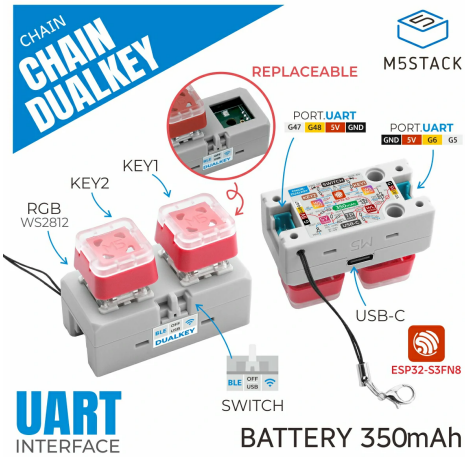
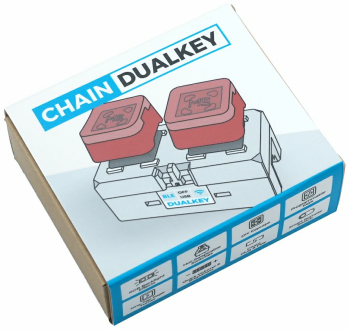
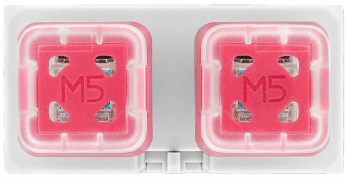
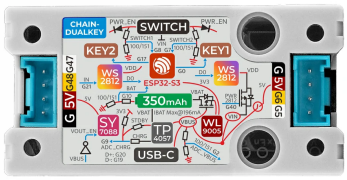
Chain DualKey

SKU:C147









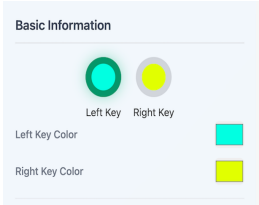
Description

Chain DualKey is a programmable dual-key input development board equipped with the ESP32-S3FN8 main control chip. The front integrates 2 hot-swappable blue switch mechanical keyboard keys and 2 programmable RGB LEDs, providing excellent interactive feedback. It has a built-in 350mAh lithium battery, combining with a low-power design for good battery life. The product comes with pre-installed Chain macro keyboard firmware, supports USB / BLE connections, and can emulate HID input devices. After the device is powered on, you can connect to the device's AP hotspot and configure the HID function mapping for the local device or expansion nodes via the built-in web page to achieve various control functions. This development board adopts the M5Stack Chain series expandable design, featuring two HY2.0-4P expansion ports that support lateral expansion and connection to other sensor devices. With the USB-OTG peripheral function built into ESP32-S3, it is suitable for smart home, keyboard peripherals, macro keyboards, and other scenarios.

Tutorial

Arduino IDE

This tutorial explains how to program and control Chain DualKey using Arduino IDE.



Factory Firmware User Guide

This guide introduces how to use the factory firmware of Chain DualKey, including button function configuration, LED color settings, battery status monitoring, and operation of Chain Bus devices.

Features

- ESP32-S3FN8 main control chip
- Built-in 350mAh lithium battery
- 2 programmable RGB LEDs
- 2 hot-swappable blue switch keys
- M5Stack Chain series expandable design
- LEGO-compatible holes on the back
- Lanyard design

Includes

- 1 x Chain DualKey
- 1 x Keycap Sticker

Applications

- Smart home control
- Macro keyboard
- Keyboard peripherals

Specifications

Specification	Parameter
SoC	ESP32-S3FN8 @ Dual-core Xtensa LX7 processor, with a main frequency up to 240MHz
Flash	8MB
Power Input	USB: DC 5V
Battery	350mAh lithium battery
RGB LED	2x WS2812B
Operating Temp	0 ~ 40°C
Standby Current	Power-off mode (VBAT): DC 4.2V@8.97uA Deep sleep mode (VBAT): DC 4.2V@107.64uA USB 5V power (no battery): DC 5V@41.7mA
Product Size	47.9 x 34.3 x 23.9mm
Product Weight	23.7g
Package Size	63.0 x 72.0 x 28.0mm
Gross Weight	39.3g

Learn

Charging

As long as an external power source is connected, the battery will charge regardless of the switch position.

Restart

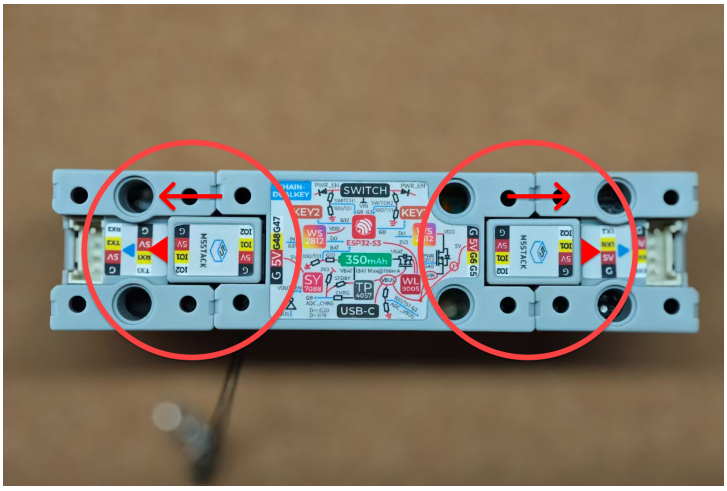
Chain DualKey does not have a reset button. Move the switch to the middle position, disconnect the USB-C cable, and reconnect it (do not hold Key1) to reboot the device.

Enter Download Mode

Move the switch to the middle position, hold Key1 (the button farther from the lanyard hole) and connect the device to your PC via a USB-C data cable. Then release Key1, and the device will enter download mode.

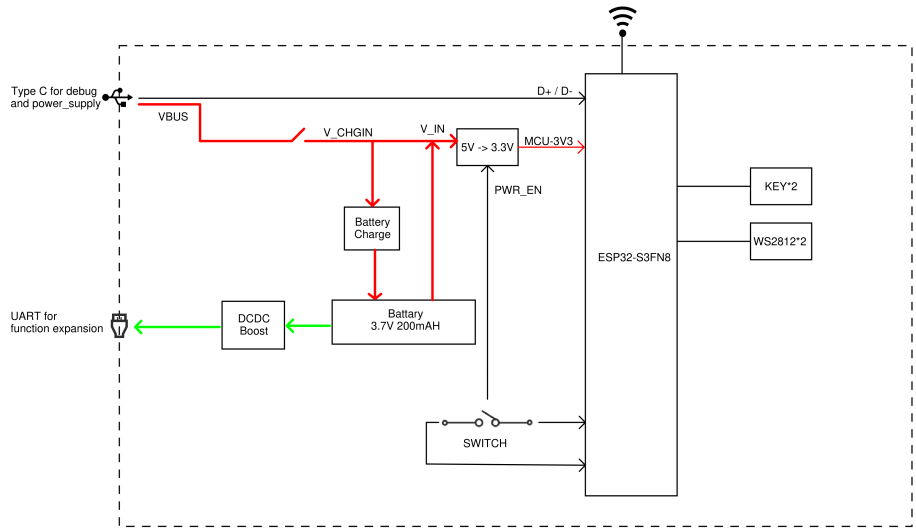
Connection Instructions

Use the Chain Bridge connector to connect the main controller Chain DualKey and each Chain series input device. Pay attention to the orientation when connecting: the triangular arrow points from the main controller Chain DualKey toward the outside, as shown in the figure below:



Schematics

- Chain DualKey Schematics PDF



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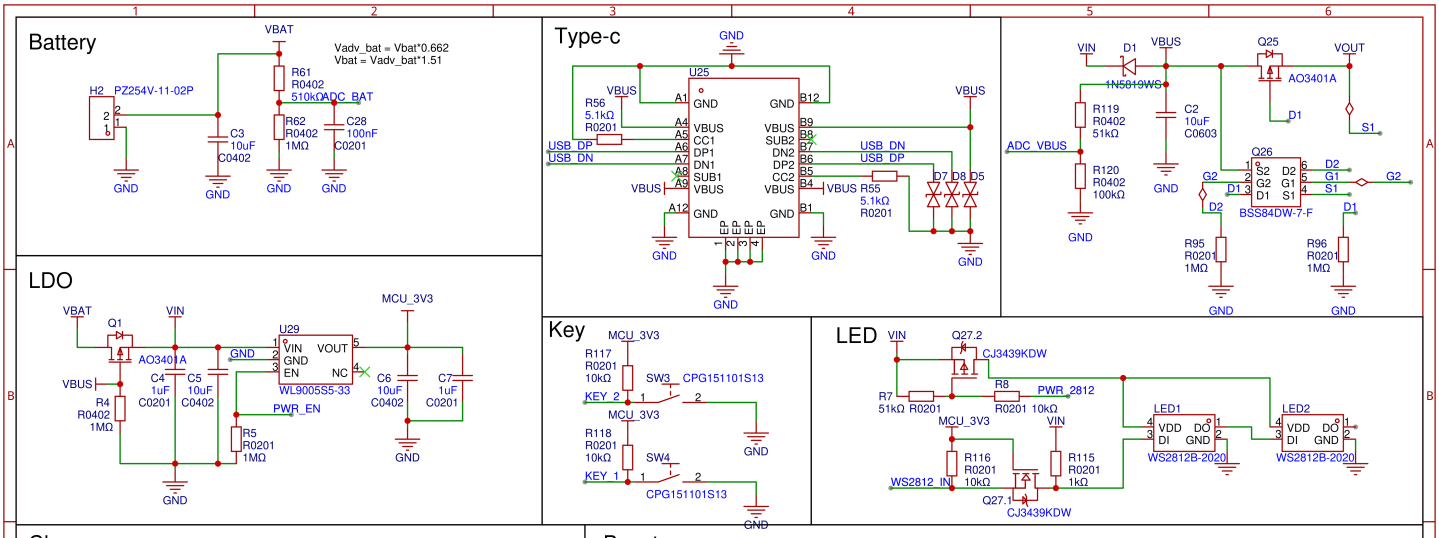
		创建日期	2025-03-10
图页	Overview	物料编码	
绘制		mini_keyboard	
审阅			
		版本	尺寸	页 1 共 3
嘉立创EDA		V1.0	A4	嘉立创EDA



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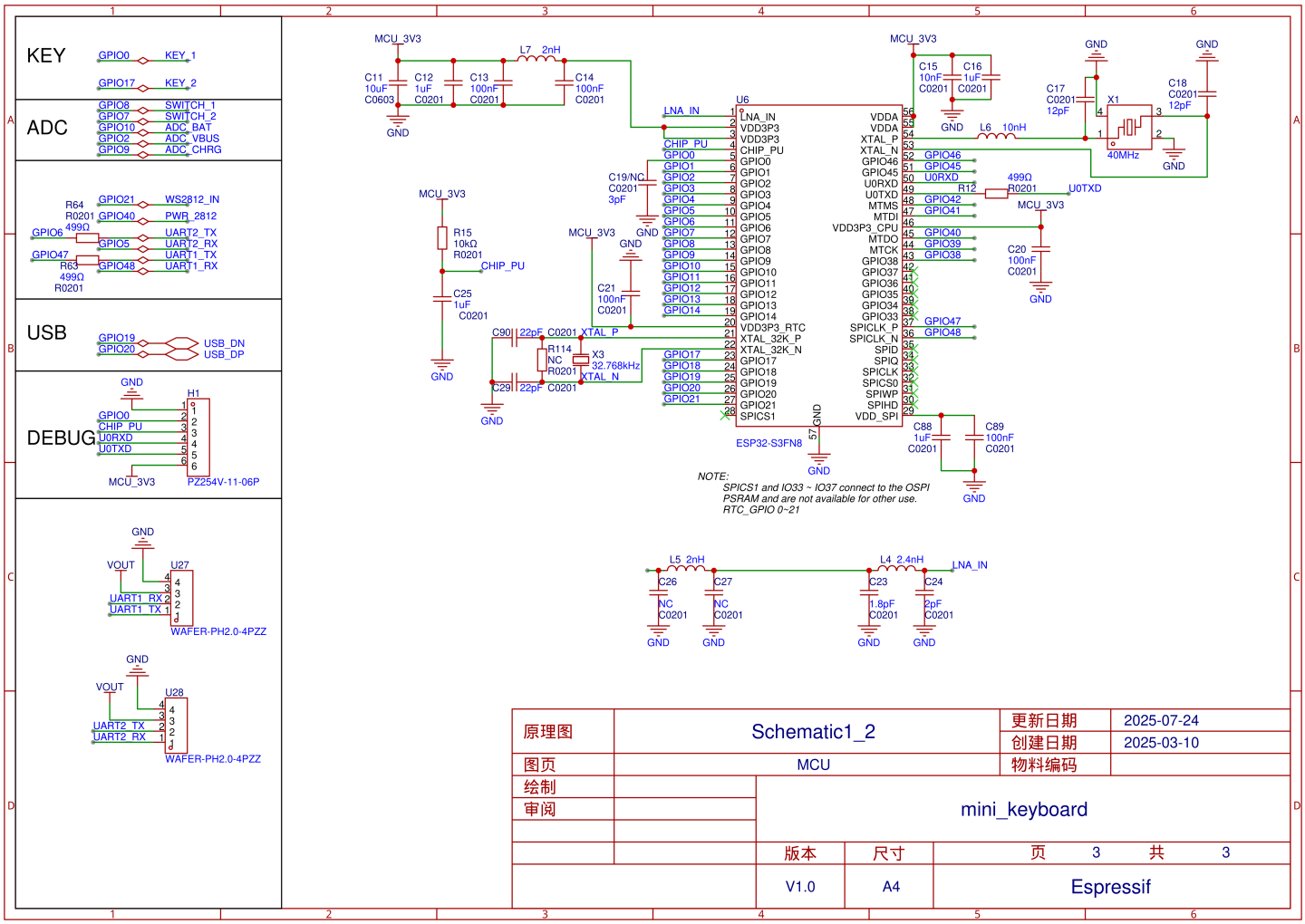


PinMap

KEY

Chain DualKey	G0	G17
KEY_1	INPUT	
KEY_2		INPUT

RGB LED

Chain DualKey	G21	G40
WS2812	INPUT	
WS2812_PWR		PWR_EN

ADC

Chain DualKey	G8	G7	G10	G2	G9
SWITCH_1	INPUT				
SWITCH_2		INPUT			
ADC_BAT			ADC_BAT		
ADC_VBUS				ADC_VBUS	
ADC_CHARGE					ADC_CHARGE

Note

When using, please do not configure SWITCH_1, SWITCH_2 as high-level outputs, otherwise the device will not be able to power off normally.

