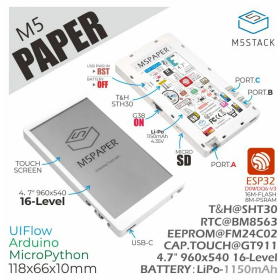


M5Paper



Description

M5Paper is M5Stacks latest core device with a touch enabled E-ink display. Powered by the ESP32-D0WD this is our first device to integrate a super sized 540*960 @4.7" E-ink display, which supports 16 grayscale levels. The display is a GT911 capacitive touch screen, which supports two point touch and a variety of gesture controls. Compared to a regular LCD, E-ink displays are easier on the eyes, which makes them a great choice for reading or viewing for longer periods. Other benefits are the low power consumption and the ability to retain the image even if power to the display is terminated. Integrated in the CoreInk are an multi-function button for operation, SHT30 temperature and moisture sensor, physical buttons and an SD card port for data storage.

Additionally the FM24C02 internal eeprom chip(256KB-EEPROM)can be used to store vital data even when the device is off. A 1150mAh lipo battery keeps the device going for long periods and battery life can be further preserved by using the RTC(BM8563)to set the device into deep sleep and wake it up again when needed. Three HY2.0-4P expansion ports are included which allow for building complex projects using the existing sensors in the M5Stack ecosystem.

Product Features

- ESP32 Standard wireless functions WiFi、 Bluetooth
- Internal 16M Flash
- Low Power Display
- Multi-Point touch screen
- 180 degree viewing angle
- Internal 1150mAh Battery
- Expandable - HY2.0-4P 3 x external expansion ports

Include

- 1x M5Paper

Applications

- IoT Terminal
- E-Book
- Industrial Control Panel
- Smart Home Panel

Specification

Resource	Parameter
ESP32-D0WD	240MHz dual core, 600 DMIPS, 520KB SRAM, Wi-Fi, dual mode Bluetooth
Flash	16MB
PSRAM	8MB
Input Voltage	5V @ 500mA
Ports	TypeC*1, HY2.0-4P*3 , SD/TF card slot
E-Ink Display	Model Number: EPD_ED047TC1 540*960@4.7" Grayscale : 16 Levels Display area : 58.32*103.68mm Display Driver : IT8951
Physical Button	Multi-function button*1 , Reset Button*1
RTC	BM8563
Antenna	2.4G 3D Antenna
PINS	G25, G32, G26, G33, G18, G19
Battery	1150mAh@3.7V
Working Temp	32°F to 104°F (0°C to 40°C)
Net Weight	86g
Gross Weight	100g
Product Dimension	118*66x*10mm
Packaging Dimension	120*70x*14mm
Casing Material	Plastic (PC)

PinMap

E-INK & SD Card

Resolution: 540*960

ESP32 Chip	GPIO13	GPIO12	GPIO14	GPIO15	GPIO4
IT8951	MISO	MOSI	SCK	CS	/
SD Card	MISO	MOSI	SCK	/	CS

Multi-function button

ESP32 Chip	GPIO37	GPIO38	GPIO39
Multi-function button	Right	BTN/PWR	Left

Internal I2C Connection

ESP32 Chip	GPIO21	GPIO22	GPIO36
GT911	SDA	SCL	INT
SHT30	SDA	SCL	/
BM8563	SDA	SCL	/
FM24C02	SDA	SCL	/

USB Serial

ESP32 Chip	GPIO1	GPIO3
CP2104	RXD	TXD

M5Paper-HY2.0 4P Port

PORT	PIN	Protocol:
PORT.A	G25,G32	I2C
PORT.B	G26,G33	DAC/ADC
PORT.C	G18,G19	UART

ESP32 ADC/DAC Mappable Pins

ADC1	ADC2	DAC1	DAC2
8 Channel	10 Channel	2 Channel	2 Channel

For more info on specific pin functions refer to the official ESP32 Docs [ESP32 datasheet](#)

Related Link

- **Datasheet**
 - [ESP32](#)
 - [SHT30 Datasheet](#)
 - [BM8563](#)
 - [SY7088](#)
 - [GT911-datasheet](#)

Schematic

- [M5 PAPER Schematic](#)