

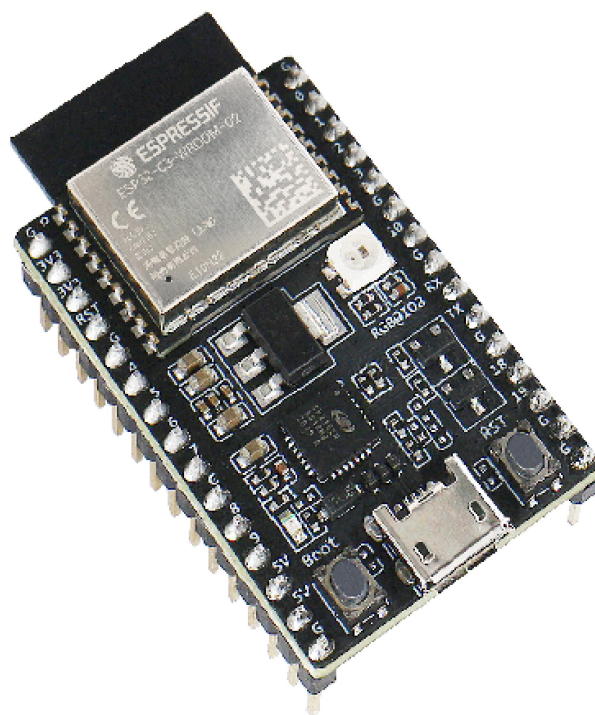
ESP32-C3-DevKitC-02

[中文]

本用户指南将帮助您开始使用 ESP32-C3-DevKitC-02，还将提供更深入的信息。

ESP32-C3-DevKitC-02 是一款基于[ESP32-C3-WROOM-02](#) 的入门级开发板，[ESP32-C3-WROOM-02](#)是一款具有 4 MB SPI 闪存的通用模块。该板集成了完整的 Wi-Fi 和蓝牙 LE 功能。

