

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
文件版本 Document Version	1.1	保存期限 Record Retention	3 年/Three years

变更标题/Change Title: ESP32 技术规格书变更 / ESP32 Datasheet Update			
PCN 编号 PCN No.	PCN-02-20180515	提出日期 Issue Date of PCN	2018/5/11
产品名称 Product Name	ESP32-D0WD ESP32-D0WDQ6 ESP32-S0WD ESP32-D2WD ESP32 系列模组和开发板/ ESP32 modules & boards	变更日期 Proposed Date of Change	2018/5/25
封装类型/尺寸 Package Type/Size	N/A	首次出货日期 Date of First Shipment	N/A
客户批准/Customer Consent: <input type="checkbox"/> 需要批准/Approval Required <input checked="" type="checkbox"/> 通知, 无需批准/Notification, Approval Not Required			
变更等级/Change Classification: <input type="checkbox"/> 主要变更/Major <input checked="" type="checkbox"/> 轻微变更/Minor			
<u>变更原因/Reason for Change:</u> 完善 ESP32 技术规格书。 /To improve the ESP32 Datasheet.			
<u>变更描述/Description of Change:</u> 1. 电压调整/Changes on voltage: <ul style="list-style-type: none"> <li>• 将 VDD3P3_CPU 的电压范围由 2.3-3.6V 改为 1.8-3.6V。 /Changed the voltage range of VDD3P3_CPU from 2.3-3.6V to 1.8-3.6V. 原因: 增加适配 1.8V 外设的应用场景。 /Reason: ESP32 is suitable for usage scenarios where peripherals operate at 1.8V.</li> <li>• 将 VDD3P3_RTC 的电压范围由 1.8-3.6V 改为 2.3-3.6V。 /Changed the voltage range of VDD3P3_RTC from 1.8-3.6V to 2.3-3.6V. 原因: 提高应用稳定性。 /Reason: This is to improve the application's stability.</li> </ul> 2. 在表格“直流电气特性”中增加以下参数/Added the following parameters to Table “DC Characteristics (3.3V, 25°C)”: <ul style="list-style-type: none"> <li>• 高电平源电流典型值 (<math>I_{OH}</math>, VDD = 3.3V, <math>V_{OH}</math> = 2.64V, PAD_DRIVER = 3) 40 mA High-level source current (<math>I_{OH}</math>, VDD = 3.3V, <math>V_{OH}</math> = 2.64V, PAD_DRIVER = 3) with a typical value of 40 mA</li> <li>• 低电平灌电流 (<math>I_{OL}</math>, VDD = 3.3V, <math>V_{OL}</math> = 0.495V, PAD_DRIVER = 3) 典型值 28 mA</li> </ul>			

Low-level sink current ( $I_{OL}$ ,  $V_{DD} = 3.3V$ ,  $V_{OL} = 0.495V$ ,  $PAD\_DRIVER = 3$ ) with a typical value of 28 mA

原因：新增说明。 / Reason: This is to provide more information on ESP32 specifications.

- 上拉电阻 ( $R_{PU}$ ) 典型值 45 k $\Omega$

Pull-up resistor ( $R_{PU}$ ) with a typical value of 45 k $\Omega$

原因：新增说明。 / Reason: This is to provide more information on ESP32 specifications.

- 下拉电阻 ( $R_{PD}$ ) 典型值 45 k $\Omega$

Pull-down resistor ( $R_{PD}$ ) with a typical value of 45 k $\Omega$

原因：新增说明。 / Reason: This is to provide more information on ESP32 specifications.

3. 删除有关温度传感器的内容。 / Remove the content about temperature sensor.

原因：该温度传感器仅适用于基本的内部测试。 / Reason: The temperature sensor was evaluated as suitable for basic internal testing only.

变更影响/Impact of Change:

1. 影响产品/Products Impacted:

该变更受影响产品为：ESP32-D0WDQ6, ESP32-D0WD, ESP32-D2WD, ESP32-S0WD。使用以上芯片为主芯片的模组和开发板也受影响。

The products impacted by the change include ESP32-D0WDQ6, ESP32-D0WD, ESP32-D2WD, ESP32-S0WD, as well as the modules and development boards built around ESP32 chips.

2. 温度传感器内容变更 / Impact of removing the content about temperature sensor:

如客户不使用受影响产品的温度传感器功能，则无影响。

No impact if users do not require the functionality of temperature sensor.

3. 电压调整 / Impact of voltage changes:

如客户对产品引脚电压设置在变更后范围内，则无影响。

No impact if users set the voltage values within the updated range.

变更识别方式/Method of Identifying Change:

产品并无变更。 / There are no changes to the device form.

变更前后产品处理/How to deal with products:

若变更项目对客户端实际使用情况造成影响，则建议客户联系 Espressif 确认处理方式，联系方式为 [pcn@espressif.com](mailto:pcn@espressif.com)。

Should the changes mentioned in this PCN impact the use of the products, users can contact Espressif at [pcn@espressif.com](mailto:pcn@espressif.com).

相关报告/Report(s) Attached:

Reliability Report or Plan: \_\_\_\_\_ N/A

Qualification Report or Plan: \_\_\_\_\_ N/A

RoHS/HF Test Report: \_\_\_\_\_ N/A

Function Test Report: \_\_\_\_\_ N/A

Other Reports (Pls specify): \_\_\_\_\_ N/A

变更人/Change Owner: 符运生		签名/Signature: 	日期/Date: 2018.5.11
Approved By 批准人			
R&D Analog	王强	Signature: 	Date: 2018.5.17
R&D Hardware	王栋	Signature: 	Date: 2018.05.17
R&D Software	姜江建	Signature: 	Date: 2018.5.17
FAE	栾春涛	Signature: 	Date: 2018.5.17
	戴玮	Signature: 	Date: 2018.5.17
ATE	王伟	Signature: 	Date: 2018.5.17
IC Package	汤上金	Signature: 	Date: 2018.5.17
QA	陶袁	Signature: 	Date: 2018.5.17
NPI	黄建	Signature: 	Date: 2018.5.17
Sales	易雨皓	Signature: 	Date: 2018.5.17
Purchasing	吴柏均	Signature: 	Date: 2018.5.17
Marketing	王珏	Signature: 	Date: 2018.5.18
CEO	张瑞安	Signature: 	Date: 2018.5.18

如果无需相关人员批准, 请在相应栏位填写 "N/A".

Input "N/A" in column(s) where approval is not required.

注: 以上信息由 Espressif 填写。

Note: The information above shall be filled in by Espressif.

**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 to confirm receipt of the PCN:

**主要变更/For Major Changes:**

- a) 客户须在接收到 PCN 后的 30 天内告知已收到 PCN.
- a) Customers should acknowledge receipt of the PCN within 30 calendar days from the date of receiving the PCN.
- 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。
- b) Lack of acknowledgment of the PCN within 30 calendar days constitutes acceptance of 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。
- c) After customers acknowledge receipt of the PCN, lack of additional response on their part within 90 calendar days constitutes acceptance of the 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。  
 a) Lack of acknowledgement of the PCN within 7 calendar days constitutes acceptance of the changes.

请反馈至 [pcn@espressif.com](mailto:pcn@espressif.com)。

Please feedback to [pcn@espressif.com](mailto:pcn@espressif.com).

注：以下信息由客户或 Espressif 销售与客户服务部门填写。

Note: The information below shall be filled in by customers or Espressif's sales department.

**客户批准/确认信息**

**Customer Approval/Acknowledgement and Remarks**

客户公司全称：

Customer's Company Name:

PCN 评审结果/PCN Study Result:  批准/Approval  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: