

This product is a bare screen and needs to be displayed with the main control board such as Raspberry Pi, ESP32, and Arduino. For details, please refer to the list.



## Overview

### Introduction

This product is a 64 × 32 RGB LED matrix panel, with 2048 RGB LEDs onboard, 4mm pitch, supports Raspberry Pi and Arduino, etc. It provides supporting open-source demos and tutorials, suitable for makers or electronics Enthusiasts to start learning, or DIY secondary development into other desktop or wall-mounted display applications.

[More](#)

### Features

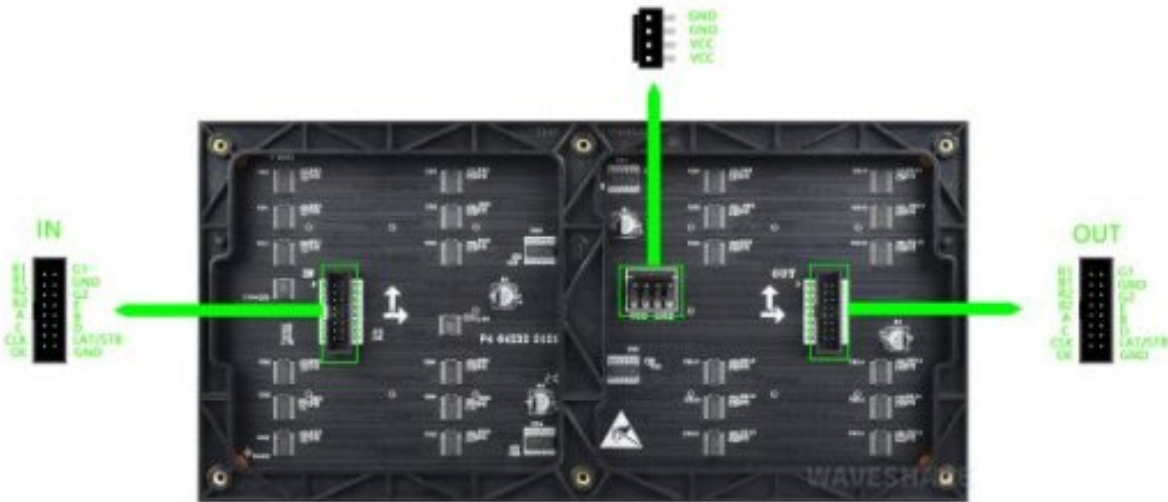
- 2048 individual RGB LEDs, full-color display, adjustable brightness.
- 64 × 32 pixels, 4mm pitch, allows displaying text, colorful images, or animation.
- The dimension is 256 × 128mm, which is moderate and suitable for DIY desktop display or wall mount display.
- Onboard two HUB75 headers, one for controller data input, one for output, and chain support.
- Provides open-source development resources and tutorials, for use with Raspberry Pi, Arduino, and so on.

### Specifications

<b>DIMENSIONS</b>	256mm × 128mm
<b>PIXELS</b>	64 × 32=2048 DOTS
<b>PITCH</b>	4mm
<b>PIXEL FORM</b>	1R1G1B
<b>VIEWING ANGLE</b>	≥160°

<b>CONTROL TYPE</b>	synchronization
<b>DRIVING</b>	1/16 scan
<b>HEADER</b>	HUB75
<b>POWER SUPPLY</b>	5V / 4A (VH4 header input)
<b>POWER</b>	≤20W

## Header Definition



PIN	DESCRIPTION	PIN	DESCRIPTION
<b>VCC</b>	5V power input	<b>GND</b>	Ground
<b>R1</b>	R higher bit data	<b>R2</b>	R lower bit data
<b>G1</b>	G higher bit data	<b>G2</b>	G lower bit data
<b>B1</b>	B higher bit data	<b>B2</b>	B lower bit data
<b>A</b>	A line selection	<b>B</b>	B line selection
<b>C</b>	C line selection	<b>D</b>	D line selection
<b>E</b>	E line selection	<b>CLK</b>	clock input
<b>LAT/STB</b>	latch pin	<b>OE</b>	output enable

Note: The power supply ports (VCC and GND) of the display screen are 5V power supply, do not connect to other power supply voltages, so as not to burn the display screen.

## Usage Scenarios

DIY Maker Desktop Or Wall Mount Display, Signboard, Environment Monitor...



