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Espressif 32E-N4

ESP32-WROOM-32E(4MB) Module Instruction Manual

Model: 32E-N4 | Brand: Espressif

1. Product Overview

The ESP32-WROOM-32E is a powerful, generic Wi-Fi+BT+BLE MCU module that targets a wide variety of applications, ranging from low-power sensor networks to the most demanding tasks, such as voice encoding, music streaming, and MP3 decoding. This module is an SMD (Surface Mount Device) module, designed for integration into larger electronic systems.

Figure 1: ESP32-WROOM-32E(4MB) Module. This image displays the top view of the module, showing the Espressif logo, the module name "ESP32-WROOM-32E", and a QR code. The module features an integrated PCB antenna.

Key Features:

- 2.4 GHz Wi-Fi (802.11 b/g/n)
- Bluetooth V4.2 BR/EDR and Bluetooth LE specification
- 4 MB flash in chip package
- On-board PCB antenna connector

2. Package Contents

Please verify that all items are present and in good condition upon opening the package:

- ESP32-WROOM-32E(4MB) Module (Quantity as per order, typically packaged in reels of 10 units)
- Integrated PCB antenna

3. Setup and Integration

The ESP32-WROOM-32E is an SMD module designed for integration into custom PCB designs. Proper setup requires knowledge of electronics and soldering techniques.

3.1. Hardware Integration:

- **Power Supply:** The module operates on a 3.3V power supply. Ensure a stable and clean power source is provided to the VCC pins. Refer to the module's datasheet for specific voltage ranges and current requirements.
- **Pin Connections:** Connect the module's pins to your custom PCB according to your application's design. Pay close attention to GPIO, UART, SPI, I2C, and other peripheral connections.
- **Soldering:** The module is designed for surface-mount soldering. Use appropriate soldering equipment and techniques to ensure secure and reliable connections. Avoid excessive heat to prevent damage to the module.
- **Antenna:** The module includes an on-board PCB antenna. Ensure no metallic objects or ground planes are placed directly above or too close to the antenna area on your PCB to avoid signal interference.

3.2. Development Environment Setup:

To program the ESP32-WROOM-32E, you will need to set up a development environment. Espressif provides the ESP-IDF (Espressif IoT Development Framework), which is the official development framework for ESP32.

- **Install ESP-IDF:** Follow the official Espressif documentation to install the ESP-IDF on your operating system. This includes installing necessary toolchains and libraries.
- **Connect to PC:** For initial programming and debugging, you will typically need a USB-to-UART bridge connected to the module's UART pins (TX, RX) and appropriate boot mode pins (GPIO0, EN).
- **Flash Firmware:** Use the ESP-IDF tools (e.g.,esptool.py) to flash your compiled firmware onto the module.

4. Operating Principles

The ESP32-WROOM-32E operates as a powerful microcontroller with integrated Wi-Fi and Bluetooth capabilities. Its functionality is determined by the firmware loaded onto its flash memory.

4.1. Wi-Fi Operation:

The module supports 802.11 b/g/n Wi-Fi standards. It can operate in Station mode (connecting to an access point), SoftAP mode (acting as an access point), or a combination of both. Firmware can be developed to handle network connections, data transmission, and cloud communication.

4.2. Bluetooth Operation:

The module supports Bluetooth V4.2 BR/EDR and Bluetooth LE (Low Energy). This allows for short-range wireless communication with other Bluetooth-enabled devices. Applications include sensor data collection, device control, and audio streaming.

4.3. Microcontroller Functions:

Beyond wireless communication, the ESP32-WROOM-32E features a powerful dual-core processor and a rich set of peripherals (GPIOs, ADC, DAC, SPI, I2C, UART, PWM, etc.). These can be programmed to interact with external sensors, actuators, and other electronic components, enabling a wide range of IoT and embedded applications.

5. Maintenance and Care

To ensure the longevity and reliable operation of your ESP32-WROOM-32E module, follow these guidelines:

- **Handle with Care:** The module is a sensitive electronic component. Avoid dropping it or subjecting it to physical shock.
- **Electrostatic Discharge (ESD) Protection:** Always handle the module in an ESD-safe environment, using anti-static mats and wrist straps, to prevent damage from static electricity.
- **Environmental Conditions:** Operate and store the module within its specified temperature and humidity ranges. Avoid exposure to extreme temperatures, direct sunlight, moisture, and corrosive environments.
- **Power Supply Stability:** Ensure the power supply is stable and within the specified voltage range (3.3V). Voltage fluctuations or overvoltage can damage the module.
- **Cleaning:** If necessary, clean the module gently with a soft, dry, lint-free cloth. Do not use liquid cleaners or solvents.

6. Troubleshooting

This section provides general troubleshooting tips for common issues. For more detailed technical support, refer to the Espressif documentation or community forums.

Problem	Possible Cause	Solution
Module not powering on/responding	Incorrect power supply voltage; loose connections; damaged module.	Verify 3.3V power supply; check all solder joints and connections; inspect module for visible damage.
Wi-Fi/Bluetooth connectivity issues	Antenna interference; incorrect firmware configuration; weak signal.	Ensure no obstructions near the PCB antenna; review firmware for correct Wi-Fi/Bluetooth settings; check signal strength in the operating environment.
Firmware flashing failure	Incorrect boot mode; faulty USB-to-UART converter; driver issues; incorrect port selection.	Ensure module is in flashing mode (GPIO0 low during reset); check USB-to-UART converter and its drivers; select the correct COM port in your flashing tool.
Unexpected module resets/crashes	Unstable power supply; software bugs; hardware issues.	Provide a stable power supply with sufficient current capacity; debug your firmware for errors; check for any short circuits or cold solder joints.

7. Specifications

Detailed technical specifications for the ESP32-WROOM-32E(4MB) Module:

Model: 32E-N4

SoC: ESP32-D0WD-V3

Flash Memory: 4 MB SPI flash

Wireless Connectivity: 2.4 GHz Wi-Fi (802.11 b/g/n), Bluetooth V4.2 BR/EDR and Bluetooth LE

Antenna: On-board PCB antenna

Operating System (Typical): FreeRTOS (supported by ESP-IDF)

Number of Processors: 1 (Dual-core Tensilica Xtensa LX6 microprocessor)

Item Weight: Approximately 0.704 ounces (20 grams)

Package Dimensions: Approximately 5.91 x 4.96 x 0.51 inches (15 x 12.6 x 1.3 cm)

Manufacturer: Espressif

First Available Date: August 20, 2021

8. Warranty and Support

8.1. Warranty Information:

Specific warranty details for the ESP32-WROOM-32E module are typically provided by the reseller or distributor at the time of purchase. As a component, warranty often covers manufacturing defects. Please retain your proof of purchase for any warranty claims.

8.2. Technical Support:

For comprehensive technical documentation, datasheets, application notes, and software development kits (SDKs), please visit the official Espressif website:

Espressif Official Modules Page

Espressif also maintains active community forums and GitHub repositories where you can find support, examples, and contribute to the development ecosystem.

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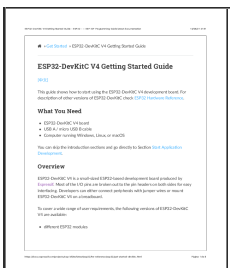
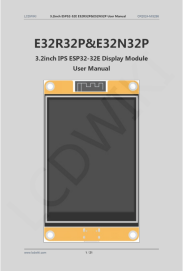
Related Documents - 32E-N4

	ESP32-DevKitC V4 Getting Started Guide | Espressif A comprehensive guide to getting started with the ESP32-DevKitC V4 development board from Espressif. Learn about its features, components, and pinouts for easy interfacing and application development.
	2.8inch ESP32-32E Display Module User Manual User manual for the 2.8-inch ESP32-32E Display Module, covering resource description, software and hardware instructions, and precautions for use. Details include ESP32-WROOM-32E module, ILI9341 LCD controller, SPI communication, USB-to-serial conversion, and various circuit diagrams.

	[3.5-inch ESP32-32E Display Module User Manual (E32R35T & E32N35T)] Comprehensive user manual for the 3.5-inch ESP32-32E Display Module (models E32R35T and E32N35T). This guide details hardware resources, software development steps, schematic explanations for various circuits (Type-C, SPI, USB-to-Serial, audio, battery management, etc.), and essential usage precautions. Features the ESP32-WROOM-32E module, ST7796 display driver, and XPT2046 touch controller.
	[Elecrow CrowPanel ESP32 Display User Manual] User manual for the Elecrow CrowPanel ESP32 HMI displays, detailing package contents, interface layouts, technical specifications, and safety instructions.
	[E32R32P & E32N32P 3.2-inch IPS ESP32-32E Display Module User Manual] Comprehensive user manual for the E32R32P & E32N32P 3.2-inch IPS ESP32-32E Display Module, covering resource descriptions, software instructions, and detailed hardware explanations.
	[E32R32P & E32N32P 3.2-inch IPS ESP32-32E Display Module User Manual] This user manual provides a comprehensive guide to the E32R32P and E32N32P 3.2-inch IPS ESP32-32E Display Modules. It covers resource descriptions, software and hardware instructions, detailed explanations of schematic diagrams, and precautions for use. The manual details the module's components, including the LCD screen, resistive touch screen, ESP32-WROOM-32E module, various interface circuits, and power management.

Documents - Espressif – 32E-N4

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文件编号 Document No.	ESP-07-2-007-03	文件名称 Document Name	产品/工艺变更通知 Product/Process Change Notice (PCN)
文件版本 Document Version	1.4	保存期限 Retention Period	5 年 5 years

乐鑫模组新增越南委外生产工厂

Espressif Introduced a New Outsourced Module Manufacturing Factory in Vietnam

PCN 编号 PCN No.	PCN20230201 (v2)	提出日期 Issue Date of PCN	2023/04/18
变更日期 Proposed Date of Change	2023/05/10	预计变更后产品首次出货日期 Proposed Date of First Shipment After Change	2023/06/01
PCN 类型 / PCN Category	需客户需要批准/ Customer Approval Required 已客户通知/ Customer Notification		

1. 影响产品名称/ Affected Product Name

所有乐鑫模组:

- ESP32-WROOM-32E-N4 已于 2022 年 12 月份越南委外工厂量产。
- ESP32-WROOM-32E-N8、ESP32-WROOM-32E-N16，已于 2023 年 3 月份越南委外工厂量产。
- ESP32-S3-WROOM-1 产品已通过验证，达到可交付标准，可于 2023 年 6 月越南委外工厂量产。

ESP32-S3-WROOM-1 具体产品型号如下：

Product Name	Product MPN
ESP32-S3-WROOM-1	ESP32-S3-WROOM-1-N4
ESP32-S3-WROOM-1	ESP32-S3-WROOM-1-N8
ESP32-S3-WROOM-1	ESP32-S3-WROOM-1-N16
ESP32-S3-WROOM-1	ESP32-S3-WROOM-1-N4R2
ESP32-S3-WROOM-1	ESP32-S3-WROOM-1-N8R2
ESP32-S3-WROOM-1	ESP32-S3-WROOM-1-N16R2
ESP32-S3-WROOM-1	ESP32-S3-WROOM-1-N4R8
ESP32-S3-WROOM-1	ESP32-S3-WROOM-1-N8R8
ESP32-S3-WROOM-1	ESP32-S3-WROOM-1-N16R8

- 其他模组等大批共体时间计划待定，将由乐鑫商务团队与您联络订单事宜。

All Espressif modules:

- ESP32-WROOM-32E-N4 was qualified and delivered from outsourced module manufacturing factory in Vietnam in December 2022.
- ESP32-WROOM-32E-N8, ESP32-WROOM-32E-N16 was qualified and delivered from outsourced module manufacturing factory in Vietnam in March 2023.

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ESPRESSIF PCN Pan Zhengyan uri media digikeyESP32 WROOM 32E N4 2022 12 ESP32 N8 N16 2023 3 gproxymedia digikey PCNs Espressif PCN20230201 v2 |||

Document No. Document Version ESP-07-2-007-03 1.4 Document Name Retention Period / Product/Pr ... al Required PCN / PCN Category / Customer Notification 1. / Affected Product Name ESP32-WROOM-**32E-N4** 2022 12 ESP32-WROOM-32E-N8ESP32-WROOM-32E-N16 2023 3 ESP32-S3-WROOM-1 2023 6 ESP...

