

StampS3

SKU:S007



Description

STAMPS3 is a highly integrated embedded controller designed for IoT applications. It utilizes the Espressif ESP32-S3FN8 main control chip and features 8MB of SPI flash memory. Powered by a high-performance Xtensa 32-bit LX7 dual-core processor, STAMPS3 delivers impressive processing power with a main frequency of up to 240MHz. This module is specifically designed to meet the demands of IoT projects that require embedded main control modules.

STAMPS3 comes equipped with a built-in highly integrated 5V to 3.3V circuit, ensuring stable power supply for reliable operation. It features an RGB status indicator and a programmable button for enhanced user control and visual feedback. The module conveniently leads out 23 GPIOs on the ESP32-S3, allowing for extensive expansion capabilities. The GPIOs are accessible through 1.27mm/2.54mm spacing leads, supporting various usage methods such as SMT, DIP row, and jump wire connections. STAMPS3 offers a compact form factor, delivering strong performance, rich expansion IO, and low power consumption.

STAMPS3 is the ideal choice for IoT application scenarios that require the integration of embedded controllers. Its compact volume and powerful features make it suitable for a wide range of projects, providing reliable performance and flexible expansion options.

Download Mode

If you want to enter download mode, press and hold the G0 button on StampS3 before turning it on, then release it after powering it on.



Note

GPIO46 is drop-down by default.

Tutorial



Arduino IDE

This tutorial will show you how to program and control STAMPS3 devices through Arduino IDE

UIFlow2.0

This tutorial will show you how to control the STAMPS3 device through the UIFlow2.0 graphical programming platform

Features

- ESP32-S3FN8(2.4GHz Wi-Fi)
- Minimal system board
- Multi-IO lead-out, support multiple application forms (SMT, DIP, flying wire)
- Integrated programmable RGB LEDs and buttons
- Support UIFlow graphical programming

Includes

- 1x StampS3
- 1x HY2.0-4P terminal
- 1 x 2.54-9P header
- 1 x 2.54-6P header
- 1 x Hex Key
- 1 × User manual

Applications

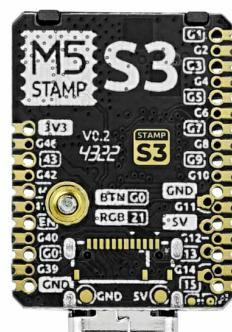
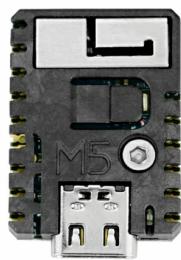
- Smart home
- Wearables
- Medical equipment

Specification

Resources	Parameters
MCU	ESP32-S3FN8
DCDC	Highly integrated MIWIN3CAD01-SC

Key integrated modules	
Flash	8MB
Input voltage	5V
Interactive	Programmable physical buttons x 1, programmable RGB LED (WS2812B-2020) x 1
Antenna type	2.4G 3D antenna
Module resource interface	Touch sensor, SD/SDIO/MMC master controller, SPI, SDIO/SPI slave controller, EMAC, motor PWM, LED PWM, UART, I2C, I2S, GPIO, pulse counter
IO interface x23	G0/G1/G2/G3/G4/G5/G6/G7/G8/G9/G10/G11/G12/G13/G14/G15/G39/G40/G41 1/G42/G43/G44/G46
Connection method	SMT/DIP (pitch 2.54mm and 1.27mm)/Jump Wire
IO interface spacing	2.54mm和1.27mm
Lcd interface spacing	0.5mm@12pin or 8pin
Operating temperature	0°C to 40°C
Product Size	26mm × 18mm × 4.6mm

