STEVAL-IHM001V1

BLDC & AC Motor Control Control Board

Data Brief

Features

- Quick to set up, to install and easy to run
- Easy to configure thanks to dedicated Graphic User Interface (RDK-GUI)
- Firmware libraries available for easy customization (RDK-Libraries)
- Design is re-usable (the ORCAD source files are available for free)
- Several kinds of applications with six-step commutation or 6-signal PWM (sine wave-modulated) outputs, including: 3 Phase AC Induction motor control, 3 Phase BLDC/AC PM motor control (6-step sensorless), 3 Phase BLAC PM motor control (sinusoidal driven, with Hall sensors)
- Optimized layout to provide very low level of interference between the Power and the Signal noise
- Modular approach with three different power board module (300W, 1kW, 3kW)

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Applications

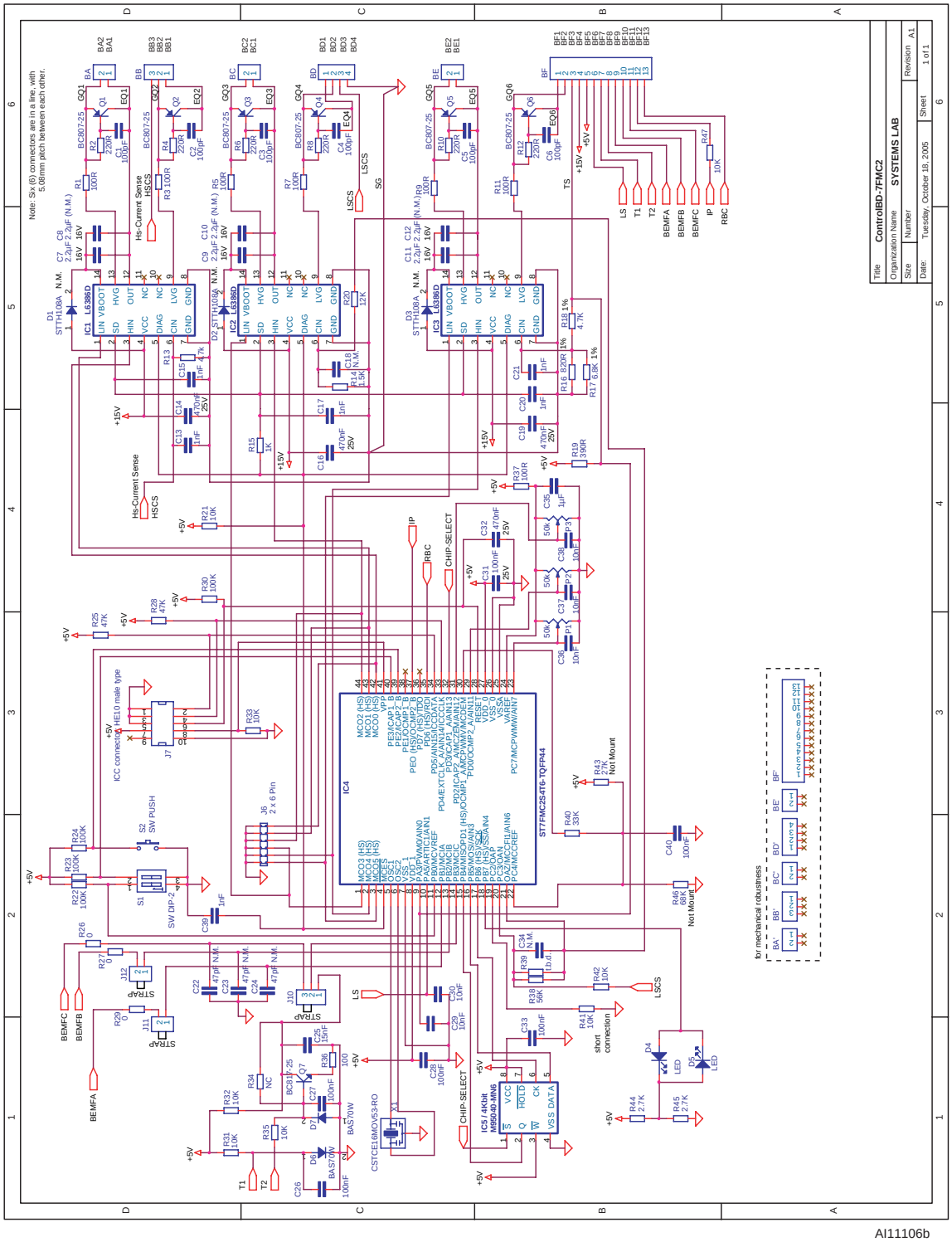
The general hardware architecture of the reference design kit is based on an Inverter topology suitable to efficiently drive three types of motors: "3 Phase BLDC/AC Permanent Magnet in (six-step mode)" , "3 Phase AC Induction" and "3 Phase BLAC PM motor (sinusoidal driven)" plus a plug-in control board, based on ST7FMC MCU.

The ST7FMC microcontroller is designed specifically for motor control applications and offers significant advantages compared to other microprocessor based approaches such as DSPs

The control board is compatible with all the three power boards of the reference design kit system.

1 Board Schematic

Figure 1. Scheme



2 Revision history

Date	Revision	Changes
29-Nov-2005	1	Initial release.