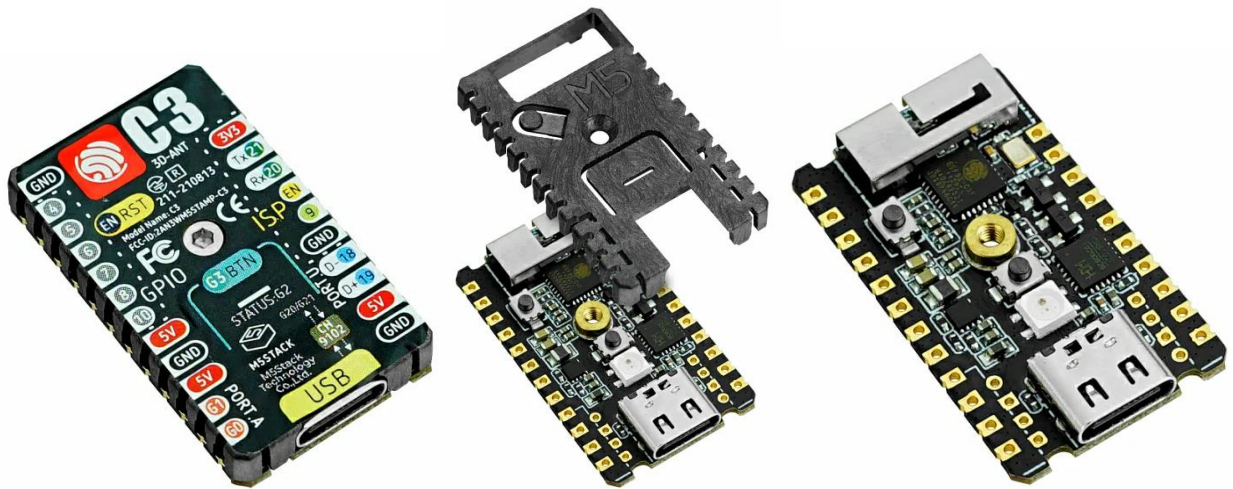




M5STACK

STAMP-C3

SKU:C056-B, K056



Quick-Start



ESP-IDF

This tutorial will show you how to control STAMP-C3 devices through the IDF graphical programming platform

Description

M5Stack just added a new family to its popular series of modules with the Stamp-C3. the new Stamp-C3 featuring ESPRESSIF ESP32-C3 **RISC-V** MCU with **Wi-Fi** connectivity for IoT edge devices such as home appliances and Industrial Automation. By combining RSA-3072-based secure boot and the AES-128-XTS-based flash encryption, while also make it optimal for industrial IoT equipment collecting sensor data within a factory or a building.

The Stamp-C3 is based on **32-bit RISC-V** microcontroller and operates at a maximum clock frequency of **160 MHz**. With 400 KB of internal RAM and **4 MB Flash**, it can facilitate many different use-cases involving connected devices. Furthermore, the exceptional heat resistance plastic enclosure is sustained at a higher operating temperature.

Product Features

- MULTIPLE STYLE:
 - Three types soldering options are available(SMT, DIP, flywire), with a high-temperature resistant plastic enclosure, Peak temperature = 230°C
- HIGH INTEGRATION:
 - Stamp-C3 contains 5V->3.3V DC/DC design, GPIOx13, programmable RGB LED x1, Reset button x1, button x1, 3D antenna,providing stable and reliable wireless communication.
- LOW-CODE DEVELOPMENT:
 - Stamp-C3 fully compatible with Arduino, ESP32-IDF, and other mainstream development platforms to quickly build various applications. (UIFlow support coming soon)

Include

- M5Stamp C3 (5pcs):
 - 5 x M5Stamp C3
 - 5 x Heat Resistant Sticker



- M5Stamp C3 Mate:
 - 1 x M5Stamp C3
 - 1 x Heat Resistant Sticker
 - 2 x 2.54-12P header
 - 2 x 2.54-10P header
 - 2 x 90° Grove Connector
 - 1 x M2 Hex Key