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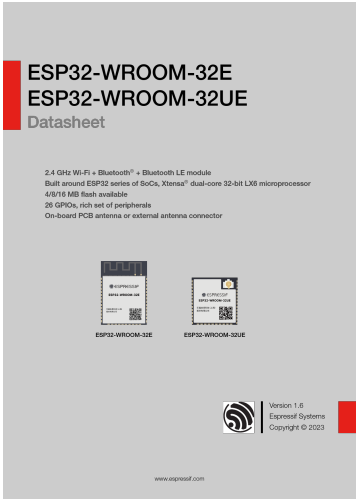

ESP32-WROOM-32E
ESP32-WROOM-32UE
Datasheet

2.4 GHz Wi-Fi + Bluetooth® + Bluetooth LE module
Built around ESP32 series of SoCs, Xtensa® dual-core 32-bit LX6 microprocessor
4/8/16 MB flash available
26 GPIOs, rich set of peripherals
On-board PCB antenna or external antenna connector

ESP32-WROOM-32E ESP32-WROOM-32UE

Version 1.6
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[pdf] Specifications Datasheet Documentation

Espressif ESP32 WROOM 32E N4 Module d extension Wi Fi 1 pc s Conrad Electronic Suisse fiche technique 3027864 espressif esp32 wroom 32e n4 module dextension wi fi pcs asset conrad media10 add 160267 c1 en 003027864DS00 |||

ESP32WROOM32E ESP32WROOM32UE Datasheet 2.4 GHz WiFi Bluetooth Bluetooth LE module Built around E ... he two modules is as follows: Table 1: ESP32WROOM32E Series Comparison1 Ordering Code ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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ESP32-S3-WROOM-1	ESP32-S3-WROOM-1-N4R2
ESP32-S3-WROOM-1	ESP32-S3-WROOM-1-N8R2
ESP32-S3-WROOM-1	ESP32-S3-WROOM-1-N16R2
ESP32-S3-WROOM-1	ESP32-S3-WROOM-1-N4R8
ESP32-S3-WROOM-1	ESP32-S3-WROOM-1-N8R8
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ESPRESSIF PCN Pan Zhengyan ESP32 S3 WROOM 1 N8 Espressif Systems RF and Wireless DigiKey PCN20230201 v2 mm digikey Volume0 opasdata d220001 medias docus 5383 |||

Document No. Document Version ESP-07-2-007-03 1.4 Document Name Retention Period / Product/Pr ... al Required PCN / PCN Category / Customer Notification 1. / Affected Product Name ESP32-WROOM-**32E-N4** 2022 12 ESP32-WROOM-32E-N8ESP32-WROOM-32E-N16 2023 3 ESP32-S3-WROOM-1 2023 6 ESP...

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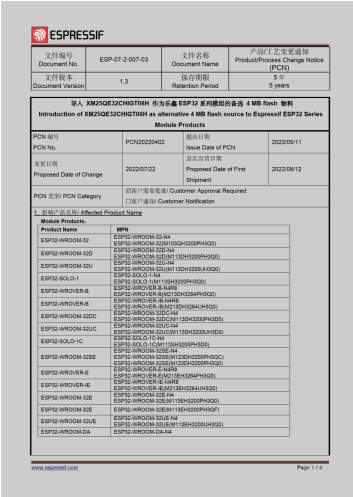

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文件版本 Document Version	1.3	保存期限 Retention Period	5 年 5 years

导入 XM25QE32CHIGT08H 作为乐鑫 ESP32 系列模组的备选 4 MB flash 物料
Introduction of XM25QE32CHIGT08H as alternative 4 MB flash source to Espressif ESP32 Series Module Products

PCN 编号 PCN No.	PCN20220402	颁出日期 Issue Date of PCN	2022/05/11
变更日期 Proposed Date of Change	2022/07/22	首次出货日期 Proposed Date of First Shipment	2022/08/12
PCN 类别/ PCN Category	需客户需要批准/ Customer Approval Required □客户通知/ Customer Notification		

1. 影响产品名称/ Affected Product Name

Module Products.

Product Name	MPN
ESP32-WROOM-32	ESP32-WROOM-32-N4 ESP32-WROOM-32(M10GH3200PH3Q0)
ESP32-WROOM-32D	ESP32-WROOM-32D-N4 ESP32-WROOM-32D(M113DH3200PH3Q0)
ESP32-WROOM-32U	ESP32-WROOM-32U-N4 ESP32-WROOM-32U(M113DH3200UH3Q0)
ESP32-SOLO-1	ESP32-SOLO-1-N4 ESP32-SOLO-1(M113SH3200PH3Q0)
ESP32-WROVER-B	ESP32-WROVER-B-N4R8 ESP32-WROVER-B(M213DH3264PH3Q0)
ESP32-WROVER-B	ESP32-WROVER-IB-N4R8 ESP32-WROVER-IB(M213DH3264UH3Q0)
ESP32-WROOM-32DC	ESP32-WROOM-32DC-N4 ESP32-WROOM-32DC(M113DH3200PH3D0)
ESP32-WROOM-32UC	ESP32-WROOM-32UC-N4 ESP32-WROOM-32UC(M113DH3200UH0D0)
ESP32-SOLO-1C	ESP32-SOLO-1C-N4 ESP32-SOLO-1C(M113SH3200PH3D0)
ESP32-WROOM-32SE	ESP32-WROOM-32SE-N4 ESP32-WROOM-32SE(M113DH3200PH3QC) ESP32-WROOM-32SE(M123DH3200PH3Q0)
ESP32-WROVER-E	ESP32-WROVER-E-N4R8 ESP32-WROVER-E(M213EH3264PH3Q0)
ESP32-WROVER-IE	ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE(M213EH3264UH3Q0)
ESP32-WROOM-32E	ESP32-WROOM-32E-N4 ESP32-WROOM-32E(M113EH3200PH3Q0)
ESP32-WROOM-32E	ESP32-WROOM-32E-N8 ESP32-WROOM-32E(M113EH3200PH3QF)
ESP32-WROOM-32UE	ESP32-WROOM-32UE-N4 ESP32-WROOM-32UE(M113EH3200UH3Q0)
ESP32-WROOM-DA	ESP32-WROOM-DA-N4

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Document No. Document Version ESP-07-2-007-03 1.3 Document Name Retention Period / Product/Pr ... 8 ESP32-WROVER-E M213EH3264PH3Q0 ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE M213EH3264UH3Q0 ESP32-WROOM-**32E-N4** ESP32-WROOM-32E M113EH3200PH3Q0 ESP32-WROOM-32E ESP32-WROOM-32E M113EH3200PH3QF ESP32-WR...

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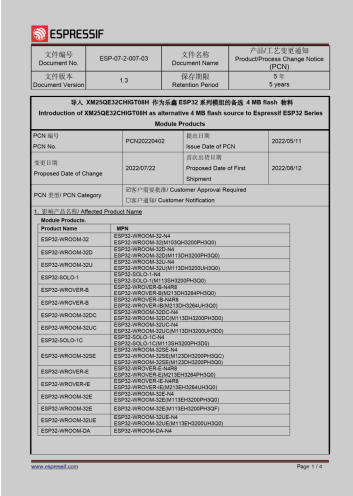

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ESP32-WROOM-32D	ESP32-WROOM-32D-N4 ESP32-WROOM-32D(M113DH3200PH3Q0)
ESP32-WROOM-32U	ESP32-WROOM-32U-N4 ESP32-WROOM-32U(M113DH3200UH3Q0)
ESP32-SOLO-1	ESP32-SOLO-1-N4 ESP32-SOLO-1(M113SH3200PH3Q0)
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ESP32-WROOM-32DC	ESP32-WROOM-32DC-N4 ESP32-WROOM-32DC(M113DH3200PH3D0)
ESP32-WROOM-32UC	ESP32-WROOM-32UC-N4 ESP32-WROOM-32UC(M113DH3200UH0D0)
ESP32-SOLO-1C	ESP32-SOLO-1C-N4 ESP32-SOLO-1C(M113SH3200PH3D0)
ESP32-WROOM-32SE	ESP32-WROOM-32SE-N4 ESP32-WROOM-32SE(M113DH3200PH3QC) ESP32-WROOM-32SE(M123DH3200PH3Q0)
ESP32-WROVER-E	ESP32-WROVER-E-N4R8 ESP32-WROVER-E(M213EH3264PH3Q0)
ESP32-WROVER-IE	ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE(M213EH3264UH3Q0)
ESP32-WROOM-32E	ESP32-WROOM-32E-N4 ESP32-WROOM-32E(M113EH3200PH3Q0)
ESP32-WROOM-32E	ESP32-WROOM-32E-N8 ESP32-WROOM-32E(M113EH3200PH3QF)
ESP32-WROOM-32UE	ESP32-WROOM-32UE-N4 ESP32-WROOM-32UE(M113EH3200UH3Q0)
ESP32-WROOM-DA	ESP32-WROOM-DA-N4

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ESPRESSIF PCN Pan Zhengyan ESP32 WROOM 32D N4 M113DH3200PH3Q0 32U M113DH3200UH3Q0v1mouser Espressif Systems PCN20220402 srsltid ARcRdnotDlvnMoTMqQy 2y4Q9UiIjky8BZHgaEX5VdPwXAHwUS2f8Mj3 |||

Document No. Document Version ESP-07-2-007-03 1.3 Document Name Retention Period / Product/Pr ... 8 ESP32-WROVER-E M213EH3264PH3Q0 ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE M213EH3264UH3Q0 ESP32-WROOM-**32E-N4** ESP32-WROOM-32E M113EH3200PH3Q0 ESP32-WROOM-32E ESP32-WROOM-32E M113EH3200PH3QF ESP32-WR...

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ESPRESSIF

ESP-07-2-007-03/V1.5

取消 ESP32 （4 MB flash） 系列模组产品出厂配置乐鑫通用 AT 固件
Discontinuation of Default Flashing Espressif Common AT Firmware on ESP32 (4 MB flash) Series Modules

PCN 编号 PCN No.	PCN20250692	颁出日期 Issue Date of PCN	2025/06/26
变更日期 Proposed Date of Change	2025/07/14	预计变更后产品首次出货日期 Proposed Date of First Shipment After Change	2025/07/30
PCN 类型 PCN Category	☒ 客户需要批准/ Customer Approval Required □客户通知/ Customer Notification		

1. 影响产品名称/ Affected Product Name

产品名称 Product Name	订购代码 Ordering Code	变更前乐鑫通用 AT 固件料号 Espressif Common AT FW PN Before Change
ESP32-WROOM-32	ESP32-WROOM-32-N4	ESP32U012
ESP32-WROOM-32D	ESP32-WROOM-32D-N4	ESP32U012
ESP32-WROOM-32D	ESP32-WROOM-32D-H4	ESP32U012
ESP32-WROOM-32D	ESP32-WROOM-32D(M113DH3200PS3Q0)	ESP32U012
ESP32-WROOM-32U	ESP32-WROOM-32U-N4	ESP32U012
ESP32-WROOM-32U	ESP32-WROOM-32U-H4	ESP32U012
ESP32-WROOM-32U	ESP32-WROOM-32U(M113DH3200US3Q0)	ESP32U012
ESP32-WROOM-32U	ESP32-WROOM-32U(M113DH3200UH3Q0)	ESP32U012
ESP32-WROOM-32E	ESP32-WROOM-32E-N4	ESP32U012
ESP32-WROOM-32E	ESP32-WROOM-32E-H4	ESP32U012
ESP32-WROOM-32E	ESP32-WROOM-32E(M113EH3200PS3Q0)	ESP32U012
ESP32-WROOM-32E	ESP32-WROOM-32E(M113EH3200PH3Q0)	ESP32U012
ESP32-WROOM-32UE	ESP32-WROOM-32UE-H4	ESP32U012
ESP32-WROOM-32UE	ESP32-WROOM-32UE-H4	ESP32U012
ESP32-WROOM-32UE	ESP32-WROOM-32UE(M113EH3200US3Q0)	ESP32U012
ESP32-WROOM-32UE	ESP32-WROOM-32UE(M113EH3200UH3Q0)	ESP32U012
ESP32-SOLO-1	ESP32-SOLO-1-N4	ESP32S11
ESP32-SOLO-1	ESP32-SOLO-1-H4	ESP32S11

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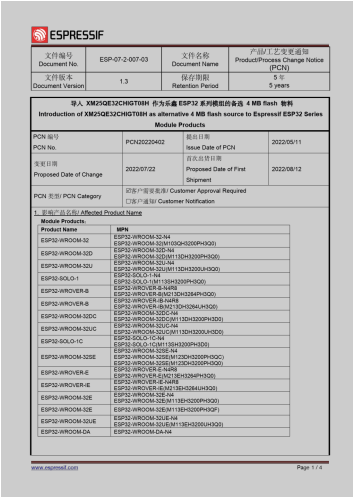
Espressif ESP32 Module Firmware Change Notification

Notification regarding the discontinuation of default Espressif Common AT Firmware on ESP32 (4 MB flash) series modules, including affected product names, reasons for change, and impact assessment.

lang:en score:24 filesize: 2.56 M page_count: 7 document date: 2025-06-26



ESPRESSIF

文件编号 Document No.	ESP-07-2-007-03	文件名称 Document Name	产品/工艺变更通知 Product/Process Change Notice (PCN)
文件版本 Document Version	1.3	保存期限 Retention Period	5 年 5 years

导入 XM25QE32CHIGT08H 作为乐鑫 ESP32 系列模组的备选 4 MB flash 物料
Introduction of XM25QE32CHIGT08H as alternative 4 MB flash source to Espressif ESP32 Series Module Products

PCN 编号 PCN No.	PCN20220402	提出日期 Issue Date of PCN	2022/05/11
变更日期 Proposed Date of Change	2022/07/22	首次出货日期 Proposed Date of First Shipment	2022/08/12
PCN 类型/ PCN Category	客户需要批准/ Customer Approval Required 口客户通知/ Customer Notification		

1. 影响产品名称/ Affected Product Name

Module Products.

Product Name	MPN
ESP32-WROOM-32	ESP32-WROOM-32-N4 ESP32-WROOM-32(M103GH3200PH3Q0)
ESP32-WROOM-32D	ESP32-WROOM-32D-N4 ESP32-WROOM-32D(M113DH3200PH3Q0)
ESP32-WROOM-32U	ESP32-WROOM-32U-N4 ESP32-WROOM-32U(M113DH3200UH3Q0)
ESP32-SOLO-1	ESP32-SOLO-1-N4 ESP32-SOLO-1(M113SH3200PH3Q0)
ESP32-WROVER-B	ESP32-WROVER-B-N4R8 ESP32-WROVER-B(M213DH3264PH3Q0)
ESP32-WROVER-B	ESP32-WROVER-IB-N4R8 ESP32-WROVER-IB(M213DH3264UH3Q0)
ESP32-WROOM-32DC	ESP32-WROOM-32DC-N4 ESP32-WROOM-32DC(M113DH3200PH3D0)
ESP32-WROOM-32UC	ESP32-WROOM-32UC-N4 ESP32-WROOM-32UC(M113DH3200UH3D0)
ESP32-SOLO-1C	ESP32-SOLO-1C-N4 ESP32-SOLO-1C(M113SH3200PH3D0)
ESP32-WROOM-32SE	ESP32-WROOM-32SE-N4 ESP32-WROOM-32SE(M113DH3200PH3QC) ESP32-WROOM-32SE(M123DH3200PH3Q0)
ESP32-WROVER-E	ESP32-WROVER-E-N4R8 ESP32-WROVER-E(M213EH3264PH3Q0)
ESP32-WROVER-IE	ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE(M213EH3264UH3Q0)
ESP32-WROOM-32E	ESP32-WROOM-32E-N4 ESP32-WROOM-32E(M113EH3200PH3Q0)
ESP32-WROOM-32E	ESP32-WROOM-32E(M113EH3200PH3QF)
ESP32-WROOM-32UE	ESP32-WROOM-32UE-N4 ESP32-WROOM-32UE(M113EH3200UH3Q0)
ESP32-WROOM-DA	ESP32-WROOM-DA-N4

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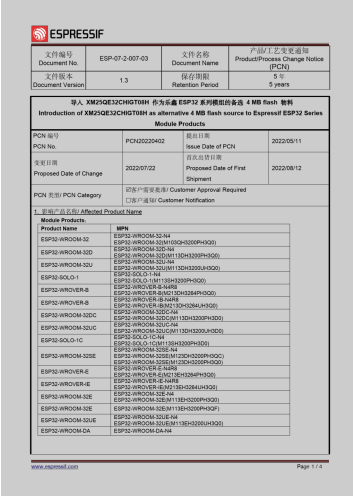
ESPRESSIF PCN Pan Zhengyan Product Change Notification ESP32 DevKitC VIB Espressif Systems Mouser Schweiz PCN20220402 XM25QE32CHIGT08H 4 MB flash mouser |||

Document No. Document Version ESP-07-2-007-03 1.3 Document Name Retention Period / Product/Pr ... 8 ESP32-WROVER-E M213EH3264PH3Q0 ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE M213EH3264UH3Q0 ESP32-WROOM-**32E-N4** ESP32-WROOM-32E M113EH3200PH3Q0 ESP32-WROOM-32E ESP32-WROOM-32E M113EH3200PH3QF ESP32-WR...

lang:en score:24 filesize: 616.71 K page_count: 4 document date: 2022-07-29



ESPRESSIF

文件编号 Document No.	ESP-07-2-007-03	文件名称 Document Name	产品/工艺变更通知 Product/Process Change Notice (PCN)
文件版本 Document Version	1.3	保存期限 Retention Period	5 年 5 years

导入 XM25QE32CHIGT08H 作为乐鑫 ESP32 系列模组的备选 4 MB flash 物料
Introduction of XM25QE32CHIGT08H as alternative 4 MB flash source to Espressif ESP32 Series Module Products

PCN 编号 PCN No.	PCN20220402	提出日期 Issue Date of PCN	2022/05/11
变更日期 Proposed Date of Change	2022/07/22	首次出货日期 Proposed Date of First Shipment	2022/08/12
PCN 类型/ PCN Category	客户需要批准/ Customer Approval Required 口客户通知/ Customer Notification		

1. 影响产品名称/ Affected Product Name

Module Products.

Product Name	MPN
ESP32-WROOM-32	ESP32-WROOM-32-N4 ESP32-WROOM-32(M103GH3200PH3Q0)
ESP32-WROOM-32D	ESP32-WROOM-32D-N4 ESP32-WROOM-32D(M113DH3200PH3Q0)
ESP32-WROOM-32U	ESP32-WROOM-32U-N4 ESP32-WROOM-32U(M113DH3200UH3Q0)
ESP32-SOLO-1	ESP32-SOLO-1-N4 ESP32-SOLO-1(M113SH3200PH3Q0)
ESP32-WROVER-B	ESP32-WROVER-B-N4R8 ESP32-WROVER-B(M213DH3264PH3Q0)
ESP32-WROVER-B	ESP32-WROVER-IB-N4R8 ESP32-WROVER-IB(M213DH3264UH3Q0)
ESP32-WROOM-32DC	ESP32-WROOM-32DC-N4 ESP32-WROOM-32DC(M113DH3200PH3D0)
ESP32-WROOM-32UC	ESP32-WROOM-32UC-N4 ESP32-WROOM-32UC(M113DH3200UH3D0)
ESP32-SOLO-1C	ESP32-SOLO-1C-N4 ESP32-SOLO-1C(M113SH3200PH3D0)
ESP32-WROOM-32SE	ESP32-WROOM-32SE-N4 ESP32-WROOM-32SE(M113DH3200PH3QC) ESP32-WROOM-32SE(M123DH3200PH3Q0)
ESP32-WROVER-E	ESP32-WROVER-E-N4R8 ESP32-WROVER-E(M213EH3264PH3Q0)
ESP32-WROVER-IE	ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE(M213EH3264UH3Q0)
ESP32-WROOM-32E	ESP32-WROOM-32E-N4 ESP32-WROOM-32E(M113EH3200PH3Q0)
ESP32-WROOM-32E	ESP32-WROOM-32E(M113EH3200PH3QF)
ESP32-WROOM-32UE	ESP32-WROOM-32UE-N4 ESP32-WROOM-32UE(M113EH3200UH3Q0)
ESP32-WROOM-DA	ESP32-WROOM-DA-N4

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ESPRESSIF PCN Pan Zhengyan ESP32 11 May 2022 WROOM 32U N4 Espressif Systems RF IF et RFID DigiKey PCN20220402 media digikey PCNs |||

Document No. Document Version ESP-07-2-007-03 1.3 Document Name Retention Period / Product/Pr ... 8 ESP32-WROVER-E M213EH3264PH3Q0 ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE M213EH3264UH3Q0 ESP32-WROOM-**32E-N4** ESP32-WROOM-32E M113EH3200PH3Q0 ESP32-WROOM-32E ESP32-WROOM-32E M113EH3200PH3QF ESP32-WR...

lang:en score:24 filesize: 616.95 K page_count: 4 document date: 2022-06-03

ESPRESSIF

文件编号 Document No.	ESP-07-2-007-03	文件名称 Document Name	产品/工艺变更通知 Product/Process Change Notice (PCN)
文件版本 Document Version	1.3	保存期限 Retention Period	5 年 5 years

升级乐鑫部分通用模组的产品料号及模组丝印
Upgrade Manufacturer Part Number and Laser Marking of Espressif Module

PCN 编号 PCN No.	PCN-2021-030	提出日期 Issue Date of PCN	2021/12/16
变更日期 Proposed Date of Change	2022/01/10	首次出货日期 Proposed Date of First Shipment	2022/01/25
PCN 类型 / PCN Category	口客户需要批准/ Customer Approval Required 客户通知/ Customer Notification		

1. 影响产品名称/ Affected Product Name

1) ESP8089/18

2) ESP8266 系列模组/ ESP8266 Series Modules:

ESP-WROOM-02, ESP-WROOM-S2, ESP-WROOM-02D, ESP-WROOM-02U, ESP-WROOM-02DC, ESP-WROOM-02UC, ESP-WROOM-5V2L, ESP-WROOM-5C

3) ESP32 系列模组/ ESP32 Series Modules:

ESP32-WROOM-32, ESP32-WROVER, ESP32-WROOM-32D, ESP32-WROOM-32U,
ESP32-SOLO-1, ESP32-WROVER-B, ESP32-WROOM-32DC, ESP32-WROOM-32UC,
ESP32-SOLO-1C, ESP32-WROOM-32SE, ESP32-WROVER-E, ESP32-WROVER-IE,
ESP32-WROOM-32E, ESP32-WROOM-32UE, ESP32-DU1906, ESP32-DU1906-U

4) ESP32-S2 系列模组/ ESP32-S2 Series Modules:

ESP32-S2-WROOM, ESP32-S2-WROOM-I, ESP32-S2-WROVER, ESP32-S2-WROVER-I

2. 变更原因/ Reason for Change

为方便客户更加便捷地做到即模组产品规格，乐鑫将优化部分模组的产品料号（MPN）及外观丝印。

To facilitate the identification of Espressif module names and their specifications with improved efficiency and accuracy, Espressif will rename some modules with new Manufacturer Part Number (MPN) and update laser marking as well.

3. 变更描述/ Description of Change

按照乐鑫更新后的料号规则，对部分模组的产品料号进行升级，模组屏蔽盖的丝印标识则多更新。模组产品料号规则可以参考以下：

Espressif will update MPN of some Espressif module products to a new naming convention and part of the marking on module's shield cover is updated at the same time. See details below for new naming convention.

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[pdf] Specifications

ESPRESSIF PCN Pan Zhengyan 2021 030 media digikey PCNs Espressif |||

Document No. Document Version ESP-07-2-007-03 1.3 Document Name Retention Period / Product/Pr ... R8 ESP32-WROVER-E-N16R8 ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE-N8R8 ESP32-WROVER-IE-N16R8 ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32UE...

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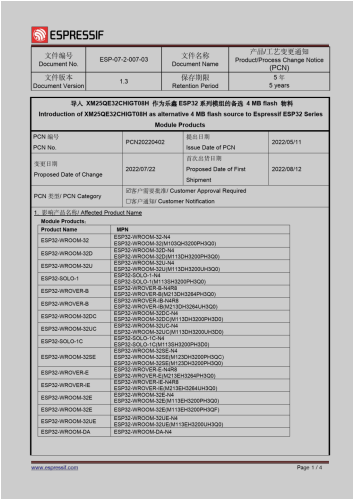

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文件编号 Document No.	ESP-07-2-007-03	文件名称 Document Name	产品/工艺变更通知 Product/Process Change Notice (PCN)
文件版本 Document Version	1.3	保存期限 Retention Period	5 年 5 years

导入 XM25QE32CHIGT08H 作为乐鑫 ESP32 系列模组的备选 4 MB flash 物料
Introduction of XM25QE32CHIGT08H as alternative 4 MB flash source to Espressif ESP32 Series Module Products

PCN 编号 PCN No.	PCN20220402	提出日期 Issue Date of PCN	2022/05/11
变更日期 Proposed Date of Change	2022/07/22	首次出货日期 Proposed Date of First Shipment	2022/08/12
PCN 类型/ PCN Category	客户需要批准/ Customer Approval Required 已知产通知/ Customer Notification		

1. 影响产品名称/ Affected Product Name

Module Products:

Product Name	MPN
ESP32-WROOM-32	ESP32-WROOM-32-N4 ESP32-WROOM-32(M100QH3200PH3Q0)
ESP32-WROOM-32D	ESP32-WROOM-32D-N4 ESP32-WROOM-32D(M113DH3200PH3Q0)
ESP32-WROOM-32U	ESP32-WROOM-32U-N4 ESP32-WROOM-32U(M113DH3200UH3Q0)
ESP32-SOLO-1	ESP32-SOLO-1-N4 ESP32-SOLO-1(M113SH3200PH3Q0)
ESP32-WROVER-B	ESP32-WROVER-B-N4R8 ESP32-WROVER-B(M213EH3264PH3Q0)
ESP32-WROVER-B	ESP32-WROVER-IB-N4R8 ESP32-WROVER-IB(M213DH3264UH3Q0)
ESP32-WROOM-32DC	ESP32-WROOM-32DC-N4 ESP32-WROOM-32DC(M113DH3200PH3D0)
ESP32-WROOM-32UC	ESP32-WROOM-32UC-N4 ESP32-WROOM-32UC(M113DH3200UH3D0)
ESP32-SOLO-1C	ESP32-SOLO-1C-N4 ESP32-SOLO-1C(M113SH3200PH3D0)
ESP32-WROOM-32SE	ESP32-WROOM-32SE-N4 ESP32-WROOM-32SE(M113DH3200PH3QC) ESP32-WROOM-32SE(M113DH3200PH3Q0)
ESP32-WROVER-E	ESP32-WROVER-E-N4R8 ESP32-WROVER-E(M213EH3264PH3Q0)
ESP32-WROVER-IE	ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE(M213DH3264UH3Q0)
ESP32-WROOM-32E	ESP32-WROOM-32E-N4 ESP32-WROOM-32E(M113EH3200PH3Q0)
ESP32-WROOM-32E	ESP32-WROOM-32E(M113EH3200PH3QF)
ESP32-WROOM-32UE	ESP32-WROOM-32UE-N4 ESP32-WROOM-32UE(M113EH3200UH3Q0)
ESP32-WROOM-DA	ESP32-WROOM-DA-N4

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[pdf] Datasheet

ESPRESSIF PCN Pan Zhengyan Espressif Systems DISTRIBUTOR Page 5 ESP32 WROOM 32E M113EH3200PS3Q0 WROVER M203QL2864PH3Q0 S2 SOLO U N4R2 esp wrover kit ve rxelectronics sg datasheet 57 |||

Document No. Document Version ESP-07-2-007-03 1.3 Document Name Retention Period / Product/Pr ... 8 ESP32-WROVER-E M213EH3264PH3Q0 ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE M213EH3264UH3Q0 ESP32-WROOM-**32E-N4** ESP32-WROOM-32E M113EH3200PH3Q0 ESP32-WROOM-32E ESP32-WROOM-32E M113EH3200PH3QF ESP32-WR...

lang:en score:24 filesize: 620.71 K page_count: 4 document date: 2022-06-03

ESPRESSIF

ESP-07-2-007-03/V1.5

取消 ESP32 （4 MB flash） 系列模组产品出厂配置乐鑫通用 AT 固件
Discontinuation of Default Flashing Espressif Common AT Firmware on ESP32 (4 MB flash) Series Modules

PCN 编号 PCN No.	PCN20250602	**提出日期 Issue Date of PCN**	2025/06/26
变更日期 Proposed Date of Change	2025/07/14	**预计变更后产品首次出货日期 Proposed Date of First Shipment After Change**	2025/07/30
PCN 类型 PCN Category	客户需要批准/ Customer Approval Required 已知产通知/ Customer Notification		

1. 影响产品名称/ Affected Product Name

产品名称 Product Name	**订购代码 Ordering Code**	**变更前乐鑫通用 AT 固件版本 Espressif Common AT FW PN Before Change**
ESP32-WROOM-32	ESP32-WROOM-32-N4	ESP32U012
ESP32-WROOM-32D	ESP32-WROOM-32D-N4	ESP32U012
ESP32-WROOM-32D	ESP32-WROOM-32D-H4	ESP32U012
ESP32-WROOM-32D	ESP32-WROOM-32D(M113DHS200XPS3Q0)	ESP32U012
ESP32-WROOM-32U	ESP32-WROOM-32U-N4	ESP32U012
ESP32-WROOM-32U	ESP32-WROOM-32U-H4	ESP32U012
ESP32-WROOM-32U	ESP32-WROOM-32U(M113DHS200XUS3Q0)	ESP32U012
ESP32-WROOM-32U	ESP32-WROOM-32U(M113DHS200XUH3Q0)	ESP32U012
ESP32-WROOM-32E	ESP32-WROOM-32E-N4	ESP32U012
ESP32-WROOM-32E	ESP32-WROOM-32E-H4	ESP32U012
ESP32-WROOM-32E	ESP32-WROOM-32E(M113EHS200XPS3Q0)	ESP32U012
ESP32-WROOM-32E	ESP32-WROOM-32E(M113EHS200XPHQ0)	ESP32U012
ESP32-WROOM-32UE	ESP32-WROOM-32UE-N4	ESP32U012
ESP32-WROOM-32UE	ESP32-WROOM-32UE-H4	ESP32U012
ESP32-WROOM-32UE	ESP32-WROOM-32UE(M113EHS200XUS3Q0)	ESP32U012
ESP32-WROOM-32UE	ESP32-WROOM-32UE(M113EHS200XUHQ0)	ESP32U012
ESP32-SOLO-1	ESP32-SOLO-1-N4	ESP32S11

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[pdf]

PCNs PCN20250602 Discontinuation of Default Flashing Espressif Common AT Firmware on ESP32 4 MB flash Series Modulesespressif cn sites default files pcn PCN20250602 Modules |||

ESP-07-2-007-03/V1.5 ESP32 4 MB flash AT Discontinuation of Default Flashing Espressif Common AT ... ESP32-WROOM-32U M113DH3200US3Q0 ESP32U012 ESP32-WROOM-32U M113DH3200UH3Q0 ESP32U012 ESP32-WROOM-**32E-N4** ESP32U012 ESP32-WROOM-32E-H4 ESP32U012 ESP32-WROOM-32E M113EH3200PS3Q0 ESP32U012 ESP32-...

lang:en score:22 filesize: 898.95 K page_count: 7 document date: 2025-07-07

ESP32-WROOM-32E
ESP32-WROOM-32UE
ESP32-WROOM-32UE-TK
uses same datasheet of
ESP32-WROOM-32UE
Datasheet

2.4 GHz Wi-Fi + Bluetooth® + Bluetooth LE module
Built around ESP32 series of SoCs, Xtensa® dual-core 32-bit LX6 microprocessor
4/8/16 MB flash available
26 GPIOs, rich set of peripherals
On-board PCB antenna or external antenna connector

试用水印

ESP32-WROOM-32E ESP32-WROOM-32UE

Version 1.6
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[pdf] User Manual Specifications Datasheet Documentation

Manual 94275906 QUEBEC INC 2024001 2BGNQ 2BGNQ2024001

ESP32WROOM32E ESP32WROOM32UE ESP32-WROOM-32UE-TK uses same datasheet of ESP32WROOM32UE Datasheet 2.4 ... he two modules is as follows: Table 1: ESP32WROOM32E Series Comparison1 Ordering Code ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

lang:en score:22 filesize: 585.46 K page_count: 33 document date: 2024-08-08

ESPRESSIF

文件编号 Document No.	ESP-07-2-007-03	文件名称 Document Name	产品/工艺变更通知 Product/Process Change Notice (PCN)
文件版本 Document Version	1.3	保存期限 Retention Period	5 年 5 years

升级乐鑫部分适用模组的产品料号及模组丝印
Upgrade Manufacturer Part Number and Laser Marking of Espressif Module

PCN 编号 PCN No.	PCN-2021-030	颁出日期 Issue Date of PCN	2021/12/16
变更日期 Proposed Date of Change	2022/01/10	首次出货日期 Proposed Date of First Shipment	2022/01/25
PCN 类型 / PCN Category	☐客户需要批准/ Customer Approval Required ☑客户通知/ Customer Notification		

1. 影响产品名称/ Affected Product Name

1) ESP8089M16

2) ESP8266 系列模组/ ESP8266 Series Modules:
ESP-WROOM-02, ESP-WROOM-02, ESP-WROOM-02D, ESP-WROOM-02U, ESP-WROOM-02DC, ESP-WROOM-02UC, ESP-WROOM-5V-D1, ESP-WROOM-5C

3) ESP32 系列模组/ ESP32 Series Modules:
ESP32-WROOM-32, ESP32-WROVER, ESP32-WROOM-32D, ESP32-WROOM-32U, ESP32-SOLO-1, ESP32-WROVER-B, ESP32-WROOM-32DC, ESP32-WROOM-32UC, ESP32-SOLO-1C, ESP32-WROOM-32SE, ESP32-WROVER-E, ESP32-WROVER-IE, ESP32-WROOM-32E, ESP32-WROOM-32UE, ESP32-DU1906, ESP32-DU1906-U

4) ESP32-S2 系列模组/ ESP32-S2 Series Modules:
ESP32-S2-WROOM, ESP32-S2-WROOM-I, ESP32-S2-WROVER, ESP32-S2-WROVER-I

2. 变更原因/ Reason for Change

为方便客户更加快速准确地识别模组/产品规格，乐鑫将优化部分模组的产品料号（MPN）及外观丝印。
To facilitate the identification of Espressif module names and their specifications with improved efficiency and accuracy, Espressif will rename some modules with new Manufacturer Part Number (MPN) and update laser marking as well.

3. 变更描述/ Description of Change

按照乐鑫更新后的料号规则，对部分模组的产品料号进行升级，模组屏蔽盖的丝印标识同步更新。模组产品料号规则可以参考以下：
Espressif will update MPN of some Espressif module products to a new naming convention and part of the marking on module's shield cover is updated at the same time. See details below for new naming convention.

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[pdf] Specifications Datasheet

ESPRESSIF PCN Pan Zhengyan Espressif Systems ÐÐ¸ÑÑÑÑÐ¸Ð± ÑÑÐ¾Ñ ESP32 C3 WROOM 02U N4 ESP8285N08 S2 M22S2H3200PH3Q0 esp32 wroom 32d n16 rxelectronics ua datasheet 5c |||

Document No. Document Version ESP-07-2-007-03 1.3 Document Name Retention Period / Product/Pr ... R8 ESP32-WROVER-E-N16R8 ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE-N8R8 ESP32-WROVER-IE-N16R8 ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32UE...

lang:en score:22 filesize: 1.04 M page_count: 8 document date: 2022-02-19

ESPRESSIF

文件编号 Document No.	ESP-07-2-007-03	文件名称 Document Name	产品/工艺变更通知 Product/Process Change Notice (PCN)
文件版本 Document Version	1.3	保存期限 Retention Period	5 年 5 years

升级乐鑫部分适用模组的产品料号及模组丝印
Upgrade Manufacturer Part Number and Laser Marking of Espressif Module

PCN 编号 PCN No.	PCN-2021-030	颁出日期 Issue Date of PCN	2021/12/16
变更日期 Proposed Date of Change	2022/01/10	首次出货日期 Proposed Date of First Shipment	2022/01/25
PCN 类型 / PCN Category	☐客户需要批准/ Customer Approval Required ☑客户通知/ Customer Notification		

1. 影响产品名称/ Affected Product Name

1) ESP8089M16

2) ESP8266 系列模组/ ESP8266 Series Modules:
ESP-WROOM-02, ESP-WROOM-02, ESP-WROOM-02D, ESP-WROOM-02U, ESP-WROOM-02DC, ESP-WROOM-02UC, ESP-WROOM-5V-D1, ESP-WROOM-5C

3) ESP32 系列模组/ ESP32 Series Modules:
ESP32-WROOM-32, ESP32-WROVER, ESP32-WROOM-32D, ESP32-WROOM-32U, ESP32-SOLO-1, ESP32-WROVER-B, ESP32-WROOM-32DC, ESP32-WROOM-32UC, ESP32-SOLO-1C, ESP32-WROOM-32SE, ESP32-WROVER-E, ESP32-WROVER-IE, ESP32-WROOM-32E, ESP32-WROOM-32UE, ESP32-DU1906, ESP32-DU1906-U

4) ESP32-S2 系列模组/ ESP32-S2 Series Modules:
ESP32-S2-WROOM, ESP32-S2-WROOM-I, ESP32-S2-WROVER, ESP32-S2-WROVER-I

2. 变更原因/ Reason for Change

为方便客户更加快速准确地识别模组/产品规格，乐鑫将优化部分模组的产品料号（MPN）及外观丝印。
To facilitate the identification of Espressif module names and their specifications with improved efficiency and accuracy, Espressif will rename some modules with new Manufacturer Part Number (MPN) and update laser marking as well.

