

# DA29020

## Glow Plug Controller

The DA29020 is a 5-channel driver for external high-side switches with integrated charge-pump. It is intended for PWM operation controlled by an external uC.

The SPI interface provides a variety of configuration options to optimize EMC performance.

The built in 10-Bit ADC allows for measurements of channel currents, various interface voltages and the die temperature.

The integrated programmable short-circuit protection, over- and under- voltage detection and overtemperature shut-down protect the chip and the load.

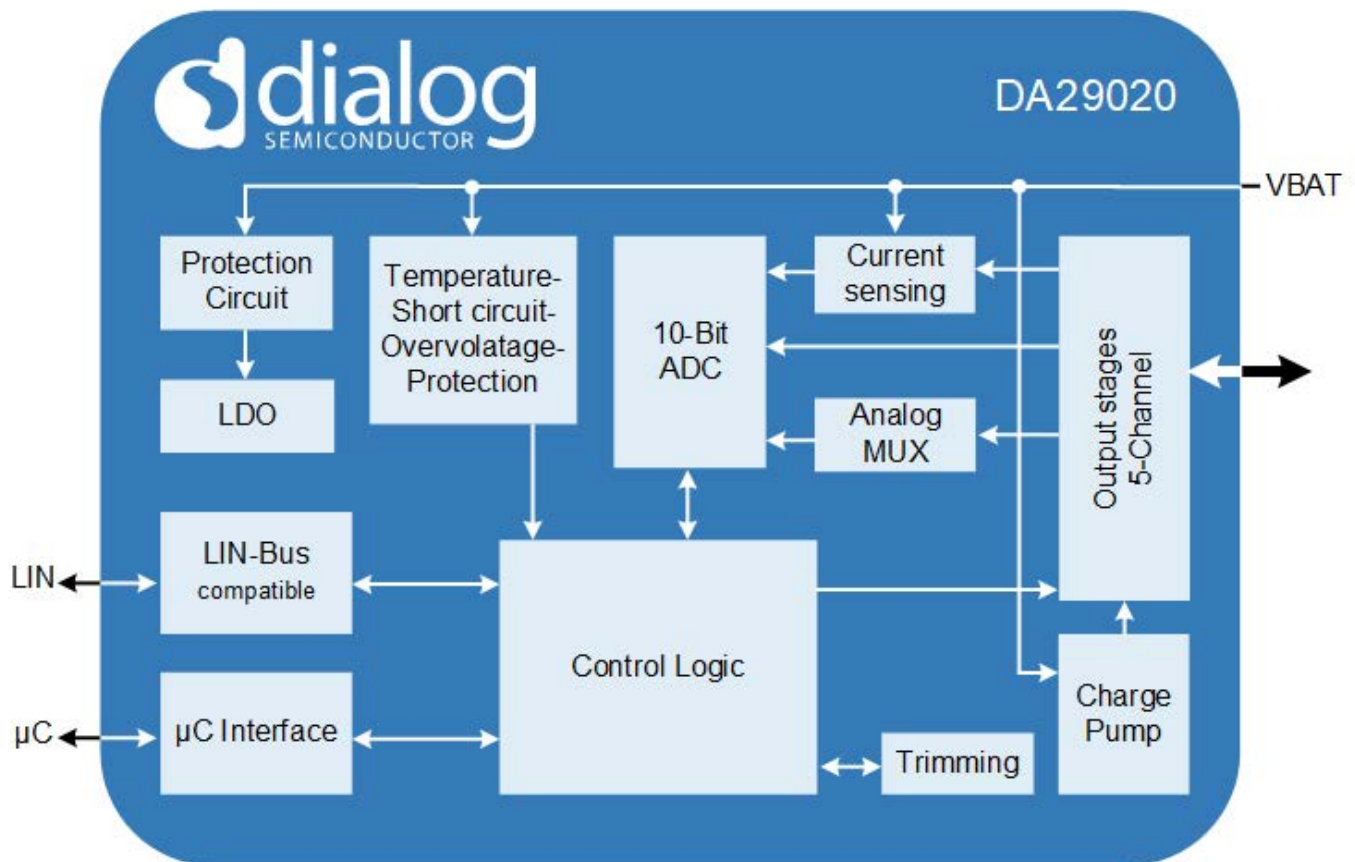
Operation in harsh environments including ground-shift, ground-loss, strong supply-transients, polarity reversal and a wiring-harness with significant inductance is supported.

A programmable high-voltage control-input and a high-voltage diagnosis-output provide connection to the environment.

Low-power sleep mode and different selectable wake-up mechanisms help to reduce the system-level power consumption.

Features	Benefits	Applications
<ul style="list-style-type: none"><li>• Integrated reverse battery protection</li><li>• AEC-Q100 grade 1 qualification</li><li>• 10 Bit-ADC</li><li>• Typ. 14 V supply, 30 V max.</li><li>• Over / under voltage detection</li><li>• Over temperature protection</li><li>• Integrated gate driver with charge pump</li><li>• LDO and SPI interface to external controller</li><li>• Integrated gate driver with charge pump</li><li>• TQFP48 package with exposed pad</li></ul>	<ul style="list-style-type: none"><li>• Diagnosis interface</li><li>• Glow plug current measurement with total accuracy 3.5 %</li><li>• Integrated short circuit protection</li><li>• Digital measurement of Tj</li></ul>	<ul style="list-style-type: none"><li>• Adaptive glow plug control system for diesel engines</li><li>• PTC heater control</li></ul>

## Block Diagram



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