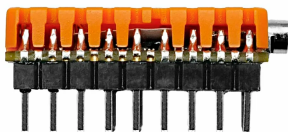
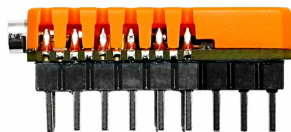
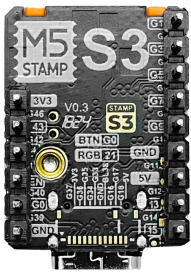
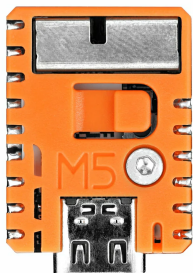
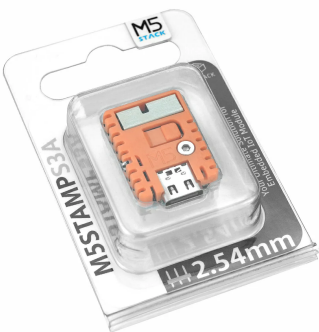


Stamp-S3A PIN2.54

SKU:S007-PIN254-V033





Description

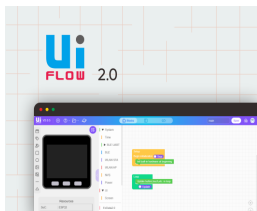
Stamp-S3A PIN2.54 is a highly integrated embedded module based on the Espressif ESP32-S3FN8, equipped with a 240MHz Xtensa® 32-bit LX7 dual-core processor, integrated 8MB Flash, programmable RGB LED, and button input. Featuring an optimized 3D antenna design, it offers enhanced wireless communication capabilities. The module breaks out 23 GPIO pins and is soldered with 2.54mm pitch SMT headers. Its compact size makes it ideal for high-density PCB integration, enabling developers to quickly build compact applications.

Tutorial



Arduino IDE

This tutorial will guide you through programming and controlling the Stamp-S3A PIN2.54 device using the Arduino IDE.



UiFlow2

This tutorial will guide you through controlling the Stamp-S3A PIN2.54 device using the UiFlow2 graphical programming platform.

Features

- ESP32-S3FN8 (2.4GHz Wi-Fi)
- 2.54mm pitch SMT interface
- 23 multifunction GPIO
- 8MB Flash
- Multiple I/O breakout, supports multiple application forms (SMT, DIP, flying wires)
- Integrated programmable RGB LED and button
- Development Platform
 - UiFlow2
 - Arduino IDE
 - ESP-IDF
 - PlatformIO

| Includes

- 1 x Stamp-S3A PIN2.54
- 1 x Pin Sticker

| Applications

- Smart home
- Smart IoT devices
- Industrial control terminals
- Smart wearable devices

| Specifications

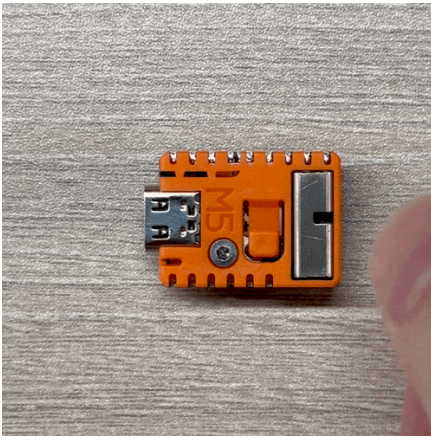
Specification	Parameter
SoC	ESP32-S3FN8 @ Xtensa® 32-bit LX7 dual-core processor, clock frequency 240MHz
Flash	8MB
DC-DC	MUN3CAD01-SC
Wi-Fi	2.4 GHz Wi-Fi
Input Voltage	DC 5V
Human Interaction	Programmable physical button x 1, Programmable RGB LED (WS2812B-2020) x 1
Antenna Type	2.4GHz 3D antenna
Module Interfaces	Touch sensor, SD/SDIO/MMC host controller, SPI, SDIO/SPI slave controller, EMAC, motor PWM, LED PWM, UART, I2C, I2S, GPIO, pulse counter
IO Ports x23	G0/G1/G2/G3/G4/G5/G6/G7/G8/G9/G10/G11/G12/G13/G14/G15/G39/G40/G41/G42/G43/G44/G46
IO Pitch	2.54mm
LCD Pitch	0.5mm@12P or 8P
Operating Temp.	0 ~ 40°C
Product Size	26.0 x 18.0 x 4.7mm
Product Weight	3.1g
Package Size	74.0 x 48.0 x 13.0mm
Gross Weight	7.6g

Learn

Download Mode

Download Mode

To enter download mode, press and hold the G0 button on the Stamp-S3A PIN2.54 before powering on, then release after powering up.

