Unit BLDC Driver

SKU:U181

Description

Unit BLDC Driver is a driver unit specially designed for brushless DC (BLDC) motors. It adopts an STM32 MCU as the main controller and communicates via I²C to precisely control the DRV11873PWPR motor-driver chip, enabling PWM speed regulation, direction switching, and more. The driver chip features a simplified control interface and integrated stall protection, providing efficient and low-noise operation for small three-phase BLDC motors. The on-board STM32 upgrade interface facilitates firmware updates and functional expansion, making it ideal for industrial automation, smart robotics, precision instruments, and other fields.

Features

- STM32 MCU
- I²C communication (0x65)
- DRV11873 driver control
- BLDC (brushless DC motor)
- PWM speed configuration, direction switching, etc.
- Stall protection

- Firmware upgradable

Includes

- 1 x Unit-BLDC Driver
- 1 x HY2.0-4P Grove Cable (20cm)
- 1 x VH3.96-4P Terminal

Applications

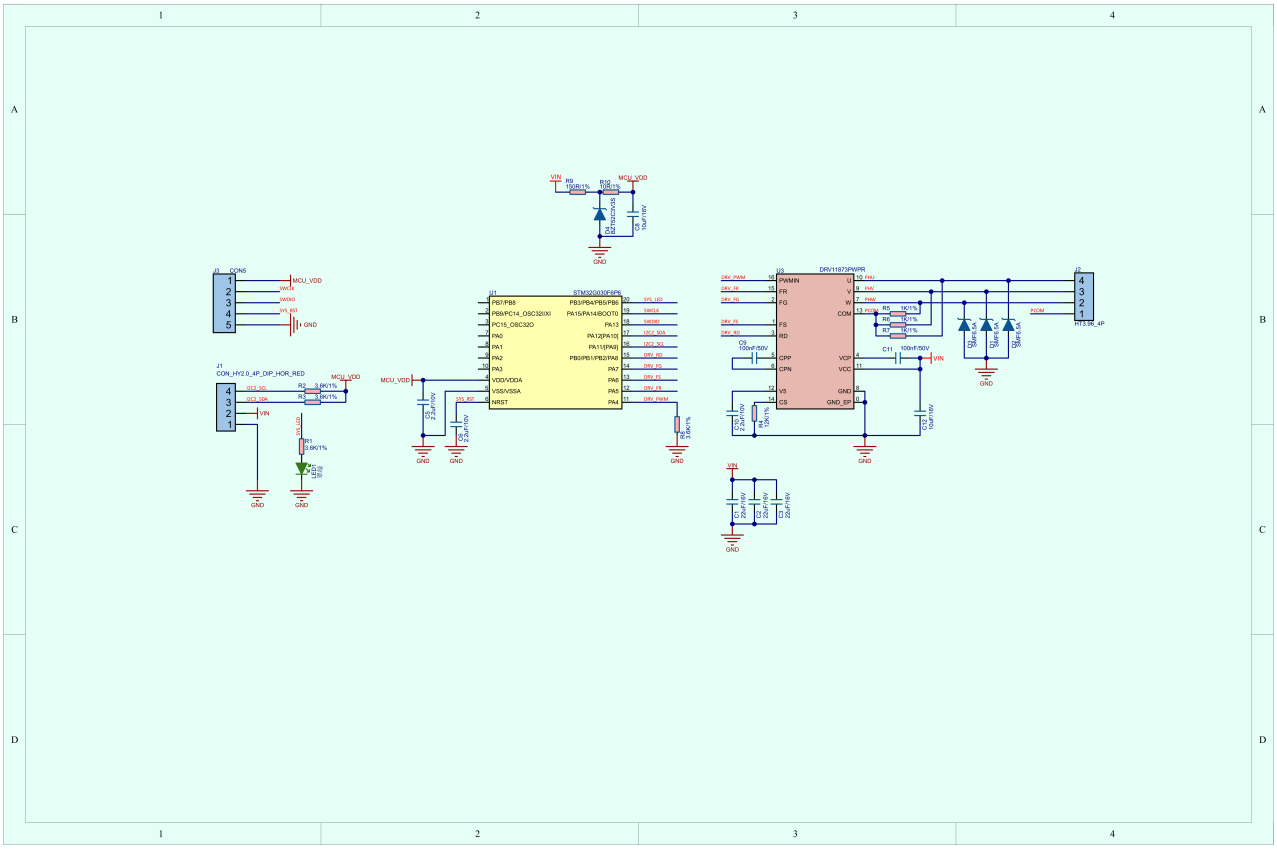
- Industrial Automation
- Smart Robotics
- Precision Instruments

Specifications

Specification	Parameter
MCU	STM32G030F6P6
Motor Driver Chip	DRV11873PWPR
Motor Type	Three-phase sensorless BLDC motor
Motor Drive Voltage	5 V (powered via Grove port)
I²C Address	0x65
Output Drive Capacity	DC 5 V / 508 mA
Power Consumption	Standby current: DC 5 V / 10.62 mA Operating current: DC 5 V / 13.20 mA
Operating Temperature	0 ~ 40 °C
Product Size	32.0 x 24.0 x 11.3mm
Product Weight	6.2 g
Package Size	138.0 x 93.0 x 12.3mm
Gross Weight	13.4 g

