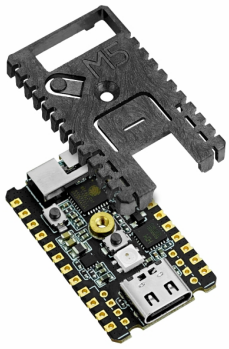
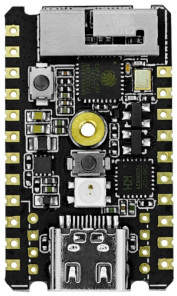
Stamp-C3 Mate

SKU:K056





Description

Stamp-C3 Mate is an accessory kit for the Stamp-C3 minimal core board. The kit includes the Stamp-C3, along with practical accessories such as female headers, male headers, and HY2.0-4P female connectors, allowing you to quickly integrate the Stamp-C3 into your circuits. The Stamp-C3 is a cost-effective **Wi-Fi minimal core board**. The module features the **ESP32-C3** main control chip, which is equipped with a **RISC-V** 32-bit single-core processor with a clock frequency of up to 160 MHz. It has 400 KB SRAM + 4MB FLASH and integrates 2.4 GHz Wi-Fi. The core board supports security mechanisms such as secure boot, Flash encryption, and digital signatures. Despite its compact size, it is highly functional and can meet diverse IoT application needs.

Features

- Supports multiple application forms (SMT, DIP, flying leads)
- Comes with high-temperature plastic armor, supports SMT reflow temperature (230°C)
- Includes 5V->3.3V DC/DC circuit, GPIOx13
- Type-C interface
- Programmable RGB LED x1, reset button x1, button x1
- High-performance 3D antenna, providing stable and reliable wireless communication quality
- ESP32 minimal system board
- Development Platform
  - Arduino IDE
  - ESP-IDF
  - PlatformIO

Includes

- 1 x Stamp-C3
- 1 x High-temperature resistant sticker
- 1 x 2.54-12P female header
- 1 x 2.54-12P male header
- 1 x 2.54-10P female header
- 1 x 2.54-10P male header
- 2 x HY2.0-4P female connector (90°)
- 1 x L-shaped 1.5mm hex wrench (compatible with M2 screws)

Applications

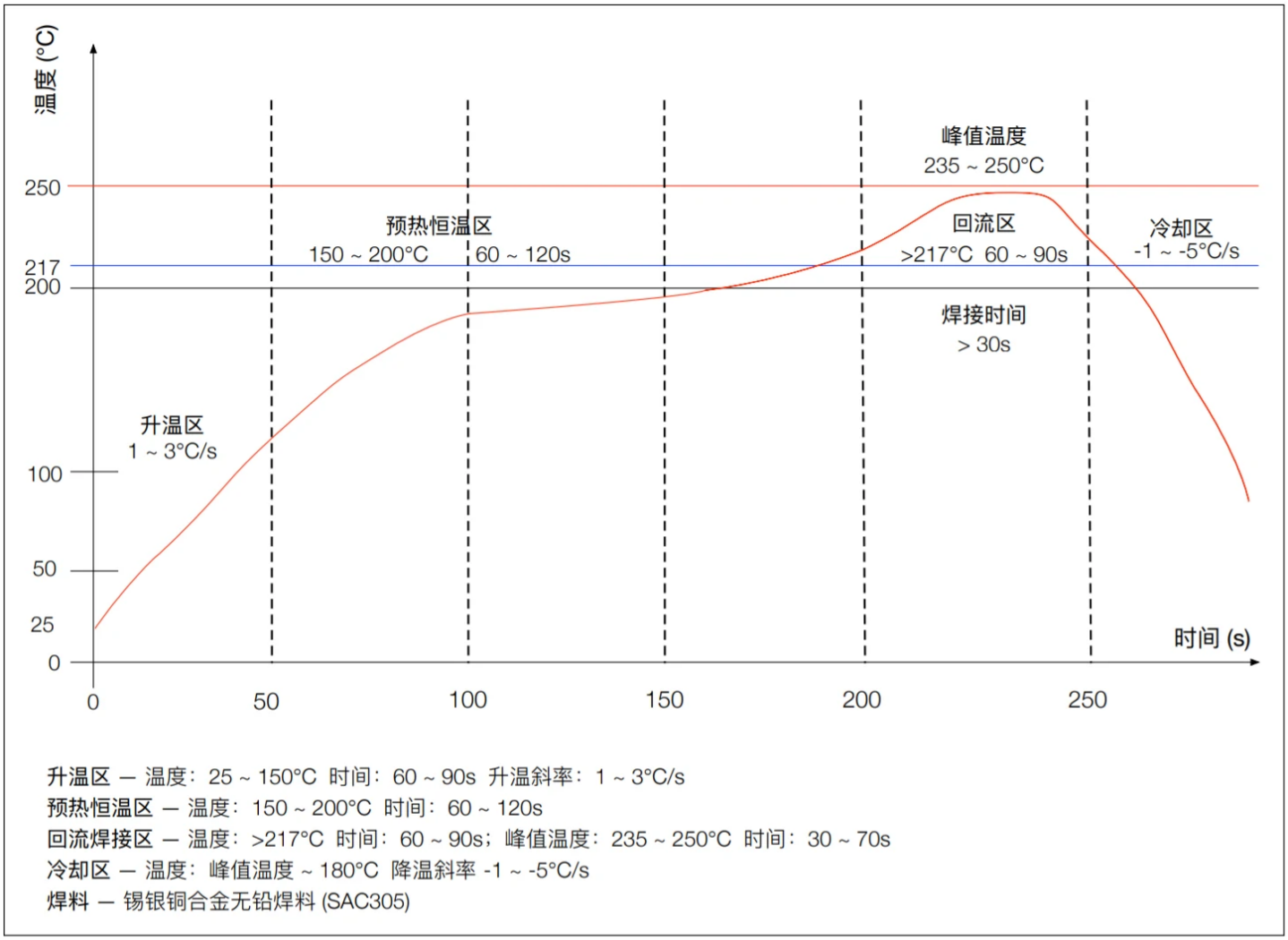
- DIY prototyping
- Industrial automation
- Smart home

