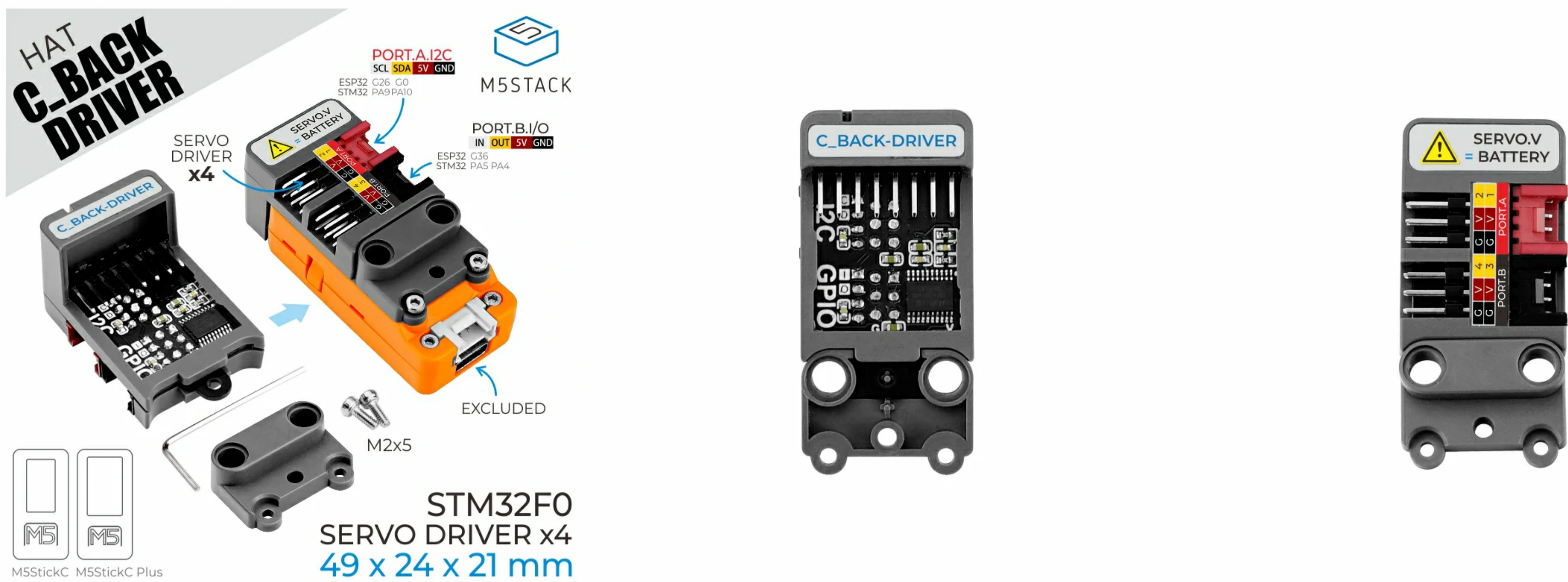


C Back Driver

SKU:A100



Description

C Back Driver is a steering gear drive board compatible with M5StickC. It adopts STM32F030F4P6 control scheme, uses I2C communication interface to communicate with M5StickC, and provides 4 sets of PWM steering gear drive interfaces (the drive power of the steering gear is directly connected to the M5StickC). The internal battery can drive general specifications of the steering gear, such as: SG90, etc.). This module leads the I2C bus at the top of StickC and provides an additional GPIO interface through STM32 expansion. It can be used for general logic level and ADC analog signal input reading. With the LEGO compatible hole design on the back, users can easily integrate this driver board into the LEGO building block structure, which can be used to build controllable structures such as steering gear manipulators.

Product Features

- 4x Servo driver
- Compatible with C/C Plus
- Interface expansion (GPIO, I2C)

