

# ATOM Matrix ESP32 Development Kit

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## Description

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**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 provided 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

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- ESP32 PICO-based
- Programmable button
- 5 \* 5 RGB LED matrix panel
- Built-in Infra-red LED
- Built-in MPU6886 Inertial Sensor
- Extendable Pins & Holes
- Program Platform:[Arduino](#) [UIFlow](#)

## Include

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1x ATOM Matrix

## Applications

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- Internet of things terminal controller
- IoT node
- Wearable peripherals

## Specification

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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/O+UART) x 1
PIN Port	G19, G21, G22, G23, G25, G33
RGB LED	WS2812B x 25
MEMS	MPU6886
IR	Infrared transmission

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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 )

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