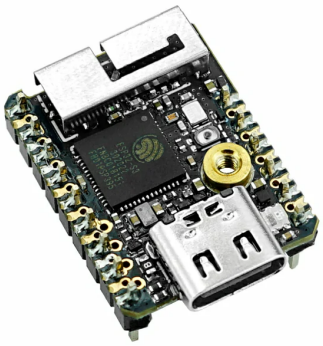
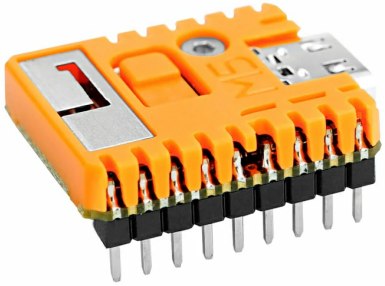
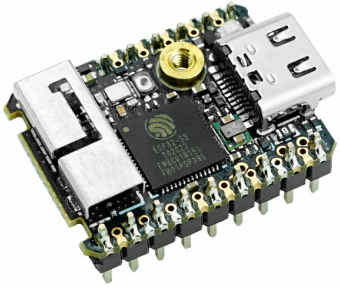
Stamp-S3 PIN2.54

SKU:S007-PIN254







Description

M5StampS3 PIN2.54 is a highly integrated embedded main control core module. It uses the Espressif **ESP32-S3FN8** main control chip, equipped with **8MB SPI flash**, and features a high-performance Xtensa 32-bit LX7 dual-core processor with a clock speed of up to 240MHz. The module includes a **highly integrated 5V to 3.3V circuit**, **RGB status indicator**, and **programmable button**. It exposes **10 GPIOs from the ESP32-S3** in the form of **2.54mm pitch pin headers**. This product is characterized by its compact size, strong performance, rich expansion I/O, and low power consumption. This module is suitable for **IoT applications requiring embedded main control modules**.

Tutorial

Arduino IDE

This tutorial will introduce you to how to program and control the M5StampS3 device using the Arduino IDE

UiFlow2

This tutorial will introduce you to how to control the M5StampS3 device using the UiFlow2 graphical programming platform

Features

- ESP32-S3FN8 (2.4GHz Wi-Fi)
- Integrated programmable RGB LED and button
- 2.54mm pitch pin headers
- Supports UIFlow graphical programming
- Development Platform
  - UiFlow2
  - Arduino IDE
  - ESP-IDF
  - PlatformIO

Includes

- 1 x Stamp-S3 PIN2.54
- 1 x Silkscreen sticker

Applications

- Smart home
- Wearable devices
- Medical devices

Specifications

Specification	Parameter
SoC	ESP32-S3FN8@Xtensa LX7 Dual-Core, up to 240MHz
Flash	8MB
Wi-Fi	2.4 GHz Wi-Fi
DC-DC	MUN3CAD01-SC
Input Voltage	5V
Human-Machine Interface	Programmable physical button x 1, programmable RGB LED (WS2812B-2020) x 1
Antenna Type	2.4G 3D antenna
Module Resource Interface	Touch sensor, SD/SDIO/MMC host 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/G42/G43/G44/G46
Pin Header Pitch	2.54mm
LCD Interface Pitch	0.5mm@12pin or 8pin
Operating Temperature	0 ~ 40°C
Product Size	26 x 18 x 4.6mm
Package Size	74 x 48 x 13mm
Product Weight	3.4g
Package Weight	6.3g

Learn

Download Mode

To enter download mode, hold down the G0 button on the StampS3 before powering on, and release it after powering up.