Application

- DIY Prototyping
- Home Appliances
- Industrial Automation

Specifications	Parameters
ESP32-C3	32bit RISC-V single-core processor, clocked at 160 MHz
Storage	384KB ROM, 400KB SRAM, 8KB RTC SRAM, 4MB FLASH
Wi-Fi	2.4 GHz band supports 20 MHz and 40 MHz bandwidth, IEEE 802.11 b/g/n protocol, data rate up to 150 Mbps
Input voltage	5V @ 500mA
HMI	Programmable physical button x 1, reset debugging button x 1, programmable RGB LED (SK6812) x 1
USB interface	TypeC x1
Antenna Type	2.4G 3D Antenna
Module peripheral interface resources	ADC, GPIO, SPI, UART, I2C, I2S, PWM, RMT, DMA, USB serial port, TWAI
IO interface x13	G21, G20, G9, G18, G19, G1, G0, G10, G8, G7, G6, G5, G4
IO interface spacing	2.54mm
Net weight	3.8g
Product size	34 * 20 * 4.6mm
Packing size	85*55mm sealing bag (translucent)

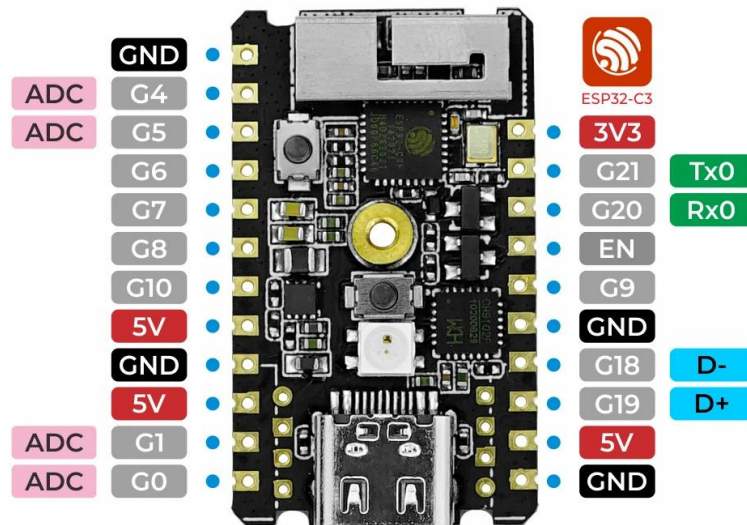


Driver Installation

Click the link below to download the driver that matches the operating system. select the installation package corresponding to the number of operating systems to install. During the installation process of **CH9102_VCP_SER_MacOS v1.7**, an error may occur, but the installation is actually completed, just ignore it.) When using it, if If the program cannot be downloaded normally (the prompt is overtime or Failed to write to target RAM), you can try to reinstall the device driver.

Driver name	Applicable driver chip	Download link
CH9102_VCP_SER_Windows	CH9102	Download
CH9102_VCP_SER_MacOS v1.7	CH9102	Download

