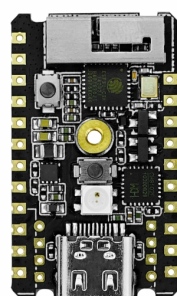
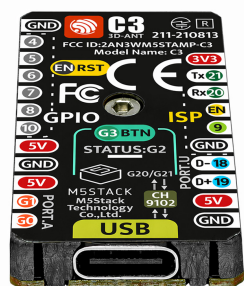
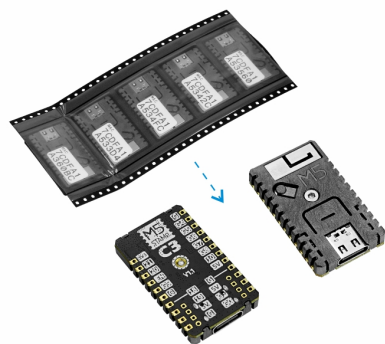
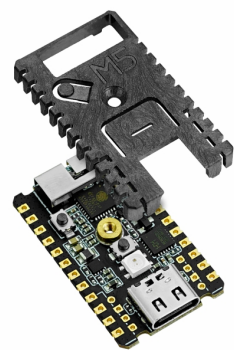
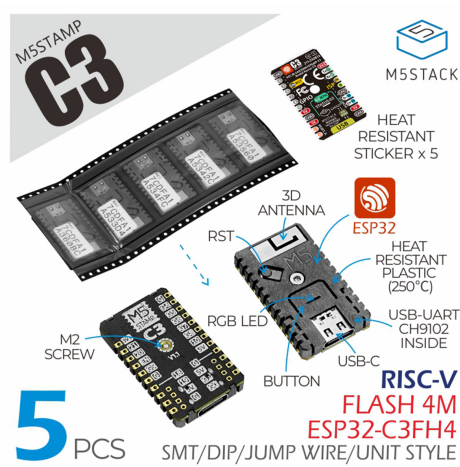
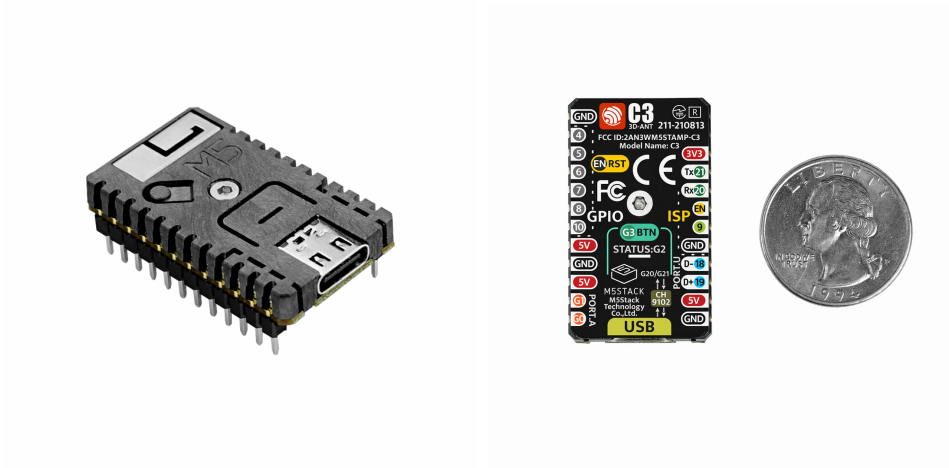


Stamp-C3

SKU:C056-B

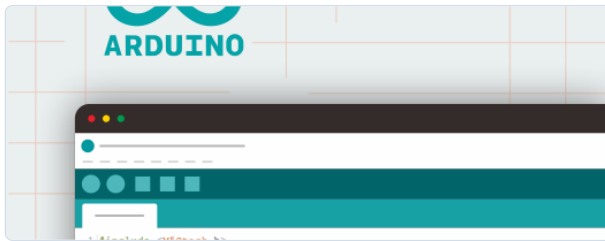




Description

Stamp-C3 is a cost-effective, minimal RISC-V core board powered by the **ESP32-C3** SoC from Espressif. It integrates a 32-bit single-core **RISC-V** processor running at up to 160 MHz, 400 KB SRAM, and 4 MB FLASH, together with 2.4 GHz Wi-Fi connectivity. The board supports secure boot, Flash encryption, digital signature and other security features. Despite its tiny size, it delivers robust performance to meet diverse IoT application requirements.