3. 变更描述/ Description of Change

按照乐鑫更新后的料号规则，对部分模组的产品料号进行升级，模组屏蔽盖的丝印标识同步更新。模组产品料号规则可以参考以下：
Espressif will update MPN of some Espressif module products to a new naming convention and part of the marking on module's shield cover is updated at the same time. See details below for new naming convention.

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[pdf] Specifications

ESPRESSIF PCN Pan Zhengyan Dec 16 2021 — Customer Approval Required ☑ Notification 1 Affected Product Name ESP8089M16 030 Upgrade Manufacturer Part Number and Laser Marking of Espressif Module espressif sites default files pcn |||

Document No. Document Version ESP-07-2-007-03 1.3 Document Name Retention Period / Product/Pr ... R8 ESP32-WROVER-E-N16R8 ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE-N8R8 ESP32-WROVER-IE-N16R8 ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32UE...

lang:en score:22 filesize: 1.04 M page_count: 8 document date: 2021-12-22

ESPRESSIF

文件编号 Document No.	ESP-07-2-007-03	文件名称 Document Name	产品/工艺变更通知 Product/Process Change Notice (PCN)
文件版本 Document Version	1.4	保存期限 Retention Period	5 年 5 years

ESP32 系列产品的芯片版本升级
Upgrade Chip Revision of ESP32 Series Products

PCN 编号 PCN No.	PCN20220901	颁出日期 Issue Date of PCN	2022/10/13
变更日期 Proposed Date of Change	2022/10/20	预计变更后产品首次出货日期 Proposed Date of First Shipment After Change	2023/01/13
PCN 类型 / PCN Category	必客户需要批准/ Customer Approval Required ☐客户通知/ Customer Notification		

1. 影响产品/Affected Products

Category 1 Products with ESP32 Chip Revision v1.0.

1) 芯片产品/ Chip Products:
ESP32-D0WD, ESP32-D0WDQ6, ESP32-S0WD, ESP32-PICO-D4

2) 模组产品/ Module Products:

Product Name	MPN
ESP32-WROOM-32	ESP32-WROOM-32-N4 ESP32-WROOM-32UM103QH3200PH3Q0 ESP32-WROOM-32-N8 ESP32-WROOM-32UM103QH6400PH3Q0 ESP32-WROOM-32-N16 ESP32-WROOM-32UM103QH2800PH3Q0
ESP32-WROVER	ESP32-WROVER-N4R8 ESP32-WROVER(I)O203QL3264PH3Q0 ESP32-WROVER-I(M)O203QL3264UH3Q0 ESP32-WROVER-N8R8 ESP32-WROVER(I)O203QL6464PH3Q0 ESP32-WROVER-N16R8 ESP32-WROVER(I)O203QL2864PH3Q0 ESP32-WROVER-I-N8R8 ESP32-WROVER-I(M)O203QL6464UH3Q0 ESP32-WROVER-I-N16R8 ESP32-WROVER-I(M)O203QL2864UH3Q0
ESP32-WROOM-32D	ESP32-WROOM-32D-N4 ESP32-WROOM-32D(M)13DH3200PH3Q0 ESP32-WROOM-32D-N8 ESP32-WROOM-32D(M)13DH6400PH3Q0 ESP32-WROOM-32D-N16 ESP32-WROOM-32D(M)13DH2800PH3Q0
ESP32-WROOM-32U	ESP32-WROOM-32D-H4 ESP32-WROOM-32D(M)13DH3200PS3Q0 ESP32-WROOM-32U-N4 ESP32-WROOM-32U(M)13DH3200UH3Q0

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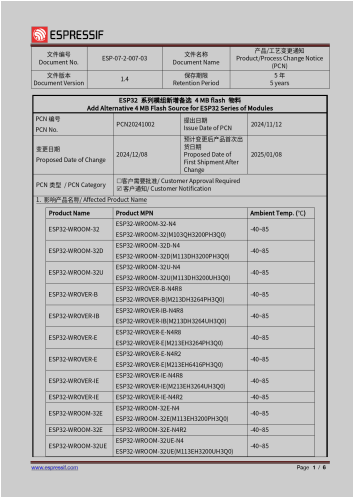
[pdf]

ESPRESSIF PCN Pan Zhengyan PCN20220901 Upgrade Chip Revision of ESP32 Series Products espressif sites default files pcn |||

Document No. Document Version ESP-07-2-007-03 1.4 Document Name Retention Period / Product/Pr ... SP32-WROVER-IE-N16R8, ESP32-WROVER-IE M213EH2864UH3Q0 ESP32-WROOM-32E M113EH3200PH3QF ESP32-WROOM-**32E-N4**, ESP32-WROOM-32E M113EH3200PH3Q0 ESP32-WROOM-32E-N8, ESP32-WROOM-32E M113EH6400PH3Q0 ESP32-...

lang:fr score:22 filesize: 1.11 M page_count: 9 document date: 2022-10-13



ESPRESSIF

文件编号 Document No.	ESP-07-2-007-03	文件名称 Document Name	产品/工艺变更通知 Product/Process Change Notice (PCN)
文件版本 Document Version	1.4	保存期限 Retention Period	5 年 5 years

ESP32 系列模组新增备选 4 MB flash 物料
Add Alternative 4 MB Flash Source for ESP32 Series of Modules

PCN 编号 PCN No.	PCN20241002	颁出日期 Issue Date of PCN	2024/11/12
变更日期 Proposed Date of Change	2024/12/08	预计变更后产品首次出货日期 Proposed Date of First Shipment After Change	2025/01/08
PCN 类型 / PCN Category	□客户需要批准/ Customer Approval Required ☑客户通知/ Customer Notification		

1. 影响产品名称/ Affected Product Name

Product Name	Product MPN	Ambient Temp. (℃)
ESP32-WROOM-32	ESP32-WROOM-32-N4 ESP32-WROOM-32(M103QH3200PH3Q0)	-40~85
ESP32-WROOM-32D	ESP32-WROOM-32D-N4 ESP32-WROOM-32D(M113DH3200PH3Q0)	-40~85
ESP32-WROOM-32U	ESP32-WROOM-32U-N4 ESP32-WROOM-32U(M113DH3200UH3Q0)	-40~85
ESP32-WROVER-B	ESP32-WROVER-B-N4R8 ESP32-WROVER-B(M213DH3264PH3Q0)	-40~85
ESP32-WROVER-IB	ESP32-WROVER-IB-N4R8 ESP32-WROVER-IB(M213DH3264UH3Q0)	-40~85
ESP32-WROVER-E	ESP32-WROVER-E-N4R8 ESP32-WROVER-E(M213EH6416PH3Q0)	-40~85
ESP32-WROVER-E	ESP32-WROVER-E-N4R2 ESP32-WROVER-E(M213EH6416PH3Q0)	-40~85
ESP32-WROVER-IE	ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE(M213EH3264UH3Q0)	-40~85
ESP32-WROVER-IE	ESP32-WROVER-IE-N4R2	-40~85
ESP32-WROOM-32E	ESP32-WROOM-32E-N4 ESP32-WROOM-32E(M113EH3200PH3Q0)	-40~85
ESP32-WROOM-32E	ESP32-WROOM-32E-N4R2	-40~85
ESP32-WROOM-32UE	ESP32-WROOM-32UE-N4 ESP32-WROOM-32UE(M113EH3200UH3Q0)	-40~85

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[pdf]

PCN20241002 3 Description of Change XM25UH32D flash ESP32 4 MB Introduced series as an alternative source for the Espressif WROOM 32D N4 Systems RF and Wireless DigiKey mm digikey Volume0 opasdata d220001 medias docus 6462 |||

Document No. Document Version ESP-07-2-007-03 1.4 Document Name Retention Period / Product/Proces ... EH6416PH3Q0 ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE M213EH3264UH3Q0 ESP32-WROVER-IE-N4R2 ESP32-WROOM-**32E-N4** ESP32-WROOM-32E M113EH3200PH3Q0 ESP32-WROOM-**32E-N4**R2 ESP32-WROOM-32UE-N4 ESP32-WROOM-32UE M1...

lang:en score:21 filesize: 1.64 M page_count: 6 document date: 2024-11-15

ESPRESSIF

文件编号 Document No.	ESP-07-2-007-03	文件名称 Document Name	产品/工艺变更通知 Product/Process Change Notice (PCN)
文件版本 Document Version	1.3	保存期限 Retention Period	5 年 5 years

升级乐鑫部分通用模组的产品料号及模组丝印
Upgrade Manufacturer Part Number and Laser Marking of Espressif Module

PCN 编号 PCN No.	PCN-2021-030	颁出日期 Issue Date of PCN	2021/12/16
变更日期 Proposed Date of Change	2022/01/10	首次出货日期 Proposed Date of First Shipment	2022/01/25
PCN 类型 / PCN Category	□客户需要批准/ Customer Approval Required ☑客户通知/ Customer Notification		

1. 影响产品名称/ Affected Product Name
1) ESP8266模组
2) ESP8266 系列模组/ ESP8266 Series Modules:
ESP-WROOM-02, ESP-WROOM-S2, ESP-WROOM-02D, ESP-WROOM-02U, ESP-WROOM-02DC, ESP-WROOM-02UC, ESP-WROOM-5V2L, ESP-WROOM-5C
3) ESP32 系列模组/ ESP32 Series Modules:
ESP32-WROOM-32, ESP32-WROVER, ESP32-WROOM-32D, ESP32-WROOM-32U, ESP32-SOLO-1, ESP32-WROVER-B, ESP32-WROOM-32DC, ESP32-WROOM-32UC, ESP32-SOLO-1C, ESP32-WROOM-32SE, ESP32-WROVER-E, ESP32-WROVER-IE, ESP32-WROOM-32E, ESP32-WROOM-32UE, ESP32-DU1906, ESP32-DU1906-U
4) ESP32-S2 系列模组/ ESP32-S2 Series Modules:
ESP32-S2-WROOM, ESP32-S2-WROOM-I, ESP32-S2-WROVER, ESP32-S2-WROVER-I
2. 变更原因/ Reason for Change
为方便客户更加快速准确地识别模组产品规格，乐鑫将优化部分模组的产品料号（MPN）及外观丝印。
To facilitate the identification of Espressif module names and their specifications with improved efficiency and accuracy, Espressif will rename some modules with new Manufacturer Part Number (MPN) and update laser marking as well.
3. 变更描述/ Description of Change
按照乐鑫更新后的料号规则，对部分模组的产品料号进行升级，模组屏蔽盖的丝印标识同步更新。模组产品料号规则可以参考以下：
Espressif will update MPN of some Espressif module products to a new naming convention and part of the marking on module's shield cover is updated at the same time. See details below for new naming convention.