## Raspberry Pi Instructions

Please refer to the github information: [Demo](#), [wiring reference](#)

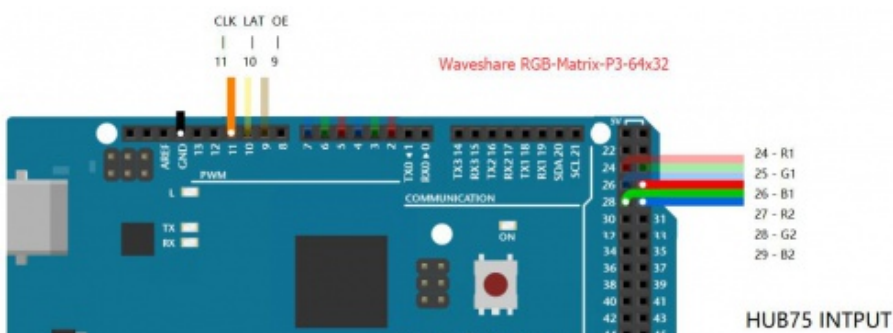
## User Guides for Arduino Mega

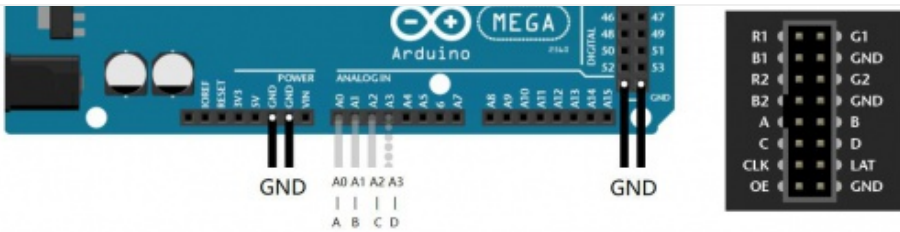
### Hardware Connection

#### Prepare materials

- RGB-Matrix-P3-64x32
- Arduino Mega (please purchase it separately)

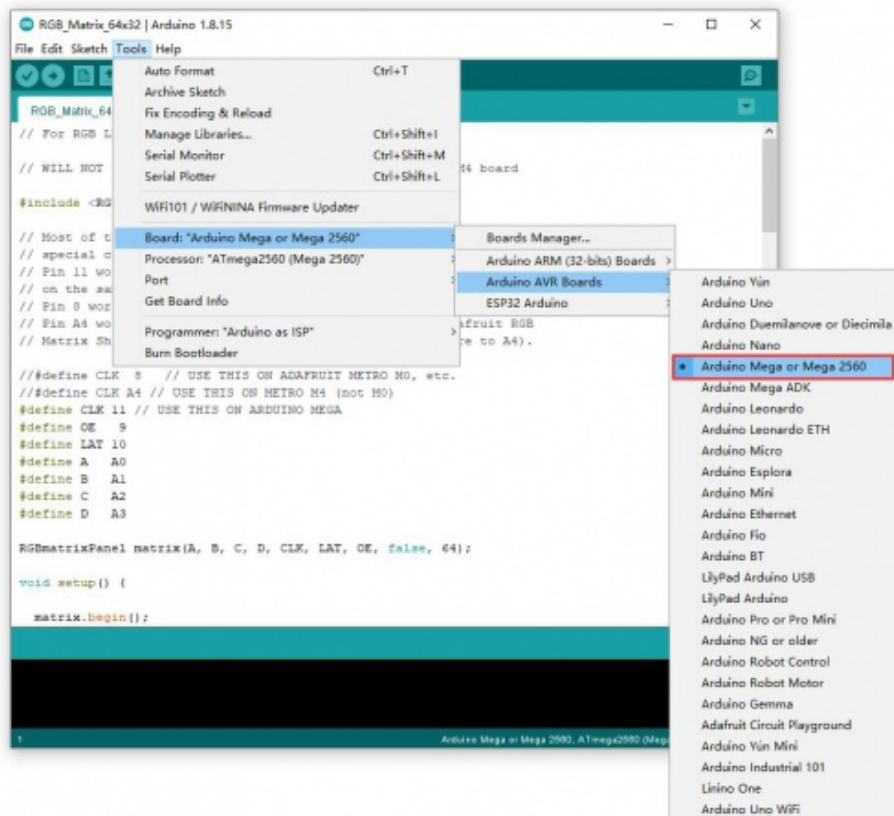
#### Hardware Connection Diagram





## Software Settings

- Download [example](#)
- After connecting the wires according to the hardware connection diagram, the software settings are as follows:



## RGB text display



The effect of running the instance is shown in the following figure:

**【Function Description】**



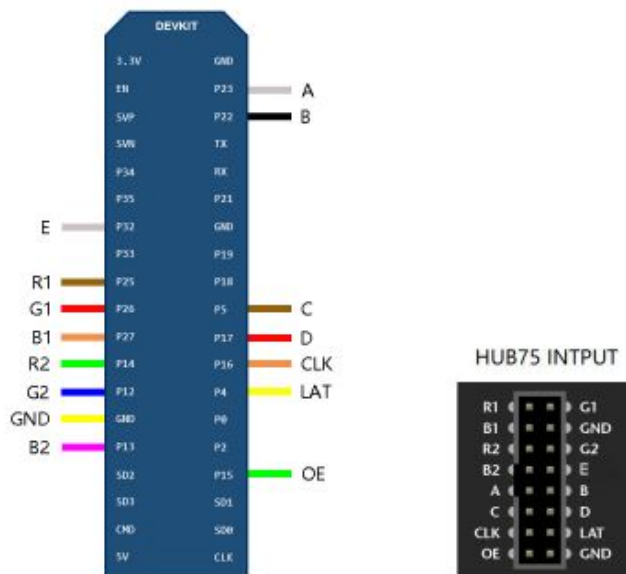
- UI:
  - Can display icons
  - Can display text content such as text and numbers

## Working with ESP32

### Preparation

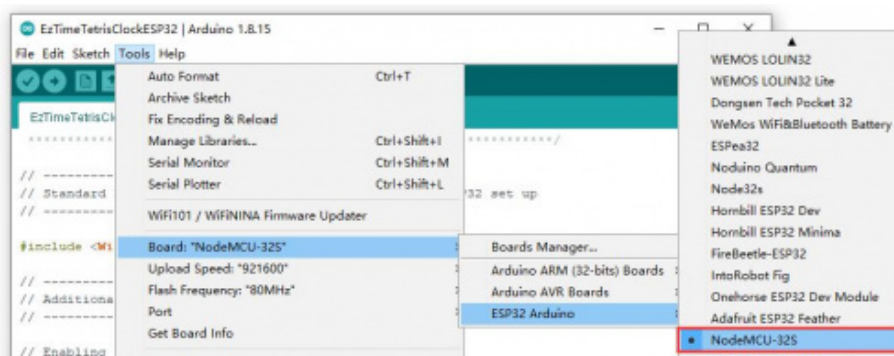
- RGB-Matrix-P4-64x32
- NodeMCU-32S (not included)

### Hardware Connection



### Software Setting

- Download [the demo](#).
- Copy the folder under libraries in AuroraDemo to the libraries in the installation directory of the Arduino IDE
- After connecting the wires according to the hardware connection diagram, the software settings are as follows:



```

// Improve programmer
// https://m
// #define double_buffer

#include <FbMatrix.h>
// The library for controlling the LED Matrix
// At time of writing this my changes for the TinyPICO
// Have been merged into the main FbMatrix library,
// but have not been released, so you will need to install
// from Github
//
// If you are using a regular ESP32 you may be able to use
// the library manager version
// https://github.com/2dop/FbMatrix

// Adafruit GFX library is a dependency for the FbMatrix Library
// Can be installed from the library manager
// https://github.com/adafruit/Adafruit-GFX-Library

```

- MH ET LIVE ESP32MiniKit
- ESP32vn IoT Uno
- DOIT ESP32 DEVKIT V1
- DOIT ESPduino32
- OLIMEX ESP32-EVB
- OLIMEX ESP32-GATEWAY
- OLIMEX ESP32-PoE
- OLIMEX ESP32-PoE-ISO
- OLIMEX ESP32-DevKit-LiPo
- ThaiEasyElec's ESPino32
- M5Stack-Core-ESP32
- M5Stack-FIRE
- M5Stack-C
- M5Stack-ATOM
- M5Stack-Core2
- M5Stack-Timer-CAM
- M5Stack-CoreInk
- ODROID ESP32
- Heltec WiFi Kit 32
- Heltec WiFi LoRa 32
- Heltec WiFi LoRa 32(V2)

- Note: if you don't have the corresponding board, you can operate as below:

Click on file -> add board manager address -> enter: [https://raw.githubusercontent.com/espressif/arduino-esp32/gh-pages/package\\_esp32\\_index.json](https://raw.githubusercontent.com/espressif/arduino-esp32/gh-pages/package_esp32_index.json) -> OK

## Perform

SimpleTestShapes: Display basic shapes

PatternPlasma: Displays cool plasma patterns

BouncingSquares: Show bouncing squares

AuroraDemo: Simple example showing various animation effects

#There is an open source project on GitHub: ESP32-HUB75-MatrixPanel-I2S-DMA, which has a more detailed introduction.