Tutorial



Arduino IDE

This tutorial will show you how to program and control the Stamp-C3 device with the Arduino IDE.

Features

- Supports multiple mounting methods (SMT, DIP, flying leads)
- Equipped with a high-temperature plastic shield, compatible with SMT reflow (230 °C)
- On-board 5 V → 3.3 V DC/DC, 13 × GPIOs
- Type-C port
- 1 × programmable RGB LED, 1 × reset button, 1 × user button
- High-performance 3D antenna for stable, reliable wireless communication
- Smallest ESP32 system board
- Development Platform
 - Arduino IDE
 - ESP-IDF
 - PlatformIO

Includes

- 5 × Stamp-C3
- 5 × High-temperature Labels

Applications

- DIY prototyping

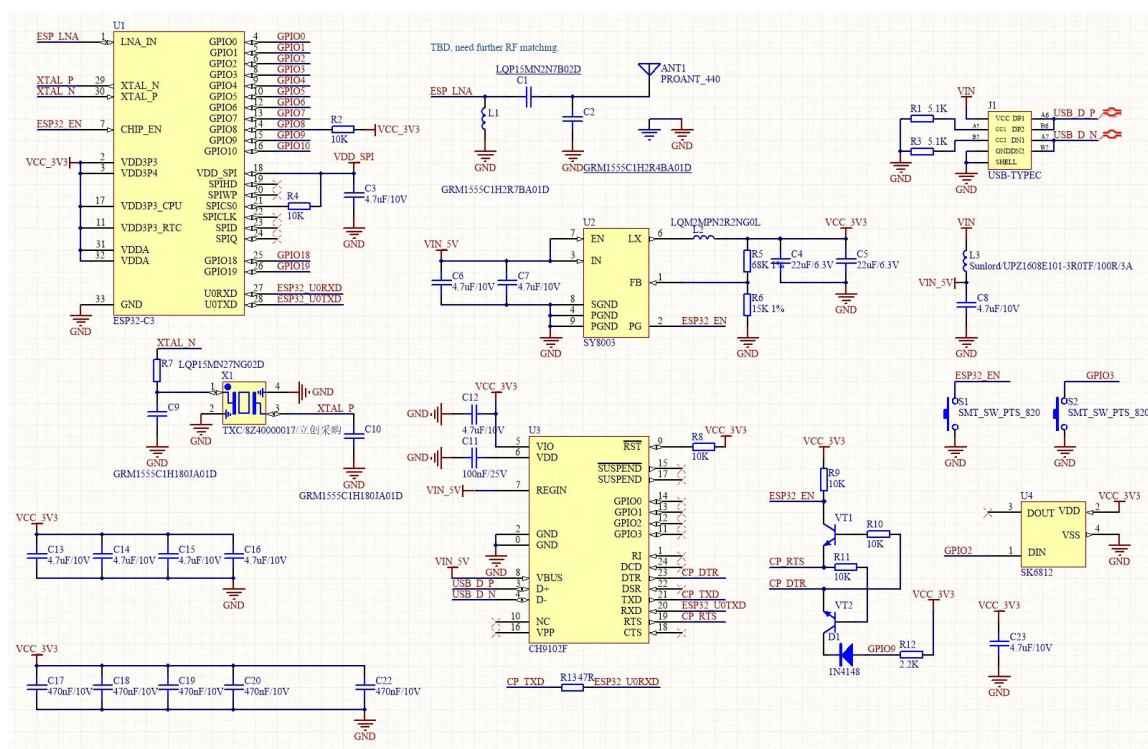
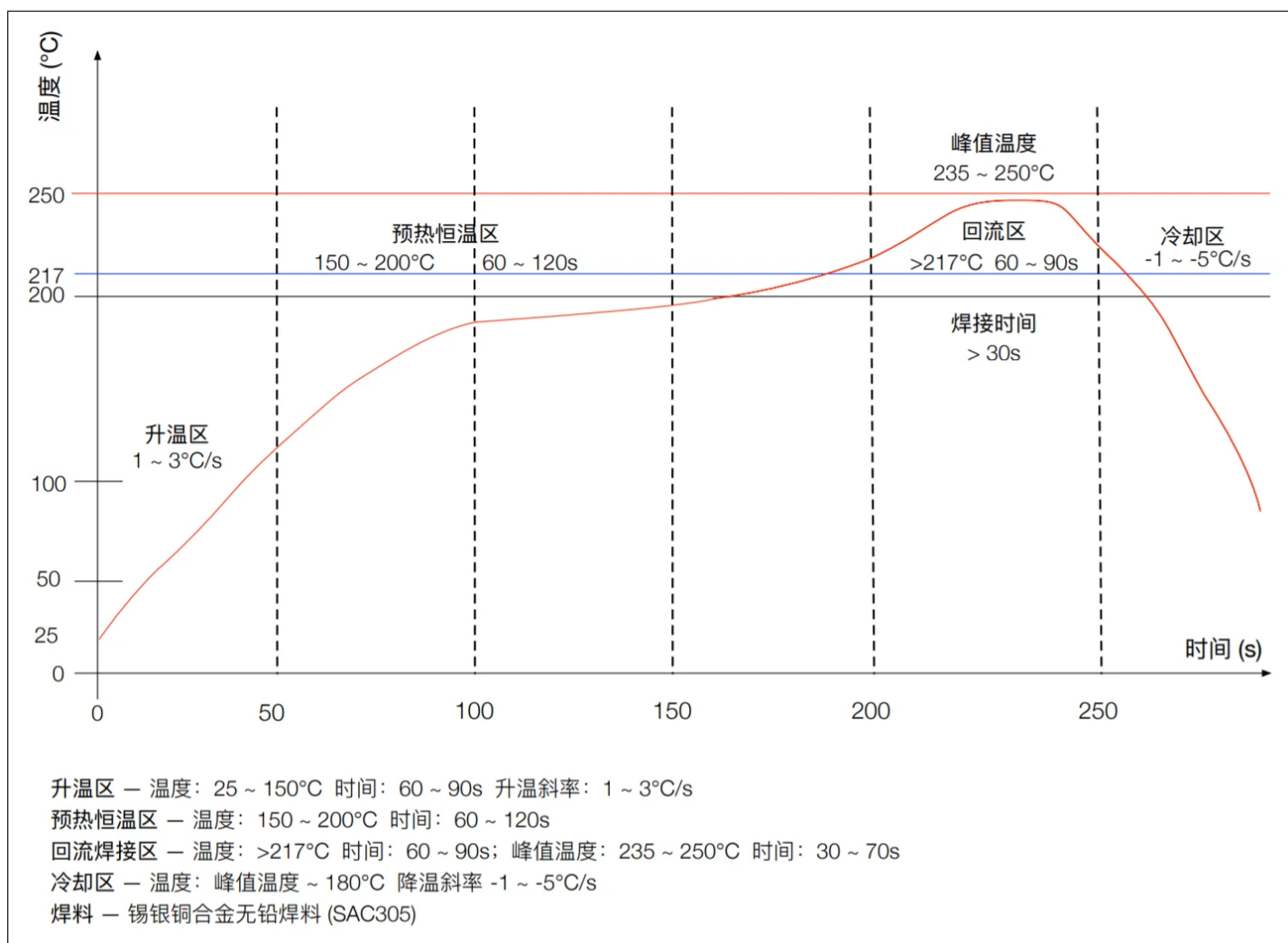
- Industrial automation
- Smart home

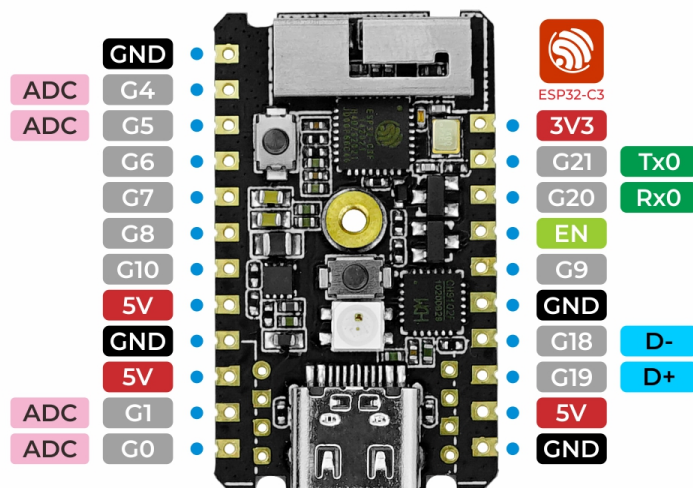
Specifications

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
Single Product Weight	4.1g
Package Size	138.0 x 93.0 x 5.6mm
Gross Weight	23.3g

