EVAL-VNH5019-P2

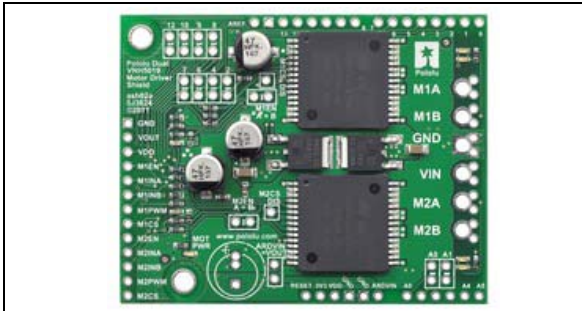## Dual VNH5019 Motor Driver Shield Arduino-Compatible

– Can survive input voltages up to 41 V

– Undervoltage and overvoltage shutdown

– High-side and low-side thermal shutdown

– Short-to-ground and short-to-Vcc protection

Description

This motor driver shield makes it easy to control two bidirectional, high-power, brushed DC motors with an Arduino-Compatible, SPC56P-Discovery and STM32 Nucleo boards. The board features a pair of robust VNH5019A motor drivers, which operate from 5.5 to 24 V and can deliver a continuous 12 A (30 A peak) per channel, and incorporate most of the components of the typical application, like pull-up's and protection resistors and FETs for reverse battery protection.
This versatile motor driver is intended for a wide range of users, from beginners who just want a plug-and-play motor control solution for their Arduinos and Nucleo to experts who want to directly interface with ST's great motor driver ICs. The Arduino pin mappings can all be customized if the defaults are not convenient and the VNH5019A control lines are broken out along the left side of the board for general-purpose use without an Arduino. This versatility, along with an option to power the Arduino directly from the shield, set this board apart from similar competing motor shields and it is as well a perfect tool to evaluate VNH5019A performance.

For more information please visit Pololu web site.

Features

- Wide operating voltage range: 5.5 - 24 V

- High output current: up to 12 A continuous (30 maximum) per motor

- Motor outputs can be combined to deliver up to 24 A continuous (60 A maximum) to a single motor

- Inputs compatible with both 5 V and 3.3 V systems (logic high threshold is 2.1 V)

- PWM operation up to 20 kHz for quieter motor operation

- Current sense voltage output proportional to motor current

- Motor indicator LEDs show what the outputs are doing even when no motor is connected

- Can be used with Arduino compatible boards, SPC56P-Discovery, STM32 Nucleo or other microcontroller boards

- When used as a shield, the motor power supply can optionally be used to power the Arduino base as well

- Arduino pin mappings can be customized if the default mappings are not convenient

- Arduino library or SPC5Studio makes it easy to get started using this board as a motor driver shield

- Reverse-voltage protection

- Robust drivers:

Table 1. Device summary

Order code	Reference
EVAL-VNH5019-P2	EVAL-VNH5019-P2 Evaluation board

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1   Revision history

Table 2. Documen revision history

Date	Revision	Changes
06-Dec-2013	1	Initial release.
05-Jun-2014	2	Updated Features and Description. Add *Table 1*.

Please Read Carefully: