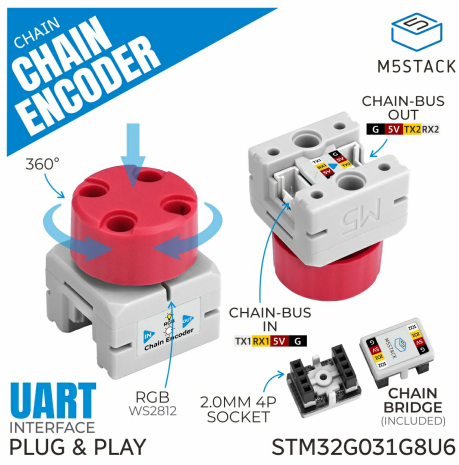
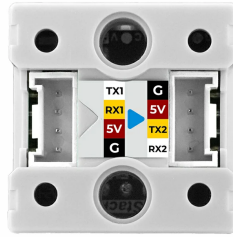


Chain Encoder

SKU:U207





Description

Chain Encoder is a rotary encoder input node in the M5Stack Chain series. It integrates an AB rotary encoder internally, supporting rotation direction detection and pulse counting, and the center of the knob supports button input. It also integrates a programmable RGB LED for status indication and interactive display. The encoder cap features LEGO-compatible mounting holes, enabling more creative structural connections. It is suitable for applications such as human-machine interaction and smart home control.

Chain Encoder integrates the STM32G031G8U6 core controller and adopts a UART serial daisy-chain communication protocol. Through two HY2.0-4P expansion interfaces, it can expand additional Chain series devices to build richer interactive applications.

Features

- M5Stack Chain series
- AB rotary encoder
- Button input
- STM32G031G8U6 core controller
- 1 x RGB LED
- LEGO-compatible mounting structure
- Uses UART serial daisy-chain communication protocol
- 2 x HY2.0-4P expansion interfaces for Chain series device expansion

Includes

- 1 x Chain Encoder
- 1 x Chain Bridge

Applications

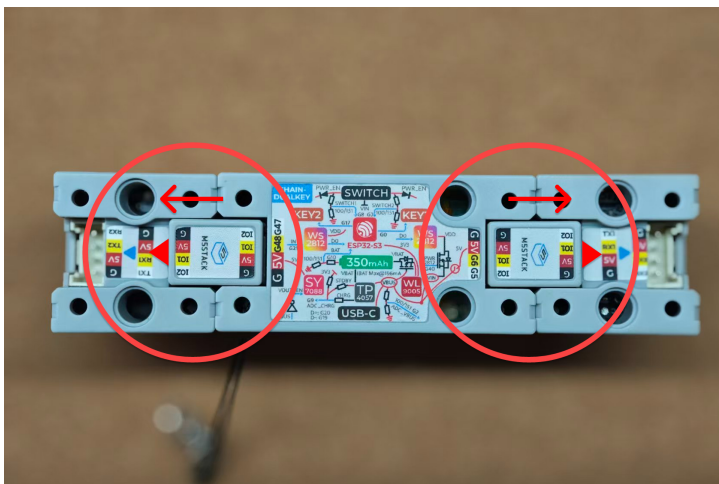
- Smart home control
- Human-machine interaction

Specifications

Specification	Parameter
MCU	STM32G031G8U6
Input Power	DC 5V
Communication	UART 115200bps@8N1
Interface	2 x HY2.0-4P
RGB LED	1 x WS2812B
RGB On Power	22.51mA
Operating Temp	0 ~ 40°C
Product Size	23.9 x 23.9 x 29.8mm
Product Weight	10.0g
Package Size	138.0 x 93.0 x 26.0mm
Gross Weight	13.7g

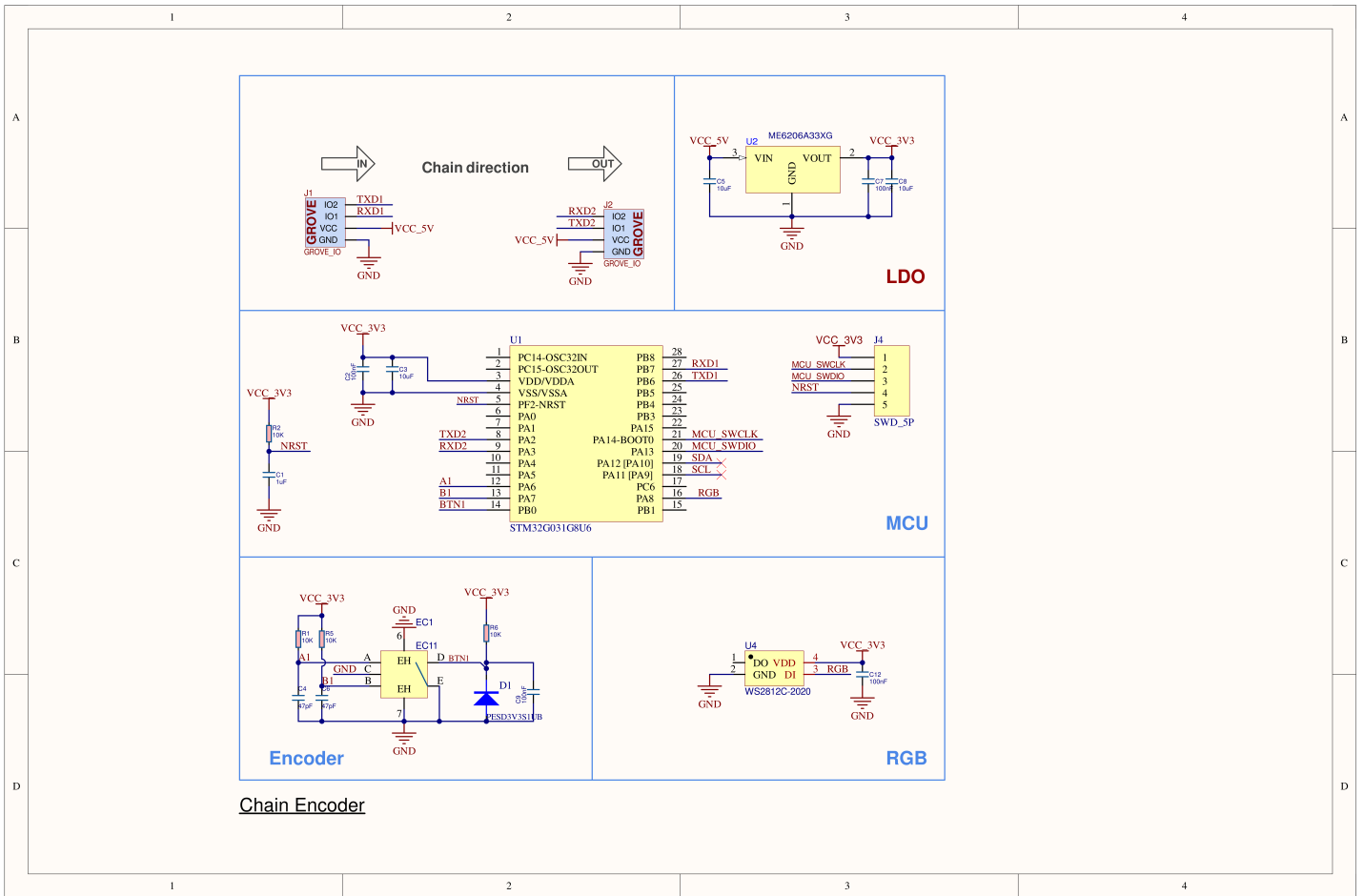
Learn

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 triangular arrow should point from the main controller Chain DualKey outward, as shown in the figure:



Schematics

- [Chain Encoder Schematics PDF](#)



PinMap

RGB LED

STM32G031	PA8
WS2812C	RGB

Encoder

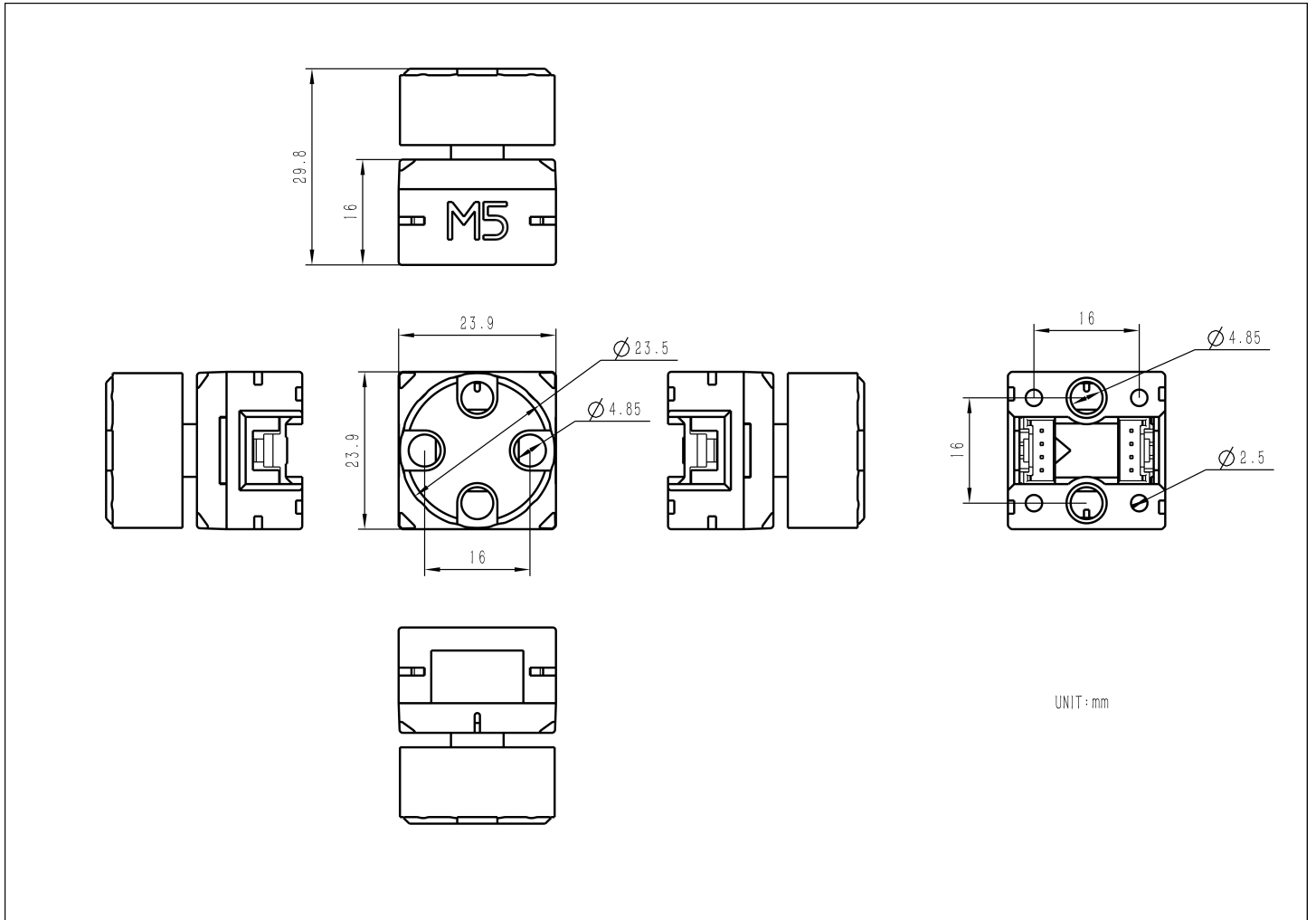
STM32G031	PA6	PA7	PB0
Encoder	A1	B1	BTN1

UART

STM32G031	PB6	PB7	PA2	PA3
UART1	TXD1	RXD1		
UART2			TXD2	RXD2

Model Size

- [Chain Encoder Model Size PDF](#)



Softwares

Arduino

- [Chain Encoder Arduino Getting Started Guide](#)
- [Chain Series Product Driver Library](#)

UiFlow2

- [Chain Encoder UiFlow2 Docs](#)

Internal Firmware

- [Chain Encoder Internal Firmware](#)

| Protocol

- [Chain Encoder Communication Protocol](#)

| Video

- Chain Encoder product introduction and feature demonstration

[U207-Chain-Encoder-video-EN.mp4](#)