Unit-CamS3 🛒

SKU:U174

| Description

CAMS3 Unit is a compact camera unit based on the ESP32S3 module. This camera unit is equipped with 8M PSRAM and 16M Flash memory, providing ample space for image processing and storage. It features a 2MP camera (OV2640) with a wide-angle field of view (DFOV 66.5°) and can capture photos at a maximum resolution of 1600x1200. With support for WiFi cloud image transmission, users can easily achieve remote and free image monitoring.

CAMS3 Unit comes with a built-in MicroSD card slot, allowing users to conveniently store images and other information, making data backup more convenient. It is also equipped with a built-in PDM microphone, enabling sound recording for comprehensive audio and video recording. CAMS3 Unit is equipped with a programmable status indicator light, and when the blue light flashes, it indicates that the camera is capturing and uploading data.

The HY2.0-4P port on the bottom of CAMS3 Unit exposes the S3 internal D+/D- pins, supporting firmware updates or USB serial communication by connecting the M5Grove2USB-C module. This provides users with a more convenient development and debugging environment. The onboard 2x1.3 headers expose the ESP32S3's programming download port, making firmware burning and other tasks simpler and more reliable.

The original firmware of CAMS3 Unit provides a complete shooting and uploading function for EZData. Users only need to perform simple configurations to achieve remote and free image monitoring. This makes the product ideal for applications in remote monitoring, time-lapse photography, industrial automation, and other fields.

> Download Mode:
> 1. Use ESP32-Downloader to download by connecting through the reserved 2 1x3 female headers.
> 2. When using the Grove2USB-C provided in the product packaging for downloading, Before the electricity,short-circuit the G0 and GND pins of the female header using the supplied male-to-male jumper wire to enter download mode. Then, you can connect with Grove2USB-C for downloading.

Features

- Based on module ESP32-S3-WROOM-1-N16R8, support WIFI
- WiFi cloud EZDATA or serial port transmission image data
- 2 Megapixel camera (OV2640)
- Built-in MicroSD card slot
- Built-in PDM microphone, support voice recording function
- Built-in programmable indicator light

Includes

- 1x CAMS3 Unit
- 1x Grove2USB-C
- 2x Male-to-male bread line
- 1x HY2.0-4P Wire (20cm)
- 1x LEGO Adapter

Applications

- Remote Control
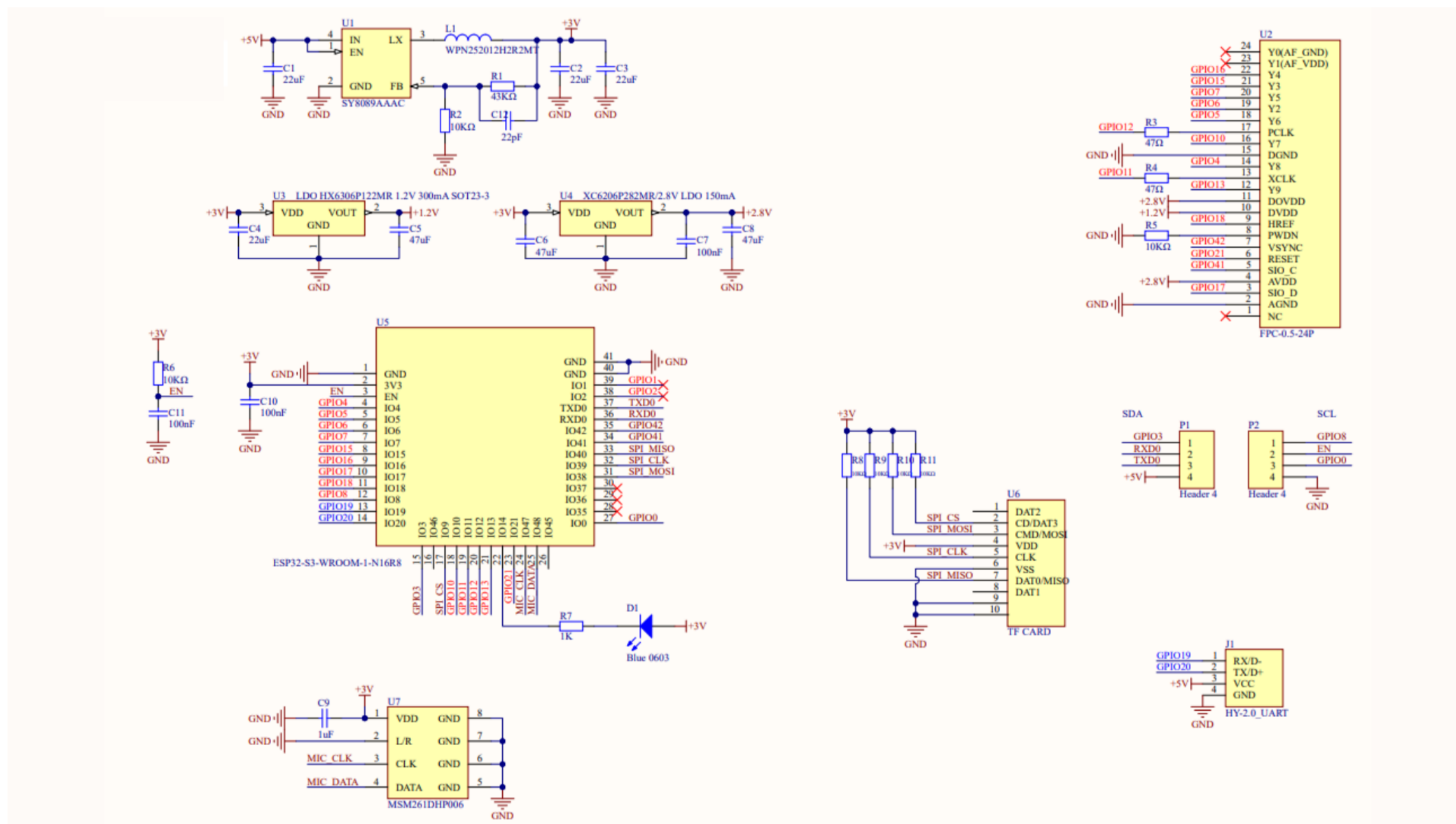- Time-LapsePhotography
- Industrial Automation

Specification

Resources	Parameters
ESP32-S3-WROOM-1-N16R8	Dual-core 240 MHz, Module onboard antenna
PSRAM	8M PSRAM
Flash	16M Flash
Camera	200W Pixels@OV2640
OV2640 supports output formats	YUV(422/420)/YCbCr422, 8-bit compressed data,RGB565/555,8-/ 10-bit Raw RGB data
DFOV	66.5°
MIC	PDM Microphone @MSM1261D4030HCPM
Storage card	Micro SD Card
Operating Temperature	0-40°C
Shell Material	Plastic
Product Size	40*24*11mm
Package Size	136* 92*20mm
Product Weight	10.8g
Package Weight	18.9g

Related Link

- OV2640
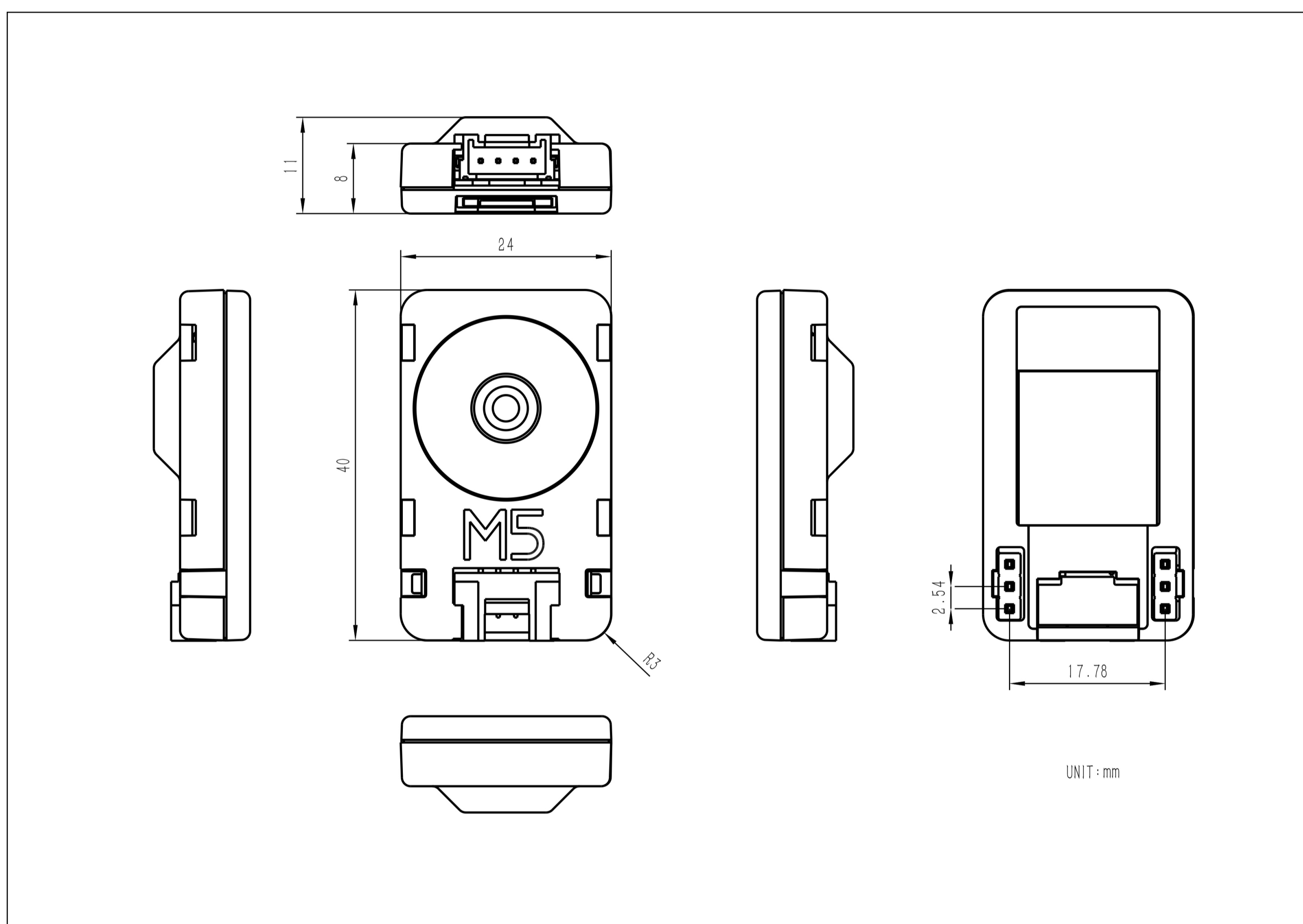- ESP32-S3-WROOM-1-N16R8
- MSM1261D4030HCPM

Schematic

PinMap

CAMS3 Unit	TX/D+	RX/D-	CS	MOSI	CLK	MISO
GROVE	G20	G19				

SD Card Socket			G9	G38	G39	G40
Progra mmabl e LED						
MIC						

Module Size

Examples

Arduino

○ CamS3 Unit Factory firmware

Video

○ CAMS3 Unit Image remote viewing and time-lapse photography

Difference Between CAM Unit and CAMS3 Unit

	SoC	Memory	Camera	MIC	Download Mode
CAM Unit	ESP32-WROOM-32E	520 KB SRAM and 4 MB SPI flash	OV2640\ 200W Pixel	/	ESP32-Downloader
CAMS3 Unit	ESP32-S3-WROOM-1-N16R8	8M PSRAM and 16M Flash	OV2640\ 200W Pixel	MSM126 1D4030 HCPM	ESP32-Downloader and Grove2USB-C

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