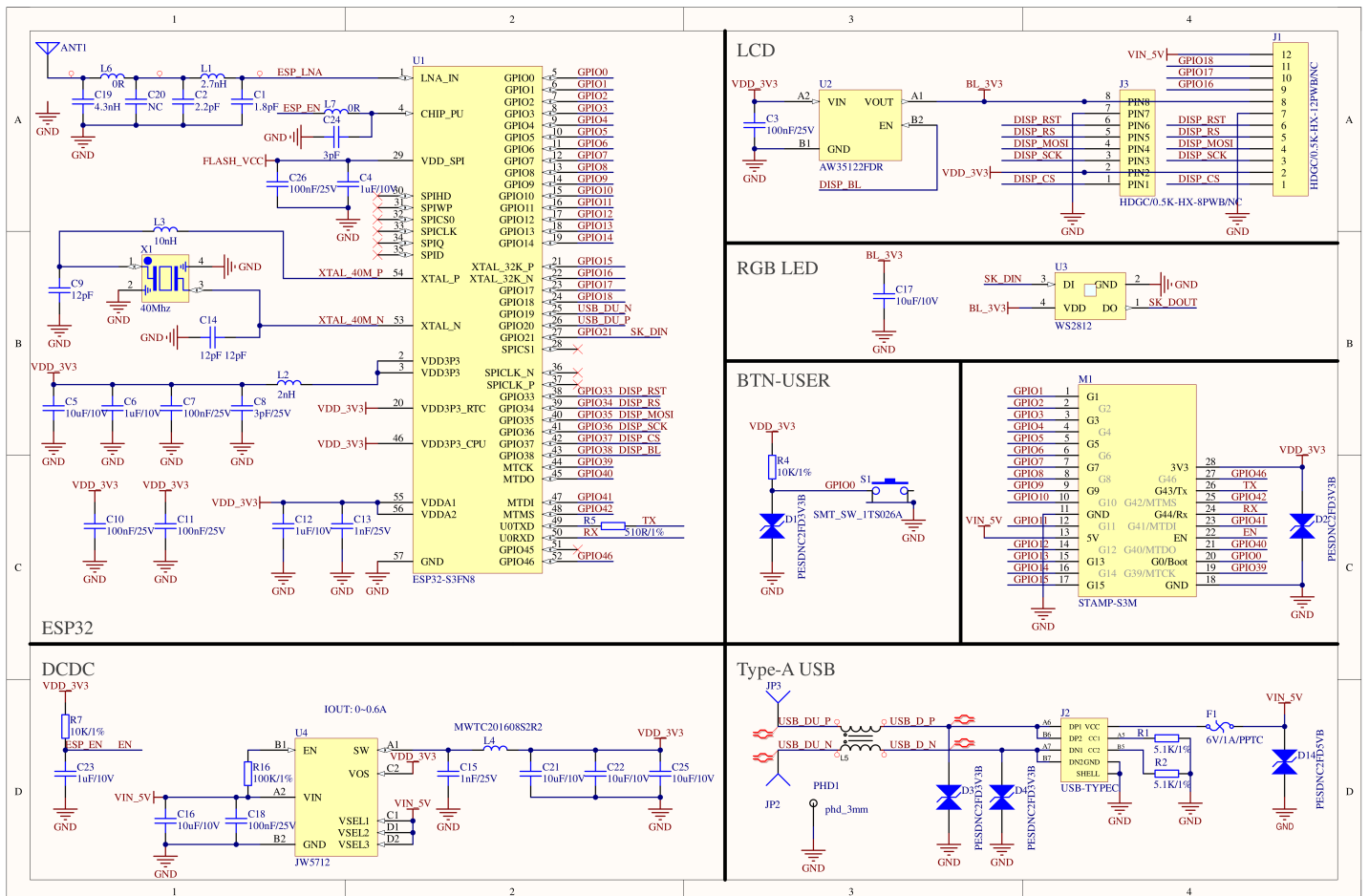


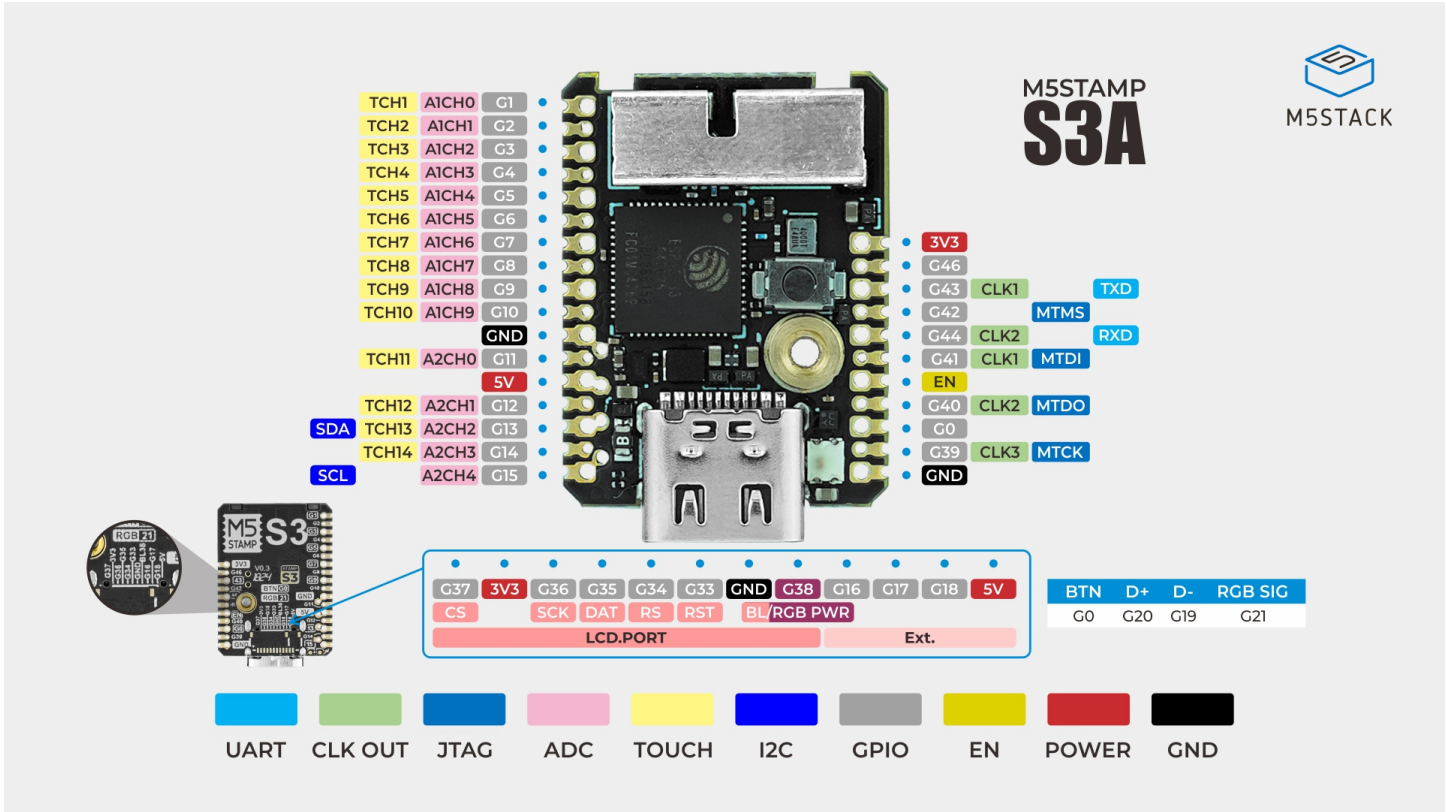
Additional Notes

- The ESP32-S3's G0 and G46 are system boot mode control pins. G0 uses pull-up by default, and G46 uses internal pull-down by default. In this state, the chip can normally start via SPI Flash. Do not pull G46 high before the chip starts, otherwise it will fail to boot. For more details, please refer to the Strapping pin description in the ESP32-S3 datasheet.
- A TFT screen SPI interface is reserved on the back of the module. The compatible FPC connector specifications are **8PIN** and **12PIN**.