Learn

Reflow Profile Supported by the Enclosure



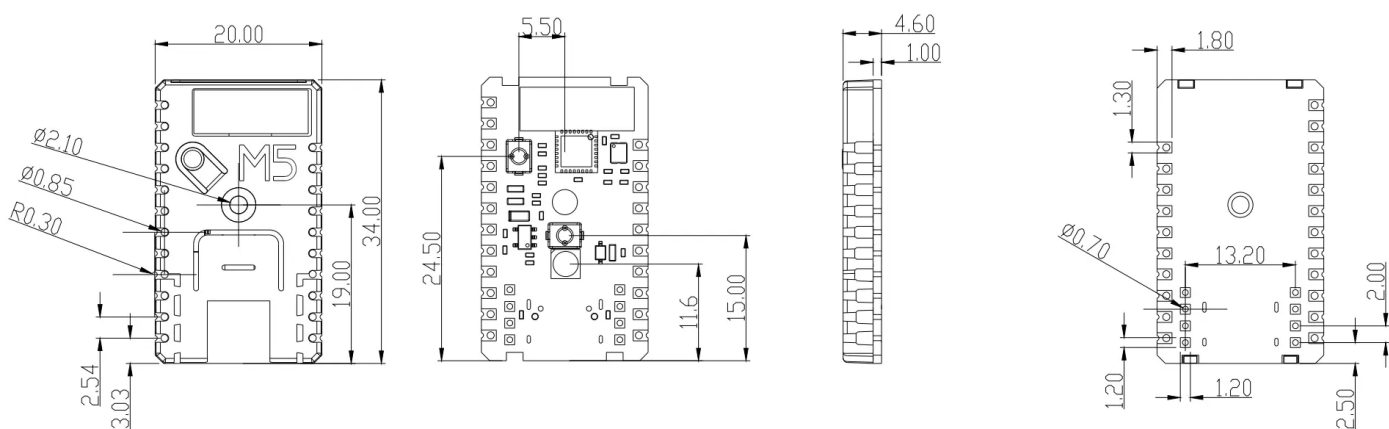


M5STAMP
C3

SK6812 & Button

ESP32-C3	G2	G3
SK6812	DI	/
Button	/	SW

Model Size



Top View

Side View

Bottom View

UNIT: mm

Structure

- [Stamp-C3 Structure Files](#)

PCB

- [Stamp-C3 KiCad Library](#)
- [Stamp-C3 PcbDoc](#)

Datasheets

- [ESP32-C3](#)

Softwares

Arduino

- [Stamp-C3 Arduino Quick Start](#)
- [Stamp-C3 Test Program](#)

ESP-IDF

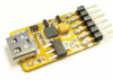
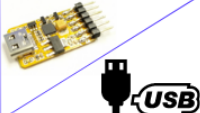
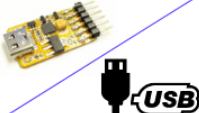
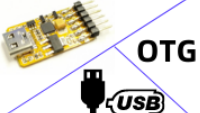
- [Stamp-C3 RGB LED Control Example](#)

USB Driver

Click the link below to download the driver for your operating system. Choose the installer that matches your OS bit version. (If you are unsure which USB chip your device uses, you can install both drivers. **CH9102_VCP_SER_MacOS v1.7** may report an error during installation, but the driver is actually installed—just ignore the message.) If you encounter issues such as download timeout or “Failed to write to target RAM,” try reinstalling the driver.

Driver Name	Supported Chip	Download
CH9102_VCP_SER_Windows	CH9102	Download
CH9102_VCP_SER_MacOS v1.7	CH9102	Download

Product Comparison

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				
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

To compare information on the Stamp series products, you can visit the [Product Selection Table](#), check the target products, and get the comparison results. The selection table covers key information such as core parameters and functional features, and supports comparison of multiple products simultaneously.