ATOM Matrix SKU:C008-B

Description

ATOM Matrix , which has a size of only 24 * 24mm, is the most compact development board in the M5Stack development kit series. It provides more GPIO pins and is very suitable for handy and miniature embedded device development. The main control adopts the ESP32-PICO-D4 chip, which comes integrated with Wi-Fi and Bluetooth technologies and has 4MB of integrated SPI flash memory. The Atom board provides an Infra-Red LED along with the 5 * 5 RGB LED matrix on the panel, a built-in IMU sensor (MPU6886), and a PH2.0 interface. A general purpose programmable button is provied below the RGB Led matrix to enable users to add input support to their various projects. The on-board USB interface (Type-C) enables rapid program uploading and execution. One M2 screw hole is provided on the back for mounting the board.

NOTE: We have set the brightness of RGB LED limited to 20. Pls DO NOT set it higher to avoid damaging the LED and acrylic screen.

Product Features

ESP32 PICO-based
Programmable   button
5 * 5 RGBLEDmatrix panel
Buitl-in Infra-red LED
Built-in MPU6886 Inertial Sensor
Extendable   Pins & Holes
Program   Platform: Arduino UIFlow

Include

1x ATOM Matrix

Applications

Internet of things terminal controller
IoT node
Wearable peripherals

Specification

Resources	Parameter
ESP32	240MHz dual core, 600 DMIPS, 520KB SRAM, Wi-Fi, dual mode Bluetooth
Flash	4MB
Power Input	5V @ 500mA
Port	TypeC x 1, GROVE(I2C+I/0+UART) x 1
PIN Port	G19, G21, G22, G23, G25, G33
RGB LED	WS2812B x 25
MEMS	MPU6886
IR	Infrared transmission
Button	Custom button x 1
Antenna	2.4G 3D Antenna
Operating Temperature	32°F to 104°F (0°C to 40°C)
Size	24 x 24 x 14 mm
Weight	14g
Case Material	Plastic (PC)

EasyLoader

EasyLoader is a concise and fast program writer, which has a built-in case program related to the product. It can be burned to the main control by simple steps to perform a series of function verification. Please install the corresponding driver according to the device type. M5Core host Please click here to view the CP210X driver installation tutorial, M5StickC/V/T/ATOM series can be used without driver)

Peripherals Pin Map

RGB Led	G27
Btn	G39
IR	G12
SCL	G21
SDA	G25

Links

Datasheet

ESP32-PICO
MPU6886
WS2812B-2020

Example

1. Arduino IDE

To get the code, please click here

2. UIFlow

Click here to view UIFlow example