



### Description

The EVAL-L9779WD-SPI is an Evaluation Board designed to evaluate L9779WD-SPI, a smart power device designed by STMicroelectronics in advanced BCD6s technology.

L9779WD-SPI is able to drive all the relevant loads used in powertrain applications (Injectors, Ignitions, Relay, etc.), to interface with Variable Reluctance Sensors and Hall sensors, to monitor diagnostic functionalities and to interact with the main networks present in powertrain environment (CAN, K-Line).

All channels are protected against short circuit and over-temperature condition.

The board can be connected to the SPC56M-Discovery, the Discovery+ board developed for the SPC563M64L.

### Features

- Voltage min/max: 4.15V to 28V.
- No. channels:
  - 4 injector driver
  - 1 canister valve driver
  - 2 Lambda sensor heater
  - 1 Main relay driver
  - 6 relay driver
  - 1 LED driver
  - 4 Ignition driver
- A programmable power stage configurable as double H-bridge to drive a stepper motor driver, or as independent 4 High side and 4 Low side drivers.
- Device registers setting and the full diagnostic are available through SPI.
- Communication protocols: SPI, CAN, (both with dedicated connectors), Kline.
- Access to all relevant pins by test points. Input signal connector compatible with the SPC56M-Discovery
- Possibility to connect a generic microcontroller boards by using a simple adapter.
- Package: HIQUAD-64.

**Table 1. Device summary**

Order codes	Reference
EVAL-L9779WD-SPI	EVAL-L9779WD-SPI Evaluation board

# 1 System requirements

- Power Supply: 4 V ÷ 40 V; up to 30 A
- SPC56 discovery board or microcontroller board able to offer:
  - a) SPI signals
  - b) 13 GPIO in order to drive injector ,ignition and to monitor device status pin.
  - c) 1 PWM signal to control the stepper motor driver
  - d) +5 V or 3,3 V ( $V_{CC}$ )

## 1.1 Development toolchain

- Labview and UDE VISUAL PLATFORM

## 1.2 Demonstration software

Software is available for demonstration purpose. For more information and download, please refer to ST web.

## 2 Revision history

**Table 2. Document revision history**

<b>Date</b>	<b>Revision</b>	<b>Changes</b>
16-Dec-2015	1	Initial release.
08-Mar-2016	2	Aligned RPN with EVAL-L9779WD-SPI.
14-Mar-2018	3	Updated board and replaced text SPC563M-DISP in SPC56M-Discovery

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