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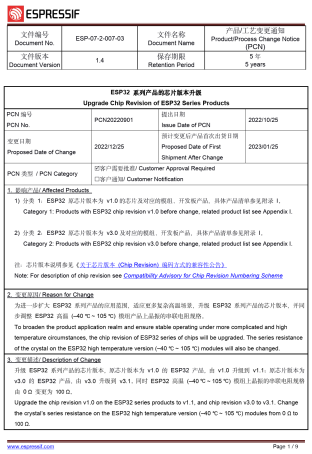
[pdf] Specifications Datasheet

ESPRESSIF PCN Pan Zhengyan ESP32 WROOM 32D N16 rxelectronicsESP32 32U M113DH3200UH3Q0 N4 M113DH6400UH3Q0 N8 M113DH2800UH3Q0esp32 wroom 32d n16rxelectronics sg datasheet 5c esp32 n16 |||

Document No. Document Version ESP-07-2-007-03 1.3 Document Name Retention Period / Product/Pr ... R8 ESP32-WROVER-E-N16R8 ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE-N8R8 ESP32-WROVER-IE-N16R8 ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32UE...

lang:en score:21 filesize: 1.04 M page_count: 8 document date: 2022-02-19



ESPRESSIF

文件编号 Document No.	ESP-07-2-007-03	文件名称 Document Name	产品/工艺变更通知 Product/Process Change Notice (PCN)
文件版本 Document Version	1.4	保存期限 Retention Period	5 年 5 years

ESP32 系列产品的芯片版本升级
Upgrade Chip Revision of ESP32 Series Products

PCN 编号 PCN No.	PCN20220901	颁出日期 Issue Date of PCN	2022/10/25
变更日期 Proposed Date of Change	2022/12/25	预计变更后产品首次出货日期 Proposed Date of First Shipment After Change	2023/01/25
PCN 类型 / PCN Category	区客户需要批准/ Customer Approval Required ☑客户通知/ Customer Notification		

1. 影响产品/ Affected Products
1) 分类 1: ESP32 原芯片版本为 v1.0 的芯片及对应的模组、开发板产品，具体产品清单参见附录 I。
Category 1: Products with ESP32 chip revision v1.0 before change, related product list see Appendix I.
2) 分类 2: ESP32 原芯片版本为 v3.0 及对应的模组、开发板产品，具体产品清单参见附录 I。
Category 2: Products with ESP32 chip revision v3.0 before change, related product list see Appendix I.
注：芯片版本说明参见《关于芯片版本 (Chip Revision) 编码方式的勘误性公告》。
Note: For description of chip revision see Compatibility Advisory for Chip Revision Numbering Scheme
2. 变更原因/ Reason for Change
为进一步扩大 ESP32 系列产品的应用范围，适应更苛刻会高温环境，升级 ESP32 系列产品的芯片版本，并同步调整 ESP32 高温（-40 ℃ ~ 105 ℃）模组产品上晶振的串联电阻规格。
To broaden the product application realm and ensure stable operating under more complicated and high temperature circumstances, the chip revision of ESP32 series of chips will be upgraded. The series resistance of the crystal on the ESP32 high temperature version (-40 ℃ ~ 105 ℃) modules will also be changed.
3. 变更描述/ Description of Change
升级 ESP32 系列产品的芯片版本，原芯片版本为 v1.0 的 ESP32 产品，由 v1.0 升级到 v1.1；原芯片版本为 v3.0 的 ESP32 产品，由 v3.0 升级到 v3.1，同时 ESP32 高温（-40 ℃ ~ 105 ℃）模组上晶振的串联电阻规格由 0 Ω 变更为 100 Ω。
Upgrade the chip revision v1.0 on the ESP32 series products to v1.1, and chip revision v3.0 to v3.1. Change the crystal's series resistance on the ESP32 high temperature version (-40 ℃ ~ 105 ℃) modules from 0 Ω to 100 Ω.

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[pdf]

ESPRESSIF PCN Pan Zhengyan PCN20220901 Upgrade Chip Revision of ESP32 Series Products espressif cn sites default files pcn |||

Document No. Document Version ESP-07-2-007-03 1.4 Document Name Retention Period / Product/Pr ... ESP32-PICO-V3-ZERO P103AH0000PH3Q1 ESP32-WROOM-32E ESP32-WROOM-32E M113EH3200PH3QF ESP32-WROOM-**32E-N4**, ESP32-WROOM-32E M113EH3200PH3Q0 ESP32-WROOM-32E-N8, ESP32-WROOM-32E M113EH6400PH3Q0 ESP32-...

lang:en score:21 filesize: 720.75 K page_count: 9 document date: 2022-10-25

ESPRESSIF

文件编号 Document No.	ESP-07-2-007-03	文件名称 Document Name	产品/工艺变更通知 Product/Process Change Notice (PCN)
文件版本 Document Version	1.4	保存期限 Retention Period	5 年 5 years

ESP32 系列产品的芯片版本升级
Upgrade Chip Revision of ESP32 Series Products

PCN 编号 PCN No.	PCN20220901	颁出日期 Issue Date of PCN	2022/10/25
变更日期 Proposed Date of Change	2022/12/25	预计变更后产品首次出货日期 Proposed Date of First Shipment After Change	2023/01/25
PCN 类型 / PCN Category	☒客户需要批准/ Customer Approval Required ☐客户通知/ Customer Notification		

1. 影响产品/ Affected Products

1) 分类 1: ESP32 原芯片版本为 v1.0 的芯片及对应的模组、开发板产品，具体产品清单参见附录 I。
Category 1: Products with ESP32 chip revision v1.0 before change, related product list see Appendix I.

2) 分类 2: ESP32 原芯片版本为 v3.0 及对应的模组、开发板产品，具体产品清单参见附录 I。
Category 2: Products with ESP32 chip revision v3.0 before change, related product list see Appendix I.

注：芯片版本说明参见《关于芯片版本 (Chip Revision) 编码方式的兼容性公告》。
Note: For description of chip revision see *Compatibility Advisory for Chip Revision Numbering Scheme*

2. 变更原因/ Reason for Change

为进一步扩大 ESP32 系列产品的应用范围，适应更多复杂高温环境，升级 ESP32 系列产品的芯片版本，并对晶振模组 ESP32 高温 (–40 ℃ ~ 105 ℃) 模组产品上晶振的串联电阻规格。
To broaden the product application realm and ensure stable operating under more complicated and high temperature circumstances, the chip revision of ESP32 series of chips will be upgraded. The series resistance of the crystal on the ESP32 high temperature version (–40 ℃ ~ 105 ℃) modules will also be changed.

3. 变更描述/ Description of Change

升级 ESP32 系列产品的芯片版本，原芯片版本为 v1.0 的 ESP32 产品，由 v1.0 升级到 v1.1；原芯片版本为 v3.0 的 ESP32 产品，由 v3.0 升级到 v3.1，同时 ESP32 高温 (–40 ℃ ~ 105 ℃) 模组上晶振的串联电阻规格由 0 Ω 变更为 100 Ω。
Upgrade the chip revision v1.0 on the ESP32 series products to v1.1, and chip revision v3.0 to v3.1. Change the crystal's series resistance on the ESP32 high temperature version (–40 ℃ ~ 105 ℃) modules from 0 Ω to 100 Ω.

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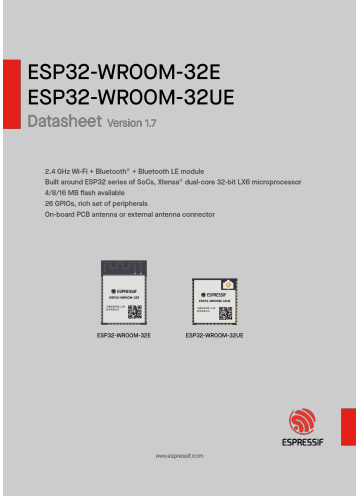
ESPRESSIF PCN Pan Zhengyan Product Change Notification ESP32 C3 DevKitC 02 Espressif Systems Mouser PCN20220901 Upgrade Chip Revision of Series Products mouser |||

Document No. Document Version ESP-07-2-007-03 1.4 Document Name Retention Period / Product/Pr ... ESP32-PICO-V3-ZERO P103AH0000PH3Q1 ESP32-WROOM-32E ESP32-WROOM-32E M113EH3200PH3QF ESP32-WROOM-**32E-N4**, ESP32-WROOM-32E M113EH3200PH3Q0 ESP32-WROOM-32E-N8, ESP32-WROOM-32E M113EH6400PH3Q0 ESP32-...

lang:en score:21 filesize: 720.26 K page_count: 9 document date: 2022-11-07



ESP32-WROOM-32E
ESP32-WROOM-32UE
Datasheet Version 1.7

2.4 GHz Wi-Fi + Bluetooth® + Bluetooth LE module
Built around ESP32 series of SoCs, Xtensa® dual-core 32-bit LX6 microprocessor
4/8/16 MB flash available
26 GPIOs, rich set of peripherals
On-board PCB antenna or external antenna connector

ESP32-WROOM-32E ESP32-WROOM-32UE

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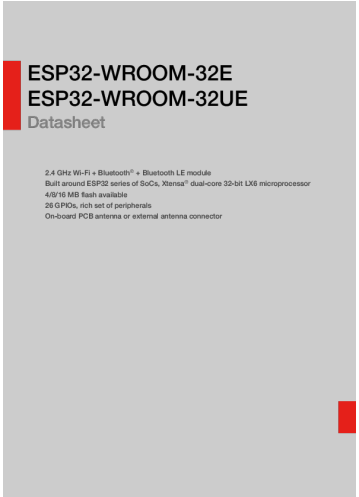
[pdf] Specifications Datasheet Documentation

ESP32 WROOM 32E 32UE Datasheet DevKitC V4 Development Board Espressif Systems Mouser esp32 wroom 32e 32ue datasheet en 1855879 mouser ec 2 891 |||

ESP32-WROOM-32E ESP32-WROOM-32UE Datasheet Version 1.7 2.4 GHz Wi-Fi Bluetooth Bluetooth LE modu ... as follows: Table 1: ESP32-WROOM-32E Series Comparison1 Ordering Code Flash2 PSRAM ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

lang:en score:19 filesize: 1.28 M page_count: 49 document date: 2024-12-20



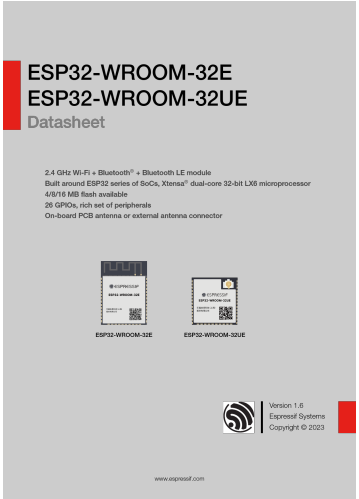
ESP32-WROOM-32E
ESP32-WROOM-32UE
Datasheet

2.4 GHz Wi-Fi + Bluetooth® + Bluetooth LE module
Built around ESP32 series of SoCs, Xtensa® dual-core 32-bit LX6 microprocessor
4/8/16 MB flash available
26 GPIOs, rich set of peripherals
On-board PCB antenna or external antenna connector

Espressif ESP32-WROOM-32E/32UE Datasheet: Wi-Fi & Bluetooth LE Module

Comprehensive datasheet for the Espressif ESP32-WROOM-32E and ESP32-WROOM-32UE modules, detailing features, specifications, pin configurations, electrical characteristics, RF performance, physical dimensions, and handling guidelines for IoT applications.

lang:en score:18 filesize: 1.37 M page_count: 25 document date: 2024-12-11



[pdf] Specifications Datasheet Documentation

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ESP32WROOM32E ESP32WROOM32UE Datasheet 2.4 GHz WiFi Bluetooth Bluetooth LE module Built around E ... he two modules is as follows: Table 1: ESP32WROOM32E Series Comparison1 Ordering Code ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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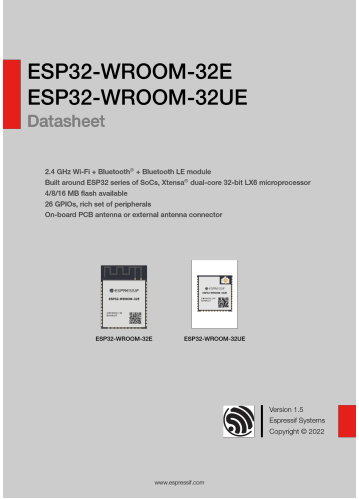

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ESP32WROOM32E ESP32WROOM32UE filafill 1 ModuleOverview Module Overview Note ChecktheLinkortheQRcodetomakesurethatyouusethelatestversionofthisdocument espressif documentation esp32 wroom 32e ue datasheet ro index controller attachment id 440 |||