Specifications

Specification	Parameter
SoC	ESP32-C3@32-bit RISC-V Single-Core Processor, Main Frequency up to 160MHz
Flash	4MB
SRAM	400KB
ROM	384KB
RTC SRAM	8KB
Wi-Fi	2.4 GHz Wi-Fi (supports 20/40MHz bandwidth, 802.11 b/g/n, up to 150Mbps)
Input Voltage	5V@500mA
Human-Machine Interaction	Programmable Physical Button x 1, Reset/Debug Button x 1, Programmable RGB LED (SK6812) x 1
USB Interface	USB Type-C x 1
Antenna Type	2.4G 3D Antenna
Module Peripheral Interface Resources	ADC, GPIO, SPI, UART, I2C, I2S, PWM, RMT, DMA, USB Serial, TWAI
IO Interfaces x13	G21, G20, G9, G18, G19, G1, G0, G10, G8, G7, G6, G5, G4
IO Interface Pitch	2.54mm
Mounting Screw Specification	M2 x 4 Countersunk Hex Socket Machine Screw
Product Size	34.0 x 20.0 x 4.6mm
Product Weight	4.1g
Package Size	138.0 x 93.0 x 10.0mm
Gross Weight	9.4g

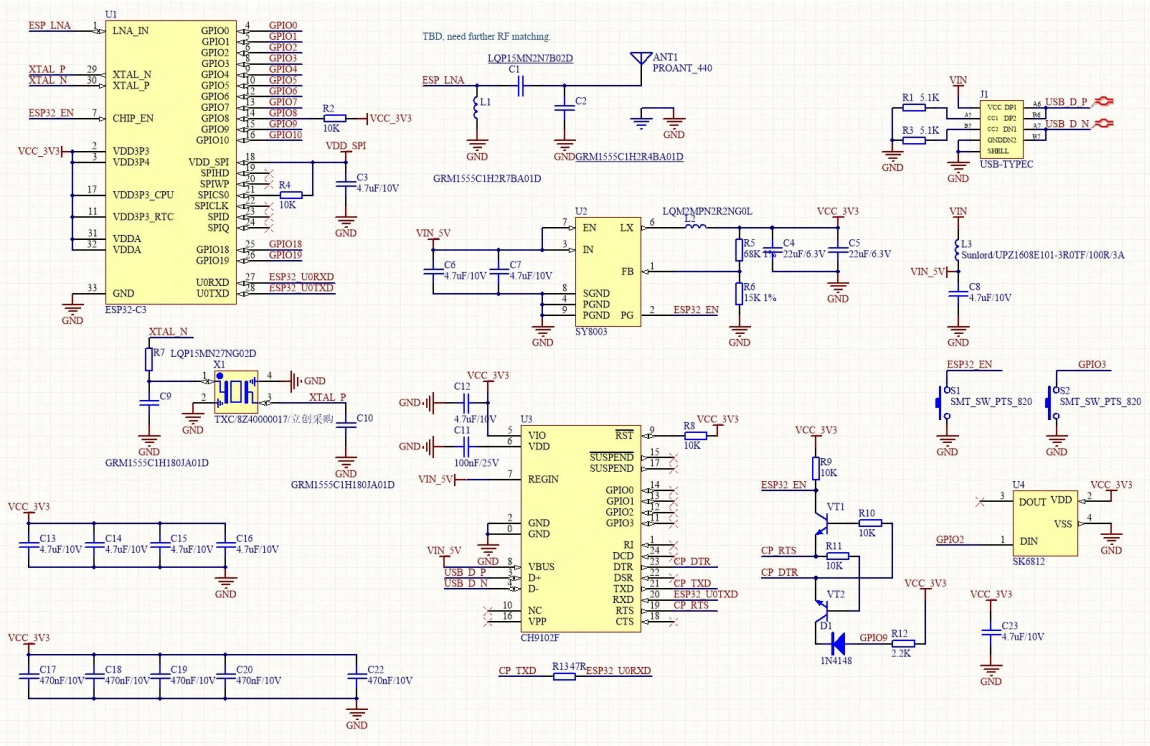
Learn

