

| | | | |
|--------------------------|-----------------|--------------------------|---|
| 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 |

| 引入 GD25Q128ESIG 作为 ESP32 系列模组的备选 16 MB flash 物料 Introduction of GD25Q128ESIG as alternative 16 MB flash source for ESP32 Series of Modules | | | |
|---|--|---|------------|
| PCN 编号 PCN No. | PCN-2021-007 | 提出日期 Issue Date of PCN | 2021/04/21 |
| 变更日期 Proposed Date of Change | 2021/06/12 | 首次出货日期 Proposed Date of First Shipment | 2021/07/20 |
| PCN 类型 / PCN Category | <input checked="" type="checkbox"/> 客户需要批准/Customer Approval Required <input type="checkbox"/> 客户通知/Customer Notification | | |
| 1. 影响产品名称/Affected Product Name ESP32-WROOM-32D(M113DH2800PH3Q0), ESP32-WROOM-32D(M113DH2800PH3Q1) ESP32-WROVER-B(M213DH2864PH3Q0), ESP32-WROVER-B(M213DH2864PH3Q1) ESP32-WROVER-E(M213EH2864PH3Q0), ESP32-WROVER-E(M213EH2864PH3Q1) ESP32-WROVER-IE(M213EH2864UH3Q0), ESP32-WROVER-IE(M213EH2864UH3Q1) ESP32-WROOM-32E(M113EH2800PH3Q0), ESP32-WROOM-32E(M113EH2800PH3Q1) ESP32-WROOM-32UE(M113EH2800UH3Q0), ESP32-WROOM-32UE(M113EH2800UH3Q1) | | | |
| 2. 变更原因/Reason for Change <p>目前，我司使用的北京兆易创新科技股份有限公司（“GD”）供应 GD25QXXC 系列产品的生产工艺为 65nm，GD 优化生产工艺为 55nm Flash 生产工艺，产品系列为 GD25QXXE。</p> <p>为提高供应稳定性，乐鑫完成了北京兆易创新科技股份有限公司（“GD”）供应的料号为 GD25Q128ESIG 的 flash 的 QVL 物料验证测试并通过，因此决定引入该 flash 作为段落 1 列出模组产品的备选物料。</p> <p>Recently, GigaDevice Semiconductor Inc. (GD), Espressif's supplier for GD25QXXC series of flash (which uses the 65nm process technology), has launched GD25QXXE series of flash (which uses the more advanced 55nm process technology).</p> <p>Under this background, to ensure a robust and diversified module supply, Espressif has qualified flash Part Number: GD25Q128ESIG provided by GigaDevice Semiconductor Inc.(GD) as the new alternative source for Espressif modules listed in Para 1.</p> | | | |
| 3. 变更描述/Description of Change 引入料号为 GD25Q128ESIG 的 3.3V, 16 MB, -40℃ ~ 85℃ flash 作为乐鑫 ESP32 系列模组的备选物料。 Introducing the 3.3V, 16 MB, -40℃ ~ 85℃ flash, Part Number: GD25Q128ESIG as an alternative source for the Espressif modules listed in Para1. | | | |
| 4. 变更对比/Change Comparison | | | |

请见附录 I: 变更信息

Please refer to Appendix I: Change Information

5. 变更影响/Impact of Change

1) 品质和性能/ Quality & Performance:

料号为 GD25Q128ESIG 的 flash 已经通过了物料验证测试, 乐鑫确认该 flash 的品质和性能满足乐鑫的要求, 且段落 1 列出的模组在此次变更后有同样的品质和性能。

This flash (Part Number: GD25Q128ESIG) has passed the material qualification test. Espressif confirms the quality and performance of this flash fully meet Espressif's requirements, and the quality and performance of modules listed in Para1 are not affected by using this flash.

2) 交期/Delivery:

对于段落 1 列出模组产品的交期没有影响。同时为乐鑫的模组产品引入新的 flash 物料能够增加供应链的多样性。

The delivery of the affected modules listed in Para 1 will not be affected. The introduction of a second flash source for the modules will improve the robustness of their supply chain.

3) 生产料号/Material Part Numbers (MPN):

对于段落 1 列出模组产品的 MPN 无影响, 客户可以使用原 MPN 进行下单。

There is no change to the MPN of the affected modules listed in Para 1. Customers can use the same MPN when placing orders.

4) 认证/Certification:

该变更对 Wifi 性能没有影响, 因此对已有 Wifi 认证的有效性没有影响。

This change does not affect the Wi-Fi performance of the affected modules. Therefore, the existing Wi-Fi certifications of the affected modules are also not affected.

5) 其他/Others:

NA

6. 变更前后产品处理/How to Deal with Products

FIFO

7. 相关报告/Report(s) Attached:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Related ECN No. | ECN-2021-005 |
| <input checked="" type="checkbox"/> Material Qualification Report | #35024 GD25Q128ESIG 在 ESP32 平台验证报告 |
| <input type="checkbox"/> Performance Test Report | |
| <input type="checkbox"/> Reliability Test Report | |
| <input checked="" type="checkbox"/> Environment Related Report (RoHS / REACH / HF etc.) | GD25Q128ESIG Environment Compliance Information |
| <input type="checkbox"/> Certification | |
| <input type="checkbox"/> Other Reports (Pls specify) | |

Appendix I 变更信息/Change Information

| 项目/Item | 变更后/ Information After Change |
|---------------------------------|---|
| 1. Flash Part Number | Add GD25Q128ESIG |
| 2. Spec | |
| 1) Flash Operating Voltage | 2.7V ~ 3.6V, which covers the operating voltage of the affected modules (3.0V ~ 3.6V), thus will not introduce any impact |
| 2) Typical Power Supply Voltage | No Changes |
| 3) Flash Capacity | No Changes |
| 4) Flash Temperature Range | No Changes |
| 5) Product Name/MPN | No Changes |

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
需客户批准的变更/ Change Requiring Customer Approval:

a) 客户须在乐鑫发出 PCN 后的 30 天内告知乐鑫已收到 PCN。如客户未在接收到 PCN 后的 30 天内告知已收到，则视为客户收到变更。

Customers are requested to acknowledge receipt of the PCN within 30 calendar days from the date of issue of the PCN. Customers would be considered as notified 30 calendar days after issue of the PCN if no acknowledgement is received.

b) 自发布 PCN 之日起 90 天内，客户没有任何其他反馈，则表示客户接受该 PCN。

The lack of any additional responses from customers within 90 calendar days from date of issue of the PCN constitutes acceptance of the proposed changes.

客户通知/ Customer Notification:

a) 客户需在乐鑫发出 PCN 后 14 天内通知乐鑫收到该 PCN。如客户未在接收到 PCN 14 日反馈乐鑫，则视为客户确认该 PCN。

Customers are requested to acknowledge receipt of the PCN within 14 calendar days from the date of issue of the PCN. Customers would be considered as having acknowledged the PCN if no response is received after 14 calendar days.

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:

PCN 评审结果/PCN Review Result:

- 批准/确认 Accepted/Acknowledged
 不批准/Rejected
 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: