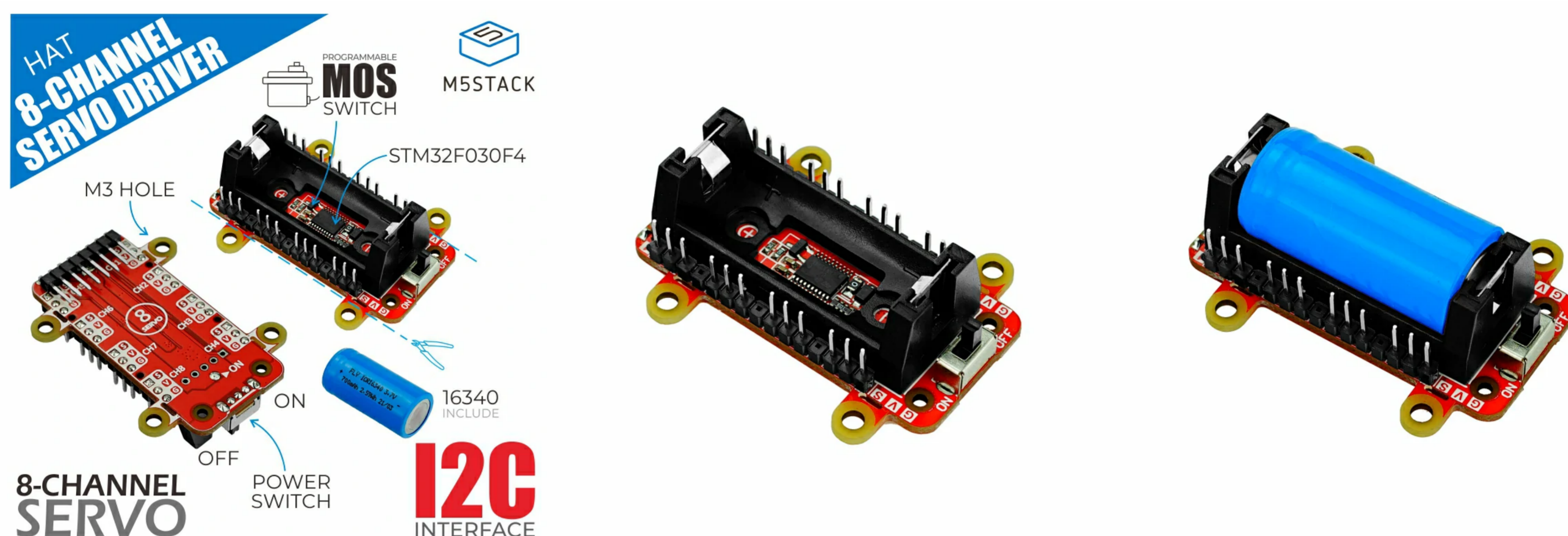


8Servos HAT v1.1

SKU:U076-B



Description

8Servos HAT v1.1 is an 8-channel servo driver module that works with the **M5StickC/C Plus** series. Adopt STM32F030F4 as main controller to drive servos with **PWM** (Pulse Width Modulation) signal. I2C communication. Embedded power management circuit to control servo ON/OFF with programming. With the rechargeable 16340 lithium battery (with the capacity of **700mAh**), it can support Maximum **1.3A** load. Applied for robotic and DIY projects.

Product Comparison

Specification	8Servos HAT	8Servos HAT v1.1
Motor power control	/	MOS tube control power on/off
Reverse Battery Protection	/	With circuit protection
Fixing hole	/	4x fixing holes
Programmable RGB LEDs	SK6812	/
I2C ADDR	0x38	0x36

Product Features

- 8-channel servo driver
- Programmable servo power control
- 16340 lithium battery
- I2C protocol control (0x36)
- Reverse Battery Protection

Included

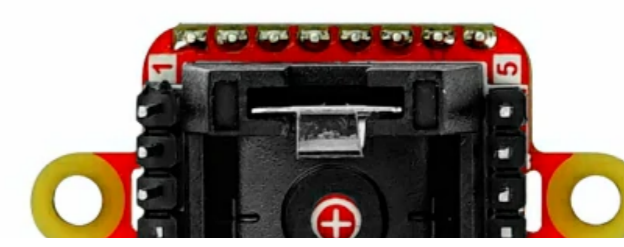
- 1x 8Servos HAT v1.1
- 1x 16340 battery (700mAh)

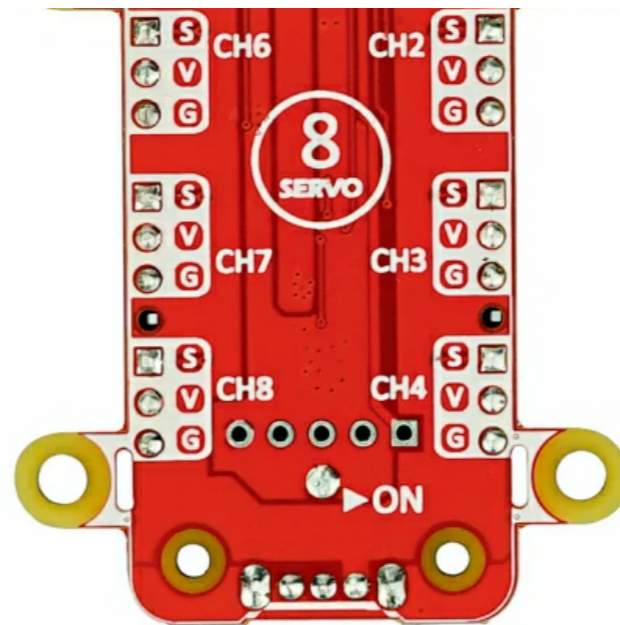
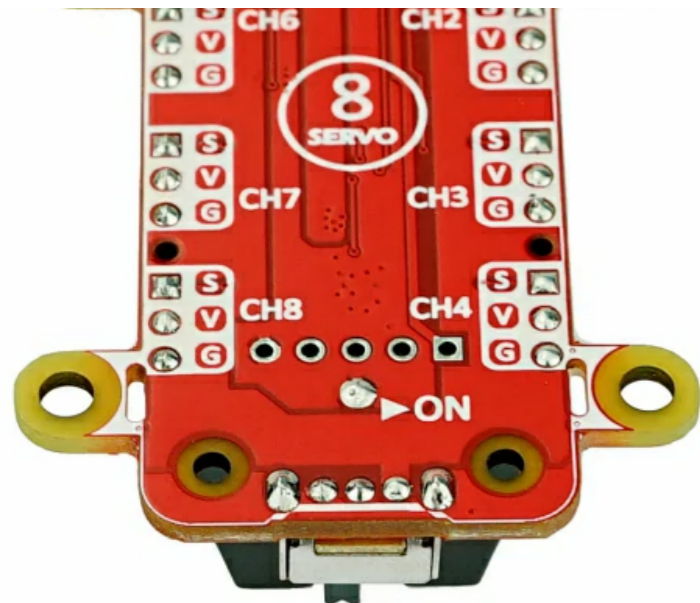
Applications

- Servo controller
- Robot control

Specification

Specification	Parameters
Lithium Battery	Specification: 16340, Capacity: 700mAh
Servo drive channel	8-channel
Maximum drive load capacity	8-channel maximum load capacity: DC4.2V@1.3A
Driver no-load standby current	DC4.2V@2.2uA
Fixing hole	M3
Communication Protocol	I2C:0x36
Net weight	28.3g
Gross weight	39.7g
Product Size	52*38*19mm
Package Size	75*46*29mm