Shell Supports Reflow Soldering Temperature Curve

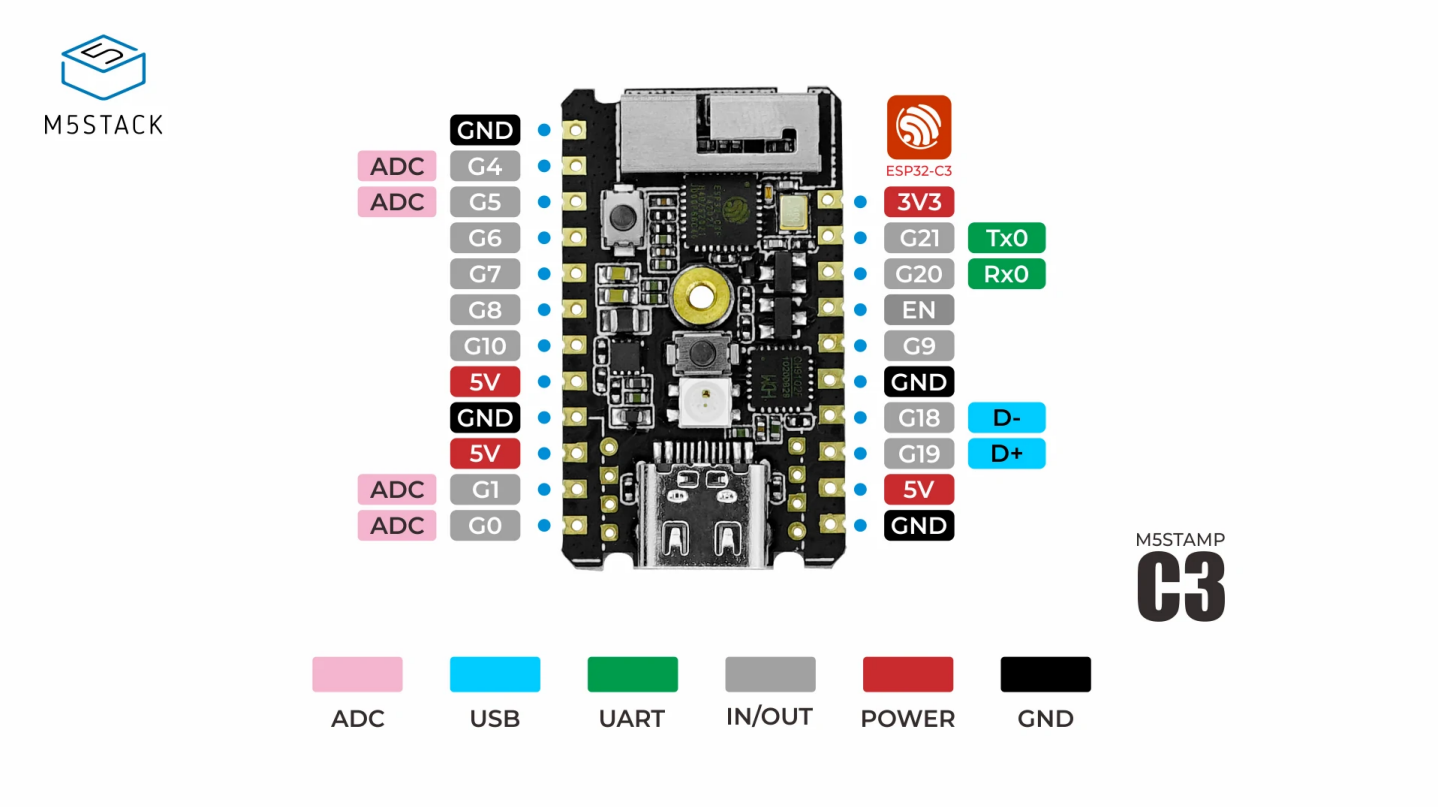


升温区 — 温度：25 ~ 150°C 时间：60 ~ 90s 升温斜率：1 ~ 3°C/s
预热恒温区 — 温度：150 ~ 200°C 时间：60 ~ 120s
回流焊接区 — 温度：>217°C 时间：60 ~ 90s；峰值温度：235 ~ 250°C 时间：30 ~ 70s
冷却区 — 温度：峰值温度 ~ 180°C 降温斜率 -1 ~ -5°C/s
焊料 — 锡银铜合金无铅焊料 (SAC305)

Schematics



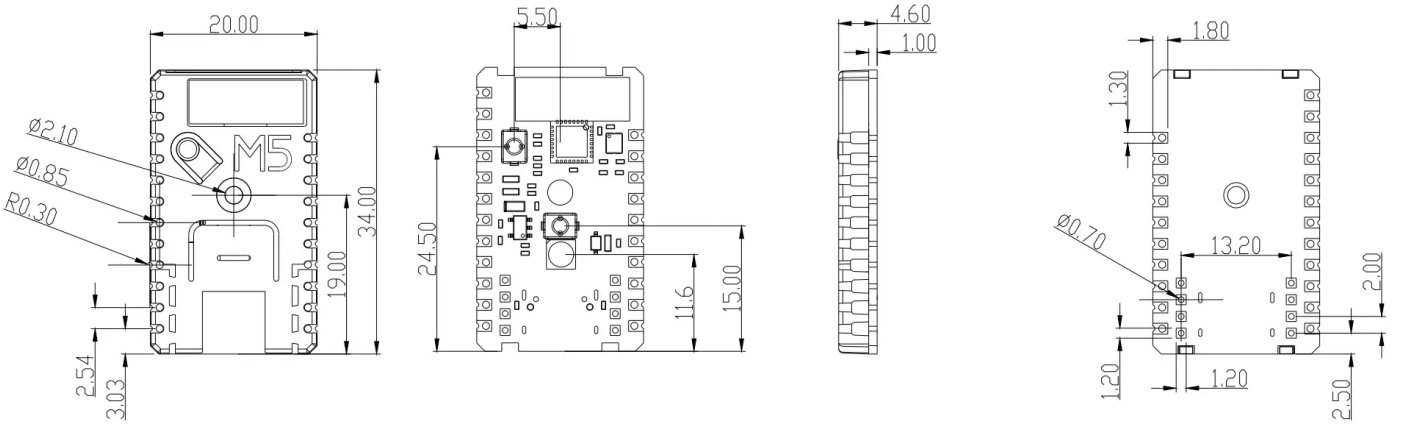
PinMap



SK6812 & Button

ESP32-C3	G2	G3
SK6812	DI	/
Button	/	SW

Model Size



PCB

- LCEDA Stamp-C3 Component

Datasheets

- ESP32-C3

Softwares

Arduino

- Stamp-C3 Test Example

ESP-IDF

- Stamp-C3 RGB LED Control Example

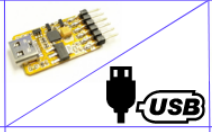
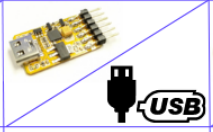
USB Driver

Click the link below to download the driver that matches your operating system. Select the installation package corresponding to your operating system's bit version. (If you are unsure of the USB chip used by your device, you can install both drivers. **CH9102_VCP_SER_MacOS v1.7** may show an error during installation, but it is actually installed successfully, so you can ignore the error.) If you encounter issues with downloading the program (e.g., timeout or "Failed to write to target RAM"), try reinstalling the device driver.

Driver Name	Compatible Chip	Download Link
CH9102_VCP_SER_Windows	CH9102	Download
CH9102_VCP_SER_MacOS v1.7	CH9102	Download

Product Comparison

M5STAMP Comparison chart

COMPARISON	STAMP PICO	STAMP C3U	STAMP C3	STAMP S3
PICTURE				
Number of IO ports	12	14	13	23
FLASH	4M	4M	4M	8M
Serial IC	/	USB CDC	CH9102F	USB CDC
Download method				 OTG
Pin spacing	2.54mm	2.54mm	2.54mm	2.54mm/ 1.27mm
LCD interface	✗	✗	✗	✓
CPU frequency	240MHz	160 MHz	160 MHz	240MHz
Size	24 × 18 × 4.6mm	34 × 20 × 4.6mm	34 × 20 × 4.6mm	26 × 18 × 4.6mm