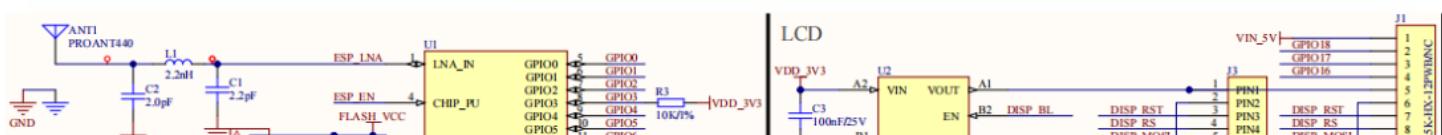
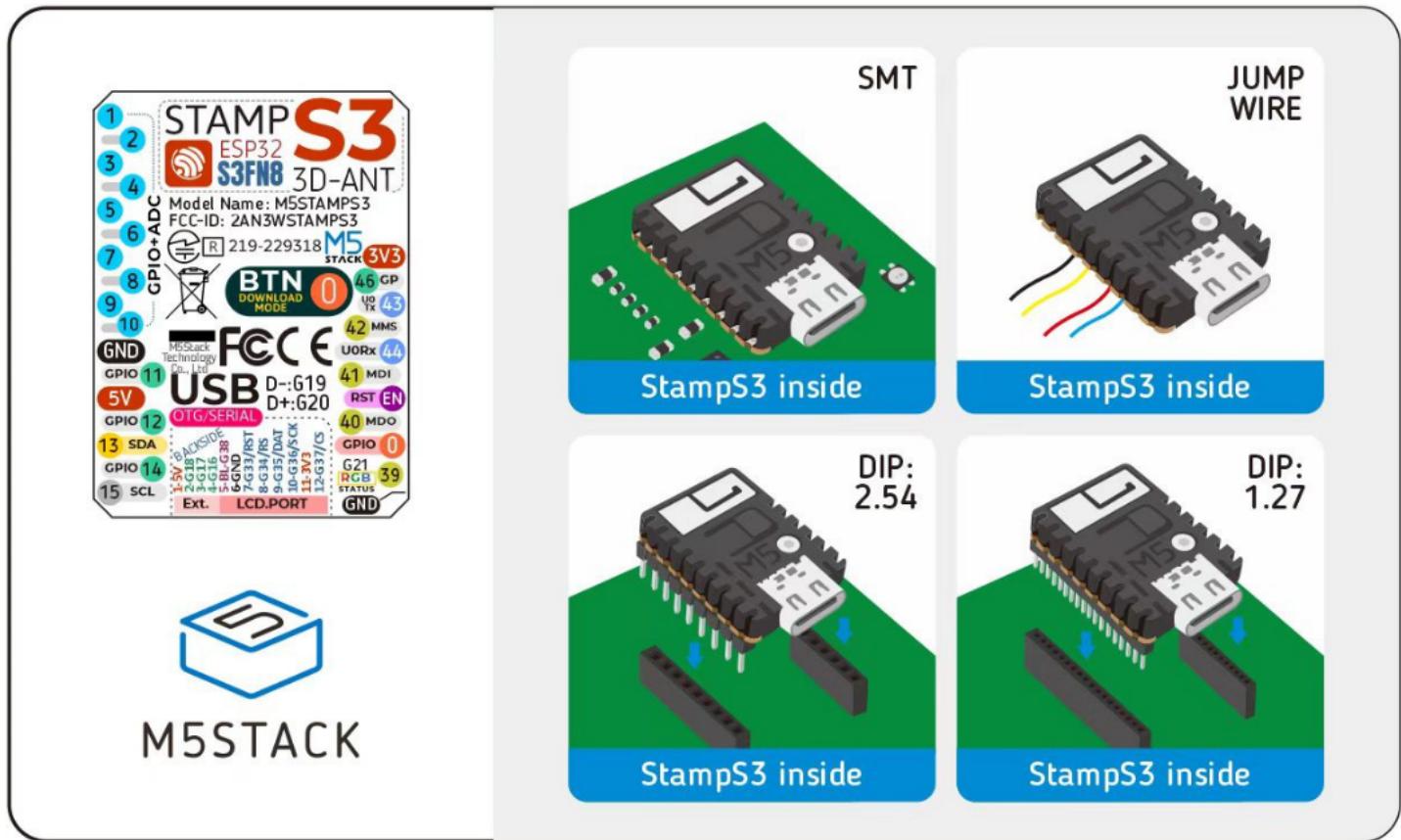