ESP32WROOM32E ESP32WROOM32UE Datasheet 2.4 GHz WiFi Bluetooth Bluetooth LE module Built around E ... he two modules is as follows: Table 1: ESP32WROOM32E Series Comparison1 Ordering Code ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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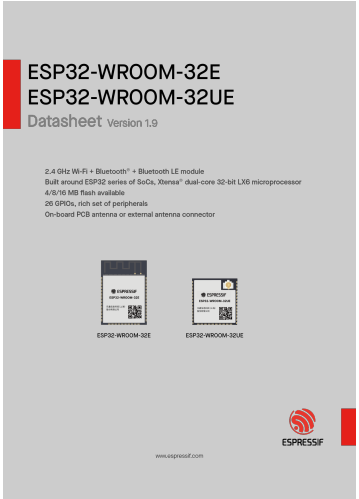

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ESP32 WROOM 32E 32UE Espressif Systems2 days ago · Pin Assignment The pins for the Remote Control Peripheral can be chosen from any GPIOs via GPIO Matrix For more information about pin assignment see Series Datasheet Section Configurations and Technical Reference Manual Chapter IO MUX Matrix2 ESP32esp32 wroom 32e esp32 32ue datasheet enesp32 enespressif sites default files documentation en pubDate 20250908espressif 20250908 SystemsESP32 Datasheet2 ESP32Batterimonitor baserad på INA260 INA226 sensor och 1b ||| ||| ESP32-WROOM-32E ESP32-WROOM-32UE Datasheet Version 1.9 2.4 GHz Wi-Fi Bluetooth Bluetooth LE module Built around ESP32 series of SoCs, Xtensa dual-core 32-bit LX6 microprocessor 4/8/16 MB flash available 26 GPIOs, rich set of peripherals On-

ESP32-WROOM-32E ESP32-WROOM-32UE Datasheet Version 1.9 2.4 GHz Wi-Fi Bluetooth Bluetooth LE modu ... as follows: Table 1: ESP32-WROOM-32E Series Comparison1 Ordering Code Flash2 PSRAM ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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[pdf] Datasheet

ESP32 WROOM 32UE N16 Datasheet espressif systems datasheet details DiGi Electronics ESP32WROOM32UEN16 digi electronics 892 |||

ESP32-WROOM-32UE-N16 Datasheet https://www.DiGi-Electronics.com DiGi Electronics Part Number Manuf ... as follows: Table 1: ESP32-WROOM-32E Series Comparison1 Ordering Code Flash2 PSRAM ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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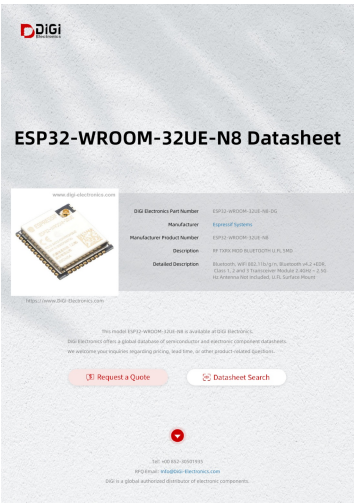

[pdf] Datasheet

ESP32 WROOM 32UE N8 Datasheet espressif systems datasheet details DiGi Electronics ESP32WROOM32UEN8 digi electronics 892 |||

ESP32-WROOM-32UE-N8 Datasheet https://www.DiGi-Electronics.com DiGi Electronics Part Number Manufa ... as follows: Table 1: ESP32-WROOM-32E Series Comparison1 Ordering Code Flash2 PSRAM ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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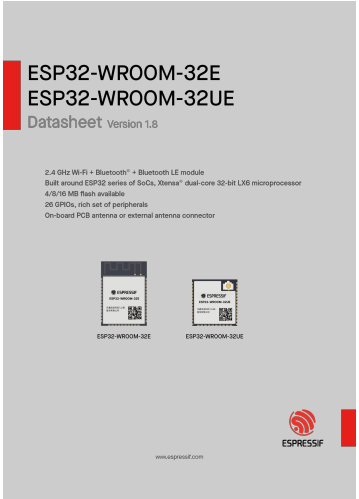

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ESP32-WROOM-32E ESP32-WROOM-32UE Datasheet Version 1.8 2.4 GHz Wi-Fi Bluetooth Bluetooth LE modu ... as follows: Table 1: ESP32-WROOM-32E Series Comparison1 Ordering Code Flash2 PSRAM ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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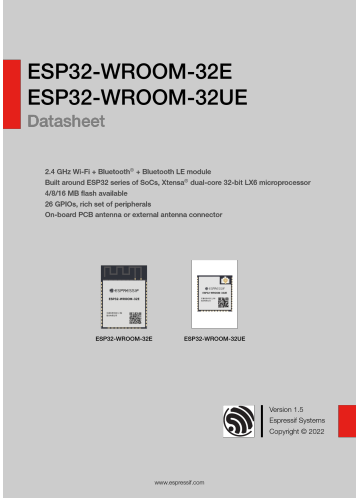

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ESP32WROOM32E ESP32WROOM32UE esp32 wroom 32e 32ue datasheet en 1855879 mouser fr 2 891 |||

ESP32WROOM32E ESP32WROOM32UE Datasheet 2.4 GHz WiFi Bluetooth Bluetooth LE module Built around E ... he two modules is as follows: Table 1: ESP32WROOM32E Series Comparison1 Ordering Code ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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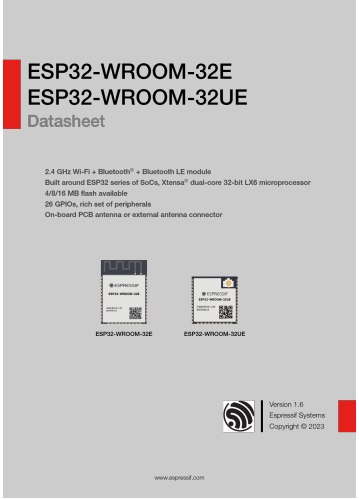

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Download NowESP32 WROOM 32E N8 by Espressif Systems Shanghai Co Ltd Component Dynamicsesp32 wroom 32e esp32 32ue datasheet ensiliconexpert s2 2023 2 8 24 30 153874 espre auto en ESP32 DatasheetDownload NowBuy 7Semi DEVKIT UE Wifi BLE Development Board EveltaESP32 Dynamics004 32Eesp32 enevelta content datasheets 004 32Esiliconexpert NowDatasheetBuy DynamicsBuy EspressIf WiFi Bluetooth LE Module Evelta004 en136 N8evelta 136 N8136 Dokumentacja 99 MBESP32 NowDatasheetFireBeetle E płytka rozwojowa z modułem sklep KamamiBuy Eveltap1196970 ESP32WROOM32E Datasheet004 N8kamami pl p1196970 Datasheetevelta ||| ||| ESP32WROOM32E ESP32WROOM32UE Datasheet 2.4 GHz WiFi Bluetooth Bluetooth LE module Built around ESP32 series of SoCs, Xtensa dualcore 32bit LX6 microprocessor 4/8/16 MB flash available 26 GPIOs, rich set of peripherals Onboard PCB antenna or ||| ESP32WROOM32E ESP32WROOM32UE Datasheet 2.4 GHz WiFi Bluetooth Bluetooth LE module Built around ESP32 series of SoCs, Xtensa dualcore 32bit LX6 microprocessor 4/8/16 MB flash available 26 GPIOs, rich set of peripherals Onboard PCB antenna or ||| ESP32WROOM32E ESP32WROOM32UE Datasheet 2.4 GHz WiFi Bluetooth Bluetooth LE module Built around ESP32 series of SoCs, Xtensa dualcore 32bit LX6 microprocessor 4/8/16 MB flash available 26 GPIOs, rich set of peripherals Onboard PCB antenna or

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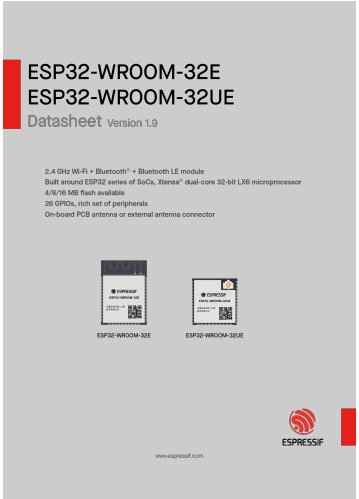

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ESP32 WROOM 32E 32UE Mouser ElectronicsThe UE modules have 2 4 GHz Wi Fi Bluetooth a dual core 32 bit processor 8 16MB flash 26 GPIOs and are for IoT v1mouser datasheet 891 esp32 wroom 32e 32ue en 1855879 srsltid AfmBOooqNSKvWoQsiWIVQ1dP IyGbwM4HtqhASzOIMwtK9GuRUFhXBOr |||

ESP32-WROOM-32E ESP32-WROOM-32UE Datasheet Version 1.9 2.4 GHz Wi-Fi Bluetooth Bluetooth LE modu ... as follows: Table 1: ESP32-WROOM-32E Series Comparison1 Ordering Code Flash2 PSRAM ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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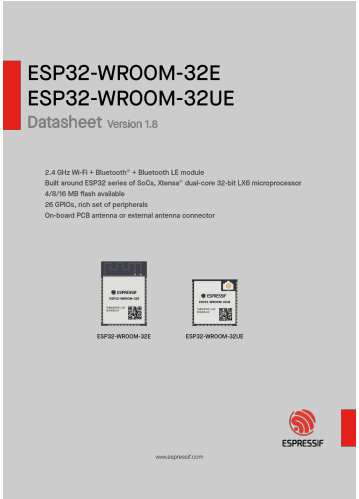

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ESP32 WROOM 32E 32UE esp32 wroom 32e 32ue datasheet en 1855879 srsltid AfmBOooSANjEg8cAKx4fLkKrMVis9GIAHJAEQ0l9tkm30KC3BFiaxW09 mouser 2 891 |||

ESP32-WROOM-32E ESP32-WROOM-32UE Datasheet Version 1.8 2.4 GHz Wi-Fi Bluetooth Bluetooth LE modu ... as follows: Table 1: ESP32-WROOM-32E Series Comparison1 Ordering Code Flash2 PSRAM ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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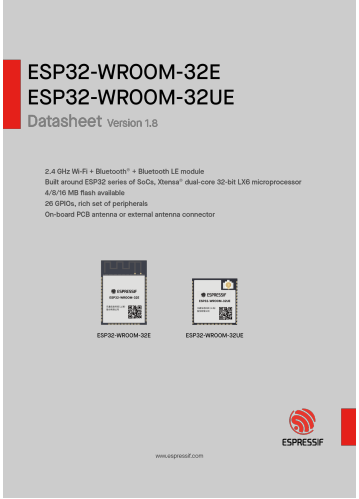

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ESP32-WROOM-32E ESP32-WROOM-32UE Datasheet Version 1.8 2.4 GHz Wi-Fi Bluetooth Bluetooth LE modu ... as follows: Table 1: ESP32-WROOM-32E Series Comparison1 Ordering Code Flash2 PSRAM ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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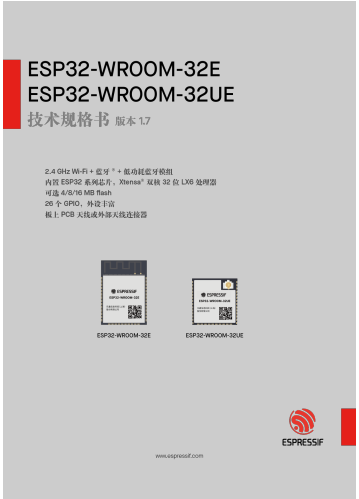

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ESP32-WROOM-32E ESP32-WROOM-32UE 1.7 2.4 GHz Wi-Fi ESP32 Xtensa 32 LX6 4/8/16 MB flash ... ab ESP32-WROOM-32E PCB ESP32-WROOM-32UE b b 1: ESP32-WROOM-32E 1 Flash2 PSRAM ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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ESPRESSIF

文件编号 Document No.	ESP-07-2-007-03	文件名称 Document Name	产品/工艺变更通知 Product/Process Change Notice (PCN)
文件版本 Document Version	1.3	保存期限 Retention Period	5 年 5 years

升级乐鑫部分通用模组的产品料号及模组丝印
Upgrade Manufacturer Part Number and Laser Marking of Espressif Module

PCN 编号 PCN No.	PCN-2021-030	颁出日期 Issue Date of PCN	2021/12/16
变更日期 Proposed Date of Change	2022/01/10	首次出货日期 Proposed Date of First Shipment	2022/01/25
PCN 类型 / PCN Category	□客户需要批准/ Customer Approval Required ☑客户通知/ Customer Notification		

1. 影响产品名称/ Affected Product Name

1) ESP8089M16

2) ESP8266 系列模组/ ESP8266 Series Modules:
ESP-WROOM-02, ESP-WROOM-S2, ESP-WROOM-02D, ESP-WROOM-02U, ESP-WROOM-02DC, ESP-WROOM-02UC, ESP-WROOM-5V2L, ESP-WROOM-5C

3) ESP32 系列模组/ ESP32 Series Modules:
ESP32-WROOM-32, ESP32-WROVER, ESP32-WROOM-32D, ESP32-WROOM-32U, ESP32-SOLO-1, ESP32-WROVER-B, ESP32-WROOM-32DC, ESP32-WROOM-32UC, ESP32-SOLO-1C, ESP32-WROOM-32SE, ESP32-WROVER-E, ESP32-WROVER-IE, ESP32-WROOM-32E, ESP32-WROOM-32UE, ESP32-DU1906, ESP32-DU1906-U

4) ESP32-S2 系列模组/ ESP32-S2 Series Modules:
ESP32-S2-WROOM, ESP32-S2-WROOM-I, ESP32-S2-WROVER, ESP32-S2-WROVER-I

2. 变更原因/ Reason for Change

为方便客户识别乐鑫模组的模组/产品规格，乐鑫将优化部分模组的产品料号（MPN）及外观丝印。
To facilitate the identification of Espressif module names and their specifications with improved efficiency and accuracy, Espressif will rename some modules with new Manufacturer Part Number (MPN) and update laser marking as well.