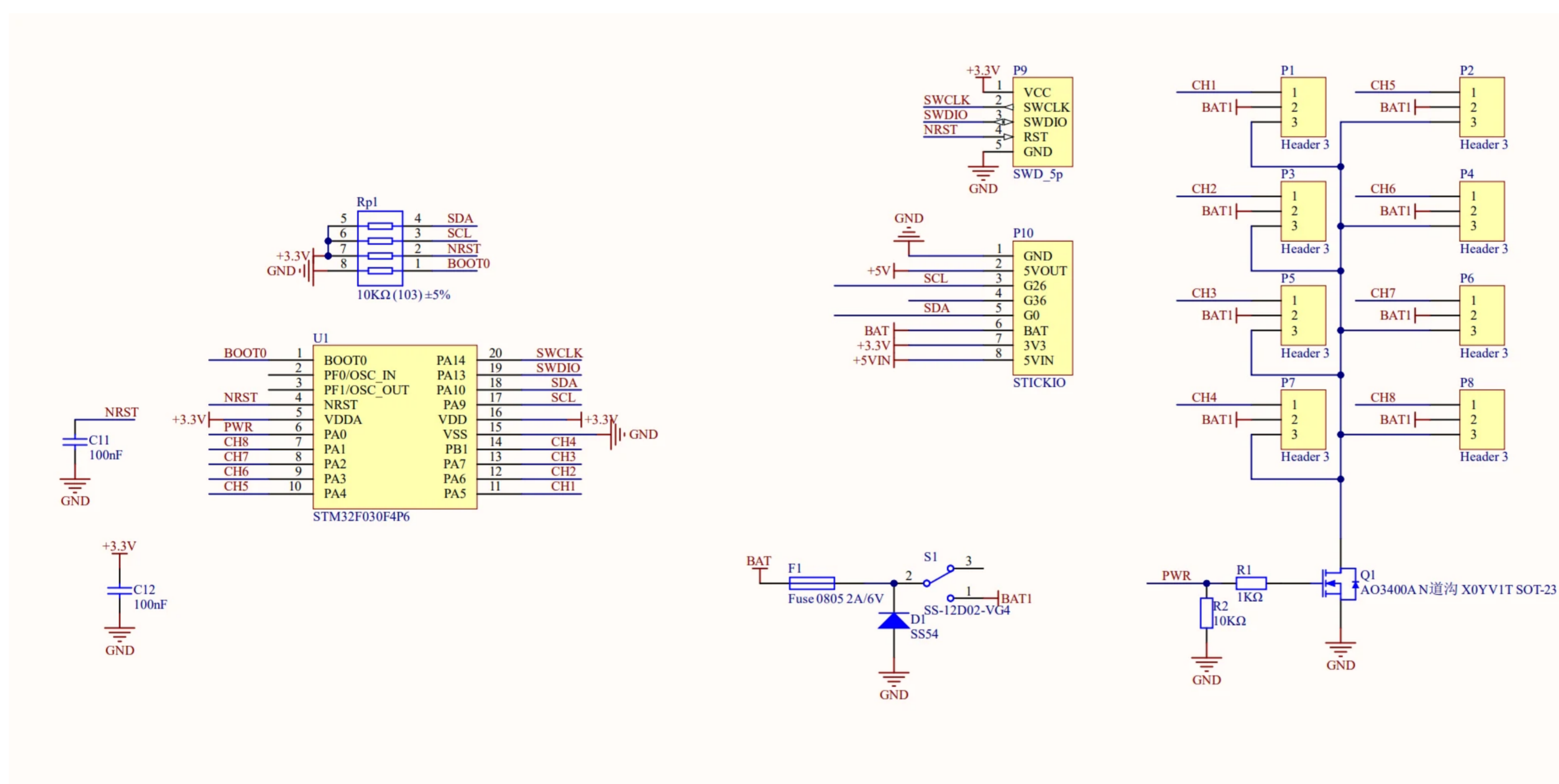




Pin Mapping

M5StickC	GPIO0	GPIO26	3.3V	GND
8Servos HAT v1.1	SDA	SCL	Vin	GND

Schematic



Example

Arduino

- 8Servos HAT v1.1 with M5StickC
- 8Servos HAT v1.1 with M5StickC Plus

Communication Protocol

- Protocol type I2C
- I2C Address: **0x36**

hex	len	R/W	description	send params
0x00	1	R/W	CH1 angle output	[0] CH1 angle Valid value range: 0-180
0x01	1	R/W	CH2 angle output	[0] CH2 angle Valid value range: 0-180
0x02	1	R/W	CH3 angle output	[0] CH3 angle Valid value range: 0-180
0x03	1	R/W	CH4 angle output	[0] CH4 angle Valid value range: 0-180
0x04	1	R/W	CH5 angle output	[0] CH5 angle Valid value range: 0-180
0x05	1	R/W	CH6 angle output	[0] CH6 angle Valid value range: 0-180
0x06	1	R/W	CH7 angle output	[0] CH7 angle Valid value range: 0-180
0x07	1	R/W	CH8 angle output	[0] CH8 angle Valid value range: 0-180
0x10	2	R/W	CH1 output pulse width	[0] CH1 pulse width HB [1] CH1 pulse width LB Valid value range: 500-2500
0x12	2	R/W	CH2 output pulse width	[0] CH2 pulse width HB [1] CH1 pulse width LB Valid value range: 500-2500
				[0] CH3 pulse width HB

hex 0x14	len 2	R/W R/W	CH3 output pulse width	send params [1] CH1 pulse width LB Valid value range: 500-2500
0x16	2	R/W	CH4 output pulse width	[0] CH4 pulse width HB [1] CH1 pulse width LB Valid value range: 500-2500
0x18	2	R/W	CH5 output pulse width	[0] CH5 pulse width HB [1] CH1 pulse width LB Valid value range: 500-2500
0x1A	2	R/W	CH6 output pulse width	[0] CH6 pulse width HB [1] CH1 pulse width LB Valid value range: 500-2500
0x1C	2	R/W	CH7 output pulse width	[0] CH7 pulse width HB [1] CH1 pulse width LB Valid value range: 500-2500
0x1E	2	R/W	CH8 output pulse width	[0] CH8 pulse width HB [1] CH1 pulse width LB Valid value range: 500-2500
0x30	1	R/W	MOS servo power control	[0] MOS_CTL Valid value range: 0(power off)/1(power on)

FAQ

COMMON

Q1: Consultation for after-sales problems of products +

Describe the problems encountered in detail. Screenshots of the programs involved or files can be added as attachments and sent to M5Stack's official after-sales email

support@m5stack.com

Q2: Code Resources, Cases, User Communication



M5Stack related resource links: Official Github

<https://github.com/m5stack>

<https://m5stack.hackster.io/>

<https://community.m5stack.com/>