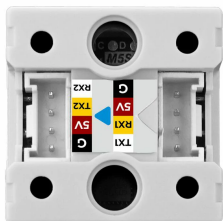
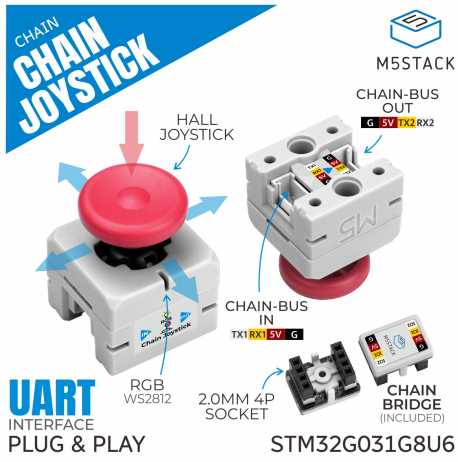


# Chain Joystick

SKU:U205





## Description

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Chain Joystick is a high-precision Hall effect joystick input node in the M5Stack Chain series. It supports three-axis control signal input, including analog input for X/Y axes and digital key input for the Z-axis. The device uses a Hall effect joystick that achieves high-precision control by detecting magnetic field changes. It features non-contact operation, wear resistance, high accuracy, and strong anti-interference capability, ensuring product stability and long lifespan. It also integrates a programmable RGB LED for status indication and interactive display. It is suitable for human-machine interaction, robot control, and other application scenarios.

Chain Joystick integrates the STM32G031G8U6 core controller and adopts the UART serial cascading communication protocol. Through two HY2.0-4P expansion interfaces, it can extend more devices from the Chain series to build richer interactive applications.

## Features

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- M5Stack Chain series
- High-precision Hall effect joystick
- STM32G031G8U6 core controller
- X/Y/Z three-axis input
- 1x RGB LED
- UART serial cascading communication protocol
- 2x HY2.0-4P expansion interfaces supporting Chain series extensions

## Includes

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- 1 x Chain Joystick
- 1 x Chain Bridge

## Applications

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- Robot control
- Human-machine interaction

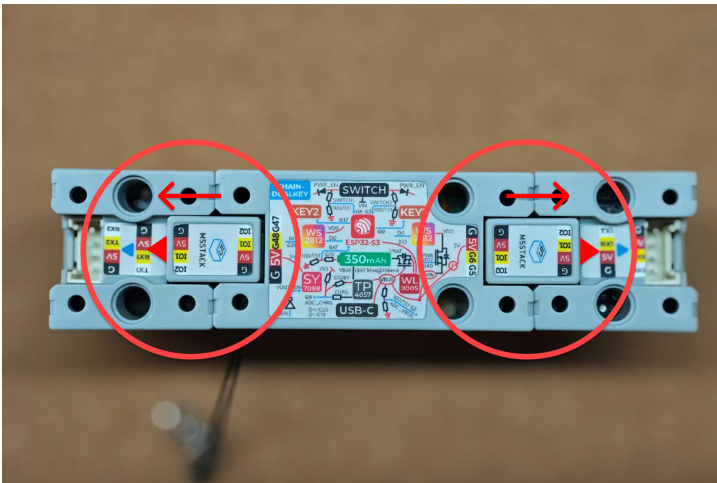
## Specifications

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Specification	Parameter
MCU	STM32G031G8U6
Input Power	DC 5V
Communication Method	UART 115200bps@8N1
Interface Type	2x HY2.0-4P
RGB LED	1x WS2812C
Operating Power Consumption	25.4mA
Operating Temperature	0 ~ 40°C
Product Size	23.9 x 23.9 x 30.4mm
Product Weight	8.6g
Package Size	138.0 x 93.0 x 25.0mm
Gross Weight	12.0g

