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LCSC ESP32S3R8N8 Dev Board

Fully open source

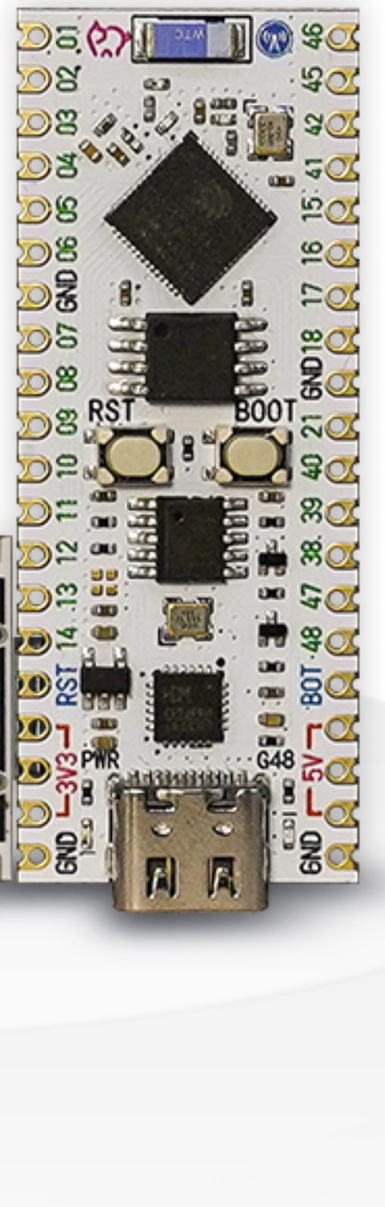
high-performance portable wiFi and bluetooth devel-opment board, all the information is fully open source, with a wealth of tutorial cases. Easy for you to get started and have project-based learning.

Contributed to project development

support ESP-IDF, Arduino IDE, MicroPython and other development environments. Exclusively provides nearly 100 + commonly used electronic module driver and project cases, favorite by creators.

Color silkscreen

Half-hole design and gold silkscreen,
cool and colorful,
make your creativity has no limitations.



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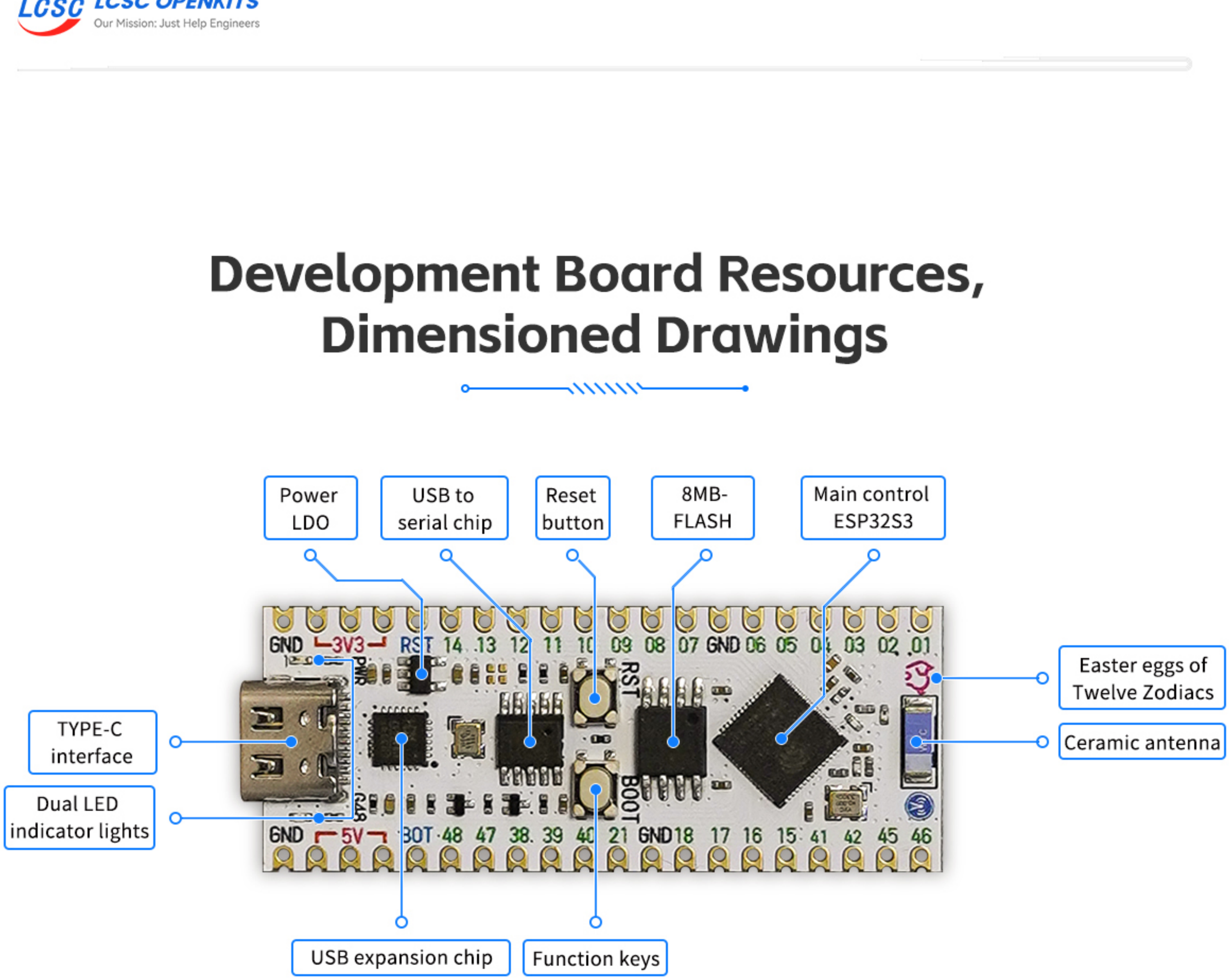
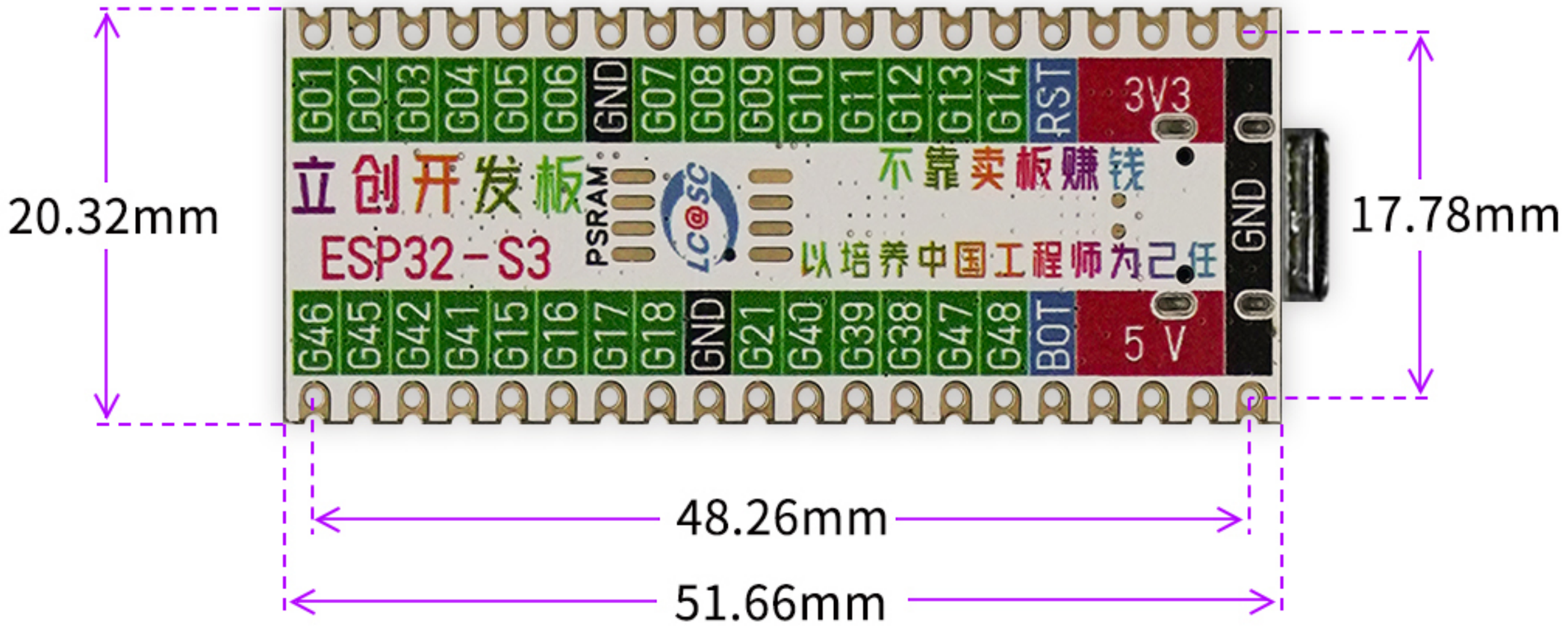
Development Board Resources, Dimensioned Drawings