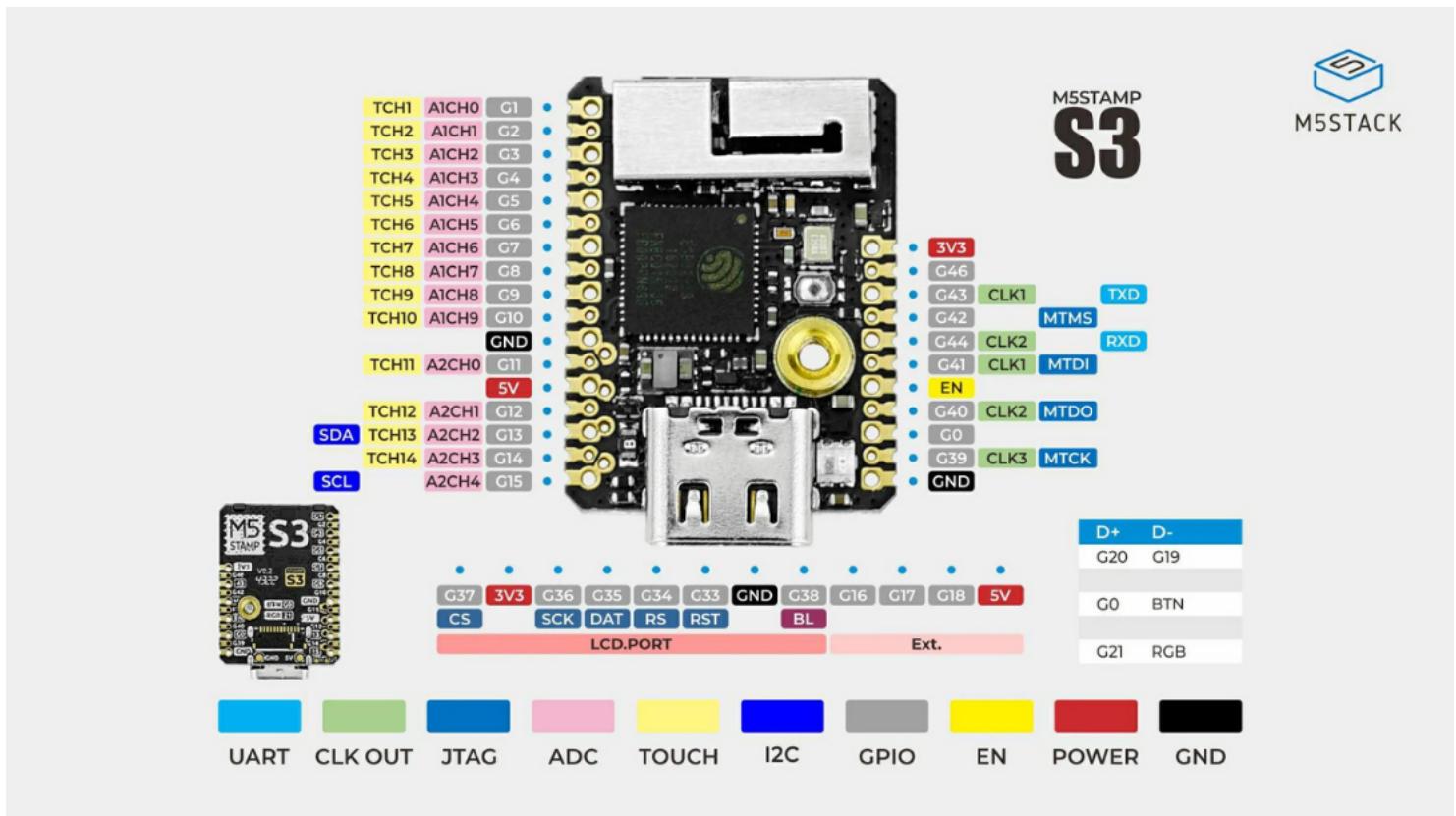
Package Size	136mm × 92mm × 13mm
Product Weight	3.2g
Package Weight	7.5g