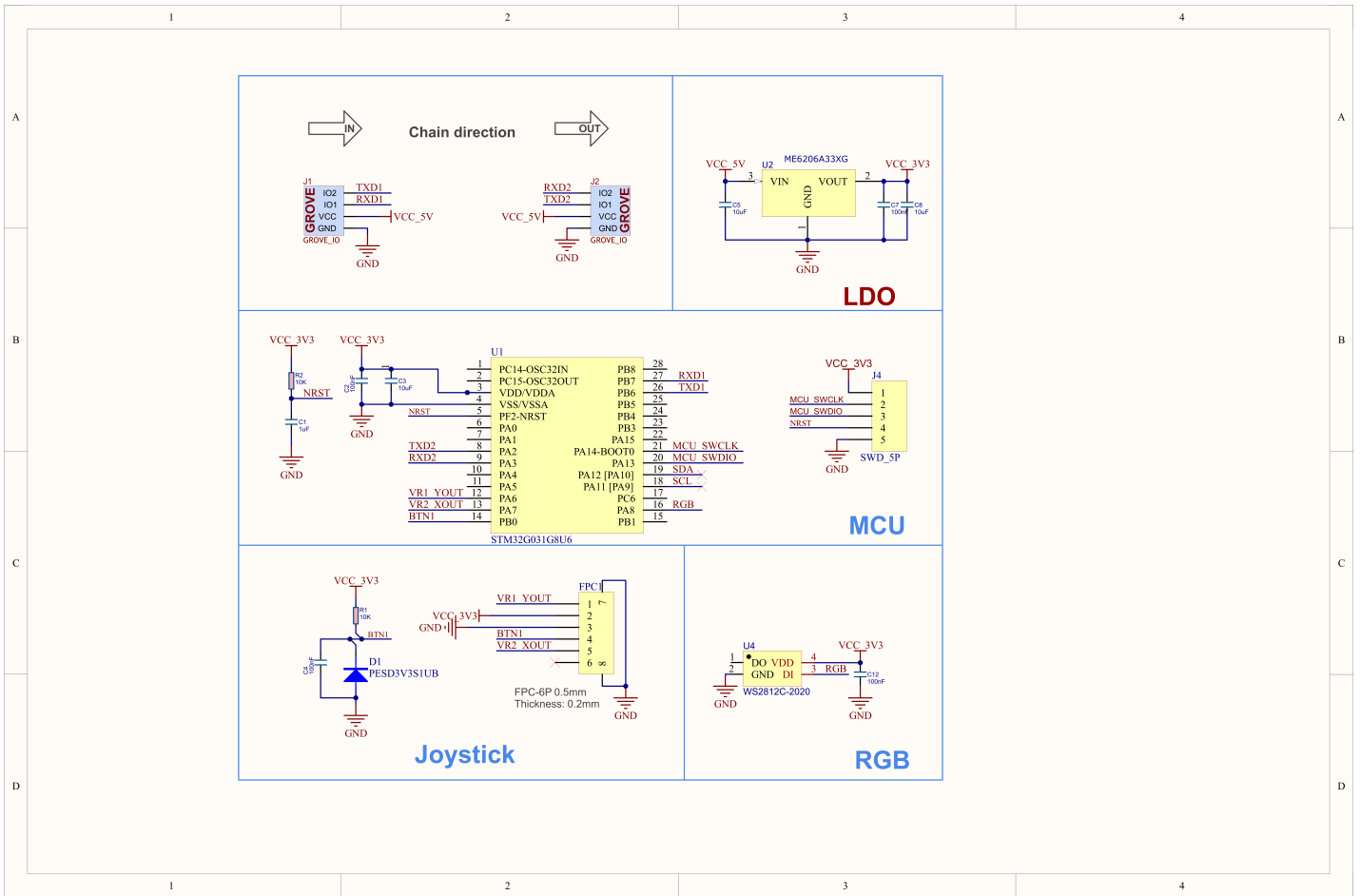
## Learn

Use the Chain Bridge connector to connect the main controller Chain DualKey and various Chain series input devices. Pay attention to the direction when connecting — the triangle arrow should point outward from the main controller Chain DualKey, as shown below:



## Schematics

- [Chain Joystick Schematics PDF](#)



