Features

- Single/Dual simultaneous vector control (FOC).
- Current reading topologies supported:
  - 1 shunt resistor,
  - 3 shunt resistors,
  - 2 ICS (isolated current sensor)
- Speed/position sensors (Encoder and Halls) as well as sensorless operation (State of observer, High frequency Injection HFI) are supported.
- Speed control, torque control, power control.
- Full customization and real time communication through PC software ST MC Workbench.
- Motor control algorithms implemented for specific applications like Maximum Torque Per Ampere (MTPA), Flux Weakening and more.
- Firmware ANSI C, MISRA compliant.

Description

ST’s STM32 offers the performance of the industry-standard Cortex®-M core at the service of vector (or field-oriented) control (FOC) algorithms, widely used in high-performance drives. The STM32 PMSM FOC SDK (STSW-STM32100), which includes the PMSM FOC FW library and ST MC Workbench, allows the user to evaluate the STM32 performance in applications driving single or dual Field Oriented Control of 3-phase Permanent Magnet motors (PMSM, BLDC).
1 Ordering Information

The STM32 PMSM FOC SDK is available for free download from STMicroelectronics.

2 Revision history

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-Feb-2014</td>
<td>1</td>
<td>Initial release.</td>
</tr>
<tr>
<td>22-May-2014</td>
<td>2</td>
<td>STM32 PMSM FOC SDK becomes a software package and includes the PMSM FOC FW library and ST MC Workbench.</td>
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