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Hardware parameters

Main controller
ESP32-S3R8, maximum 240MHz, QFN56 package, PSRAM=8MB

USB to serial port chip
using a hub's USB channel for automatic download and debugging of serial ports

USB download circuit
Use another USB channel of the hub for USB communication on the development board

2 sets of 1x20 half hole pins
28 programmable IO and multiple power pins are introduced, making it easy to expand projects

External SPI FLASH
W25Q64 8MB

Type-c
Connect to USB hub

USB expansion chip
Extend Type-C interface into two USB channels

Ceramic antenna
built-in antenna, no need for external connection

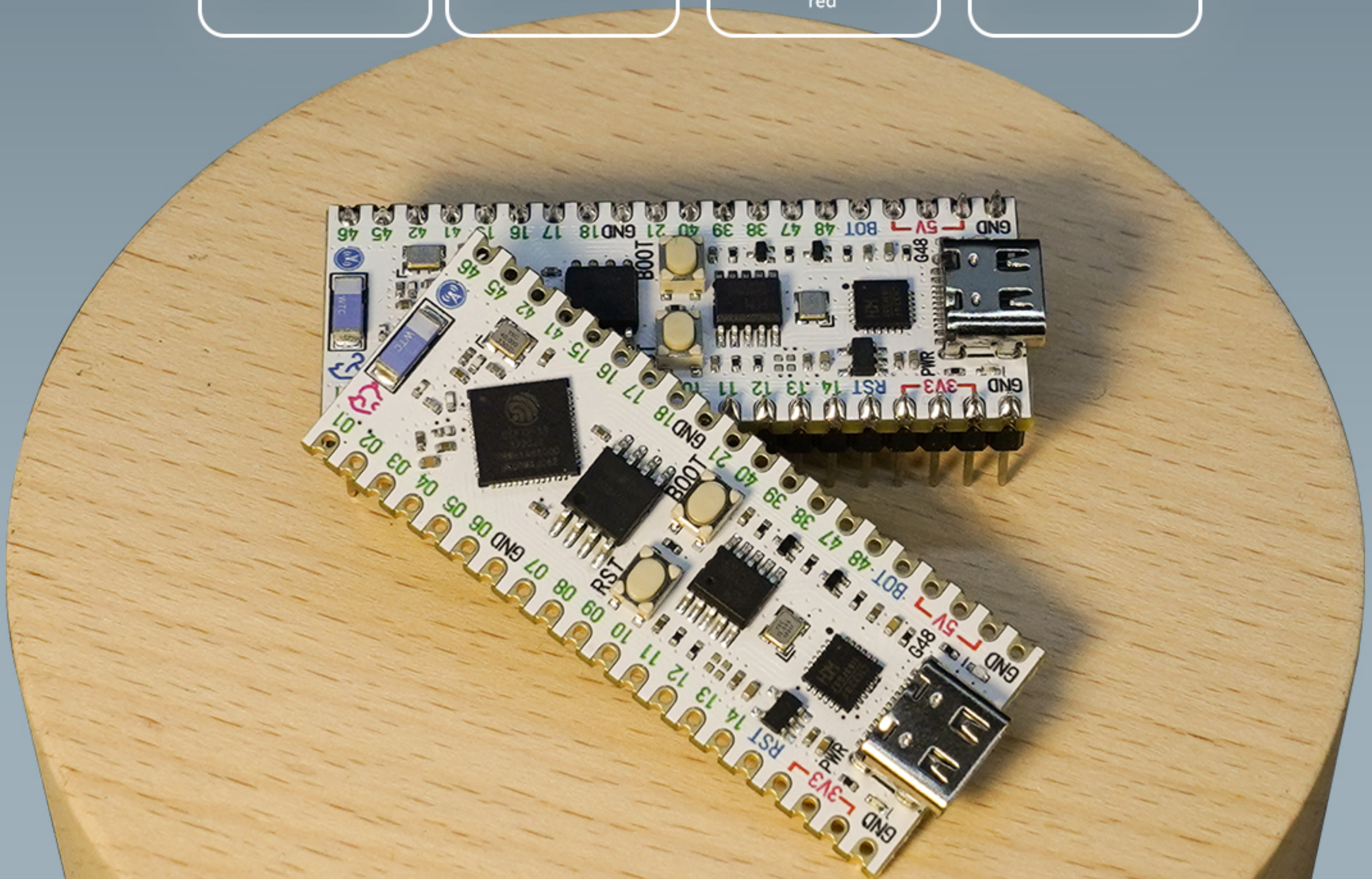
Linear regulator
LDO-800mA for 5V to 3.3V conversion