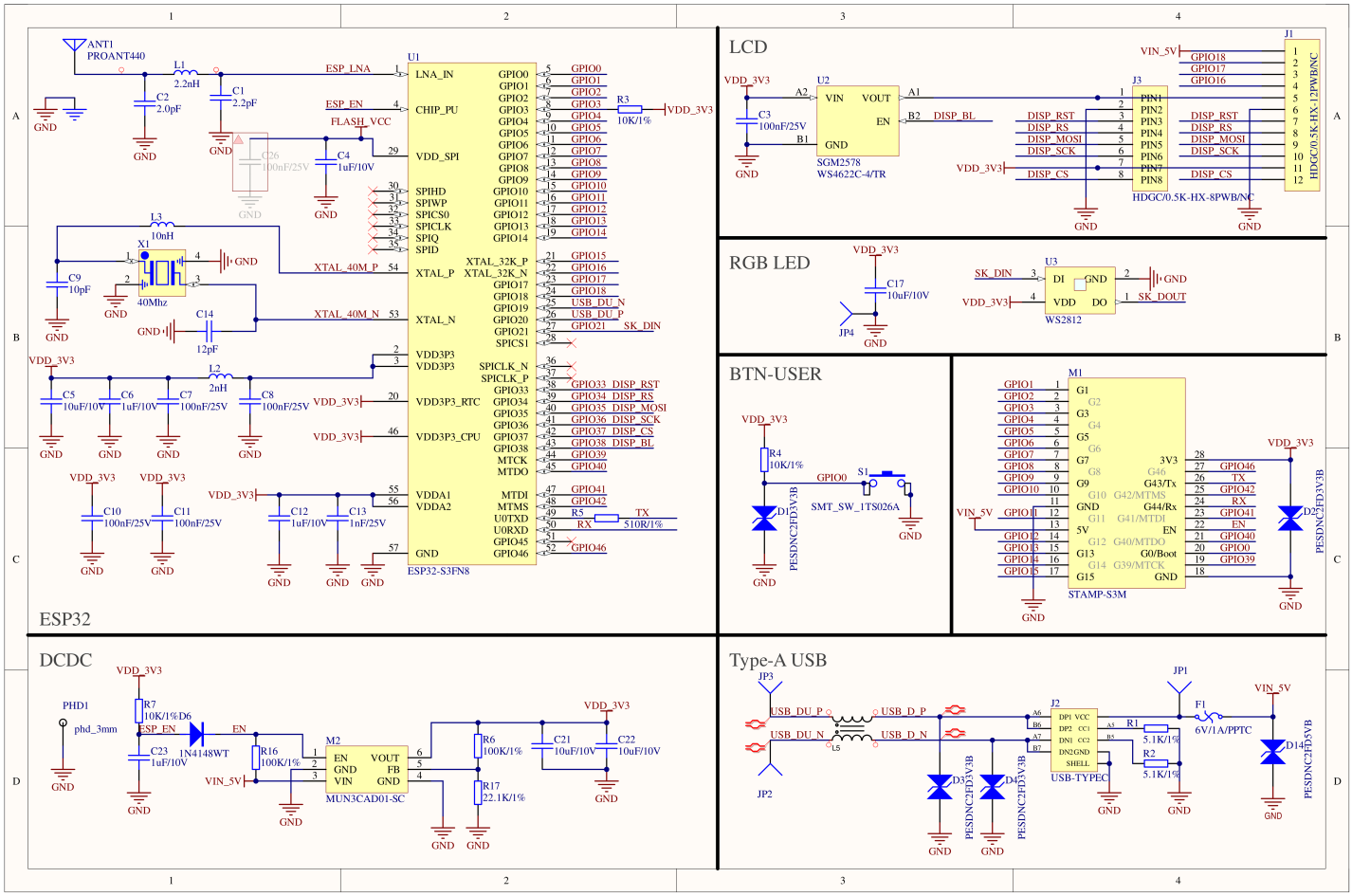
GPIO46 is pulled down by default.

