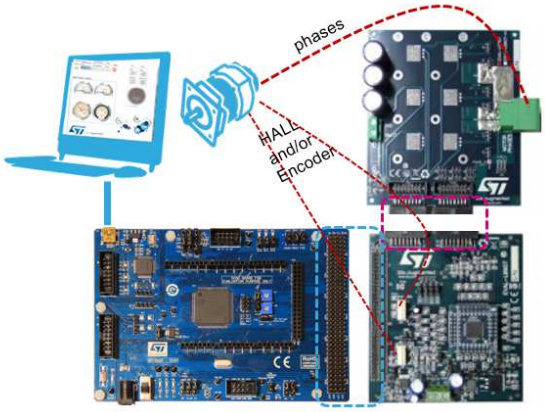
SPC5-MCTK-01
Databrief

SPC5 Motor Control Tool Kit for SPC560P and L9907



Features

- SPC5 BLDC/PMSM FOC library
- Single motor vector control (FOC).
- Current reading topologies supported:
  2 shunt current sensing (on motor phases and inverter legs)
- Speed/position sensors (Encoder, Hall) and sensor-less operation (State observer) are supported.
- Speed and Torque control
- Motor control algorithms implemented for specific needs: Max Torque Per Ampere, Flux Weakening and Feed Forward
- Firmware ANSI C, MISRA check compliancy.
- SPC560P microcontrollers supported: P-Line
- L9907 FET driver support
- SPC5 Motor Control Live Monitor (LM) to Real-time live monitoring the SPC5 Library Control Variables
- Motor Control library fully integrated into the SPC5Studio software development environment with graphic configuration
- Compliancy with FreeGCC, Hightec and Green Hills compiler

Description

SPC5-MCTK-01 is the SPC5 Motor Control Tool Kit for SPC560P and L9907 FET driver. It includes HW plus SW kit to develop Automotive application for BLDC motor control. The HW is made of SPC560P-DISP MCU Discovery board and EVAL-L9907 board with L9907 and inverter.

The SW part is made of the SPC5-MCTK-LIB PMSM/BLDC FOC FW library, a SPC5Studio configurator plugin and SPC5 MC Live Monitor. SPC5-MCTK-01 enables user to evaluate the SPC56 MCU performance in applications driving single or dual Field Oriented Control of 3-phase Permanent Magnet motors (PMSM,BLDC).

SPC5Studio Motor Control Configurator plugin and SPC5 Live Monitor reduce the design effort and time in the SPC5 PMSM FOC firmware library configuration. The users, through a graphical user interface (SPC5Studio), can generates all parameter which configure the library according to the application needs. Moreover, using real time monitor (SPC5-MCTK-LM) user can visualize speed and power on a running motor as well as change directly firmware settings like amplification gain or reference speed.

ORDER CODE	REFERENCE
SPC5-MCTK-01	**Evaluation Kit integrating SPC560P-DISP EVAL-L9907 SPC5-MCTK-LIB**

Document revision history

Date	Revision	Changes
7-Dec-2016	1.0	Initial Version
27-Feb-2017	1.1	Specified 2-shunt topology
21-Mar-2017	1.2	Added MTPA, FW and FF
03-July-2017	1.3	Alignment to new Template