BOOT
Function buttons

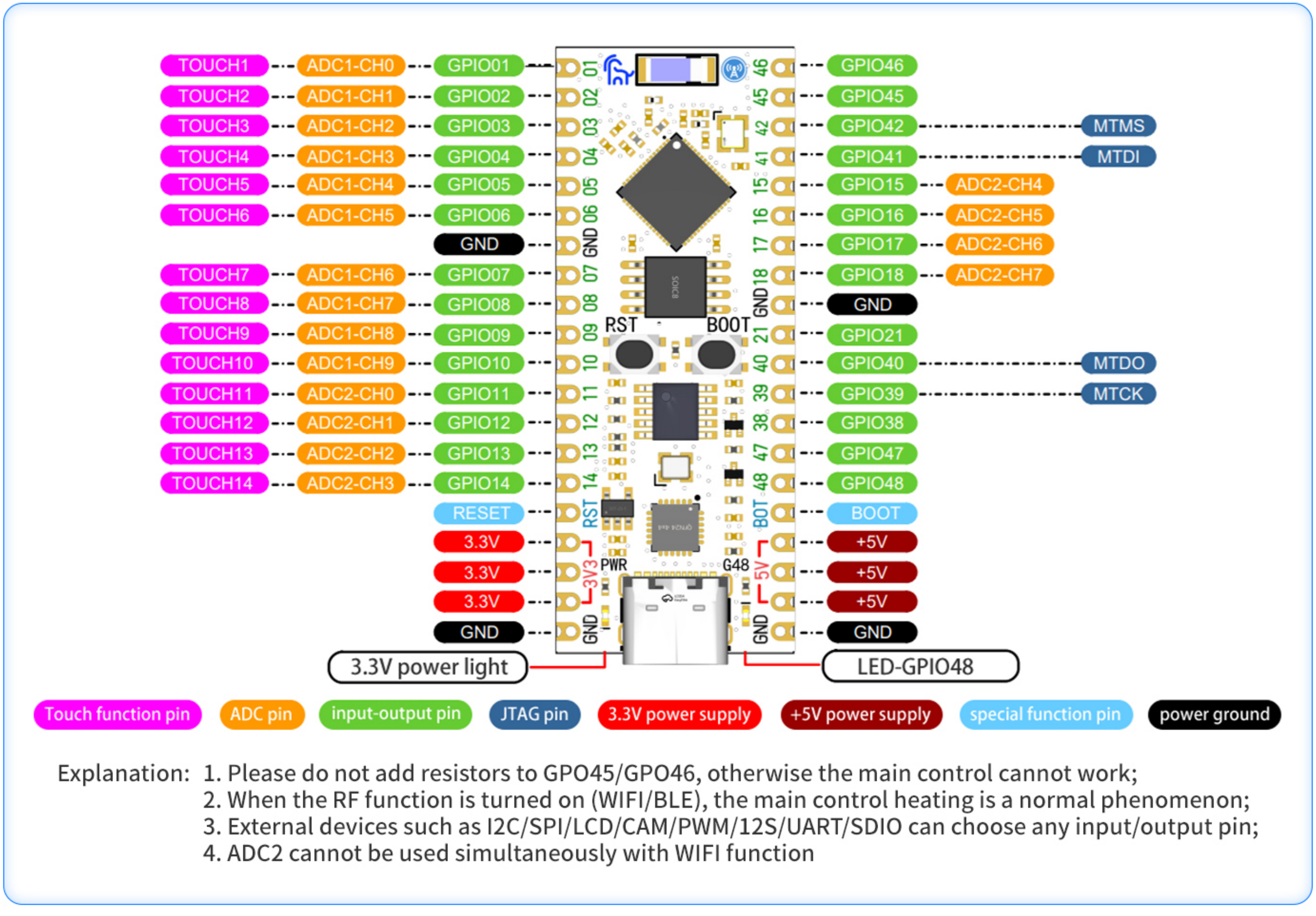
Reset
Reset button

Power indicator light
red

User light
green



Pin definition



Explanation:
1. Please do not add resistors to GPO45/GPO46, otherwise the main control cannot work;
2. When the RF function is turned on (WIFI/BLE), the main control heating is a normal phenomenon;
3. External devices such as I2C/SPI/LCD/CAM/PWM/12S/UART/SDIO can choose any input/output pin;
4. ADC2 cannot be used simultaneously with WIFI function

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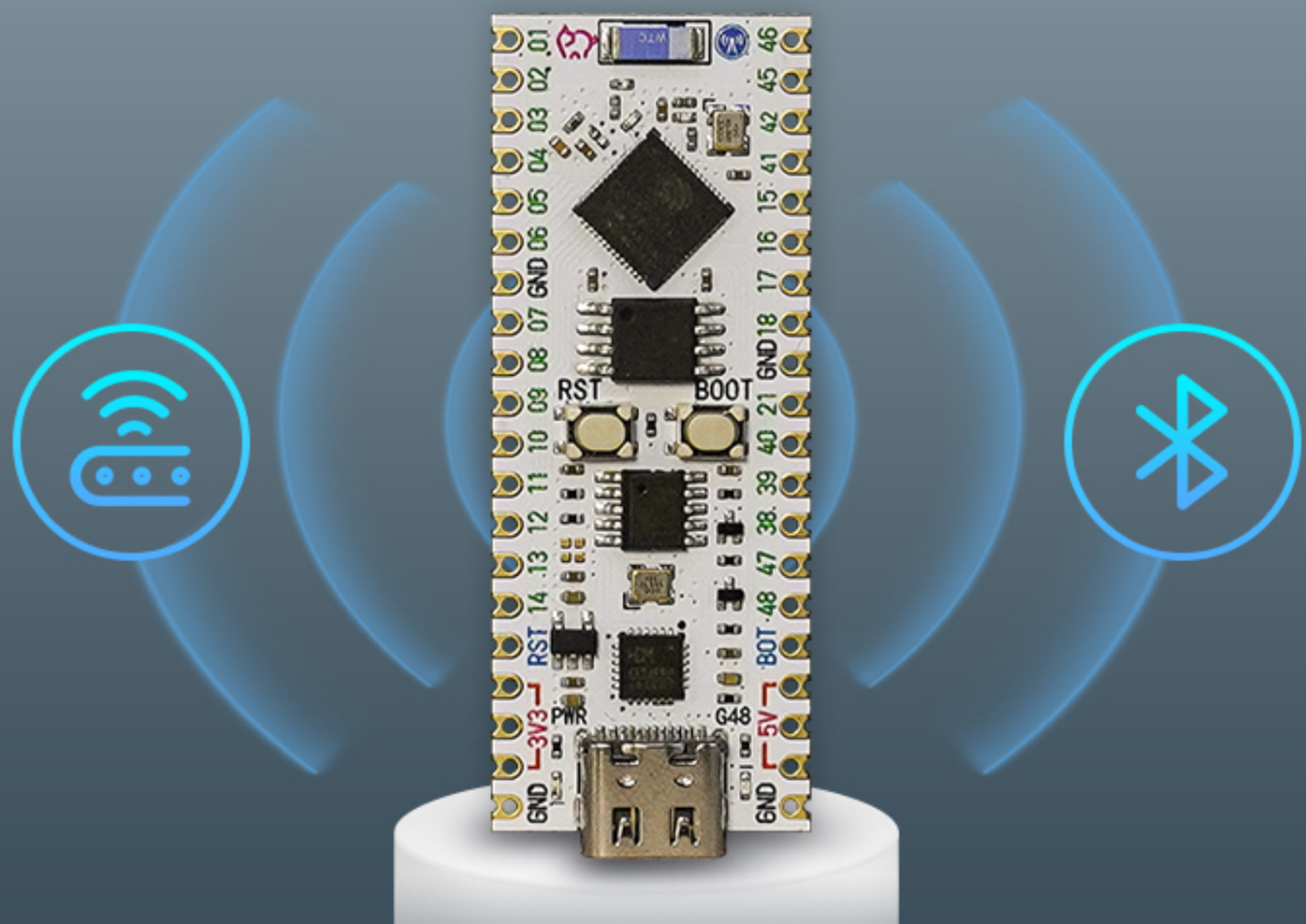
ESP32-S3R8 Main Controls

Dual-core processor,
up to 240MHz with 8MB PSRAM and 8MB FLASH.

Efficient WiFi connectivity, full Bluetooth functionality

