### 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

### 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
- **EEEPROM**: 1–2 KB
- **Core**: S12Z
- **ADC**: 10–16ch 10 bit (12 bit)
- **Speed**: 32 MHz
- **Op Range**: 5.5 V–18 V
- **HVI**: 2
- **CAN phy**: 1
- **Op Range**: 5.5 V – 18 V
- **Temp**: 150°C Ta

### Orderable Samples

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Temp Range</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>S912ZVC19F0MLF</td>
<td>-40°C to 125°C</td>
<td>48 LQFP</td>
</tr>
<tr>
<td>S912ZVC19F0MKH</td>
<td>-40°C to 125°C</td>
<td>64 LQFP-EP</td>
</tr>
<tr>
<td>S912ZVC19F0WKH</td>
<td>-40°C to 150°C</td>
<td>64 LQFP-EP</td>
</tr>
</tbody>
</table>

### 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 pretensionner
- Ultrasonic sensors
- Occupant detection
- Powertrain sensors (NOx)

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

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**For more information, visit** freescale.com/S12ZVC

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