大多数 I/O 引脚都分接到两侧的引脚接头处，以便于接口。开发人员可以使用跳线连接外设，也可以将 ESP32-C3-DevKitC-02 安装在试验板上。



ESP32-C3-DevKitC-02

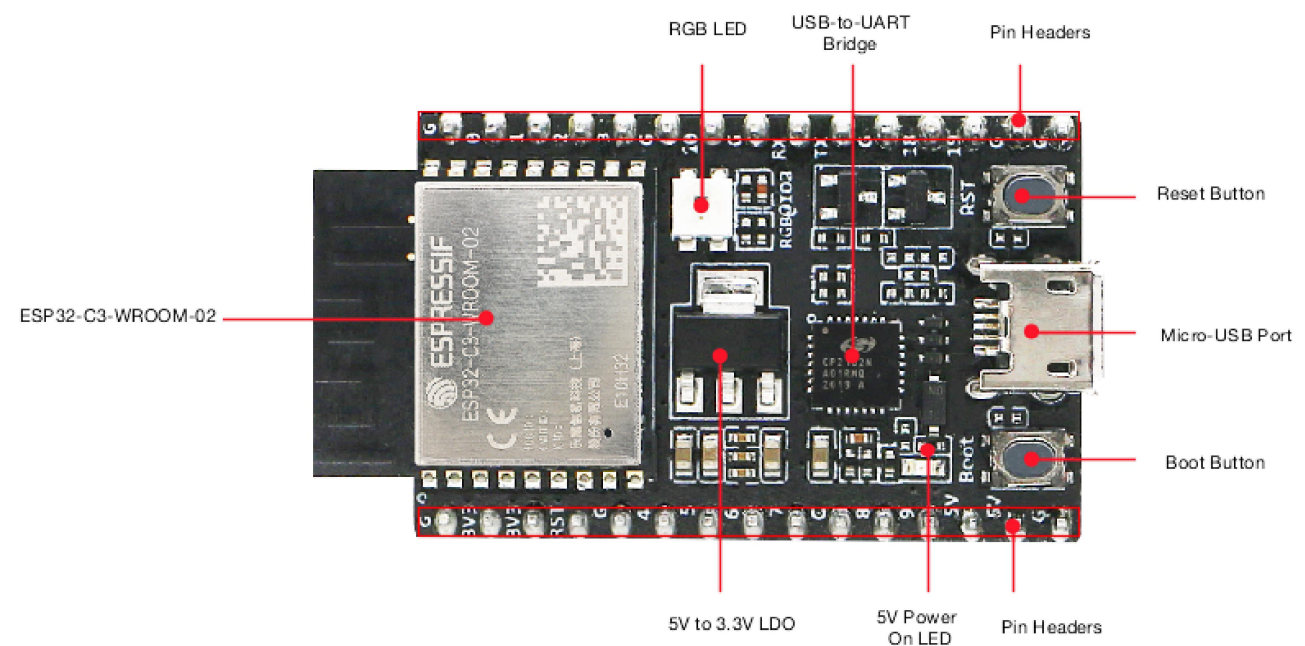
本文档由以下主要部分组成：

- [入门](#)：ESP32-C3-DevKitC-02 概述和硬件/软件设置说明，以开始使用。
- [硬件参考](#)：有关 ESP32-C3-DevKitC-02 硬件的更多详细信息。
- [硬件修订版详细信息](#)：ESP32-C3-DevKitC-02 先前版本（如果有）的修订版历史记录、已知问题和用户指南链接。
- [相关文档](#)：相关文档的链接。

开始

本节简要介绍 ESP32-C3-DevKitC-02，说明如何进行初始硬件设置以及如何将固件闪存到其中。

组件说明



ESP32-C3-DevKitC-02 - 正面

电路板的关键组件以逆时针方向描述。

关键组件	描述
ESP32-C3-WROOM-02	乐鑫 ESP32-C3-WROOM-02 是一款功能强大的通用模块，可
5 V 至 3.3 V 低电平	将5 V电源转换为3.3 V输出的电源稳压器。
5 V 上电指示灯	当 USB 电源连接到主板时打开。
引脚接头	所有可用的GPIO引脚（用于闪存的SPI总线除外）都分接到电
启动按钮	下载按钮。按住 启动 ，然后按 重置 将启动固件下载模式，用
微型 USB 端口	USB 接口。电路板的电源以及计算机与 ESP32-C3 芯片之间的
重置按钮	按此按钮重新启动系统。
USB 到 UART 桥接器	单个 USB 到 UART 桥接芯片提供高达 3 Mbps 的传输速率。
红绿灯	可寻址的 RGB LED，由 GPIO8 驱动。

开始应用程序开发

在启动 ESP32-C3-DevKitC-02 之前，请确保其状况良好，没有明显的损坏迹象。

所需硬件

- ESP32-C3-DevKitC-02
- USB 2.0 电缆（标准 A 至微型 B）
- 运行 Windows、Linux 或 macOS 的计算机

ⓘ 注意

请务必使用适当的 USB 电缆。某些电缆仅用于充电，不提供所需的数据线，也不用于对电路板进行编程。

Software Setup

Please proceed to [Get Started](#), where Section [Installation Step by Step](#) will quickly help you set up the development environment and then flash an application example into your ESP32-C3-DevKitC-02.

Contents and Packaging

Retail orders

If you order a few samples, each ESP32-C3-DevKitC-02 comes in an individual package in either antistatic bag or any packaging depending on your retailer.

For retail orders, please go to <https://www.espressif.com/en/company/contact/buy-a-sample>.

