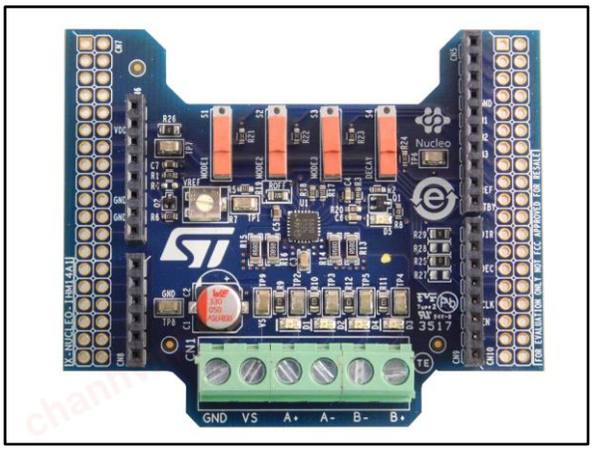
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X-NUCLEO-IHM14A1

Stepper motor driver expansion board based on STSPIN820 for STM32 Nucleo

Data brief



Features

- Operating voltage: 7 to 45 V
- Output current up to 1.5 A_{rms}
- Fine tuning microstepping up to the 256th step
- Current control with adjustable OFF time
- Full protection set:
  - Overcurrent protection
  - Short-circuit protection
  - Under voltage lock out
  - Thermal shutdown
- Compatible with Arduino UNO R3 connector
- Compatible with STM32 Nucleo boards
- RoHS compliant

Applications

- 3D printers
- Medical equipment
- Industrial 2D printers
- Textile and sewing machines
- CCTV, security and dome cameras
- ATM and cash handling machines
- Office and home automation
- POS
- Robotics

Description

The X-NUCLEO-IHM14A1 motor driver expansion board is based on the STSPIN820 monolithic driver for stepper motors.

It represents an affordable, easy-to-use solution for driving stepper motors in your STM32 Nucleo project, implementing motor driving applications such as 2D/3D printers, robotics and security cameras.

The STSPIN820 implements a PWM current control with constant OFF time adjustable via an external resistor and a microstepping resolution up to the 256th step.

The X-NUCLEO-IHM14A1 expansion board is compatible with the Arduino UNO R3 connector and the ST morpho connector, so it can be plugged to the STM32 Nucleo development board and stacked with additional X-NUCLEO expansion boards.

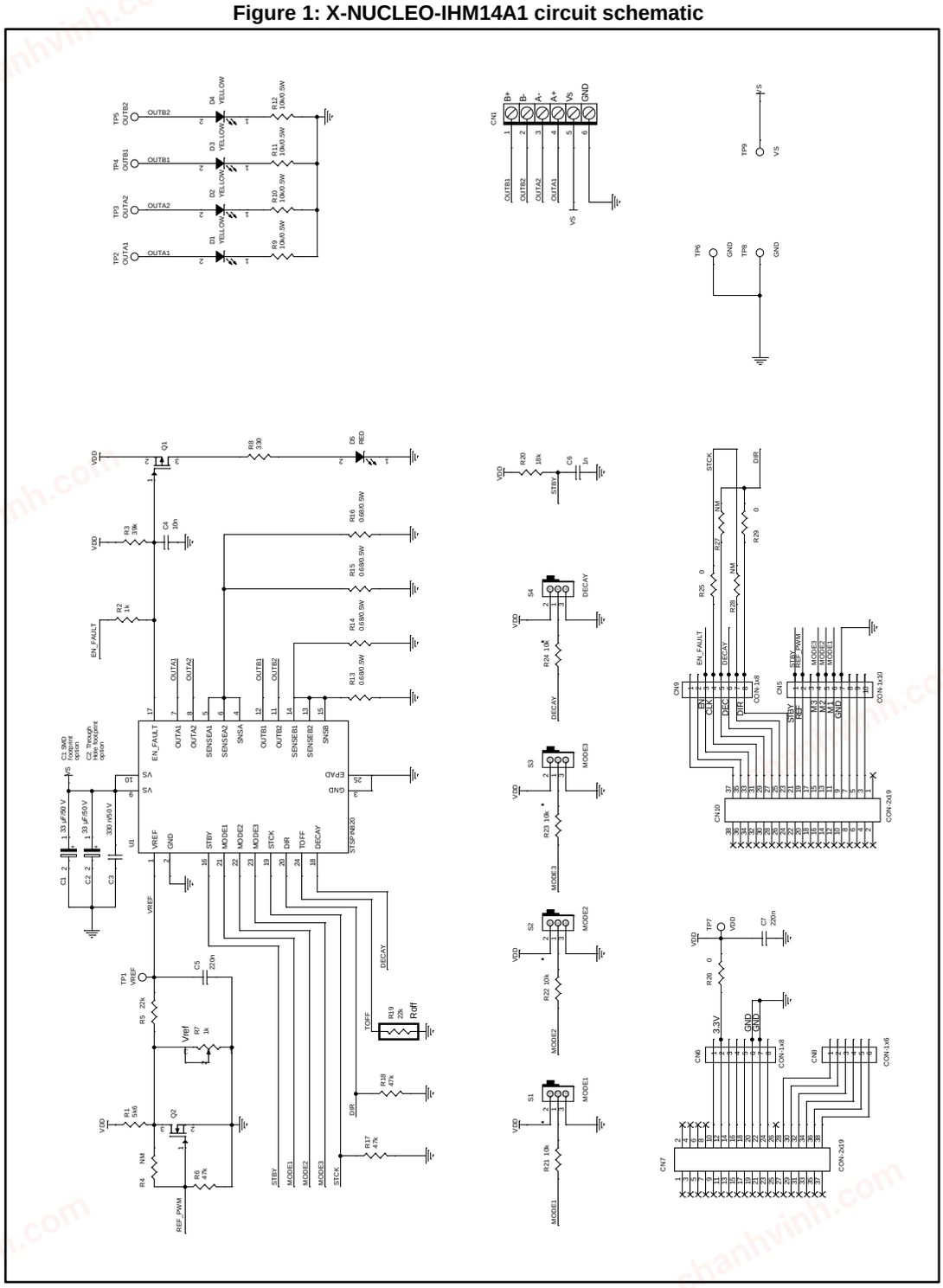
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Schematic diagram

Figure 1: X-NUCLEO-IHM14A1 circuit schematic



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Revision history

Table 1: Document revision history

Date	Version	Changes
17-Oct-2017	1	Initial release.

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