PinMap



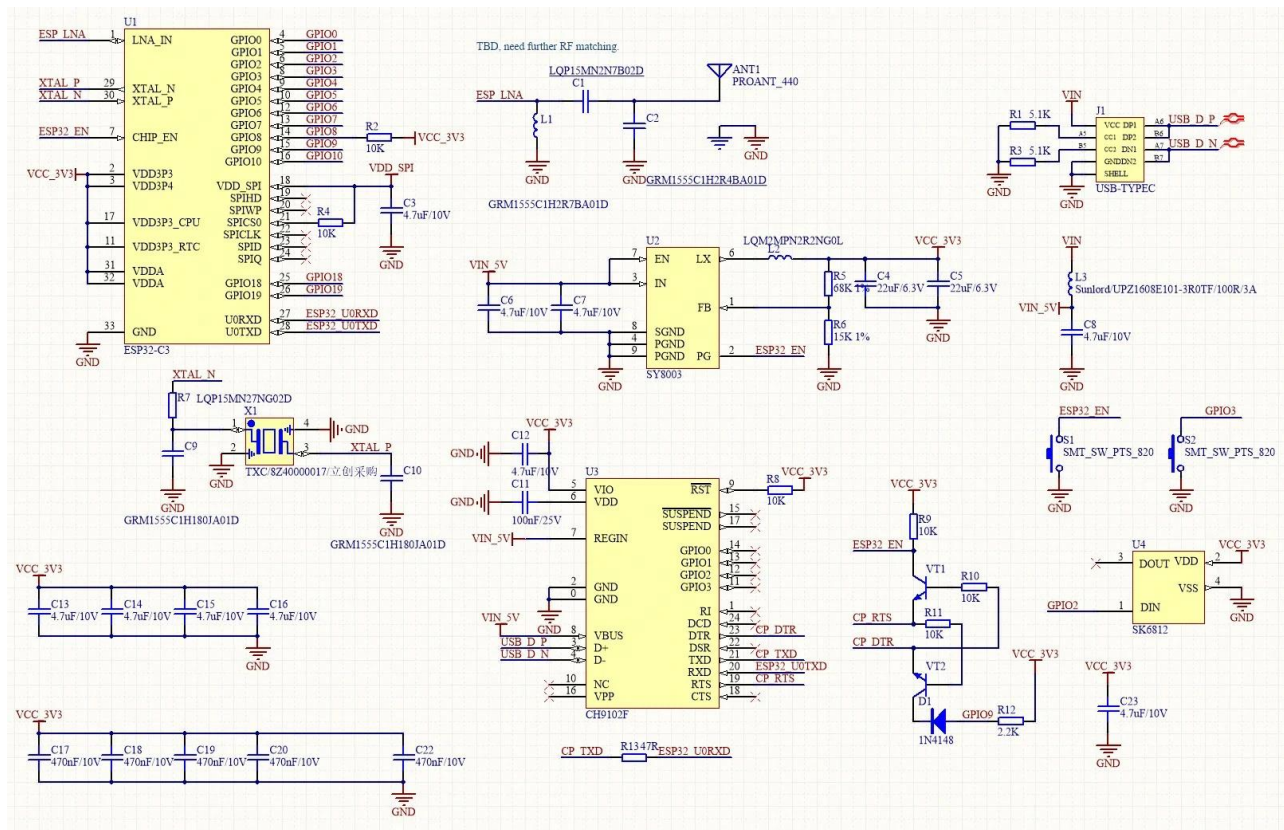
M5STAMP
C3



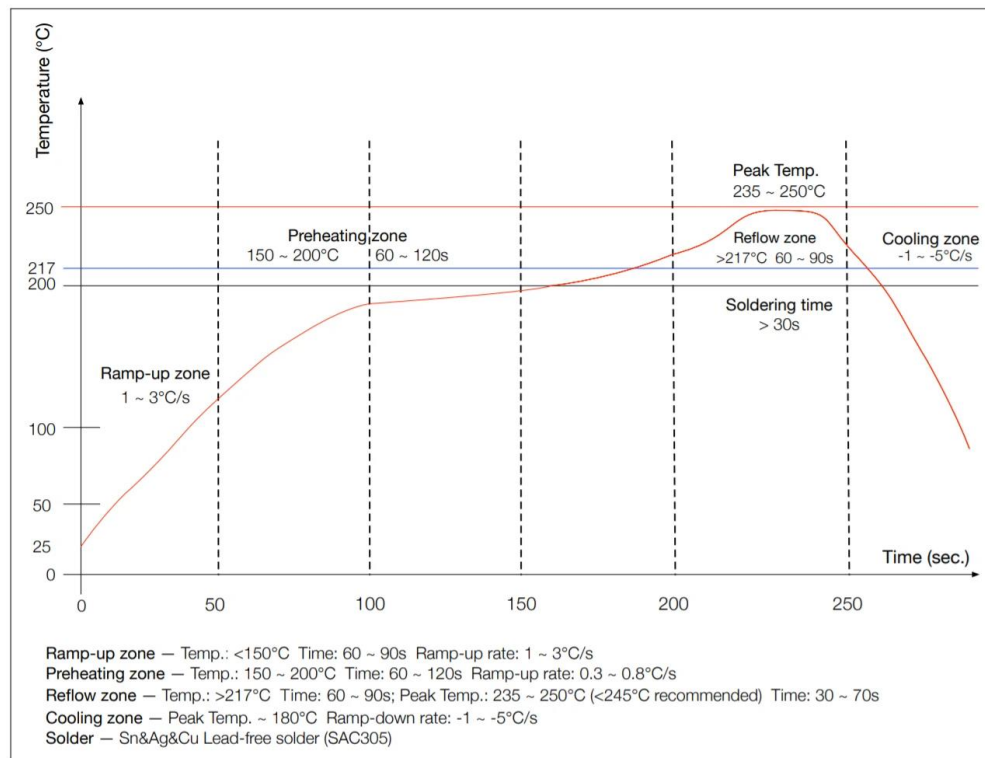
SK6812 (RGB LED) and Button

ESP32	GPIO2	GPIO3
SK6812	DI	/
Button	/	SW

Schematic



The shell supports Reflow Profile



Related Links

- **Datasheet**
 - [ESP32-C3](#)
- **PCB**
 - [LCEDA STAMP-C3 Component](#)

Example

ESP-IDF

- [RGB LED Control](#)