## PinMap

### RGB LED

STM32G031	PA8
WS2812C	RGB

### Joystick

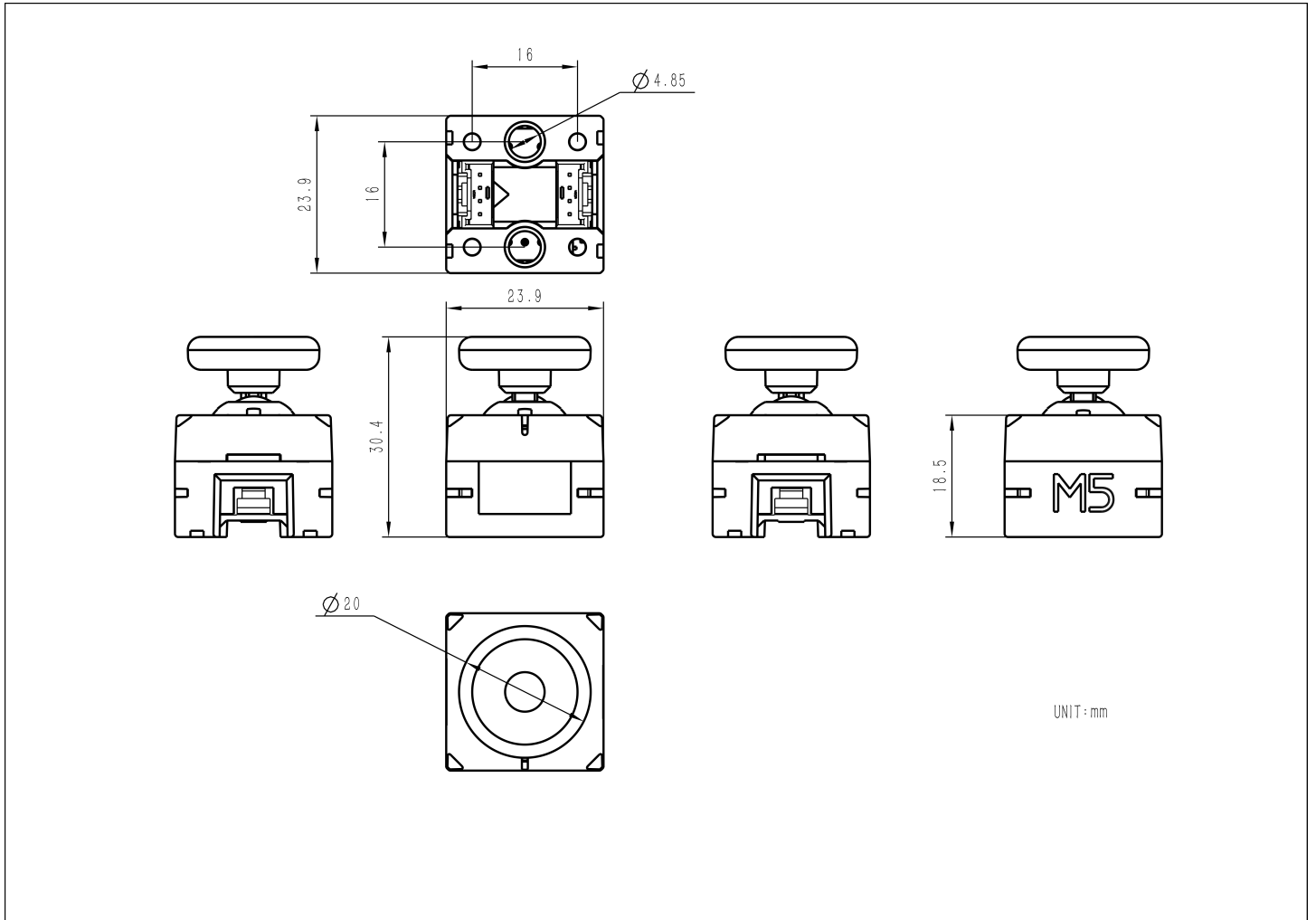
STM32G031	PB0	PA7	PA6
Button	Input	XOUT	YOUT

### UART

STM32G031	PB6	PB7	PA2	PA3
UART1	TXD1	RXD1		
UART2			TXD2	RXD2

## Model Size

- [Chain Joystick Model Size PDF](#)



## Softwares

### Arduino

- [Chain Joystick Arduino Quick Start](#)
- [Chain Joystick Arduino Library](#)
- [Chain Joystick Example Program](#)

### UiFlow2

- [Chain Joystick UiFlow2 Docs](#)

## | Internal Firmware

- [Chain Joystick Internal Firmware](#)

## | Protocol

- [Chain Joystick Communication Protocol](#)

## | Video

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- Chain Joystick Product Introduction and Function Demonstration

[U205-Chain-Joystick-video-EN.mp4](#)