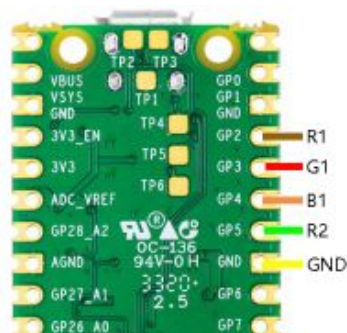
# Working with Pico

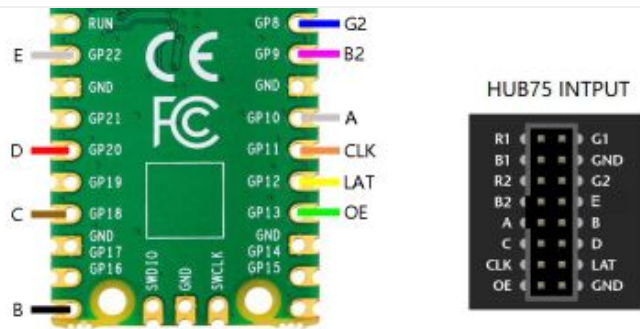
## Hardware Connection

### Preparation

- RGB-Matrix-P4-64x32
- Raspberry Pi Pico (It must be purchased separately. If not, it is recommended to buy one with soldered pin headers, which is convenient for wiring.)

### Diagram



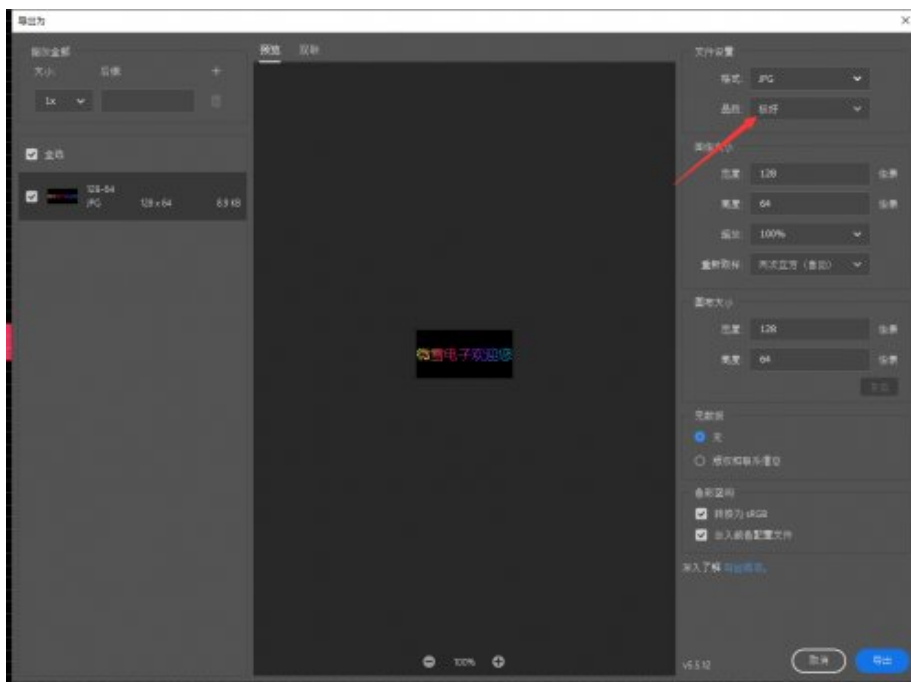


## Software Setting

- Download [the demo](#)
- After connecting the wire according to the diagram, you can set the software: [environment building](#)

## Performance

- After setting up the CircuitPython environment, you can copy all the contents of the CircuitPython directory in the downloaded Pico example to the recognized USB flash driver, and you can run the example (there are 16 demos in this code).
- The PSD folder is a file in ".psd" format, which can be used to modify the text image that needs to be moved. The modified image needs to be saved as "Excellent" and the format needs to be converted to "BMP" format.



### 【Function】

- Display text
- Set scrolling effect

## Resources

- [Demo Sample](#)
- [2D Drawing](#)
- [windows-arduino-1.8.15](#)

## Support

### Technical Support

If you need technical support or have any feedback/review, please click the **Submit Now** button to submit a ticket, Our support team will check and reply to you within 1 to 2 working days. Please be patient as we make every effort to help you to resolve the issue.

Working Time: 9 AM - 6 AM GMT+8 (Monday to Friday)

[Submit Now](#)