

# L99H92 H-BRIDGE PRE-DRIVER



Dual half-bridge or single  
H-bridge with EMI optimization



**Flexible gate driver with configurable current sensing, advanced diagnostics and protection features for DC motor control**

Designed to drive four external N-channel MOSFET transistors in a single H-bridge or dual independent half-bridge configuration, the L99H92 provides a flexible solution for DC motor control in automotive applications.

In addition to advanced diagnostics and protection features, two independent current sense amplifiers are available to detect the current in both in-line and low-side parts for developing advanced algorithms for automotive applications including windows, doors, and more.

The L99H92 embeds a watchdog for monitoring the microcontroller status within a configurable time window.

## KEY FEATURE & BENEFITS

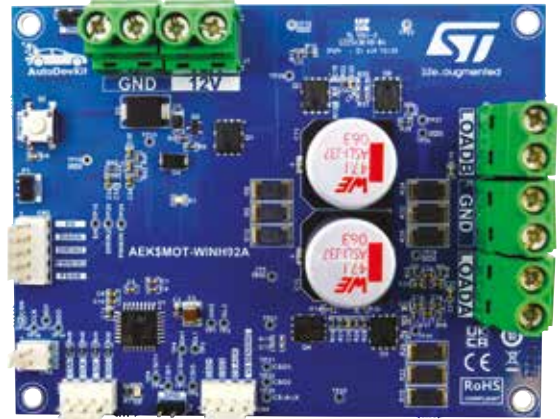
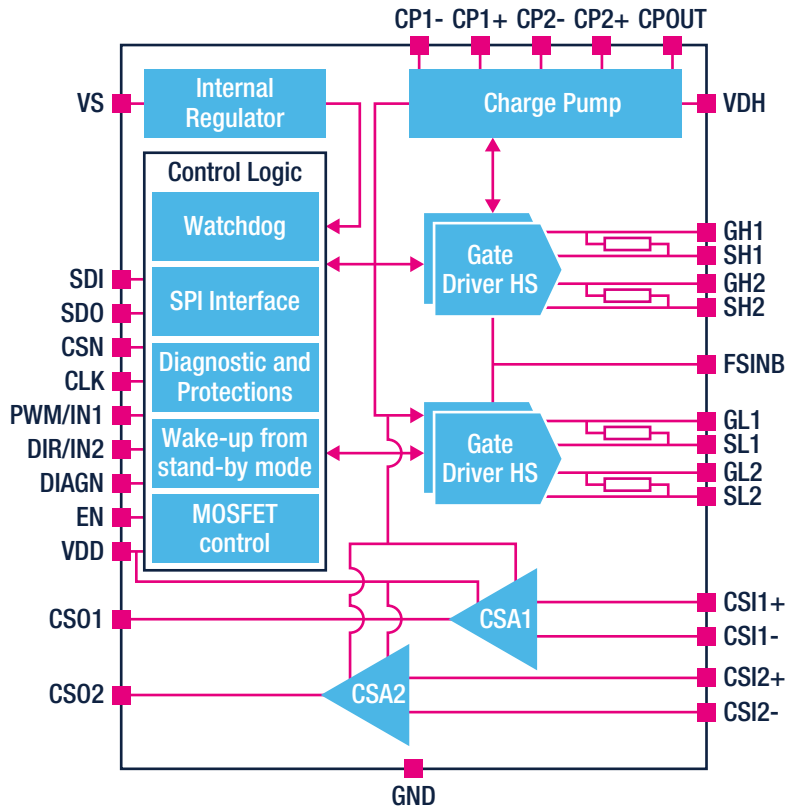
- Power supply operating range up to 28 V
- Two independent and programmable current sense amplifiers
- Diagnostics via SPI
- Dual-stage charge pump
- Programmable gate drive current (up to 170 mA) for output voltage slew rate control
- PWM up to 50 kHz operations
- Fail Safe input pin and DIAGN output pin
- Watchdog for MCU monitoring

## KEY APPLICATIONS

- Sunroof
- Power trunk lift gate/window lift
- Sliding doors
- Seat belt pre-tensioner

The L99H92 is an AEC-Q100 qualified device featuring a flexible gate driver with configurable current sensing, advanced diagnostics and protection features for DC motor control. To help developers reduce design time and costs, a ready-to-use L99H92 evaluation board (AEK-MOT-WINH92) is available. Part of the AutoDevkit ecosystem, it includes useful developer resources on how to configure the L99H92 to drive a full H-bridge configuration or a dual unidirectional half-bridge configuration for driving DC motors with a variable PWM duty cycle signal.

## L99H92 Block Diagram and AEK-MOT-WINH92 board



Ready-to-use L99H92 evaluation board (AEK-MOT-WINH92)

## Product portfolio

Part number	Package	Extended operative input voltage (V)	Charge Pump	Max Quiescent current ( $\mu\text{A}$ )	Features
L99H92QF-TR	TQFP32	4.51 V to 28 V	Dual stage charge pump supporting 100% PWM duty cycle down to 5.41 V battery voltage	5 $\mu\text{A}$	DC motor control enabling dual half-bridge or single H-bridge pre-driver offering improved performance including EMI optimization, current sensing configurability, diagnostics and protection
L99H92Q5-TR	QFN-32L Wettable flank				



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