USB

Chain DualKey	G19	G20
USB	USB_DN	USB_DP

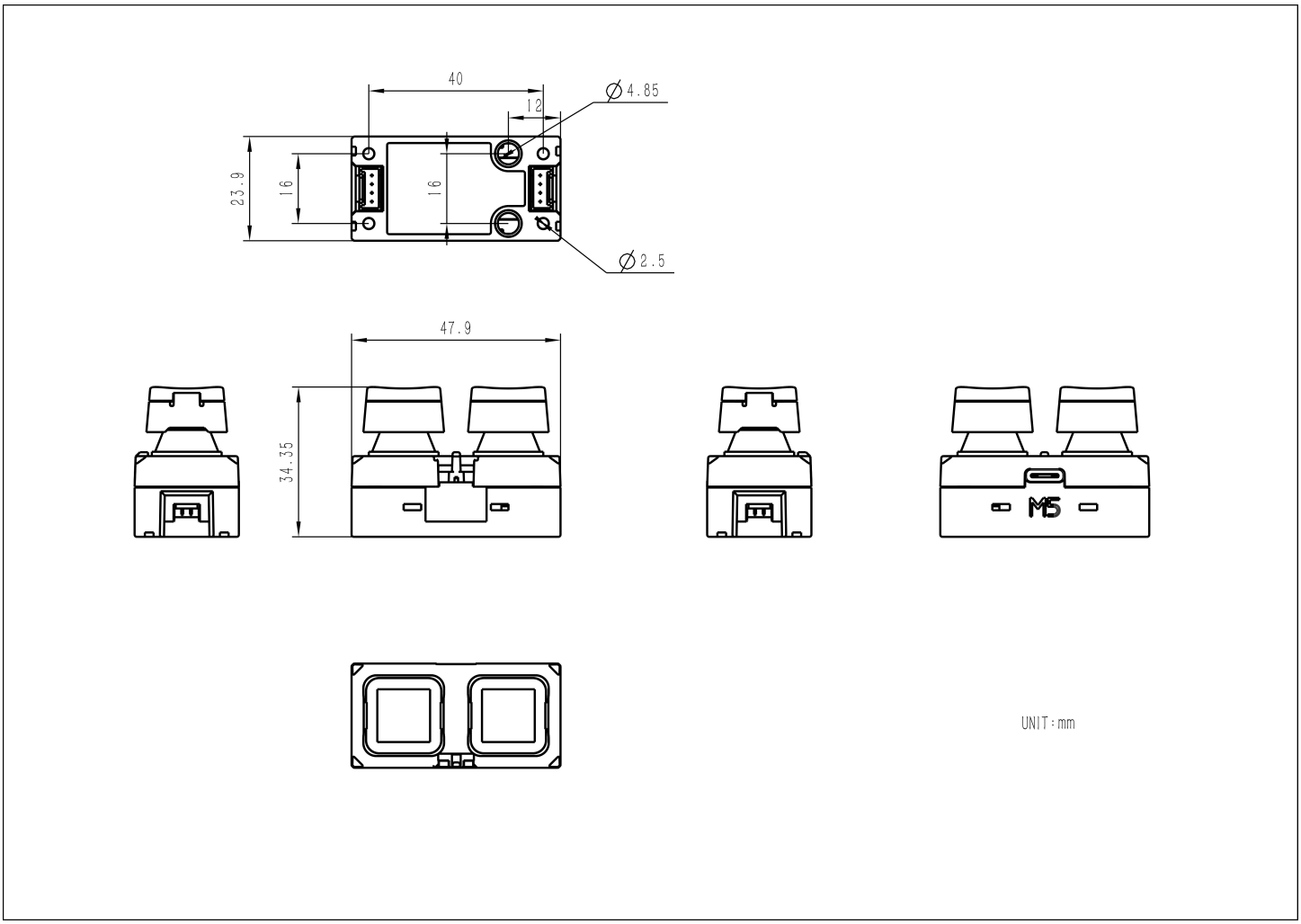
HY2.0-4P

Chain DualKey	GND	VOUT	G48	G47
HY2.0-4P_1	GND	5V	UART1_RX	UART1_TX

Chain DualKey	GND	VOUT	G5	G6
HY2.0-4P_2	GND	5V	UART2_RX	UART2_TX

Model Size

- Chain DualKey Model Size PDF



Datasheets

- ESP32-S3

Softwares

Quick Start

- Chain DualKey Factory Firmware Usage Tutorial

Arduino

- Chain DualKey Arduino Quick Start
- Chain Series Product Driver Library

ESP-IDF

- Chain DualKey Factory Firmware Source Code

Video

- Chain DualKey Product Introduction and Function Demonstration

C147-Chain-Dualkey-video-EN.mp4