



M5STACK

BASIC v2.7

SKU: K001-V27



Tutorials & Quick Start

[UIFlow](#)

This tutorial will show you how to control Basic devices through the UIFlow graphical programming platform

[Arduino IDE](#)

This tutorial will show you how to program and control Basic devices through Arduino IDE

[Micropython](#)

This tutorial will show you how to control Basic devices through Micropython programming

Description

BASIC is a cost-effective entry-level IoT main controller. It adopts Espressif ESP32 chipset, equipped with 2 low-power Xtensa® 32-bit LX6 microprocessors with main frequency up to 240MHz. Built-in 16M FLASH memory, integrated 2.0-inch full-color HD IPS display panel, speaker, TFCard slot and other peripherals. The full-coverage housing ensures circuit stability even in complex industrial applications. Internal provides a variety interface resources (ADC/DAC/I2C/UART/SPI, etc.) and 15x IO pins at the bottom, which is highly developable. Ideal for a variety of product prototyping, industrial control, intelligent building application.

- High productization:
 - Exquisite designs, Prototyping right into products
 - Product-grade full-coverage cover for more stable circuit operation
- Low Code Development:
 - Support UIFlow graphical programming platform, scripting-free, cloud push
 - Fully compatible with mainstream development platforms such as Arduino and ESP32-IDF
 - Support FreeRTOS, with dual-core and multitasking mechanism, it can perform the tasks efficiently, Program optimization.
- High Integration:
 - 2.0 inch IPS display panel, speakers, custom buttons x3
 - Built-in lithium battery power, integrated power management chip, support TypeC interface
 - Finely tuned RF circuit for stable and reliable wireless communication
- Strong Expandability:
 - 15x IO leads
 - Easy access to M5Stack's hardware and software ecology system, stackable module design, plug-and-play rich sensors expansion

Power on/off operation:

Power on: Click the red power button on the left

Shutdown: Quickly double-click the red power button on the left

**USB power supply*:* By default, when USB is powered, it cannot be shut down

Product Features

- Based on ESP32 development
- 16M FLASH
- Integrated full-color high-definition IPS display panel and a variety of hardware peripherals
- Rich resources interface, compatible with M5Stack stacking modules and sensors, highly expandable.
- Use [M5CORE BOTTOM base](#) built-in lithium battery, 15x IO leads.
- Compatible with multi-platform development:
 - [UIFlow](#)
 - [MicroPython](#)
 - [Arduino](#)
 - [.NET nanoFramework](#)

Included

- 1x BASIC
- 10x Dupont line
- 1x Type-C USB(20cm)
- 1x manual
- 1x sticker

Application

- IoT Controller
- DIY creator works
- Smart home control

Specification

Specifications	Parameters
ESP32-D0WDQ6-V3	240MHz dual core, 600 DMIPS, 520KB SRAM, Wi-Fi
Flash	16MB
Input power	5V @ 500mA
Interface	TypeC x1, I2C x1
IO	G21, G22, G23, G19, G18, G3, G1, G16, G17, G2, G5, G25, G26, G35, G36
Button	Physical button x 3
LCD screen	2.0"*@320*240 ILI9342C IPS panel, maximum brightness 853nit
Speaker	1W-0928
USB chip	CH9102F
Antenna	2.4G 3D Antenna
Battery	110mAh @ 3.7V
Net weight	47.2g
Gross weight	93g
Product size	54mm x 54mm x 18mm
Packing size	95 x 65 x 25mm
Cover Material	Plastic (PC)



Schematics

- [Schematics](#)

Related Links

- **Datasheet**
 - [ESP32](#)
 - [ILI9342C](#)
 - [IP5306](#)
- **API**
 - [Arduino API](#)