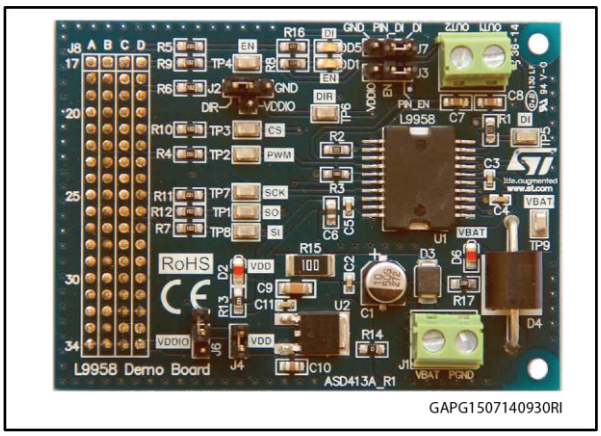
EVAL-L9958

L9958 Evaluation board for high current (8.6A) DC and Stepper Motors

Data brief



Features

- Wide supply voltage range (VBatt): 4 V ÷ 28 V
- Current regulation threshold set by SPI: 4 levels from 2.5 A to 8.6 A (Typ.)
- Device controlled and programmed via SPI Diagnostic functions accessible via SPI:
  - short circuit to battery
  - short circuit to ground
  - short circuit overload
  - over temperature
  - open load
- On board 5V, 1.5A Voltage regulator
- 2 LEDs for monitoring VBatt and EN signal
- Input signal connector compatible with the SPC5 Discovery+ boards
- Possibility to connect the board to microcontroller boards by a simple adaptor or by wires
- Test points to monitoring both input signals (SPI, PWM, EN) and outputs
- Possibility to hardware setup EN, DI and DIR by jumpers
- No heat-sink is required

Description

The EVAL-L9958 is the simplest solution to evaluate L9958 functionalities providing all the inputs and outputs capabilities necessary to drive DC or Stepper motors and monitor diagnostic functions.

L9958 is fully integrated motor driver for DC and stepper motors used in safety critical applications and under extreme environmental conditions . It can operate from 4 Vmin to 28 Vmax delivering to the load up to 8.6A. The current regulation threshold can be set by SPI from 2.5A to 8.6A (Typ.) in 4 steps.Detailed failure diagnostics on each channel is provided via SPI: short circuit to battery, short circuit to ground, short circuit overload, over temperature. Open-load can be detected in ON condition, for the widest application ranges. The EVAL-L9958 board is suitable for both beginners and expert users working in standalone mode connected with any control system or combined with all SPC5 Discovery+ boards though a computer graphic interface or though embedded application examples.The board is compatible with both 5 V and 3.3 V control systems

Table 1: Device summary

Order codes	Reference
EVAL-L9958	**EVAL-L9958** Evaluation board

For further information contact your local STMicroelectronics sales office

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1 System requirements, HW and SW resources

1.1 Development tool chain

- Graphic User Interface: Labview
- Software development environment (in connection with SPC5 MCUs) : SPC5Studio
- Hardware set-up
  - Board stand alone *Figure 1: "EVAL-L9958 Evaluation Board"*
  - PC Graphic User Interface -SPC560P-DISP (dedicated Firmware) - EVAL-L9958 *Figure 2: "SPC560P-DISP (dedicated Firmware) - EVAL-L9958"*
  - Any SPC56 Discovery + Application Examples (within SPC5 Studio) + EVAL-L9958 *Figure 3: "SPC56 Discovery + Application Examples (within SPC5 Studio) + EVAL-L9958"*