Application

- Servo controller
- Robot control

Contains

- 1x C Back Driver
- 2x Hexagonal screws M2*5
- 1x HEX KEY

Specifications

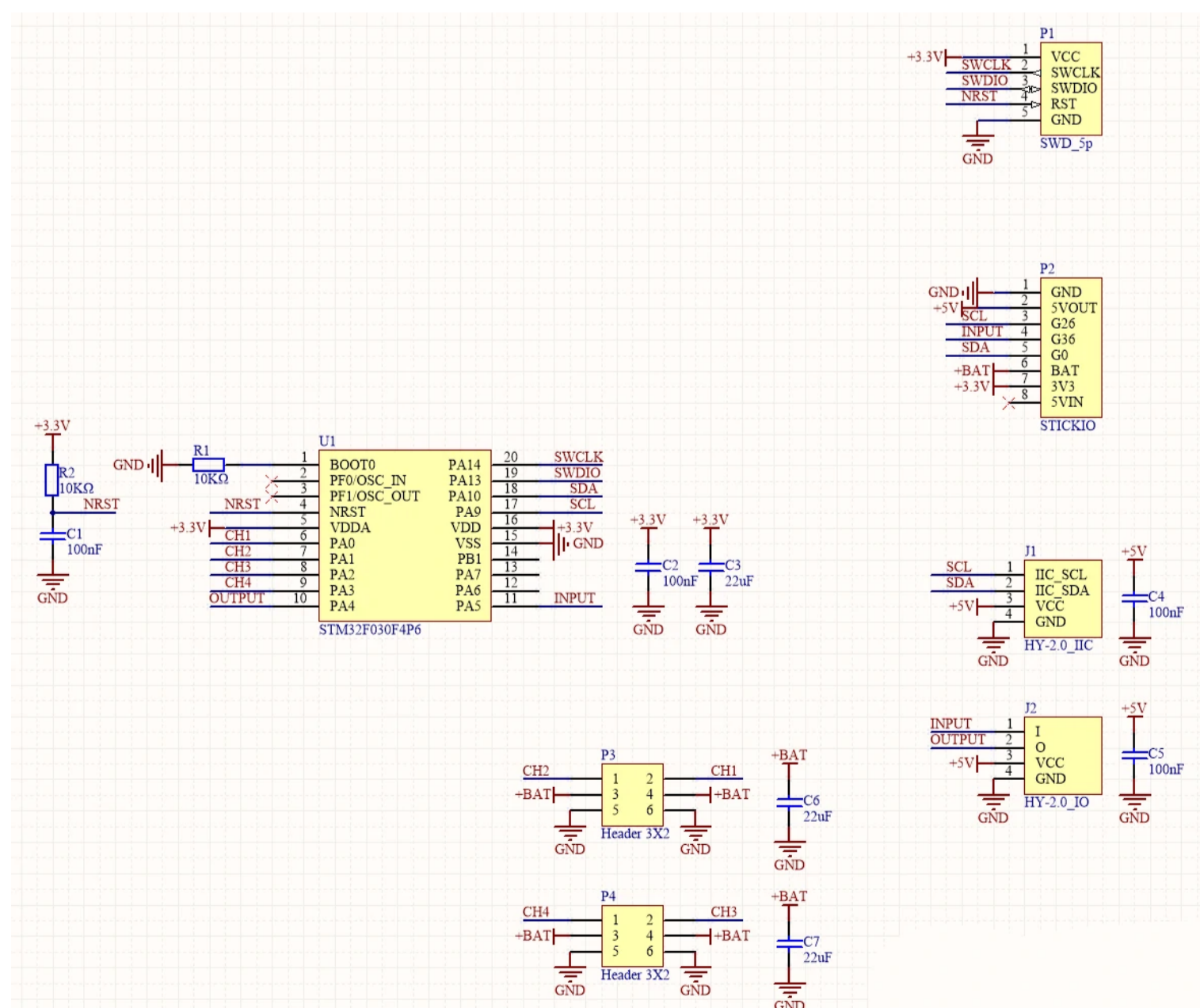
Resources	Parameter
Communication protocol	I2C: 0x38
Working current	15mA
Net weight	9g
Gross weight	13.5g
Product size	23.7*49.2*21mm
Package size	42*40*30mm



Pin mapping

M5StickC	GPIO0	GPIO26	3.3V	GND
C Back Driver	SDA	SCL	3.3V	GND

Schematic



Example

This case uses C BACK DRIVER to realize 4-channel servo control and ADC reading. Please select the corresponding case program below according to the equipment you are using.

- [StickC Plus](#)
- [StickC](#)

Protocol

- Protocol type I2C
- I2C Address: **0x38**

```
/*-----*/
| SERVO_ANGLE_REG | 0x00-0x03
| -----
| servo_1_reg[0] 0x00 | R/W | SERVO1 Angle value(0~180)
| servo_2_reg[1] 0x01 | R/W | SERVO2 Angle value(0~180)
| servo_3_reg[2] 0x02 | R/W | SERVO3 Angle value(0~180)
| servo_4_reg[3] 0x03 | R/W | SERVO4 Angle value(0~180)
/*-----*/

/*-----*/
| SERVO_PULSE_REG | 0x10-0x17
| -----
| servo_1_reg[0:1] 0x10-0x11 | R/W | SERVO1 PULSE value(500~2500)
| servo_2_reg[2:3] 0x12-0x13 | R/W | SERVO2 PULSE value(500~2500)
| servo_3_reg[4:5] 0x14-0x15 | R/W | SERVO3 PULSE value(500~2500)
| servo_4_reg[6:7] 0x16-0x17 | R/W | SERVO4 PULSE value(500~2500)
/*-----*/

/*-----*/
| PPORTB_ADC_REG | 0x20-0x21
| -----
| portb_adc_reg[0:1] 0x20-0x21 | R | PPORTB ADC value(0~4095)
/*-----*/

/*-----*/
| PPORTB_OUTPUT_REG | 0x30
| -----
| portb_output_reg[0] 0x30 | R | PPORTB Output Digital value(0/1)
/*-----*/

/*-----*/
| PPORTB_INPUT_REG | 0x31
| -----
| portb_input_reg[0] 0x31 | R | PPORTB Input Digital value(0/1)
/*-----*/
```

Video

