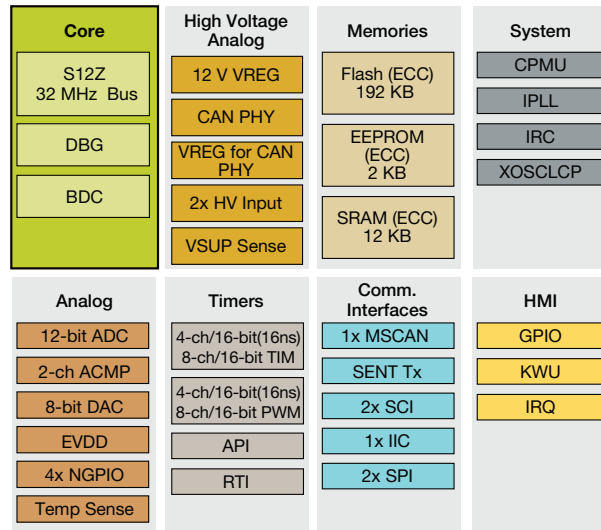
- AEC-Q100 Grade 0 Up to 150°C Ta
- Fast 12 bit ADC, 2 Op Amps, high-res PWM/Timer
- Integrated CAN transceiver
- Ultra-reliable industrial

Get Sample

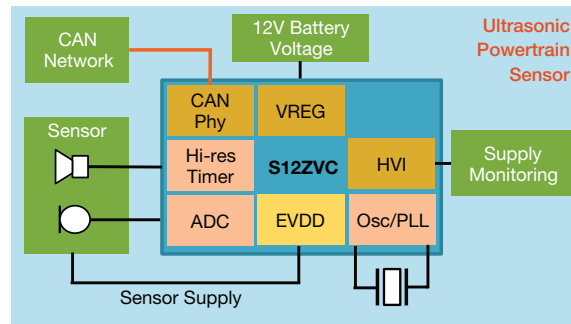
Data Sheet

Tools

### Block Diagram



### Ultrasonic Powertrain Sensor



### Success Stories

- CAN based sensors such as humidity, airmass, NOx, urea sensor
- HVAC Controllers
- Industrial CAN communication
- CAN connected motor control

### Target Applications

- CAN nodes
- CAN switch panel/user interface
- CAN actuators, sensors
- HVAC
- Lighting controls
- Seat positioning
- Seatbelt pretensioner
- Ultrasonic sensors
- Occupant detection
- Powertrain sensors (NOx)

### Enablement Tools

- Evaluation boards/hardware
  - VLG-MC9S12ZVC
- CodeWarrior, Cosmic
- LIN drivers



For more information, visit [freescale.com/S12ZVC](http://freescale.com/S12ZVC)

## Looking for pricing, stock, or lifecycle information?

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