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|--------------------------|-----------------|--------------------------|---|
| 文件编号<br>Document No.     | ESP-07-2-007-03 | 文件名称<br>Document Name    | 产品/工艺变更通知<br>Product/Process Change Notice<br>(PCN) |
| 文件版本<br>Document Version | 1.2             | 保存期限<br>Retention Period | 3 年<br>3 years                                      |

**引入料号为 XM25QH128CHIQT08Q 的 Flash 作为 ESP32 系列模组的主要物料源**  
**Introduction of Flash Part Number XM25QH128CHIQT08Q as Main Source for ESP32 Series Modules**

|                                 |              |   |           |
|---------------------------------|--------------|---|-----------|
| PCN 编号<br>PCN No.               | PCN-2020-007 | 提出日期<br>Issue Date of PCN                 | 2020/7/1  |
| 变更日期<br>Proposed Date of Change | 2020/7/1     | 首次出货日期<br>Proposed Date of First Shipment | 2020/7/10 |

客户批准/Customer Consent: 需要批准/Approval Required  
通知, 无需批准/Notification, Approval Not Required

1. 影响产品名称 / Affected Products  
ESP32-WROOM-32D  
ESP32-WROOM-32U  
ESP32-WROVER-B  
ESP32-WROVER-IB  
ESP32-WROVER-E  
ESP32-WROVER-IE  
ESP32-WROOM-32E

2. 变更原因/Reason for Change:  
乐鑫完成了武汉新芯集成电路制造有限公司 (“XMC”) 生产制造的料号为 XM25QH128CHIQT08Q 的 Flash 的物料验证, 因此决定引入该 Flash 作为段落 1 列出模组产品的主要物料源。  
Expressif has qualified Flash Part Number: XM25QH128CHIQT08Q manufactured by Wuhan Xinxin Semiconductor Manufacturing Co., Ltd.(XMC) as the new main source for Espressif modules listed in para 1.

3. 变更描述/Description of Change:  
引入料号为 XM25QH128CHIQT08Q 的 Flash (3.3V, 128 Mb, -40℃ ~ 85℃) 作为段落 1 列出模组产品的主要物料源。  
Flash Part Number XM25QH128CHIQT08Q (3.3V, 128 Mb, -40℃~ 85℃) will be introduced as the main source for Espressif's modules listed in para 1.

4. 变更对比/Change Comparison  
请见附录 I: 变更对比  
Please refer to Appendix I: Change comparison.

#### 5. 变更影响/Impact of Change:

##### 品质和性能/ Performance & Quality:

料号为 XM25QH128CHIQT08Q 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并且段落 1 列出的模组在此次变更后有同样的品质和性能。

Flash Part Number XM25QH128CHIQT08Q has completed qualification test. Espressif confirms it fully meets the requirements for quality and performance and the Espressif modules listed in para 1 have the same performance and functions after the change.

##### 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。

There is no impact to delivery performance of the affected Espressif modules listed in para 1. The introduction of a new source of Flash for the modules will improve the robustness of their supply chain.

##### 生产料号/Material Part Numbers (MPN):

无需对段落 1 列出模组产品的 MPN 做出变更。客户可以用原有的 MPN 下单。

There is no change to the MPN of the affected Espressif modules listed in para 1. Customers can continue to use existing MPN to place orders.

##### 认证/Certification:

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

The change does not affect the Wifi and BT performance of the modules and does not affect the validity of their existing Wifi and BT certifications.

#### 6. 变更前后产品处理/How to Deal with Products before Change and after Change:

1. 如客户需要样品，可以联系乐鑫的商务支持部门。

Customers can contact Espressif's Business Support for samples.

2. 如客户需要环保相关的报告 (RoHS / REACH / HF) ，可以联系乐鑫的商务支持部门。

Customers can contact Espressif's Business Support for Environment Related Report (RoHS / REACH / HF).

3. 如客户需要物料验证报告，可以联系乐鑫的商务支持部门。

Customers can contact Espressif's Business Support for material qualification report.

4. 乐鑫的模组产品将遵循先进先出原则。

The products will follow the first in and first out (FIFO) rule.

#### 7. 相关报告/Report(s) Attached:

Related ECN No.:

ECN-2020-020

Material Qualification Report:

#31799\_Flash Test Report -

XM25QH128CHIQT08Q.pdf

Performance Test Report:

Reliability Test Report:

Environment Related Report (RoHS / REACH / HF)      XMC SOP8 208mil 环保资料 20200318.xlsx

Certification

Other Reports (Pls specify):

## Appendix I 变更对比/ Change Comparison

| Before Change   | After Change                     |
|---|----------------------------------|
| <b>Flash Part Number</b>  |                                  |
| GD25Q127CSIG  | XM25QH128CHIQT08Q                |
| <b>Product Name/MPN (No Changes)</b>  |                                  |
| ESP32-WROOM-32D(M113DH2800PH3Q0)  | ESP32-WROOM-32D(M113DH2800PH3Q0) |
| ESP32-WROOM-32U(M113DH2800UH3Q0)  | ESP32-WROOM-32U(M113DH2800UH3Q0) |
| ESP32-WROVER-B(M213DH2864PH3Q0)   | ESP32-WROVER-B(M213DH2864PH3Q0)  |
| ESP32-WROVER-IB(M213DH2864UH3Q0)  | ESP32-WROVER-IB(M213DH2864UH3Q0) |
| ESP32-WROVER-E(M213EH2864PH3Q0)   | ESP32-WROVER-E(M213EH2864PH3Q0)  |
| ESP32-WROVER-IE(M213EH2864UH3Q0)  | ESP32-WROVER-IE(M213EH2864UH3Q0) |
| ESP32-WROOM-32E(M113EH2800PH3Q0)  | ESP32-WROOM-32E(M113EH2800PH3Q0) |
| <b>Flash Operating Voltage</b>  |                                  |
| 2.7V~3.7V   | 2.3V ~ 3.6V                      |
| All of the affected modules have the same working voltage: 3.0V ~ 3.6V. So both types of Flash meet the requirements. |                                  |
| <b>Typical Power Supply Voltage (No Change)</b>   |                                  |
| 3.3V  | 3.3V                             |
| <b>Flash capacity (No Change)</b>   |                                  |
| 128 Mb  | 128 Mb                           |
| <b>Flash Temperature Range (No Change)</b>  |                                  |
| -40℃ ~ 85 ℃   | -40℃ ~ 85 ℃                      |

**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:

**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.

**无需客户批准的变更/Change Not Requiring Customer Approval:**

a) 如客户未在接收到 PCN 后的 14 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 14 calendar days, they will be regarded as having accepted the proposed changes.

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

Please send feedback to [pcn@espressif.com](mailto: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/Approval

不批准/Disapproval

需要分析/Further Analysis Required

|  |  |  |  |
|--|--|--|--|
| 客户意见/Comment:                          |  |  |  |
| 公司代表人姓名<br>Representative's Name:      |  | 公司代表人职责<br>Representative's Job Title: |  |
| 公司代表人签名<br>Representative's Signature: |  | 日期<br>Date:                            |  |