Equipped with 2.4GHz 802.11b/g/n Wi-Fi, support low power Bluetooth BLE function



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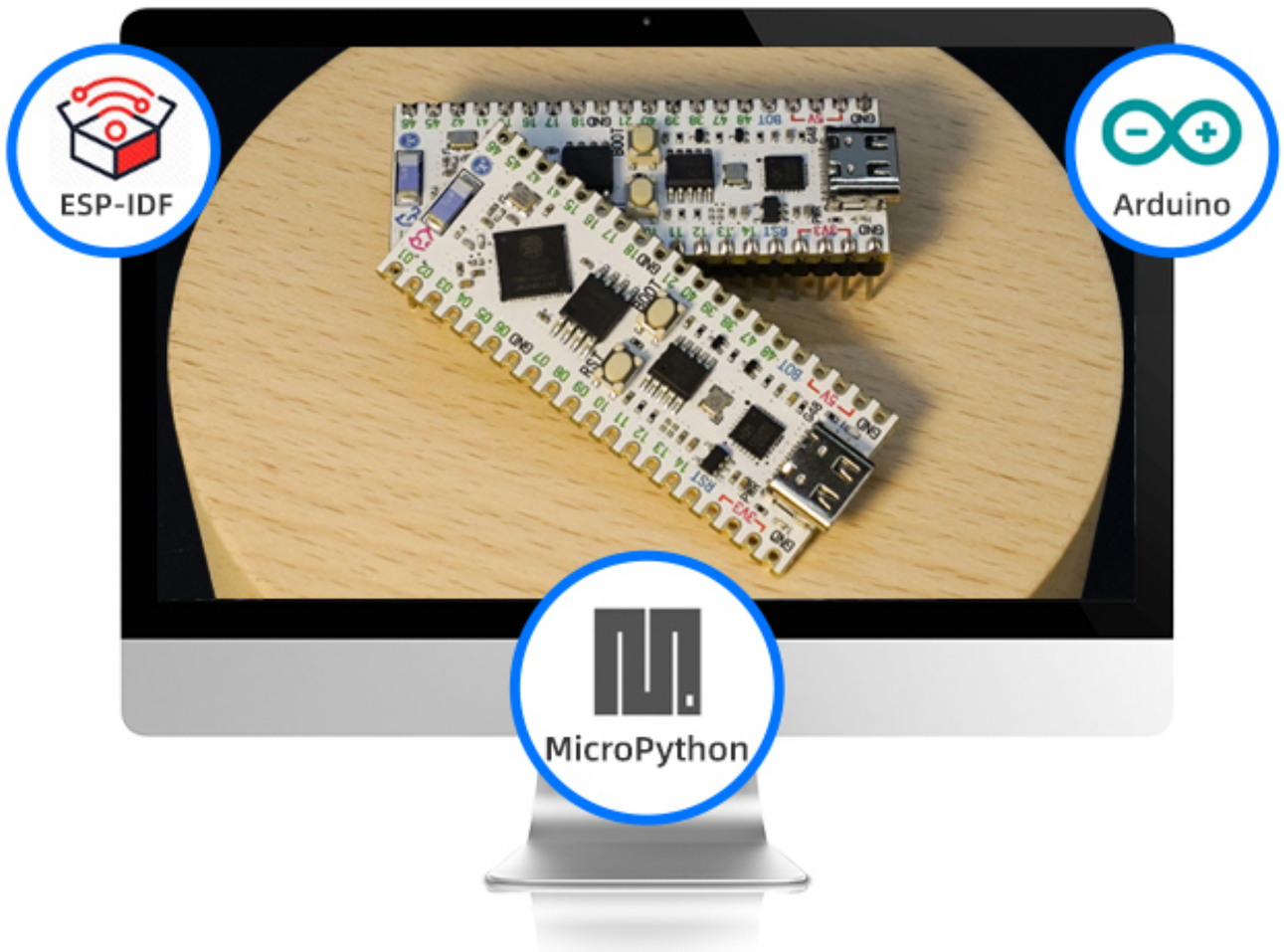
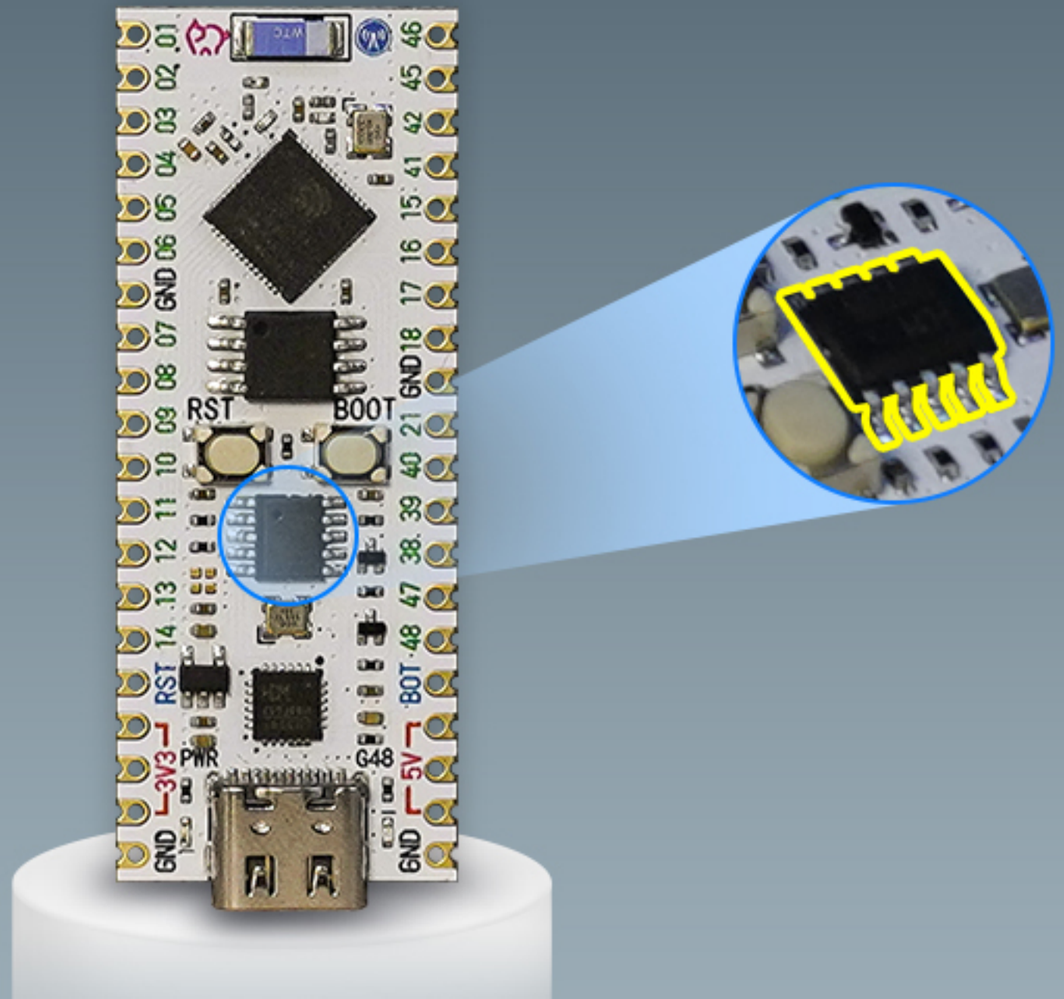
Development Environment