Wholesale Orders

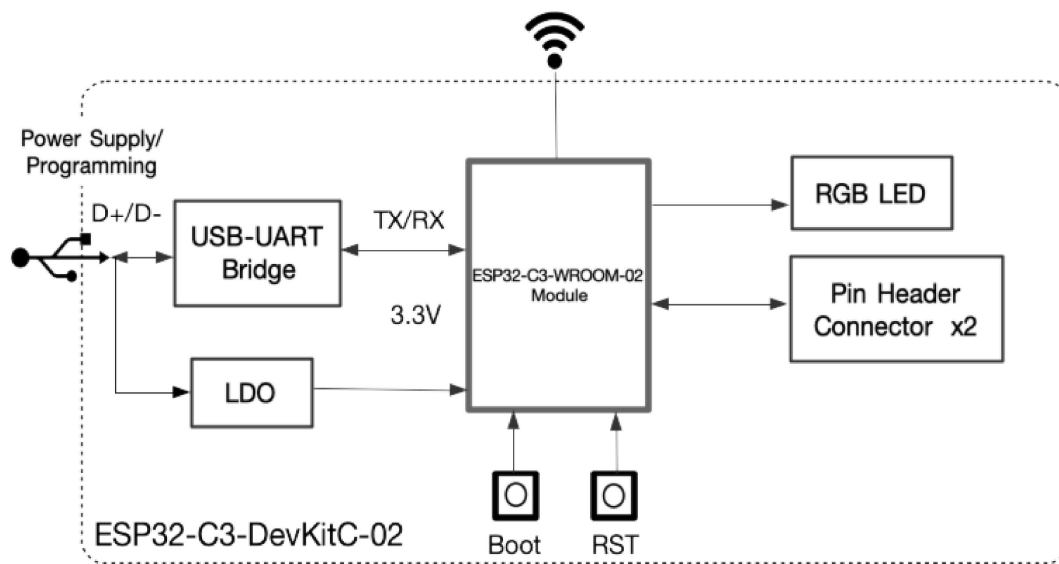
If you order in bulk, the boards come in large cardboard boxes.

For wholesale orders, please go to <https://www.espressif.com/en/contact-us/sales-questions>.

硬件参考

Block Diagram

The block diagram below shows the components of ESP32-C3-DevKitC-02 and their interconnections.



ESP32-C3-DevKitC-02 (click to enlarge)

Power Supply Options

There are three mutually exclusive ways to provide power to the board:

- Micro-USB Port, default power supply
- 5V and GND pin headers
- 3V3 and GND pin headers

It is recommended to use the first option: Micro-USB Port.

Header Block

The two tables below provide the **Name** and **Function** of the pin headers on both sides of the board (J1 and J3). The pin header names are shown in [ESP32-C3-DevKitC-02 - front](#). The numbering is the same as in the [ESP32-C3-DevKitC-02 Schematic](#) (PDF).

J1

No.	Name	Type ¹	Function
1	G	G	Ground
2	3V3	P	3.3 V power supply
3	3V3	P	3.3 V power supply
4	RST	I	CHIP_PU
5	G	G	Ground
6	4	I/O/T	GPIO4, ADC1_CH4, FSPIHD, MTMS

No.	Name	Type ¹	Function
7	5	I/O/T	GPIO5, ADC2_CH0, FSPIWP, MTDI
8	6	I/O/T	GPIO6, FSPICLK, MTCK
9	7	I/O/T	GPIO7, FSPID, MTDO
10	G	G	Ground
11	8	I/O/T	GPIO8 ² , RGB LED
12	9	I/O/T	GPIO9 ²
13	5V	P	5 V power supply
14	5V	P	5 V power supply
15	G	G	Ground

J3

No.	Name	Type ¹	Function
1	G	G	Ground
2	0	I/O/T	GPIO0, ADC1_CH0, XTAL_32K_P
3	1	I/O/T	GPIO1, ADC1_CH1, XTAL_32K_N
4	2	I/O/T	GPIO2 ² , ADC1_CH2, FSPIQ
5	3	I/O/T	GPIO3, ADC1_CH3
6	G	G	Ground
7	10	I/O/T	GPIO10, FSPICS0
8	G	G	Ground
9	RX	I/O/T	GPIO20, U0RXD
10	TX	I/O/T	GPIO21, U0TXD
11	G	G	Ground
12	18	I/O/T	GPIO18
13	19	I/O/T	GPIO19
14	G	G	Ground
15	G	G	Ground

