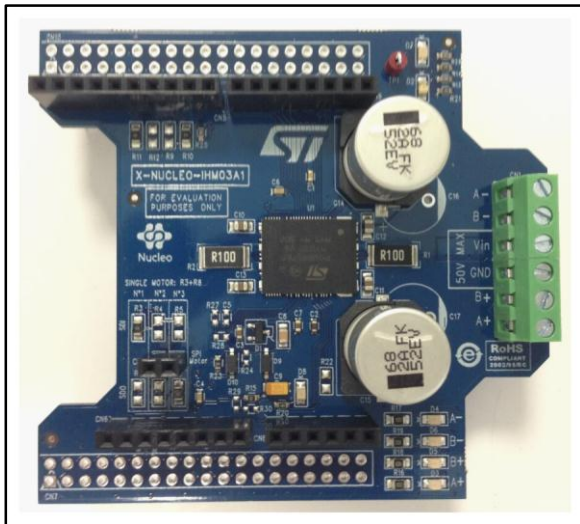


High power stepper motor driver expansion board based on powerSTEP01 for STM32 Nucleo

Data brief



Description

The X-NUCLEO-IHM03A1 is an high power stepper motor driver expansion board based on powerSTEP01. It provides an affordable and easy-to-use solution for driving high power bipolar stepper motors in your STM32 Nucleo project. The fully digital motion control through speed profile generation, adding positioning calculations and a complete set of protection features, offers high levels of performance and robustness. The X-NUCLEO-IHM03A1 is compatible with the Arduino UNO R3 connector, and supports the addition of other boards which can be stacked to drive up to three stepper motors with a single STM32 Nucleo board.

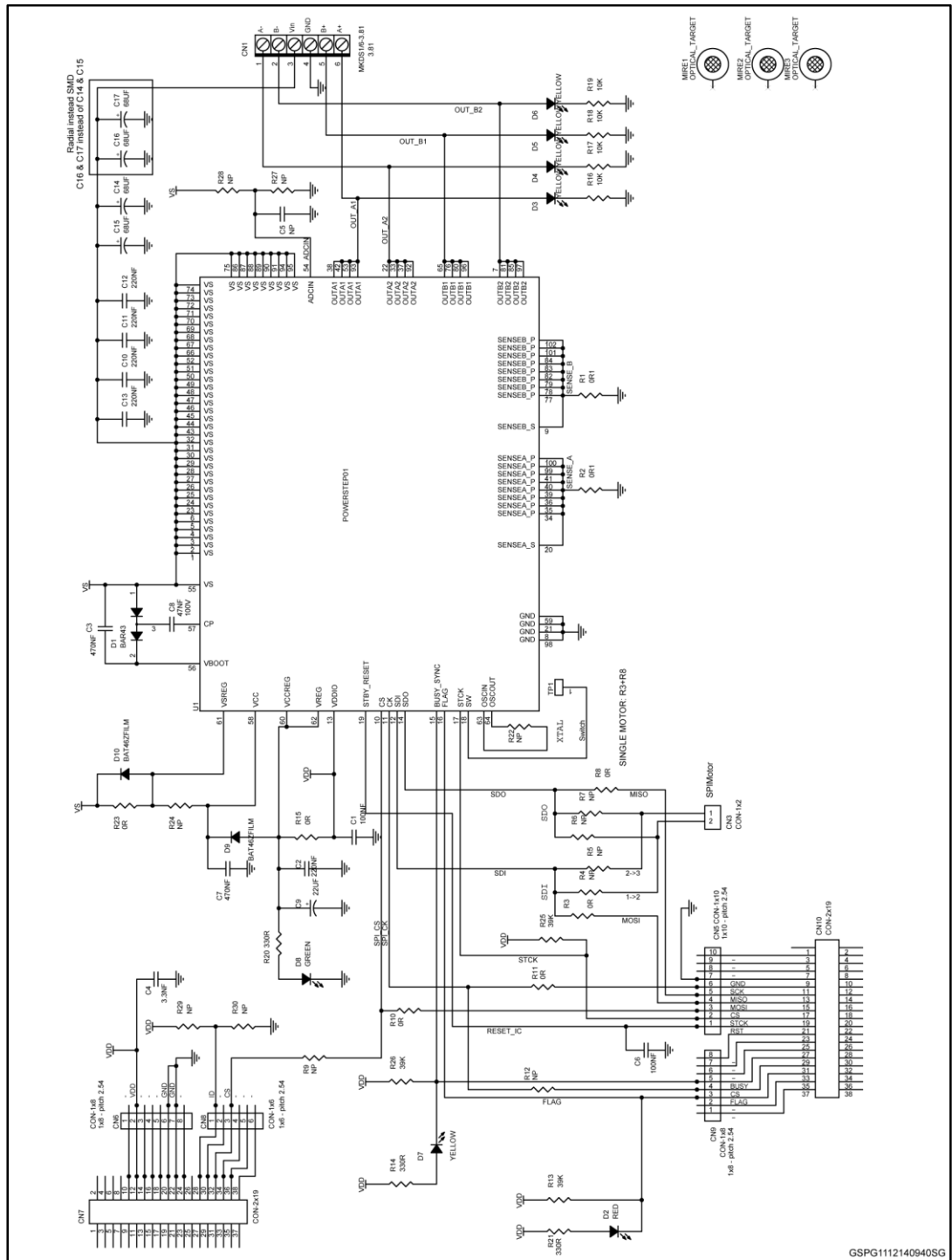
Features

- Power system-in-package, integrated dual full-bridge with low RDS(on)
- Voltage range from 10.5 V to 85 V
- Phase current up to 10 A rms
- Power OK and fault LEDs
- Up to 1/128 micro-stepping
- Programmable speed profile and overcurrent protection
- Sensorless stall detection
- Adjustable output slew rate
- Overtemperature protection
- Compatible with Arduino UNO R3 connector
- Compatible with STM32 Nucleo boards
- Suitable for multi-motor solution
- RoHS compliant



1 Schematic diagram

Figure 1: X-NUCLEO-IHM03A1 circuit schematic



GSPG1112140940SG

2 Revision history

Table 1: Document revision history

| Date | Rev | Changes |
|-------------|-----|---|
| 15-Dec-2014 | 1 | First release. |
| 08-Jun-2015 | 2 | Updated: title and board photo on the cover page. |

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