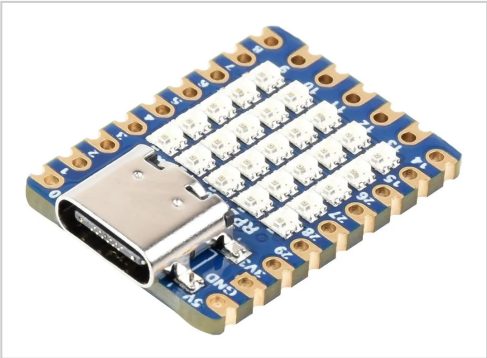
Waveshare RP2040 matrix development board: 5×5 RGB LED matrix, 2MB NOR flash, 20 GPIO pins, USB-C



The Waveshare RP2040-Matrix development board is an innovative board based on the Raspberry Pi RP2040 dual-core processor. It has an integrated 5×5 RGB LED matrix and offers flexible programming options for the development of a wide range of applications

Product number	WS-24594
Weight	0.003kg

Product description

Waveshare RP2040-Matrix development board: 5×5 RGB LED matrix, based on the official RP2040 dual-core processor
The Waveshare RP2040-Matrix development board is a Pico-like MCU board based on the Raspberry Pi RP2040. It has a 5×5 RGB LED matrix and is suitable for SMD applications with a moulded edge module.

Features at a glance

- RP2040 microcontroller chip from Raspberry Pi, dual-core Arm Cortex M0+ processor with flexible clocking up to 133 MHz
- 264KB SRAM and 2MB on-board flash memory
- Onboard 5×5 RGB LED matrix for colourful light displays
- USB 1.1 with device and host support
- 20 × multifunctional GPIO pins
- Support for C/C++, MicroPython, Arduino
- Temperature sensor and accelerated floating point libraries on board
- 8 × Programmable I/O (PIO) state machines for user-defined peripherals

Technical specifications

- USB Type-C connector
- 5×5 RGB LED matrix
- BOOT button for download mode
- RESET button
- RT9013-33GB 500mA low-dropout, low-noise, ultra-fast LDO
- W25Q16JVUXIQ 2MB NOR Flash
- RP2040 dual-core processor, operating frequency up to 133MHz

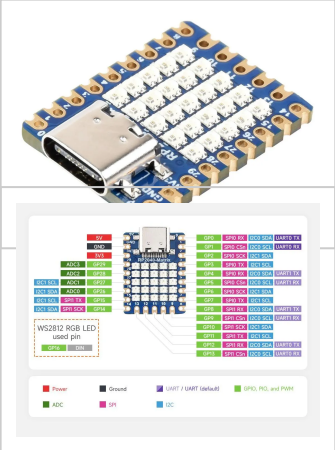
Scope of delivery

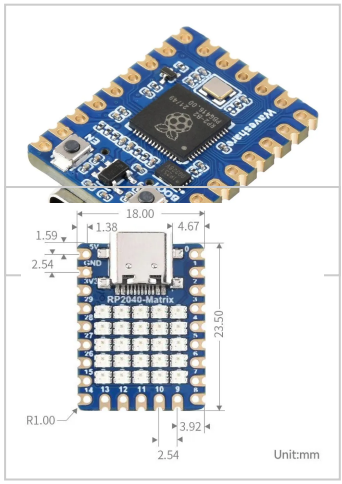
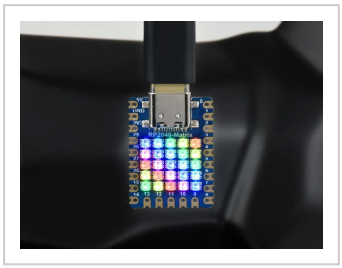
- 1x Waveshare RP2040 matrix development board

Product properties

Zolltarifnummer	84733020
Gross Weight (kg)	0.003
Country of Origin	China
Brand	Waveshare
Product ID	WS-24594
Manufacturer ID	RP2040-Matrix
EAN	4060137085970

More images


WS2812 RGB LED used pin
GP16
DIN
Power
Ground
UART / UART (default)
GPIO, PIO, and PWM
ADC
SPI
I2C


18.00
1.38
4.67
1.59
2.54
23.50
R1.00
3.92
2.54
Unit:mm
RP2040-Matrix