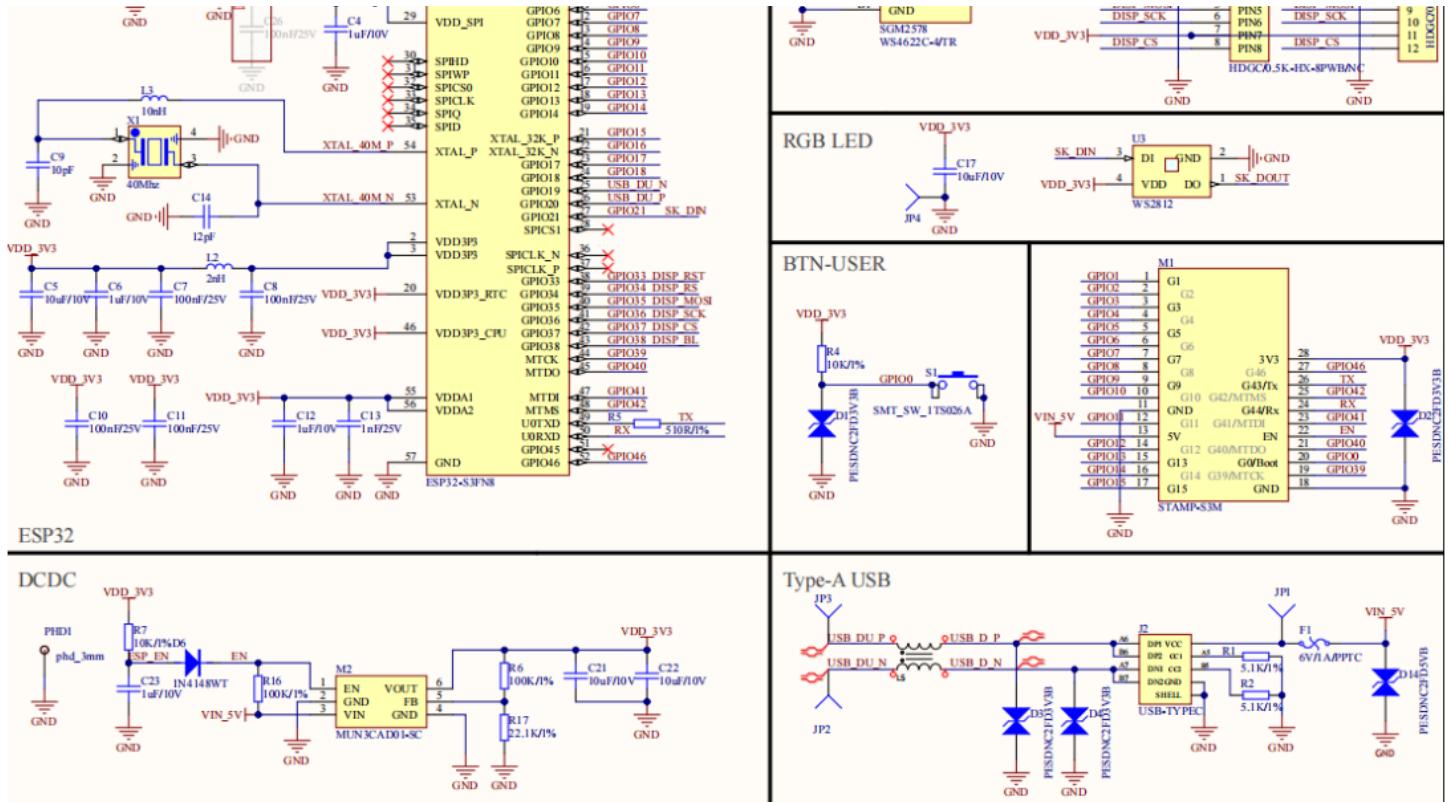


Related Link

- [ESP32-S3](#)
- [MUN3CAD01-SC](#)

Schematic





ESP32

DCDC

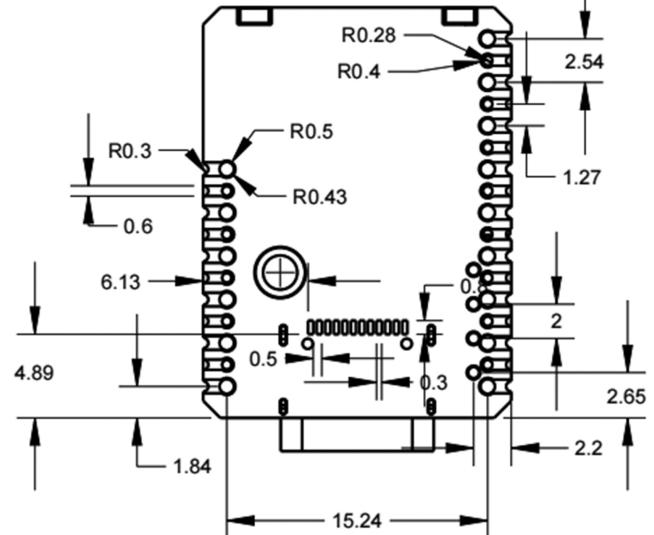
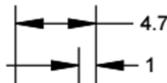
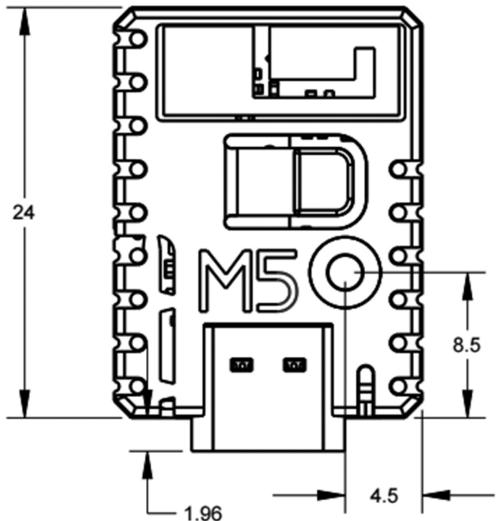
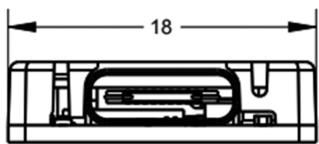
- Schematic pdf

Bottom of PCB reserved TFT screen SPI interface, FPC connector check 8PIN 和 12PIN specification.

PCB package

- kicad PCB package

Module Size

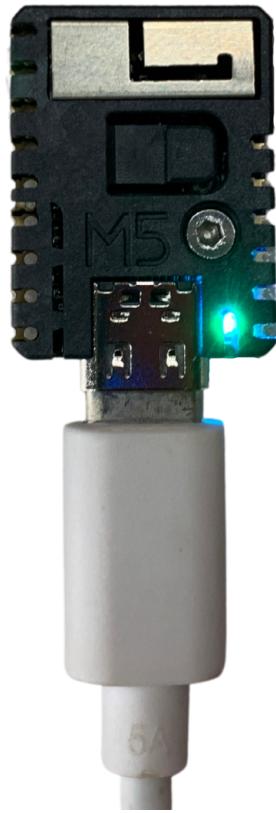


UNIT : mm

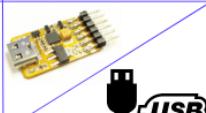
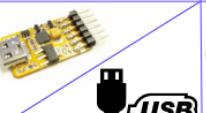
Examples

Arduino

- StampS3 Arduino Example



| Compare

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

| video
