

Hat Joystick

SKU:U073



Description

Hat Joystick is a joystick module specially designed for the M5StickC. It is equipped with an STM32F030F4 main control chip and uses the I2C communication protocol to transmit data with the M5StickC host. This miniature joystick module supports full-range directional deflection and center press, outputting deflection angle data and switch digital signals. With the unified plug-in design of the HAT series, it provides a reliable connection to the M5StickC, delivering more human-machine interaction input in a minimalist way.

Features

- Built-in STM32F030F4
- Communication protocol: I2C (address: 0x38)
- Supports full-range deflection / center button

Includes

- 1 x Hat Joystick
- 1 x Double-Sided Tape

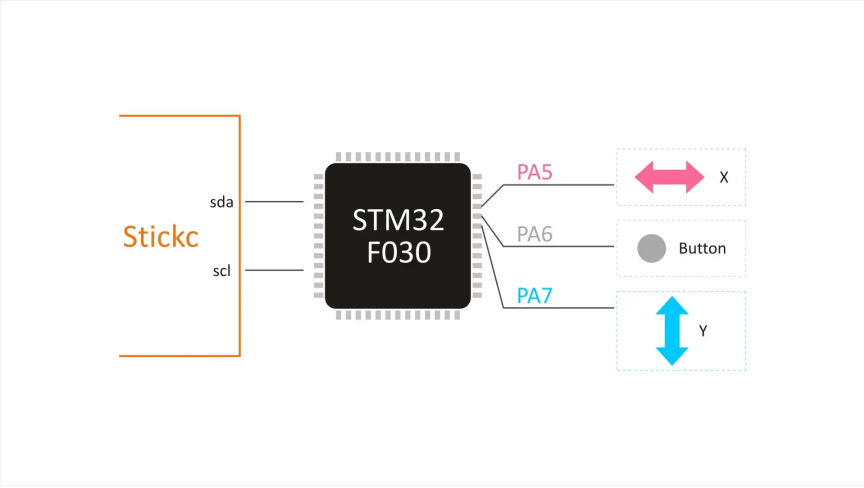
Applications

- Game controller
- Wireless joystick device

Specifications

Specification	Parameter
MCU	STM32F030F4P6
Communication Port	I2C @0x38
Product Size	100.0 x 55.0 x 50.0mm
Product Weight	81.0g
Package Size	119.0 x 89.0 x 65.0mm
Gross Weight	117.0g

Schematics

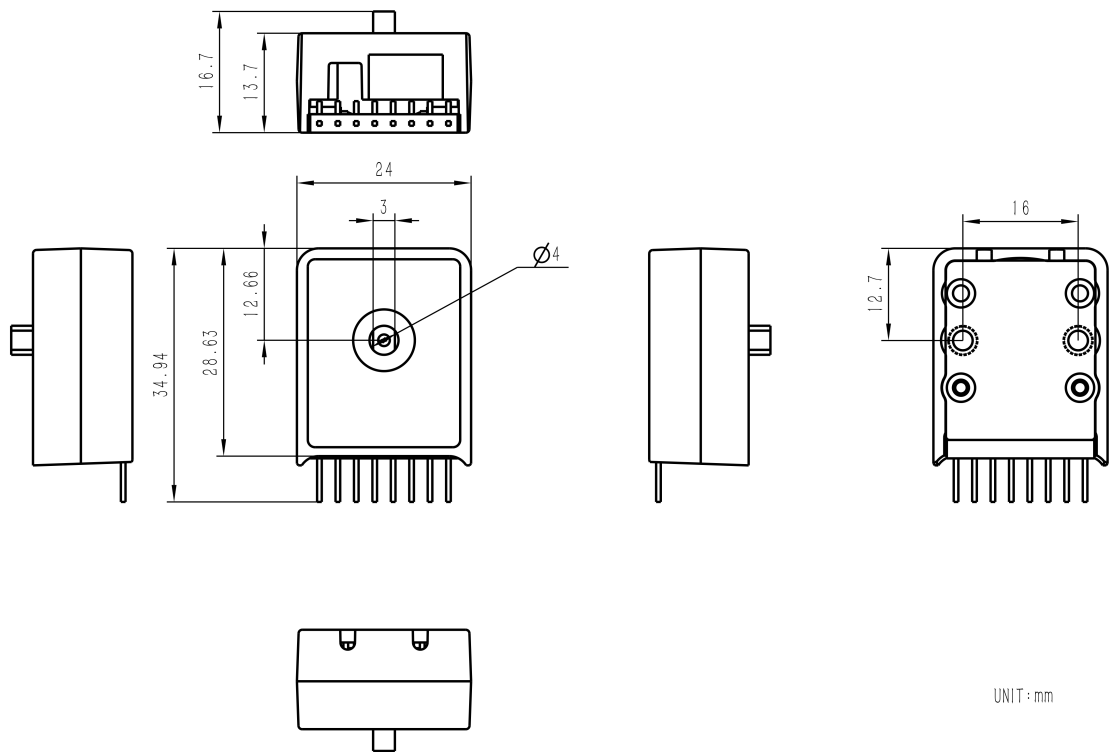


PinMap

M5StickC	G0	G26	3.3V	GND
Joystick HAT	SDA	SCL	3.3V	GND

Model Size

[Hat Joystick Model Size PDF](#)



Softwares

Arduino

- [Hat Joystick Example](#)

UiFlow1

- [Hat Joystick UiFlow1 Docs](#)

UiFlow2

- [Hat Joystick UiFlow2 Docs](#)

Protocol

I2C Address: 0x38

Registers:

0x01 Read-only 4 bytes, single-axis value 0 ~ 4096

0: X-axis raw data low 8 bits

1: X-axis raw data high 8 bits

2: Y-axis raw data low 8 bits

3: Y-axis raw data high 8 bits

0x02 Read-only 3 bytes

0: X-axis converted data (-127 ~ 127)

1: Y-axis converted data (-127 ~ 127)

2: 0 or 1 (button press = 0, release = 1)

0x03 Write-only 1 byte

0x00: Normal mode

0x01: Center point calibration

0x02: Maximum value calibration (manually rotate joystick to get max value)

0x03: Save center and max value data to flash, then restore to normal mode

Joystick Calibration Method: First write to I2C register 0x03, then send 0x02, rotate the joystick around up, down, left, and right repeatedly several times, then write 0x03 to register 0x03 to save.

EasyLoader

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Video

[Joystick_HAT.mp4](#)