Figure 1: EVAL-L9958 Evaluation Board

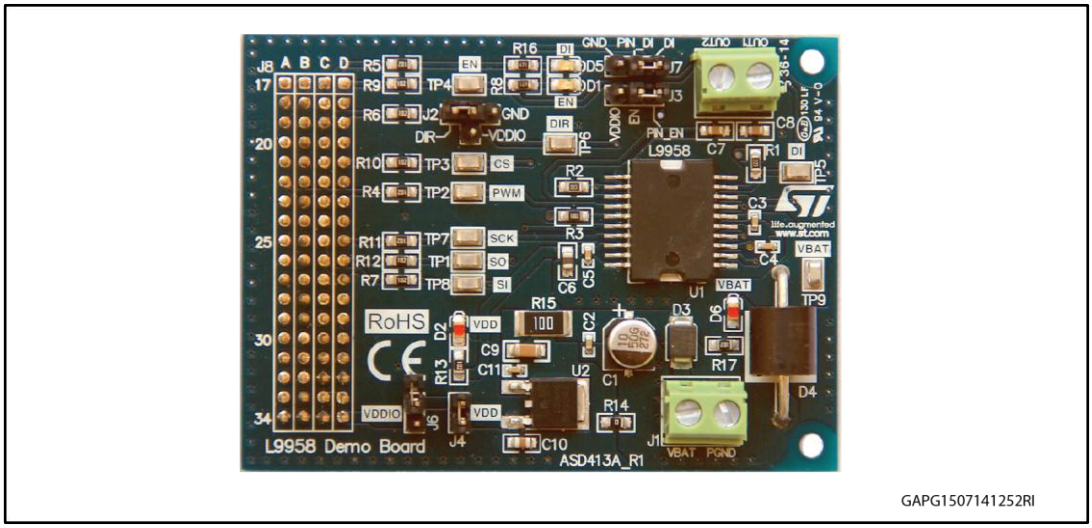


Figure 2: SPC560P-DISP (dedicated Firmware) - EVAL-L9958

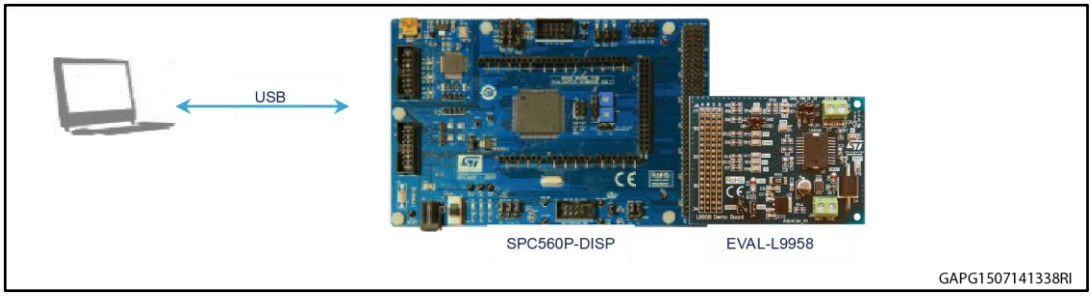
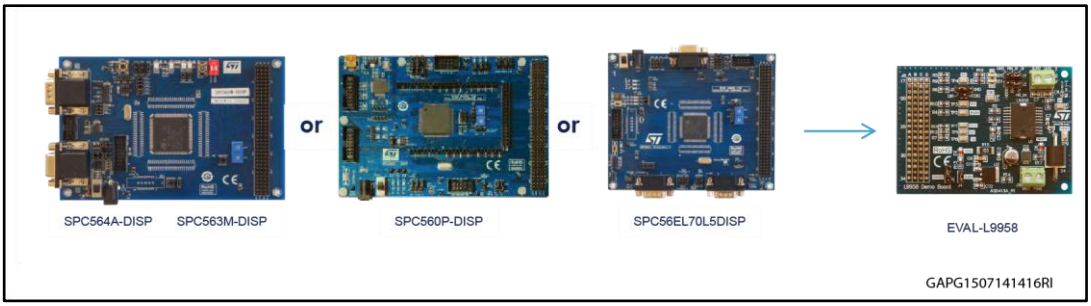


Figure 3: SPC56 Discovery + Application Examples (within SPC5 Studio) + EVAL-L9958



1.2 Evaluation software

Demonstration software is available on ST web site for free download.

2 Revision history

Table 2: Revision history

Date	Revision	Changes
01-Aug-2014	1	Initial release.
07-Jan-2015	2	Updated figure in the cover page and figures in all documents..

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