Datasheets

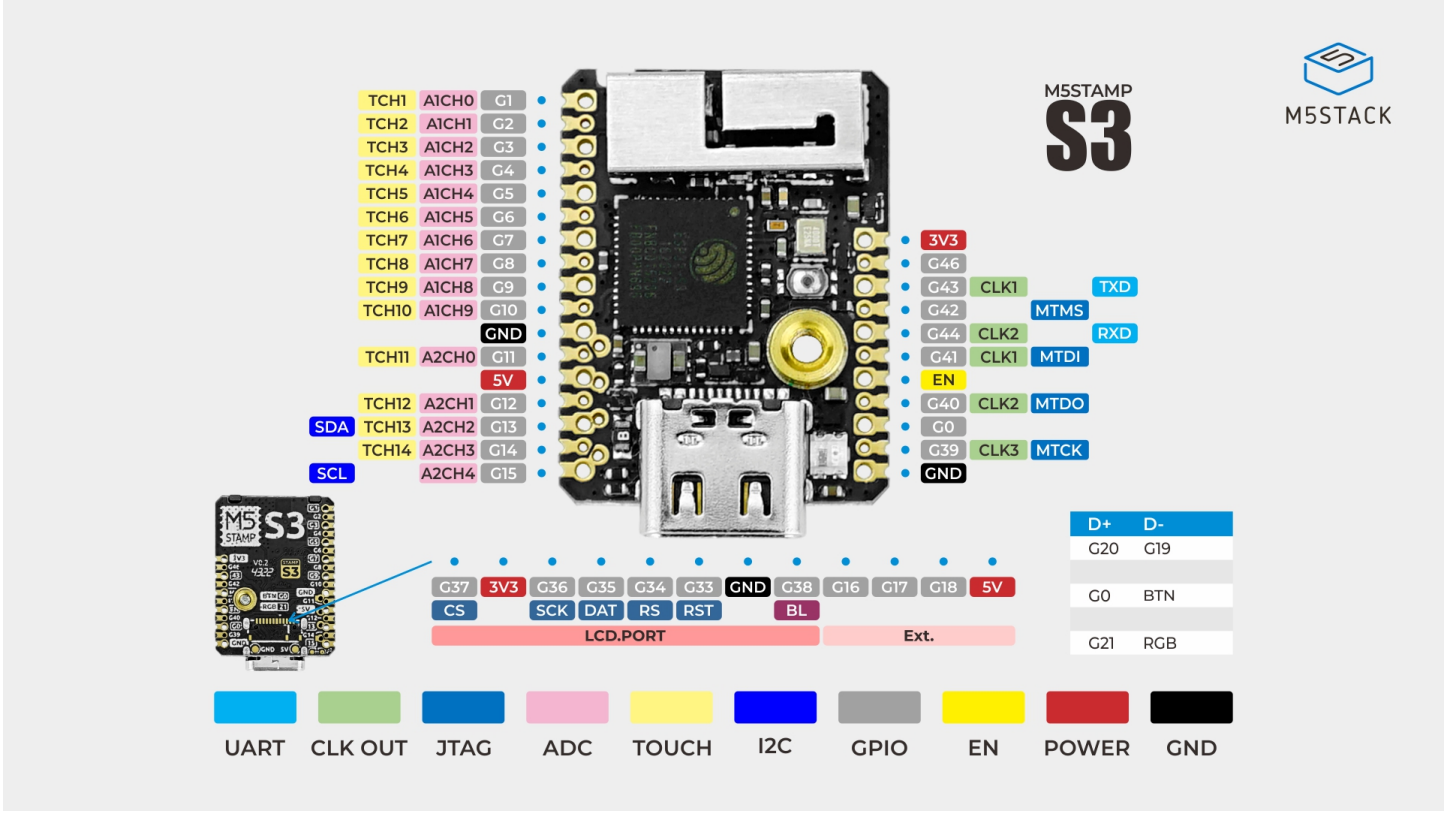
- ESP32-S3
- MUN3CAD01-SC

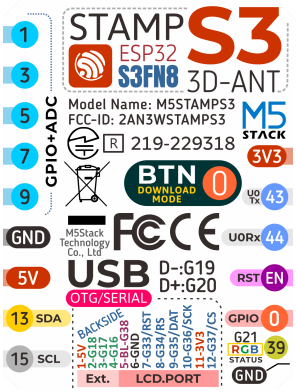
Schematics

- M5StampS3 PIN2.54 Schematics PDF

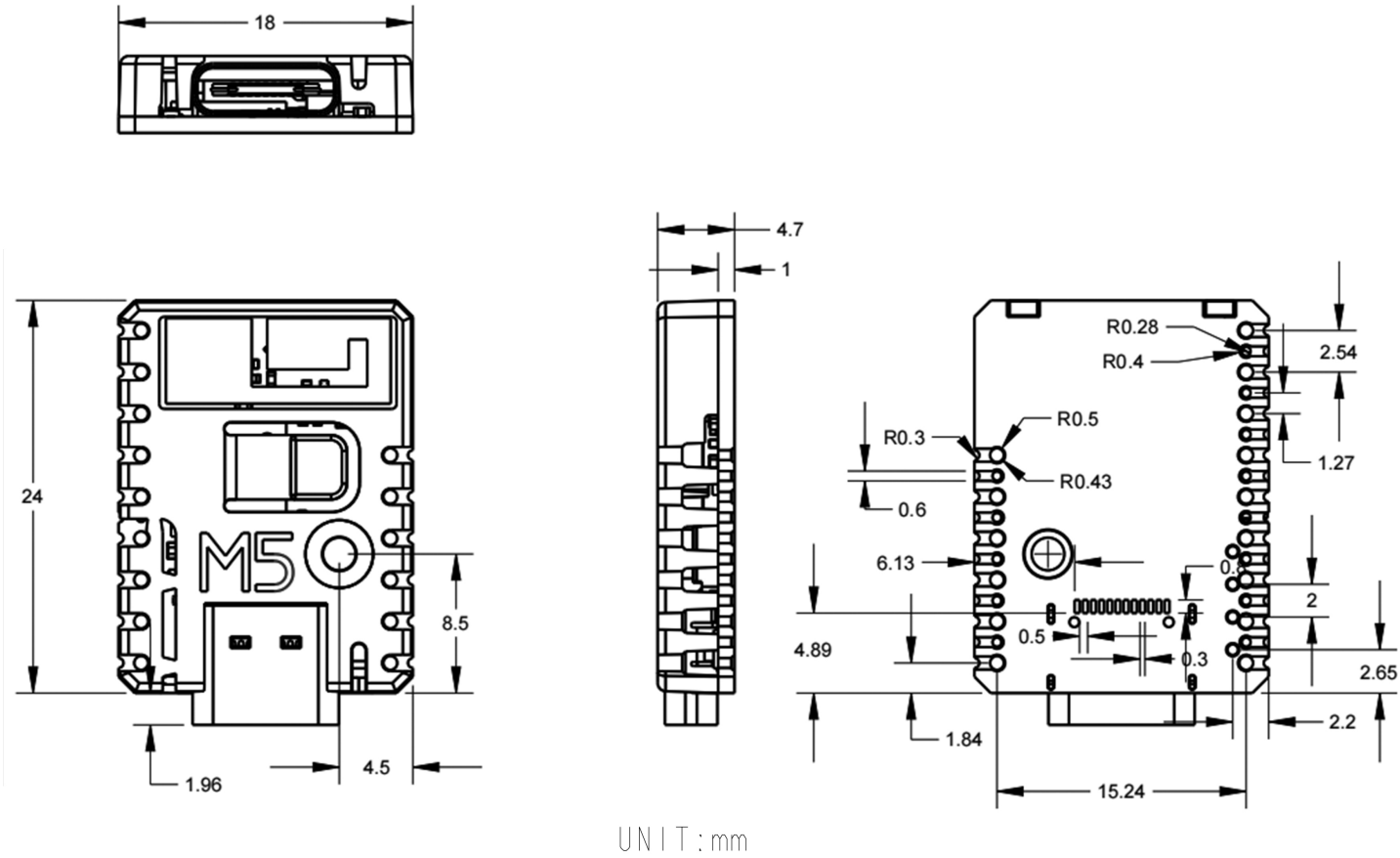


PinMap


M5STACK
M5STAMP
S3
TCH1 A1CH0 G1
TCH2 A1CH1 G2
TCH3 A1CH2 G3
TCH4 A1CH3 G4
TCH5 A1CH4 G5
TCH6 A1CH5 G6
TCH7 A1CH6 G7
TCH8 A1CH7 G8
TCH9 A1CH8 G9
TCH10 A1CH9 G10
GND
TCH11 A2CH0 G11
5V
TCH12 A2CH1 G12
SDA TCH13 A2CH2 G13
TCH14 A2CH3 G14
SCL A2CH4 G15
3V3
G46
G43 CLK1 TXD
G42 MTMS
G44 CLK2 RXD
G41 CLK1 MTDI
EN
G40 CLK2 MTDO
G0
G39 CLK3 MTCK
GND
G37 3V3 G36 G35 G34 G33 GND G38 G16 G17 G18 5V
CS SCK DAT RS RST BL
LCD.PORT
Ext.
D+ D-
G20 G19
G0 BTN
G21 RGB
UART
CLK OUT
JTAG
ADC
TOUCH
I2C
GPIO
EN
POWER
GND


STAMP S3
ESP32 S3FN8 3D-ANT
Model Name: M5STAMPS3
FCC-ID: 2AN3WSTAMPS3
219-229318
BTN
DOWNLOAD MODE
USB
D-:G19
D+:G20
OTG/SERIAL
GPIO+ADC
BACKSIDE
Ext.
LCD.PORT

Model Size



PCB

- Stamp-S3 PIN2.54 KiCad Footprint Library

Structure

- Stamp-S3 KiCad 3D

Softwares

Arduino

- Stamp-S3 PIN2.54 Arduino Quick Start
- M5StampS3 PIN2.54 Arduino Example

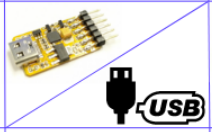
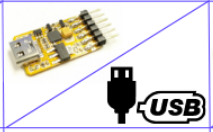
UiFlow2

- StampS3 UiFlow2 Quick Start

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				
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.