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AtomS3-Lite

SKU:C124



Description

AtomS3-Lite is a programmable controller from the **Atom series** in the M5Stack development kit series, using **ESP32-S3** as the main controller. Its size is only 24.0 x 24.0 x 9.5mm. The main controller uses the **ESP32-S3FN8** solution, with **8 MB** of SPI flash, integrated **Wi-Fi** functionality, built-in **3D antenna**, **5V to 3.3V** power circuit, providing **infrared emitter**, **RGB status indicator**, **button**, and **GROVE/HY2.0 - 4P** interface. The bottom of the product has power and 6 GPIO pin headers for easy expansion applications. The onboard **USB Type-C** interface allows for program downloading and serial communication, with an **M2 screw hole** on the back for fixing. Suitable for various embedded smart device applications.

Tutorial



Arduino IDE

This tutorial will introduce you to programming and controlling the AtomS3 Lite device using the Arduino IDE



UiFlow2

This tutorial will introduce you to controlling the AtomS3 Lite device using the UiFlow2 graphical programming platform

Features

- Developed based on ESP32-S3FN8
- Built-in USB download function
- Programmable button
- Infrared transmission function
- Expandable pins and interfaces
- Development Platform
 - UiFlow2
 - Arduino IDE
 - ESP-IDF
 - PlatformIO

Includes

- 1 x AtomS3-Lite

Applications

- IoT nodes
- Microcontrollers

Specifications

Specification	Parameter
MCU	ESP32-S3FN8
FLASH	8MB
RGB	WS2812C-2020
DC-DC	SY8089
Operating Temp	0 ~ 40°C
Power Voltage	5V
Power Method	TYPE C
Output Voltage	3.3V
IO Interface ×6	G5/G6/G7/G8/G38/G39
Product Size	24.0 x 24.0 x 9.5mm
Product Weight	5.3g
Package Size	85.0 x 65.0 x 12.2mm
Gross Weight	11.0g

Learn

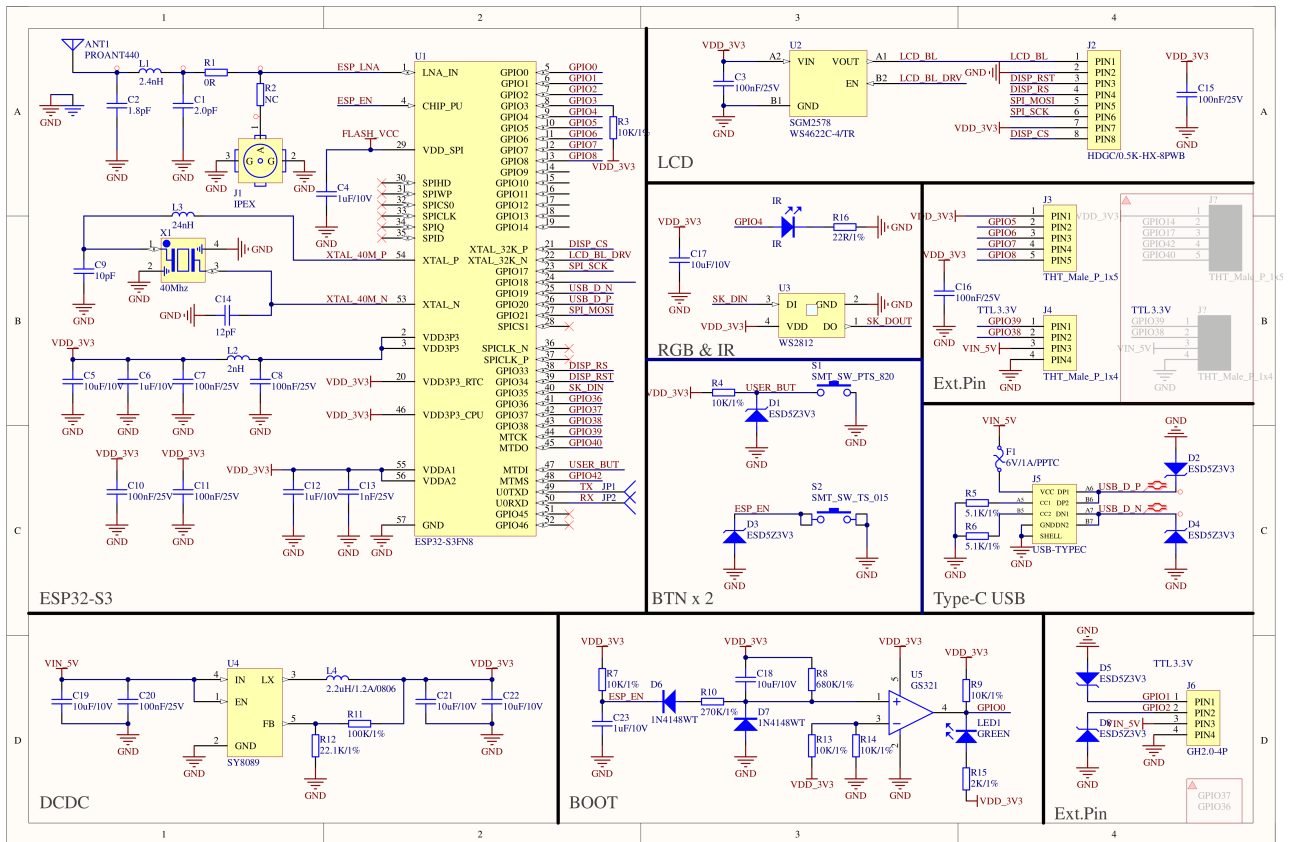
Download Mode

To flash firmware, press and hold the reset button (for about 2 seconds) until the internal green LED lights up, then release. The device is now in download mode, ready for flashing.



