

# 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

- Integrated reverse battery protection
- AEC-Q100 grade 1 qualification
- 10 Bit-ADC
- Typ. 14 V supply, 30 V max.
- Over / under voltage detection
- Over temperature protection
- Integrated gate driver with charge pump
- LDO and SPI interface to external controller
- Integrated gate driver with charge pump
- TQFP48 package with exposed pad

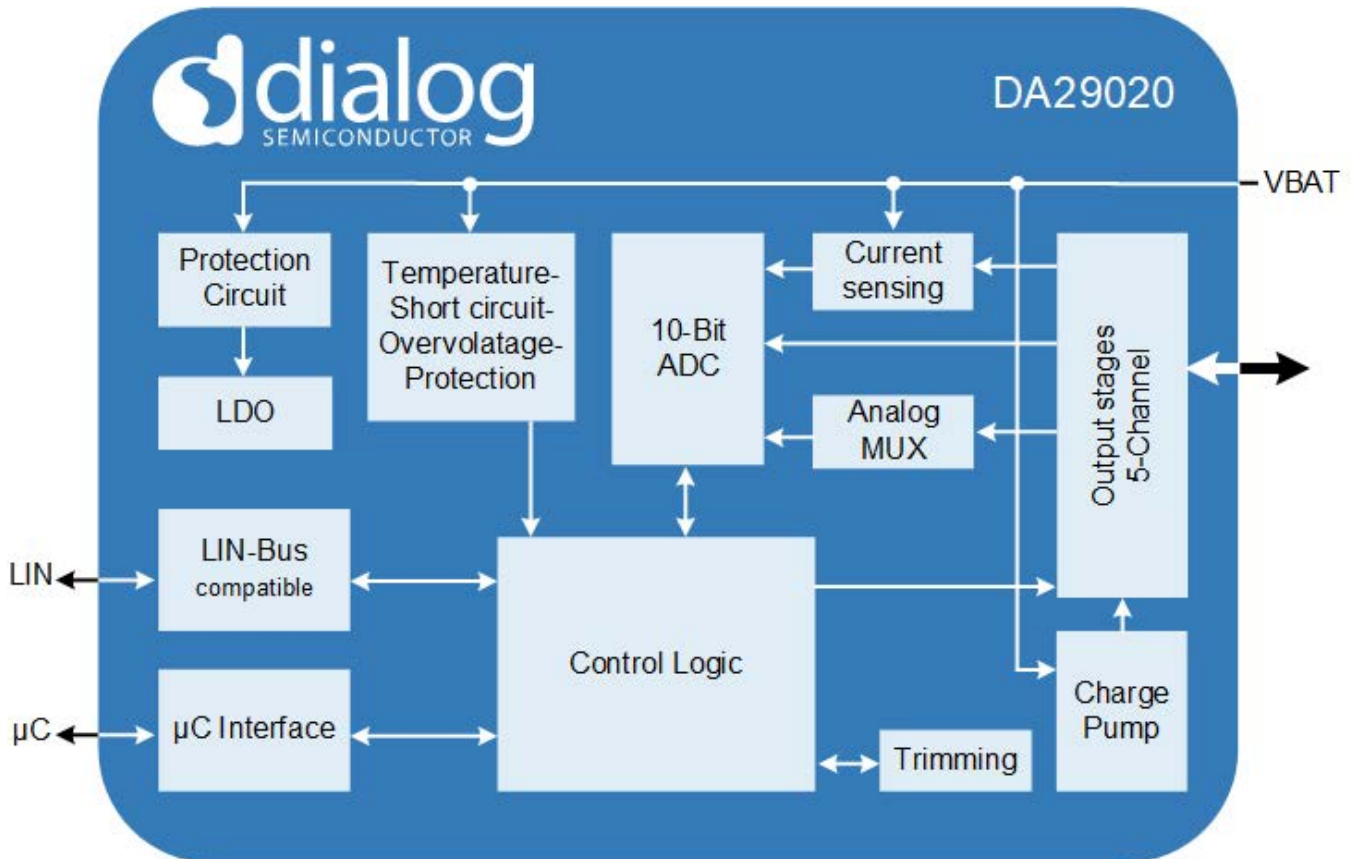
### Benefits

- Diagnosis interface
- Glow plug current measurement with total accuracy 3.5 %
- Integrated short circuit protection
- Digital measurement of T<sub>j</sub>

### Applications

- Adaptive glow plug control system for diesel engines
- PTC heater control

## Block Diagram



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