Support a variety of development environments and provide the appropriate tutorials,
with flexible programming options, ESP-IDF, Arduino IDE, Micropython.



Get rid of the downloader, support IDE one-click downloads

A TYPE-C interface to realize one-key download and communication debugging,
simple connection and efficient workflow, make development more fluent.



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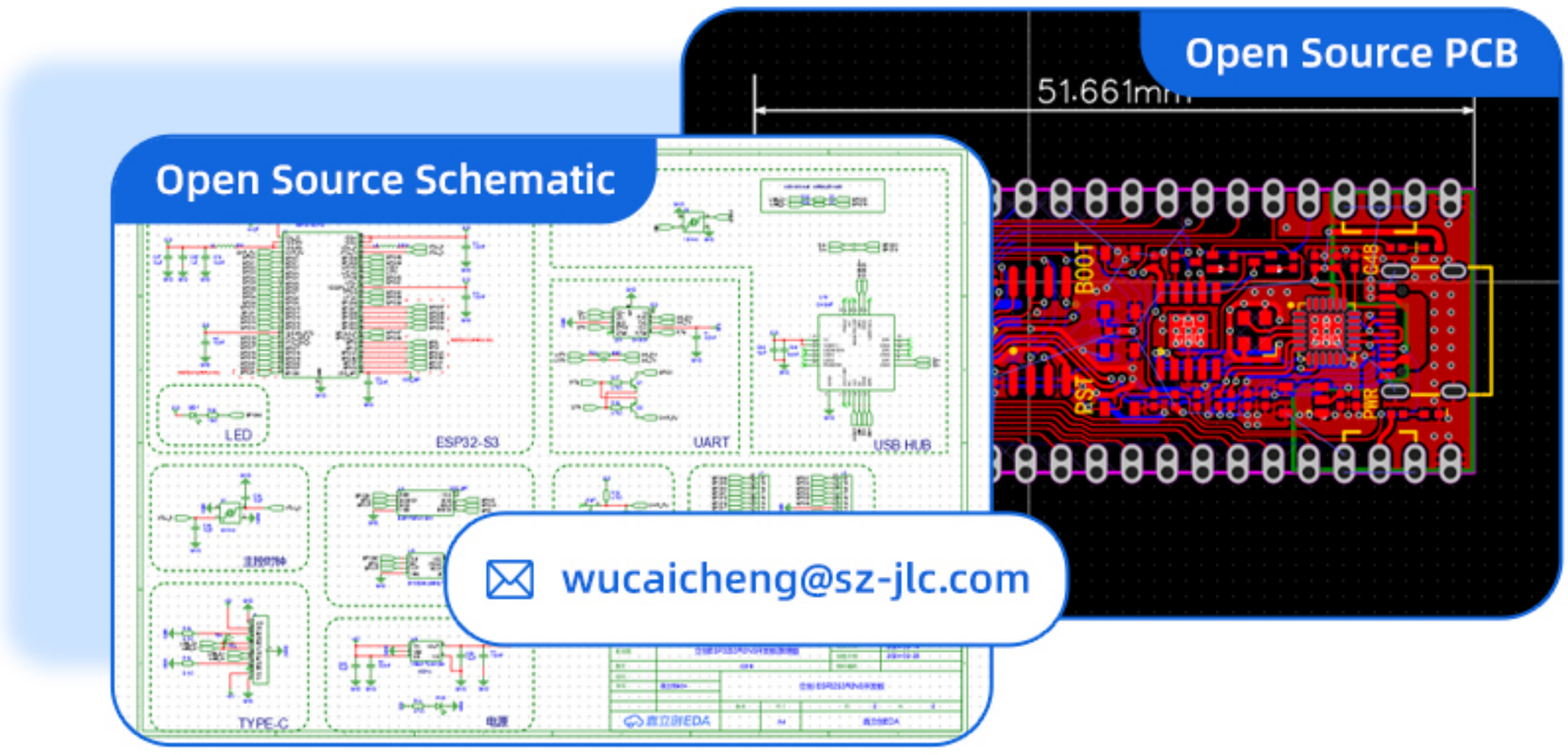
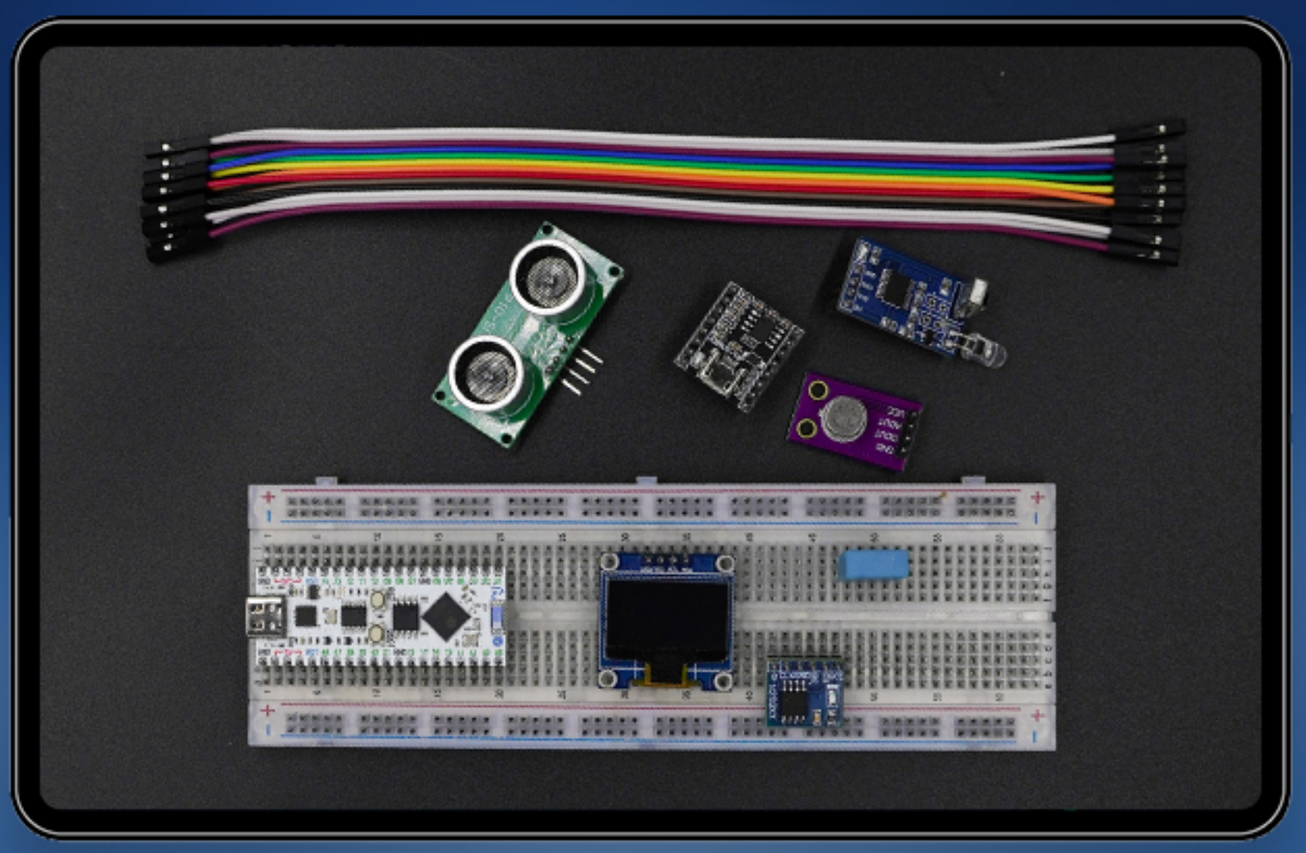
Abundant hardware and software reference materials

All supporting materials are provided for free, to help you grow every step of the way!



Project-based learning

Combination of hardware and software, through personal participation in the demand analysis, hardware design, programming, and 3D shell design. You can experience the whole process of the project, to master the project-style development. Solve the difficulty of project implementation, so that every idea becomes reality.



Requirements Analysis

Hardware Design

Programming

3D Case Design

Foundation Project

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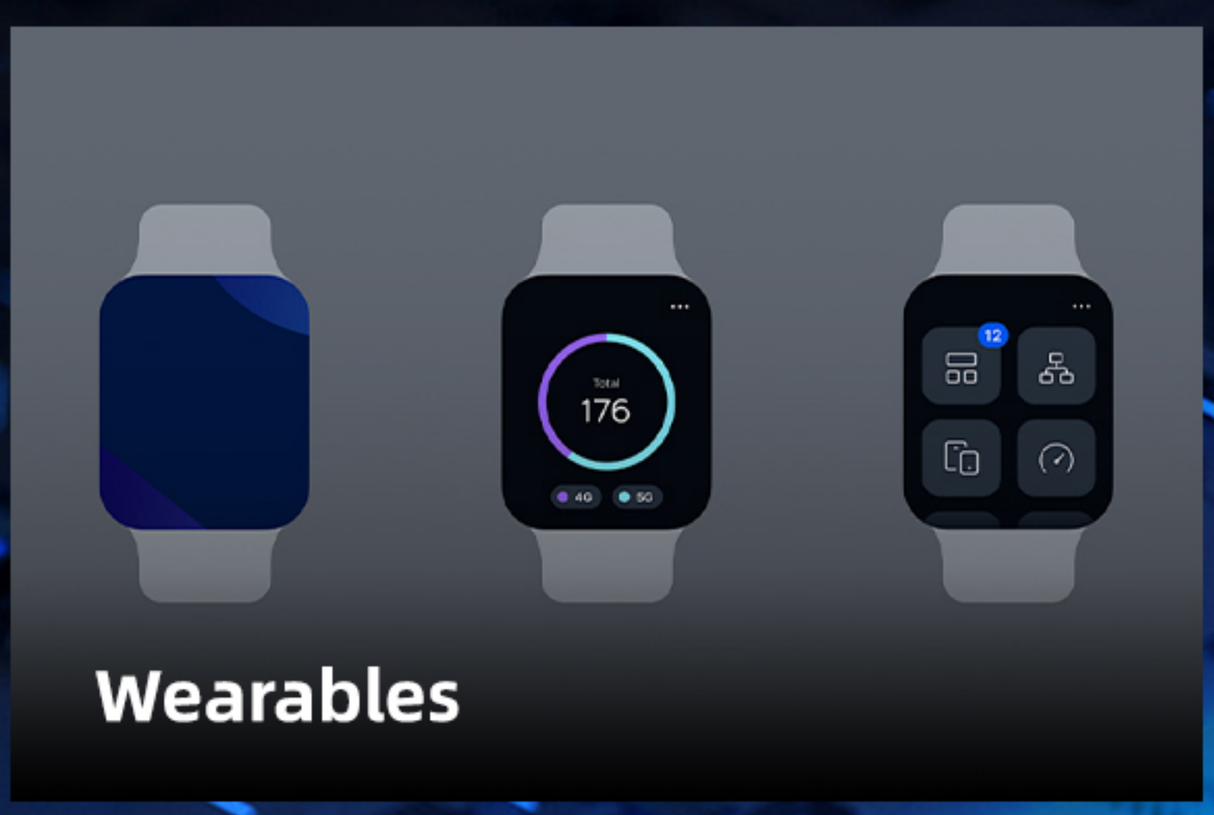
Wide range of application scenarios

Meet the different needs of various fields with strong development performance



Wearables

Education & Learning

Industrial Automation

Creator DIY

Smart Home

IoT

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Building an open source ecosystem together

Building an open source ecology together is our goal.

To this end we strive to maximize the cost-effectiveness and value.

At the same time, we fully open SDK, schematic, PCB and other hardware and software information.

Provide communication platforms, free training camps, developer support programs, etc.

so that you can give full play to your talent.

We believe that freedom and customization is the core of the open source ecosystem.

Taishan Dev board is not just a product of the LCSC, it is the result of our joint efforts.

We expect to stimulate more creativity and ideas and are eager to

work with like-minded partners to explore the infinite possibilities.

LCSC Taishan is waiting for you to join us!

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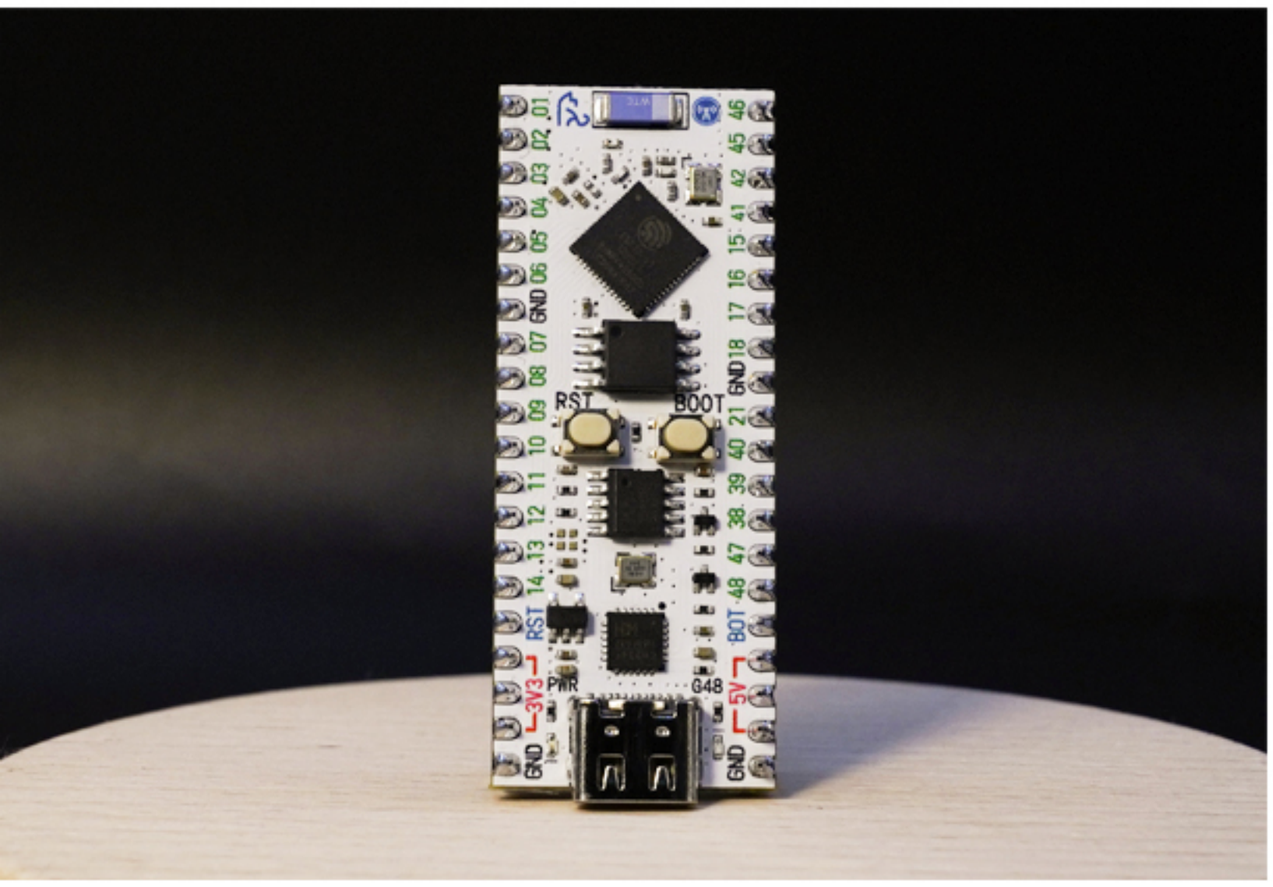
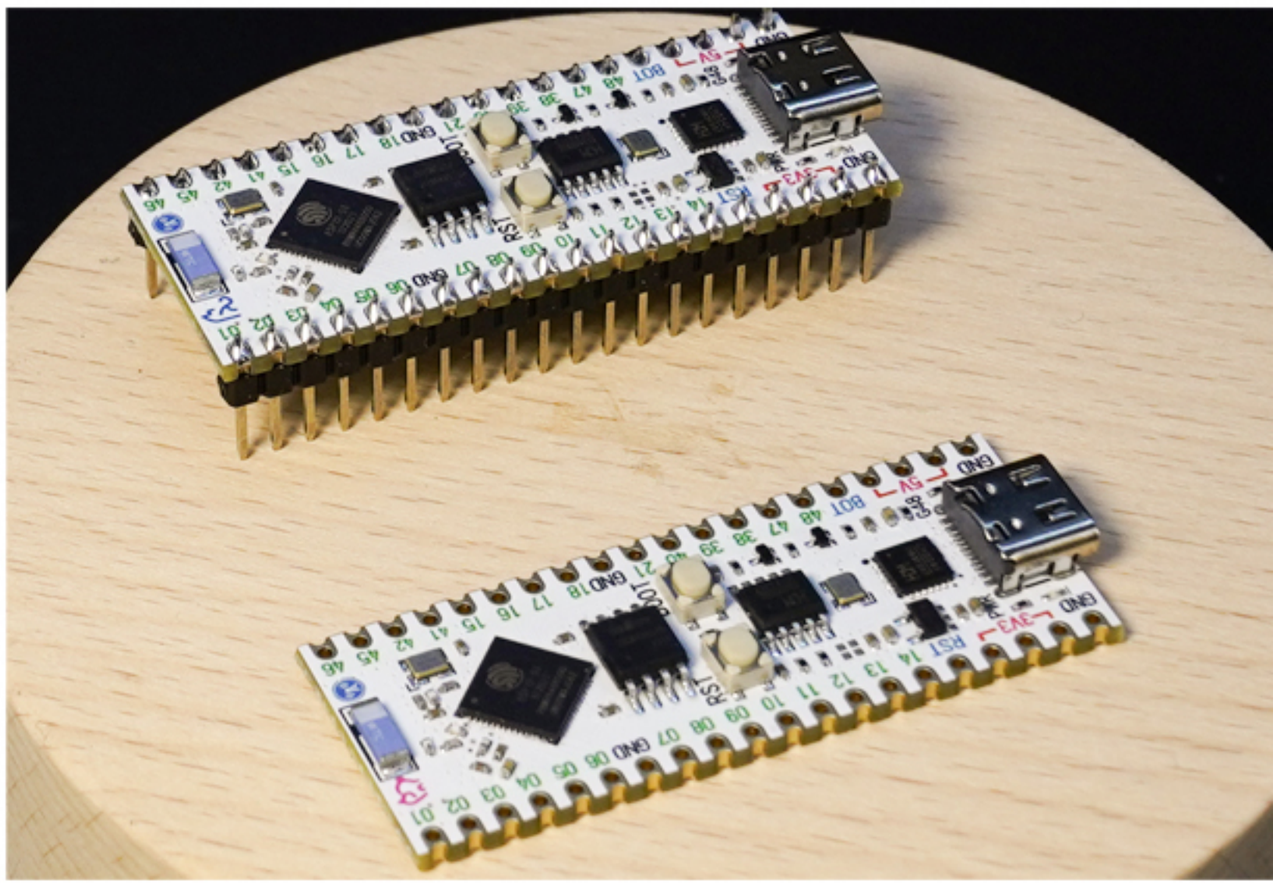
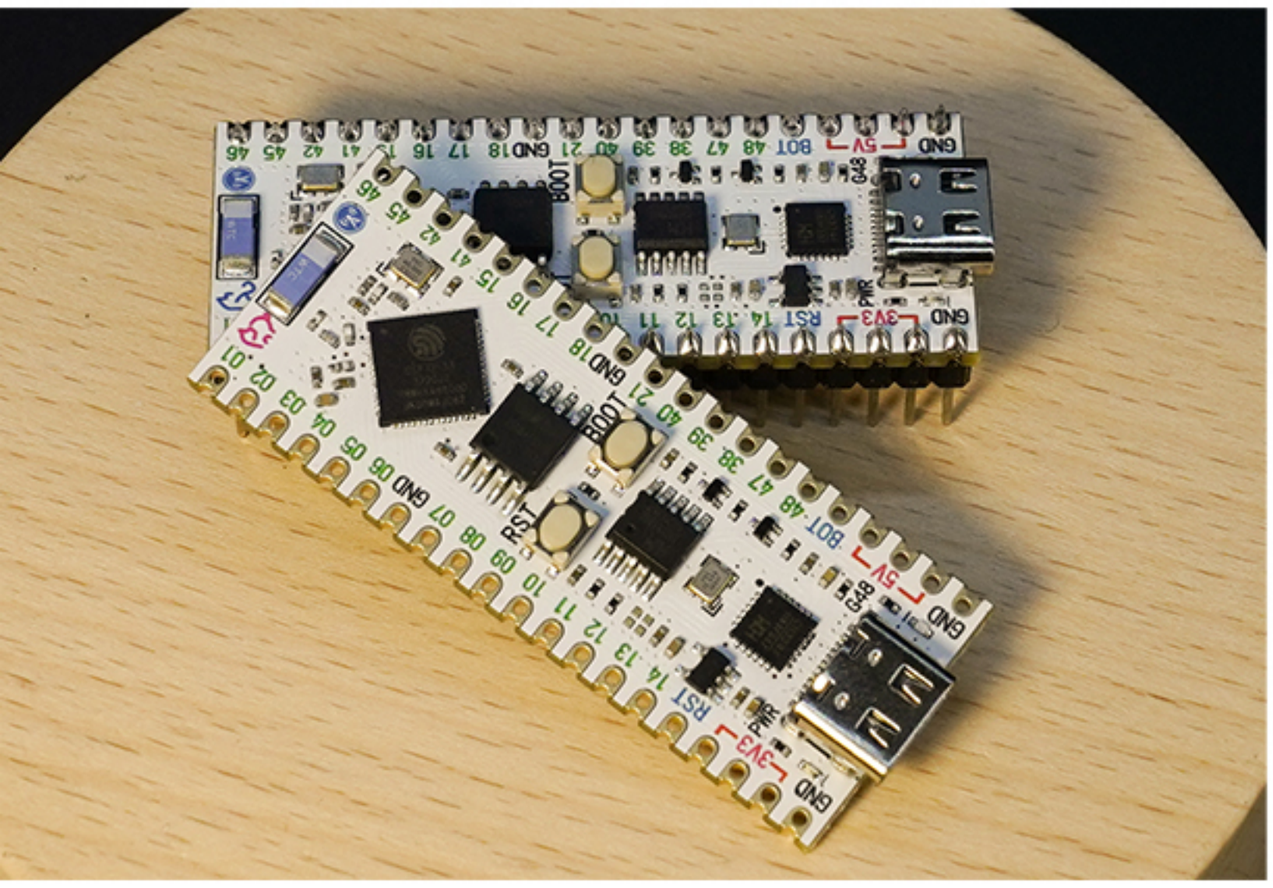
Product Showcase







Bonus Scene

The 12 signs of the Zodiac are included in the package, which is unique and full of personality.