

## EVAL-L9301 Demo board

Data brief



### Features

- Operating battery supply voltage: 5V - 18V
- Operating V<sub>dd</sub> supply voltage: 4.75V - 5.25V
- Logic inputs TTL compatible
- SPI interface for outputs control and for diagnosis data communication
- Power MOS:
- 8 Low side On-off driver
- 4 High side + 4 Low side on-off driver
- 4 configurable output configurations
- Access to all relevant pins by test points and jumper.
- Input signal connector compatible with SPC560P-DISP discovery board
- Possibility to connect a generic microcontroller boards by using a simple adapter.
- ISO PULSE circuit protection
- Reset button or Reset uC

### Description

The EVAL-L9301 is an Evaluation Board designed to evaluate L9301, a smart power device mainly for ABS valves applications.

L9301 is able to drive electronic on-off valves with or without external freewheeling diode.

The OUT1-8 can be driven by parallel input in PWM mode or SPI command. Through the SPI it is possible to configure the device parameters like configuration, Slew-rate, Overcurrent threshold, to send the drivers EVAL-L9301 commands and to read back the diagnosis results.

The device is protected against over temperature, open load, short to GND and short to V<sub>battery</sub> condition. The overcurrent diagnostics can be set in latched or unlatched mode for each channel.

This kit includes L9301 Demo Board; Firmware for SPC560P-DISP; Graphical User Interface developed in LabView environment Documentation, Demo board and GUI user manual.

**Table 1. Device summary**

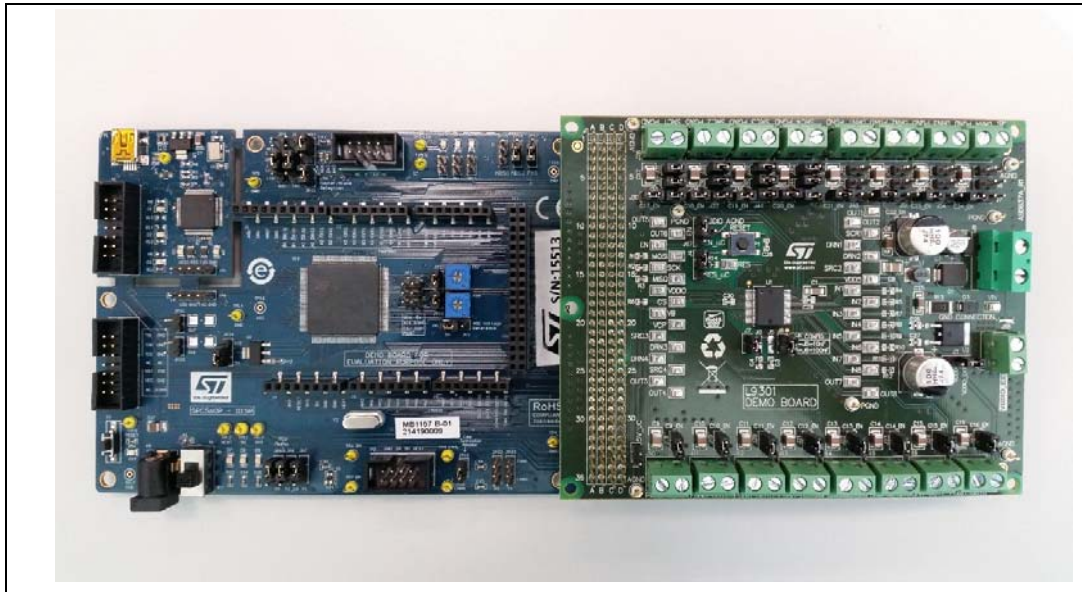
Order code	Reference
EVAL-L9301	EVAL-L9301 Evaluation board

# 1 EVAL-L9301 overview

## 1.1 Evaluation kit contents

The EVAL-L9301 board can be directly connected to the SPC560P-DISP uC discovery board (see [Figure 1](#)). SPC560P-DISP is not included into the kit.

Figure 1. SPC560P-DISP+L9301 Demo board



## 1.2 System requirements

- Power Supply: 5 V ÷ 18 V; max 8A
- SPC560P-DISP Discovery
- Windows PC

## 1.3 Loads

- Electronic valves for ABS applications (inductuance=1,14mH, resistance=4,6  $\Omega$ )
- Freewheeling diodes (if required)

## 1.4 Development toolchain

- LabView and UDE VISUAL PLATFORM
- Mini USB - B

## 1.5 Promotional software

- out.elf: firmware for SPC560P-DISP uC.
- L9301 - *PICTUS.exe*: Graphical User Interface to configure the device for diagnosis feedback.

## 2 Revision history

Table 2. Document revision history

Date	Revision	Changes
26-Jul-2016	1	Initial release.

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