Schematics

- Unit BLDC Driver Schematics PDF



PinMap

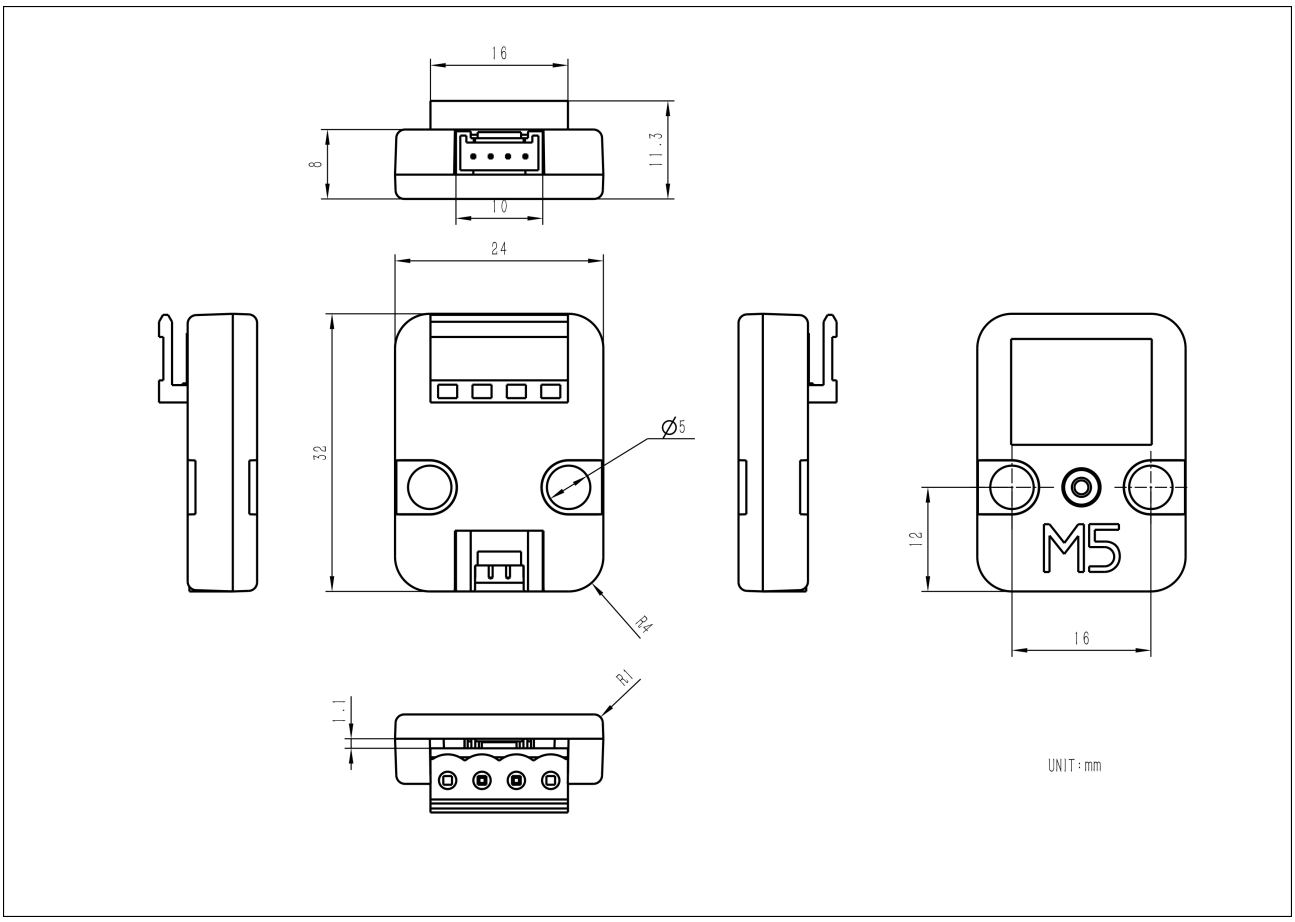
Unit BLDC Driver

HY2.0-4P	Black	Red	Yellow	White
PORT.A	GND	5V	SDA	SCL

Indicator LED

STM32	PB3/PB4/PB5/PB6
Indicator LED (Green)	SYS_LED

Model Size



Datasheets

- DRV11873

Softwares

Arduino

- Unit BLDC Driver I²C Addr Modify Example
- Unit-BLDC-Driver PWM Example
- Unit-BLDC-Driver RPM Example

UiFlow1

- Unit BLDC Driver UiFlow1 Docs

Protocol

- Unit BLDC Driver I2C Protocol

Video

- Unit BLDC Driver product and function introduction

U181 BLDC Driver UNIT 视频.mp4

- UiFlow2 Unit BLDC Driver

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