

X-NUCLEO-IHM09M1

Motor control connector expansion board for STM32 Nucleo

Data brief



Features

- ST motor control connector (34 pins) compatible with major ST motor control power boards
- STM32 Nucleo support, thanks to ST morpho connectors
- Compatible with six-step and FOC motor control firmware library by ST
- Debug connector for DAC, GPIOs, etc.
- Fully populated board conception with test points
- LED for fault signaling or status indication
- Potentiometer available (i.e. for speed reference)
- RoHS compliant

Description

The X-NUCLEO-IHM09M1 is a motor control connector expansion board for STM32 Nucleo. It provides an easy way to evaluate motor control solutions for three-phase motors by adapting the STM32 Nucleo board with an external ST motor control power board, thanks to ST morpho and motor control connector. The 34-pin motor control connector is compatible with all major ST motor control power boards, requiring an external digital section (MCU) to drive a three-phase motor. The DAC connector supports user code development and testing with easy access to the MCU peripherals. An LED is available for fault condition signaling or status indication.

Schematic diagram X-NUCLEO-IHM09M1

1 Schematic diagram

Figure 1: X-NUCLEO-IHM09M1 schematic: PWM

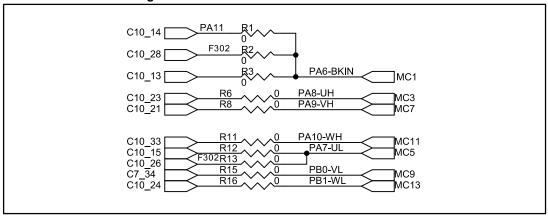


Figure 2: X-NUCLEO-IHM09M1 schematic: Hall/encoder sensor

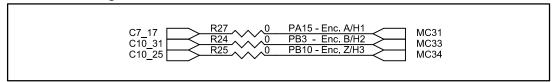


Figure 3: X-NUCLEO-IHM09M1 schematic: currents

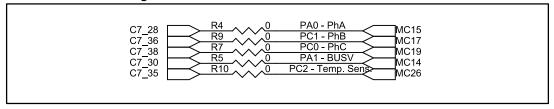
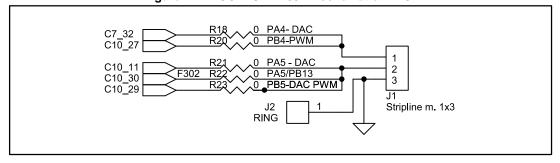


Figure 4: X-NUCLEO-IHM09M1 schematic: DAC



2/6 DocID028547 Rev 1

X-NUCLEO-IHM09M1 Schematic diagram

Figure 5: X-NUCLEO-IHM09M1 schematic: user interface

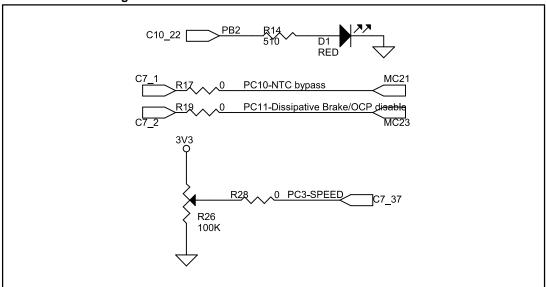


Figure 6: X-NUCLEO-IHM09M1 schematic: motor control connector

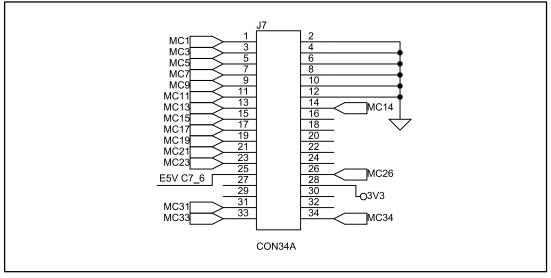
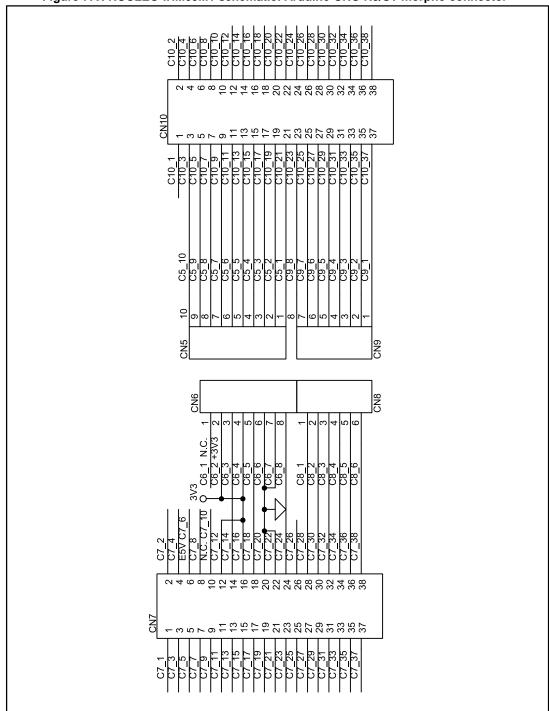


Figure 7: X-NUCLEO-IHM09M1 schematic: Arduino UNO R3/ST morpho connector



X-NUCLEO-IHM09M1 Revision history

2 Revision history

Table 1: Document revision history

Date	Version	Changes
23-Oct-2015	1	Initial release.

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