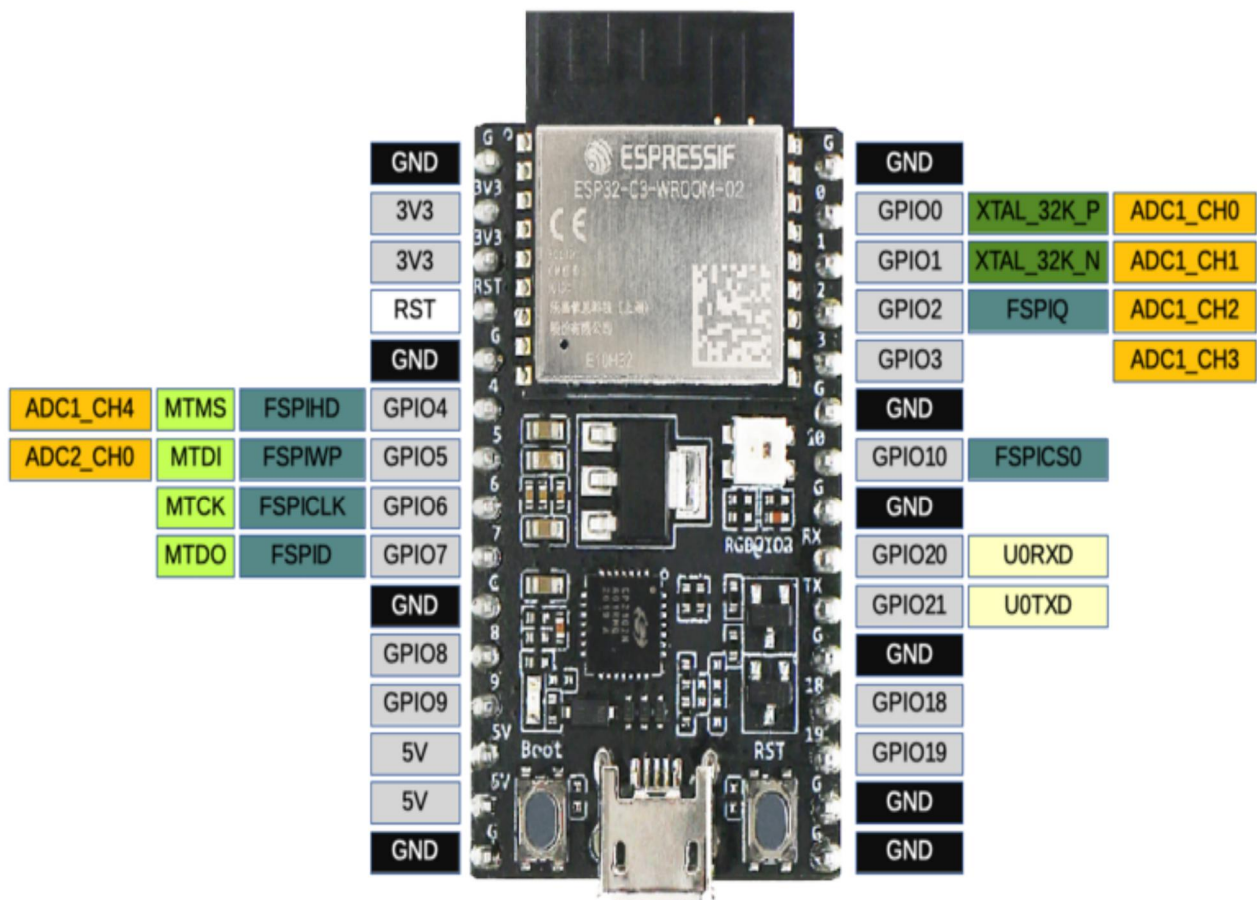
1(1,2)

P: Power supply; I: Input; O: Output; T: High impedance.

2(1,2,3)

GPIO2, GPIO8, and GPIO9 are strapping pins of the ESP32-C3 chip. These pins are used to control several chip functions depending on binary voltage values applied to the pins during chip power-up or system reset. For description and application of the strapping pins, please refer to Section Strapping Pins in [ESP32-C3 Datasheet](#).

Pin Layout



ESP32-C3-DevKitC-02 Pin Layout (click to enlarge)

Hardware Revision Details

No previous versions available.

Related Documents

- [Build Secure and Cost-effective Connected Devices with ESP32-C3](#)
- [ESP32-C3 Datasheet \(PDF\)](#)
- [ESP32-C3-WROOM-02 Datasheet \(PDF\)](#)
- [ESP32-C3-DevKitC-02 Schematic \(PDF\)](#)
- [ESP32-C3-DevKitC-02 PCB Layout \(PDF\)](#)

- [ESP32-C3-DevKitC-02 Dimensions](#) (PDF)
- [ESP32-C3-DevKitC-02 Dimensions source file](#) (DXF) - You can view it with [Autodesk Viewer](#) online

For further design documentation for the board, please contact us at sales@espressif.com.

[Provide feedback about this document](#)