Schematics

- AtomS3-Lite Schematics PDF

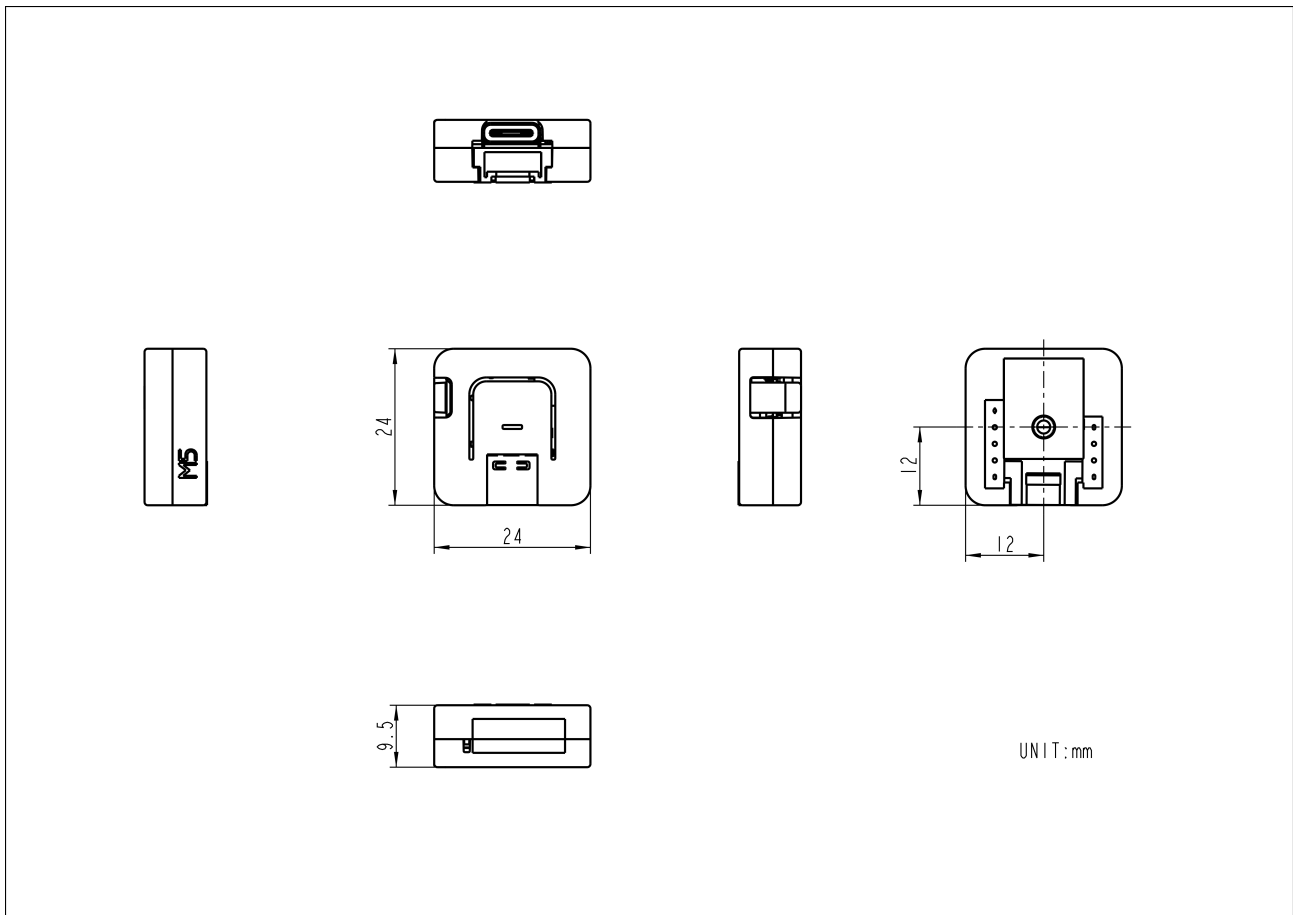


PinMap

HY2.0-4P

HY2.0-4P	Black	Red	Yellow	White
Define	GND	5V	G2	G1

Model Size



Datasheets

- [ESP32-S3](#)
- [SY8089](#)

Softwares

Arduino

- [AtomS3-Lite Arduino Library](#)

UiFlow2

- [AtomS3-Lite UiFlow2 Quickstart](#)

PlatformIO

```
[env:m5stack-atoms3]
platform = espressif32
board = esp32-s3-devkitc-1
framework = arduino
upload_speed = 1500000
monitor_speed = 115200
build_flags =
  -DESP32S3
  -DCORE_DEBUG_LEVEL=5
  -DARDUINO_USB_CDC_ON_BOOT=1
  -DARDUINO_USB_MODE=1
lib_deps =
  M5Unified=https://github.com/m5stack/M5Unified
```

| Video

- AtomS3-Lite + Bluetooth LE PWM control RGB light (UIFlow)

[M5Stack AtomS3's %2B Bluetooth LE.mp4](#)