3. 变更描述/ Description of Change

按照乐鑫更新后的料号规则，对部分模组的产品料号进行升级，模组屏蔽盖的丝印标识同步更新。模组产品料号规则可以参考以下：
Espressif will update MPN of some Espressif module products to a new naming convention and part of the marking on module's shield cover is updated at the same time. See details below for new naming convention.

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[pdf] Specifications

PCN ESP32WROOM32 R es co th Schemetic |||

Document No. Document Version ESP-07-2-007-03 1.3 Document Name Retention Period / Product/Pr ... R8 ESP32-WROVER-E-N16R8 ESP32-WROVER-IE-N4R8 ESP32-WROVER-IE-N8R8 ESP32-WROVER-IE-N16R8 ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32UE...

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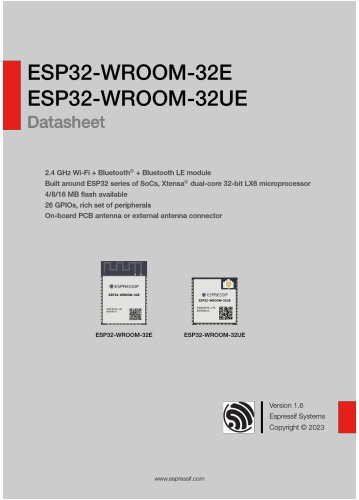

ESP32-WROOM-32E
ESP32-WROOM-32UE
Datasheet

2.4 GHz Wi-Fi + Bluetooth® + Bluetooth LE module
Built around ESP32 series of SoCs, Xtensa® dual-core 32-bit LX6 microprocessor
4/8/16 MB flash available
26 GPIOs, rich set of peripherals
On-board PCB antenna or external antenna connector

ESP32-WROOM-32E ESP32-WROOM-32UE

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ESP32WROOM32E ESP32WROOM32UE Datasheet 2.4 GHz WiFi Bluetooth Bluetooth LE module Built around E ... he two modules is as follows: Table 1: ESP32WROOM32E Series Comparison1 Ordering Code ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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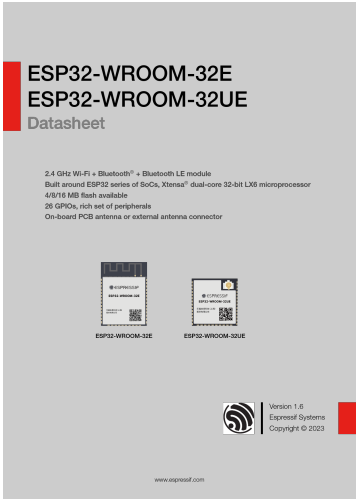

ESP32-WROOM-32E
ESP32-WROOM-32UE
Datasheet

2.4 GHz Wi-Fi + Bluetooth® + Bluetooth LE module
Built around ESP32 series of SoCs, Xtensa® dual-core 32-bit LX6 microprocessor
4/8/16 MB flash available
26 GPIOs, rich set of peripherals
On-board PCB antenna or external antenna connector

ESP32-WROOM-32E ESP32-WROOM-32UE

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ESP32WROOM32E ESP32WROOM32UE Datasheet 2.4 GHz WiFi Bluetooth Bluetooth LE module Built around E ... he two modules is as follows: Table 1: ESP32WROOM32E Series Comparison1 Ordering Code ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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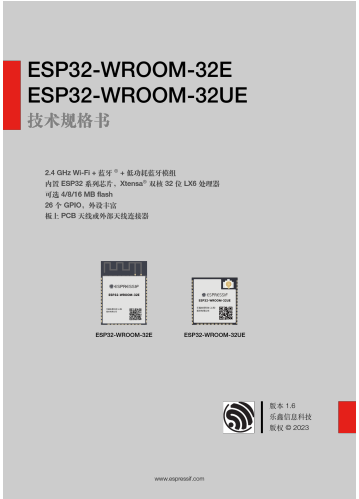

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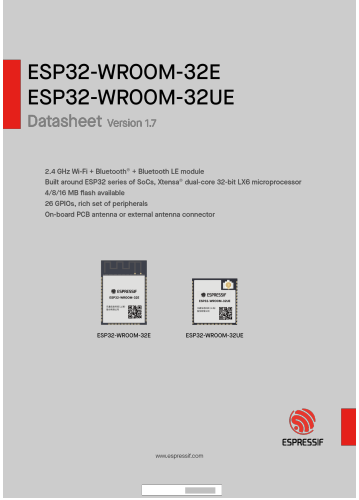

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ESP32 WROOM 32E 32UE The LED PWM Controller LEDC is designed to generate signals for 33 dB F F0 3 MHz — 25 45 Out of band 1745218412556 3821 uploadcdn oneyac upload document ||| ESP32-WROOM-32E ESP32-WROOM-32UE Datasheet Version 1.7 2.4 GHz Wi-Fi Bluetooth Bluetooth LE modu ... as follows: Table 1: ESP32-WROOM-32E Series Comparison1 Ordering Code Flash2 PSRAM ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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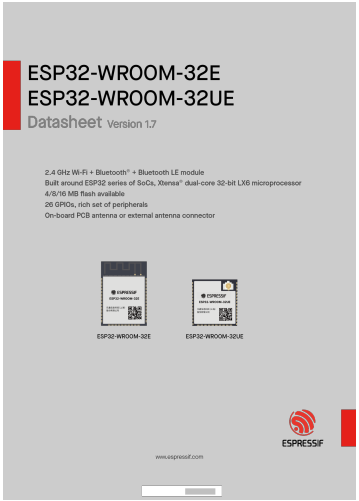

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ESP32 WROOM 32E 32UE 32K XN 13 GPIO25 14 G PIO 26 15 27 16 M TM S 17 TD I 18 VD D 3P 3 R TC 19 K 20 O 21 2 22 1743130667924 5468 uploadcdn oneyac upload document ||| ESP32-WROOM-32E ESP32-WROOM-32UE Datasheet Version 1.7 2.4 GHz Wi-Fi Bluetooth Bluetooth LE modu ... as follows: Table 1: ESP32-WROOM-32E Series Comparison1 Ordering Code Flash2 PSRAM ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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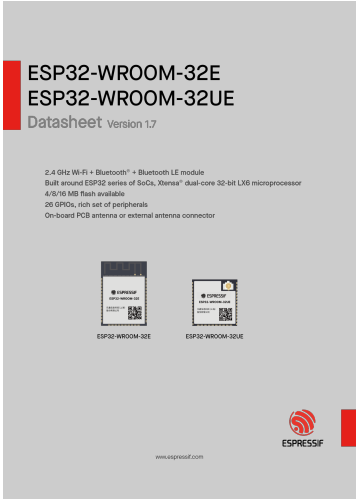

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ESP32-WROOM-32E ESP32-WROOM-32UE Datasheet Version 1.7 2.4 GHz Wi-Fi Bluetooth Bluetooth LE modu ... as follows: Table 1: ESP32-WROOM-32E Series Comparison1 Ordering Code Flash2 PSRAM ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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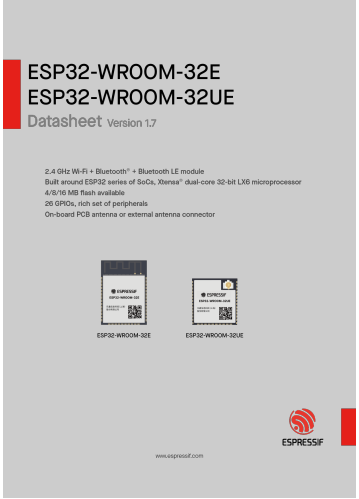

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ESP32 WROOM 32E 32UE botnrollESP32 and are two powerful generic Wi Fi MCU modules that have a rich set of peripherals They an ideal choice for wide esp32 wroom 32e esp32 32ue datasheet enbotnroll img cms en |||

ESP32-WROOM-32E ESP32-WROOM-32UE Datasheet Version 1.7 2.4 GHz Wi-Fi Bluetooth Bluetooth LE modu ... as follows: Table 1: ESP32-WROOM-32E Series Comparison1 Ordering Code Flash2 PSRAM ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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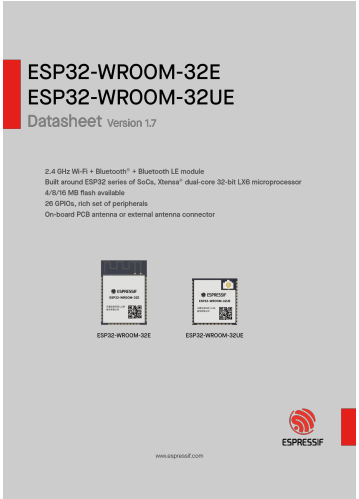

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ESP32-WROOM-32E ESP32-WROOM-32UE Datasheet Version 1.7 2.4 GHz Wi-Fi Bluetooth Bluetooth LE modu ... as follows: Table 1: ESP32-WROOM-32E Series Comparison1 Ordering Code Flash2 PSRAM ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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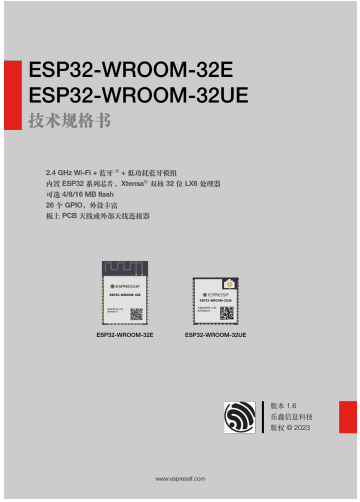

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ESP32WROOM32E ESP32WROOM32UE 2.4 GHz WiFi ESP32 Xtensa 32 LX6 4/8/16 MB flash 26 GPIO ... MP3 b ESP32-WROOM-32E PCB ESP32-WROOM-32UE b b 1: ESP32WROOM32E 1 Flash PSRAM ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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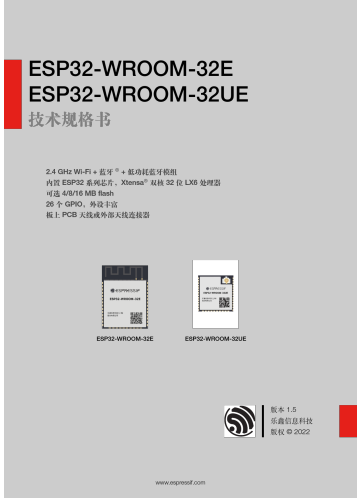

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ESP32WROOM32E ESP32WROOM32UE 2.4 GHz WiFi ESP32 Xtensa 32 LX6 4/8/16 MB flash 26 GPIO ... MP3 b ESP32-WROOM-32E PCB ESP32-WROOM-32UE b b 1: ESP32WROOM32E 1 Flash PSRAM ESP32-WROOM-**32E-N4** ESP32-WROOM-32E-N8 ESP32-WROOM-32E-N16 ESP32-WROOM-32E-H4 ESP32-WROOM-32E-H8 ESP32-WROOM-32E-...

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