

文件编号 Document No.	ESP-00-2-007-03	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	1.1	保存期限 Retention Period	3 年 3 years

ESP32 系列产品技术文档变更 ESP32 Series Products Technical Document Change			
PCN 编号 PCN No.	PCN-02-20190815	提出日期 Issue Date of PCN	2019/8/15
产品名称 Product Name	ESP32 Series Products (See below for details)	变更日期 Proposed Date of Change	2019/11/1
封装类型/尺寸 Package Type/Size	NA	首次出货日期 Proposed Date of First Shipment	NA
客户批准/Customer Consent: <input checked="" type="checkbox"/> 需要批准/Approval Required <input type="checkbox"/> 通知, 无需批准/Notification, Approval Not Required			
变更等级/Classification of Change: <input checked="" type="checkbox"/> 主要变更/Major <input type="checkbox"/> 轻微变更/Minor			
<u>变更原因/Reason for Change:</u> 1. 根据 ESP32 芯片规格书的数据, VDD_SDIO 和 VDD3P3_RTC 之间存在约 6 Ω 的电阻, 会根据 flash / PSRAM 不同的工作电流产生不同的压降, 进而可能产生 flash / PSRAM 供电不足的问题。基于该原因, 修改产品供电电压范围, 以便避免以上问题发生。 According to the data of ESP32 chip datasheet, there is about 6 Ω resistance between VDD_SDIO and VDD3P3_RTC, which will produce different voltage drop according to different working current of flash / PSRAM, which may lead to the problem of insufficient power supply of flash / PSRAM. For this reason, modify the voltage range of the product in order to avoid the above problems. 2. 产品本身并未发生变化, 仅变更相应技术文档中描述。 No changes have been made to the ESP32 series of products themselves. Only the corresponding description in technical documents are modified.			
<u>影响产品/Affected Products</u>			
Chip	ESP32-PICO-D4		
Module	ESP32-WROOM-32, ESP32-WROOM-32D/U, ESP32-WROOM-32DC/UC, ESP32-SOLO-1, ESP32-SOLO-1C, ESP32-WROVER-B/IB		
<u>变更内容/Proposed Change:</u> 将上述产品技术文档中的产品供电电压范围从 2.7 V ~ 3.6 V 改为 3.0 V ~ 3.6 V, 包括技术规格书和硬件设计指南。 Change the supply voltage range of the above mentioned products from 2.7 V ~ 3.6 V to 3.0 V ~ 3.6 V, including datasheet and hardware design guidelines.			

变更影响/Impact of Change:

1. 若客户使用 3.3 V flash / PSRAM 且使用 ESP32 芯片的 VDD_SDIO 对 flash / PSRAM 供电，则当 ESP32 芯片的供电电压低于 3.0 V 时，有可能出现 flash / PSRAM 供电电压不足的问题，因此对使用低电压供电的产品，需根据实际使用的 flash / PSRAM 进行计算，以便确认是否会产生 flash / PSRAM 供电不足的问题。

If the customer uses 3.3 V flash / PSRAM and the VDD_SDIO of ESP32 chip supplies power to flash / PSRAM, when the power supply voltage of ESP32 chip is less than 3.0 V, the problem of insufficient power supply voltage of flash / PSRAM may occur. Therefore, for the products using low voltage power supply, it is necessary to calculate according to the actual use of flash / PSRAM in order to confirm whether the problem of insufficient power supply of flash / PSRAM will occur.

2. 建议客户采用修改后的供电电压范围 3.0 V ~ 3.6 V 进行产品设计或调整。

Customers are advised to use the modified supply voltage range of 3.0 V ~ 3.6 V for product design or adjustment.

变更识别方式/ Change Identification Method:

产品本身未发生变更，无需区别。

No changes have been made to the ESP32 series of products themselves. Therefore, no need for distinguishing the products.

变更前后产品处理/How to Deal with Products:

产品本身未发生变更，无需进行区分处理。建议客户使用 2019 年 11 月 1 日后官网发布的最新版技术文档。

No changes have been made to the ESP32 series of products themselves. Therefore, no need for distinguishing the products. It's advised to use the latest version of documents released on our official website after November 1, 2019.

相关报告/Report(s) Attached:

Related ECN No.: ECN-02-20190719

邮件订阅**Espressif Email Notifications**

乐鑫为注册用户提供电子邮件通知服务，用户可通过[乐鑫订阅系统](#)接收技术文档更新、新闻通讯、PCN 等邮件通知。

Espressif sends email notifications of technical documentation changes, along with newsletters, PCNs and other valuable information, to subscribed customers only. If you wish to stay updated on our products and services, please subscribe [here](#).

客户响应要求**Customer Response Requirements**

客户须按照如下要求给予 Espressif PCN 反馈：

Customers are required to respond to Espressif, according to the following guidelines, and confirm receipt of the PCN:

主要变更/For Major Changes:

- a) 客户须在乐鑫发出 PCN 后的 30 天内告知已收到 PCN。
Customers should confirm receipt of the PCN within 30 calendar days from the date Espressif sends it to them.
- b) 如客户未在接收到 PCN 后的 30 天内告知已收到，则视为客户接受变更。
If customers do not confirm receipt of the PCN within 30 calendar days, they will be regarded as having accepted the proposed changes.
- c) 客户告知确认收到 PCN 后，如未在 90 天内反馈其他要求，则视为客户接受变更。
After the customers confirm receipt of the PCN, the lack of any additional responses on their part within 90 calendar days constitutes acceptance of the proposed changes.

轻微变更/For Minor Changes:

- a) 如客户未在接收到 PCN 后的 7 天内告知已收到，则视为客户接受变更。
If customers do not confirm receipt of the PCN within 7 calendar days, they will be regarded as having accepted the proposed changes.

请反馈至 pcn@espressif.com。

Please send feedback to pcn@espressif.com.

客户批准/确认信息
Customer Approval/Acknowledgement and Remarks

客户公司全称:

Customer's Company Name:

批准/Approval

PCN 评审结果/PCN Review Result: 不批准/Disapproval

需要分析/Further Analysis Required

客户意见/Comment:

公司代表人姓名

Representative's Name:

公司代表人职责

Representative's Job Title:

公司代表人签名

Representative's Signature:

日期

Date: