Release Notes
STM32F103xx / STM32F100xx
PMSM single/dual FOC SDK v3.0

These "Release Notes" provide important information about the motor control firmware library package "STM32F103xx / STM32F100xx PMSM single/dual FOC SDK v3.0".

These "Release Notes" are updated periodically in order to keep you abreast of evolutions of the software and any problems or limitations found.

Migration from v2.0

Migration from MC Library v2.0 can be done through the PC application “ST MC Workbench”: drive parameters should be copied from “FOCGUI” saved configurations into corresponding entries in “ST MC Workbench” pages.

Known limitations in v3.0

ENCODER speed sensor functionality: one Input Capture pin of the selected timer must be grounded, according to remapping in use and this rationale: IC4 in case of TIM2, IC4 in case of TIM3, IC3 in case of TIM4, IC4 in case of TIM5.

MCTuningClass: method PWMC_ExecRegularConv could return incorrect readings; on the other hand, if regular conversions are needed, this can be performed by calling the abovementioned method from inside the MC Application (in particular, appending the call at the end of function TSK_SafetyTask() in MC_tasks.c);

MCTuningClass: method PWMC_ADC_SetSamplingTime, it’s recommended to set the sampling time below 28.5 cycles;

STO_SpeednPosFdbkClass: initialization structure parameter “hMinReliableMecSpeed01Hz” should be always set to 0 (related field in ST MC Workbench, Drive Management)

STO_CORDIC_SpeednPosFdbkClass: initialization structure parameter “hMinReliableMecSpeed01Hz” should be always set to 0 (related field in ST MC Workbench, Drive Management).

Other information

A PC graphical application named “ST MC Workbench”, which - starting from system parameters – automatically generates the library configuration files, is available from the ST Internet website at www.st.com