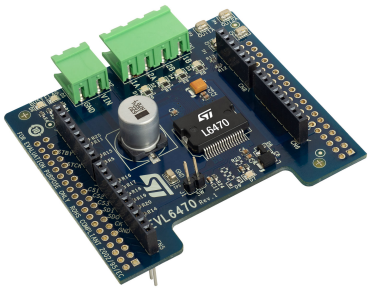
EVL6470

Data brief

Stepper motor driver evaluation board based on the L6470 device



Product status link
EVL6470

Features

- Voltage range from 8 V to 45 V
- Phase current up to 3 $A_{r.m.s}$
- Power OK and fault LEDs
- Voltage mode driving
- Fully protected power stage
- Microstepping resolution up to 1/128
- Compatible with Arduino® UNO R3 connector
- Suitable for multi-motor solutions
- RoHS compliant

Description

The EVL6470 is a stepper motor driver evaluation board based on the L6470.

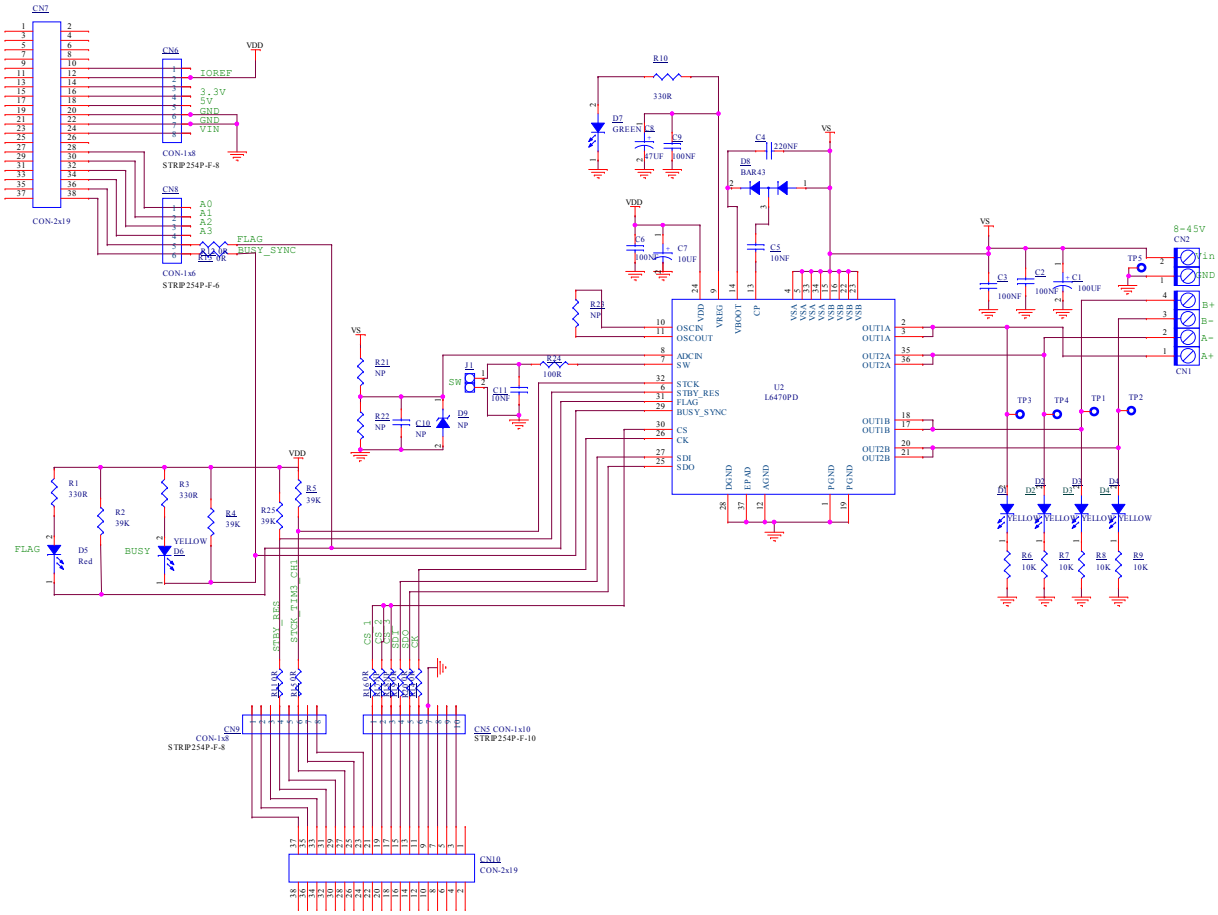
It provides an affordable and easy-to-use solution to drive a stepper motor in your application.

The L6470 device, created using analog mixed signal technology, is an advanced, fully integrated solution suitable for driving two-phase bipolar stepper motors with microstepping. It integrates a dual low R_{dsON} DMOS full bridge with an accurate on-chip current sensing circuitry suitable for non-dissipative current control and overcurrent protection. Thanks to a unique control system, a true 1/128-step resolution is achieved. The digital control core can generate user-defined motion profiles with acceleration, deceleration, speed, or target position, which are easily programmed through a dedicated set of registers. All commands and data registers, including those used to set analog values (that is: current control value, current protection trip point, dead time, PWM frequency, etc.) are sent through a standard 5-Mbit/s SPI. A complete set of protections (thermal, low bus voltage, overcurrent, and motor stall) fully protect the L6470 device, as required by the most demanding motor control applications.

The EVL6470 is compatible with the Arduino® UNO R3 connector, and it supports the addition of other boards, which can be stacked to drive up to three stepper motors.

1 EVL6470 schematic diagram

Figure 1. **EVL6470 board schematic**



Revision history

Table 1. **Document revision history**

Date	Version	Changes
18-Mar-2024	1	Initial release.

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