Schematics

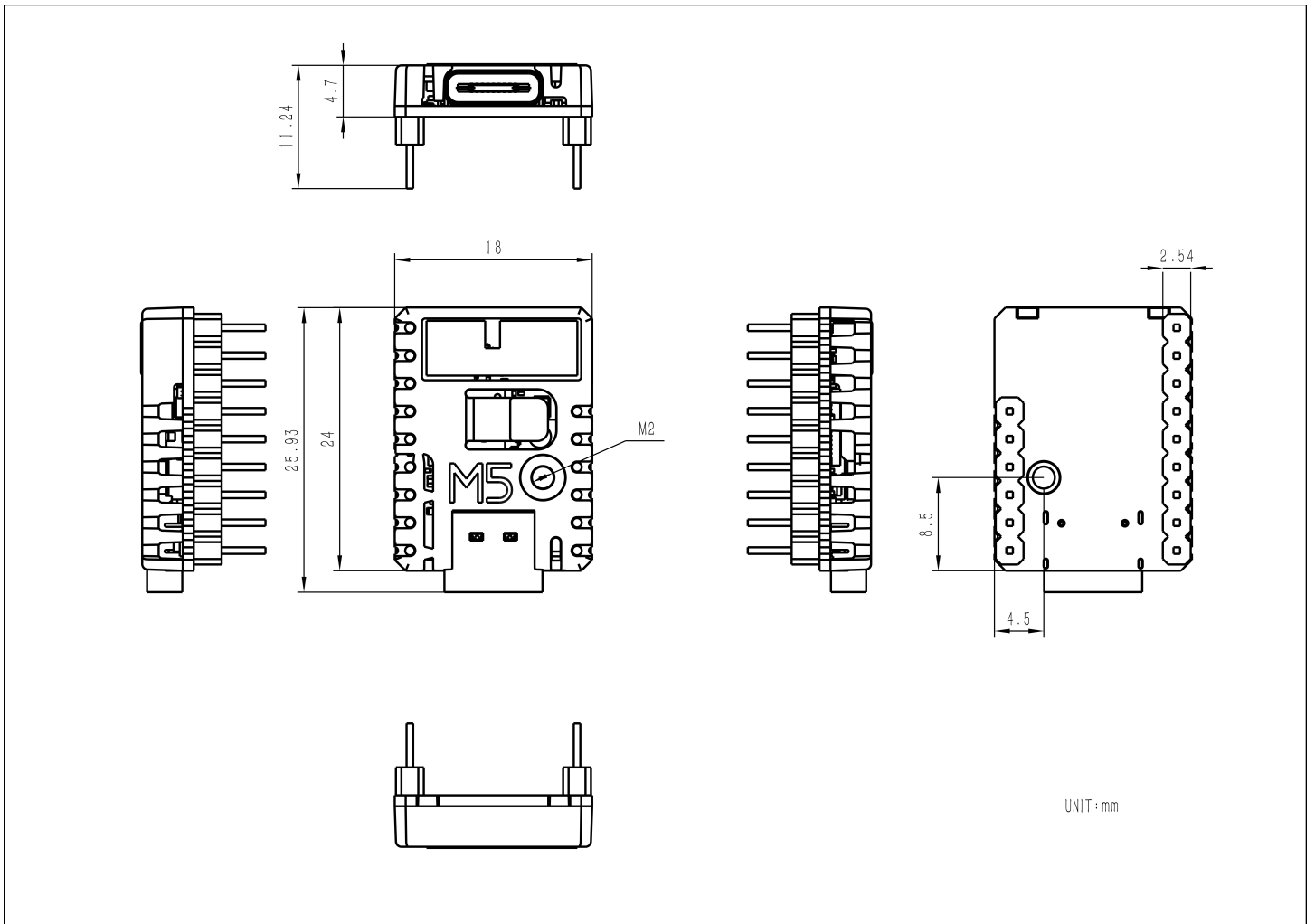
- [Stamp-S3A PIN2.54 Schematics PDF](#)





Model Size

[Stamp-S3A PIN2.54 Model Size PDF](#)



PCB

- [Stamp-S3A PIN2.54 KiCad Library](#)

Structure

- [Stamp-S3 KiCad 3D](#)
- [Stamp-S3A PIN2.54 Structure Files](#)

Datasheets

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

Softwares

Arduino

- [Stamp-S3A PIN2.54 Arduino Quick Start](#)

UiFlow2

Product Comparison

Product Compare Item				
	Stamp-S3A PIN2.54		Stamp-S3 PIN2.54	
RGB LED Control Logic	RGB LED power is shared with the reserved screen FPC cable backlight		Powered on immediately when powered	
Antenna Design	Optimized antenna design for better signal reception		Standard antenna design	
Module Boot Button	Improved button feel, button spec 4.0 x 3.0 x 2.0mm		Button spec 2.6 x 1.6 x 0.55mm	
Power Consumption	Optimized for lower power consumption		Standard design	