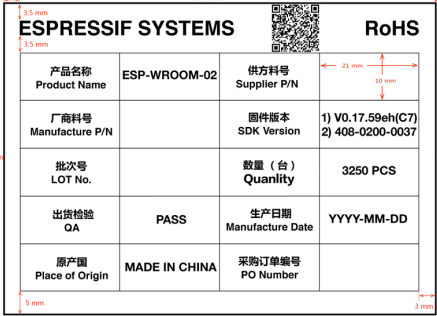






文件编号 Document No.	ESP-00-2-007-03	文件名称 Document Name	产品/工艺变更通知 Product/Process Change Notice (PCN)
文件版本 Document Version	1.1	保存期限 Retention Period	3 年 3 years

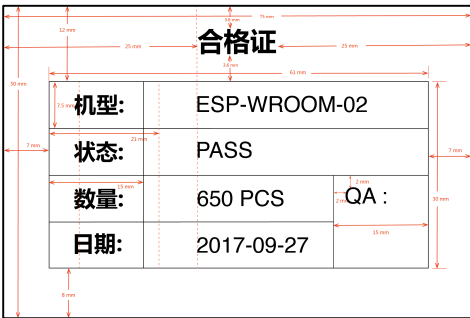

乐鑫模组包装变更通知 Packaging Changes to Espressif Modules			
PCN 编号 PCN No.	PCN-03-20190215	提出日期 Issue Date of PCN	2019-02-15
产品名称 Product Name	Espressif Modules	变更日期 Proposed Date of Change	2019-02-15
封装类型/尺寸 Package Type/Size	Module	首次出货日期 Proposed Date of First Shipment	According to FIFO, it's expected on March 8, 2019.
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/Classification of Change:		<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> <ol style="list-style-type: none"> <li>乐鑫信息科技（上海）有限公司更名为乐鑫信息科技（上海）<b>股份</b>有限公司，更新包装管理规范中涉及的相关内容，增大字体提升辨识度。The company name has been changed from “ESPRESSIF SYSTEMS (SHANGHAI) PTE., LTD.” to “ESPRESSIF SYSTEMS (SHANGHAI) CO., LTD.”, so the packaging information had to be updated accordingly. The changed part appears in bigger font for easy recognition.</li> <li>规范现有的包装方式,减少多余标签,依据标准增加 ESD 警示标识、ESD 警示语、MSL 等级标签。Espressif wanted to standardize the existing packaging methods, remove any redundant labels, add an ESD (Electrostatic-Sensitive Device) warning label and an MSL (Moisture Sensitivity Level) label, according to the current market standards.</li> <li>整合之前产品的分类标签，依据多国认证标准规范镭雕标签格式。应国家无线电委员会的要求，增加公司中文全名。Espressif wanted to integrate the previous product classification labels with the new ones, and standardize the format of the laser-engraving label, according to the multi-national certification standards. Espressif also had to add the company's full name in Chinese, at the request of the State Radio Regulatory Commission of the People's Republic of China.</li> <li>规范 PCB 丝印。Standardized the PCB silkscreen printing.</li> <li>规范产品型号。Standardized the product models.</li> </ol> <p>详情请见后续变更描述。Please, see the following in-depth description of the change to find out all the details.</p>			

### 变更描述/Description of Change:

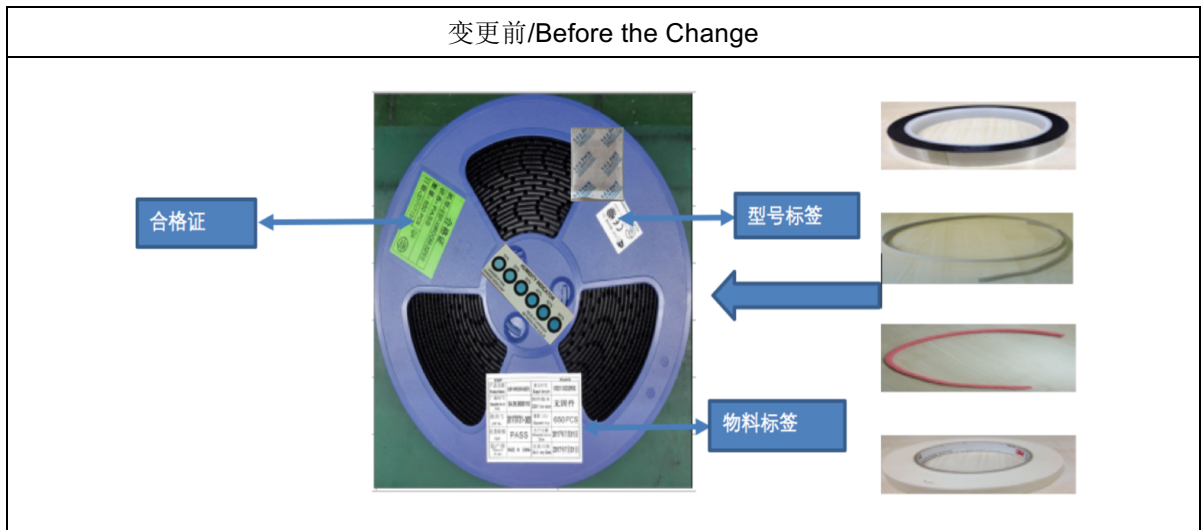
#### 1. 物料标识卡变更前后对比/Material Identification Card before and after the change:

变更前/Before the Change (100mm*75mm)	变更后/After the Change (75mm*100mm)																																															
 <p>ESPRESSIF SYSTEMS <b>RoHS</b></p> <table border="1"> <tr> <td>产品名称 Product Name</td> <td>ESP-WROOM-02</td> <td>供方料号 Supplier P/N</td> <td></td> </tr> <tr> <td>厂商料号 Manufacturer P/N</td> <td></td> <td>固件版本 SDK Version</td> <td>1) V0.17.59eh(C7) 2) 408-0200-0037</td> </tr> <tr> <td>批次号 LOT No.</td> <td></td> <td>数量 (台) Quantity</td> <td>3250 PCS</td> </tr> <tr> <td>出货检验 QA</td> <td>PASS</td> <td>生产日期 Manufacture Date</td> <td>YYYY-MM-DD</td> </tr> <tr> <td>原产国 Place of Origin</td> <td>MADE IN CHINA</td> <td>采购订单编号 PO Number</td> <td></td> </tr> </table>	产品名称 Product Name	ESP-WROOM-02	供方料号 Supplier P/N		厂商料号 Manufacturer P/N		固件版本 SDK Version	1) V0.17.59eh(C7) 2) 408-0200-0037	批次号 LOT No.		数量 (台) Quantity	3250 PCS	出货检验 QA	PASS	生产日期 Manufacture Date	YYYY-MM-DD	原产国 Place of Origin	MADE IN CHINA	采购订单编号 PO Number		 <p><b>ESPRESSIF</b> 乐鑫信息科技(上海)股份有限公司</p> <table border="1"> <tr> <td>产品名称 Product Name</td> <td colspan="2">ESP-WROOM-02</td> <td rowspan="2"></td> </tr> <tr> <td>供方料号 Supplier P/N</td> <td colspan="2">M1102H1600PH3D0</td> </tr> <tr> <td>厂商料号 Manufacturer P/N</td> <td colspan="3">XXXXXXXXXX</td> </tr> <tr> <td>固件版本 SDK Version</td> <td colspan="3">1) V0.17.59eh (C7) 2) 408-0200-0037</td> </tr> <tr> <td>采购订单编号 PO Number</td> <td>PW-2019-01-0001</td> <td>数量 (台) Quantity</td> <td>3250 PCS</td> </tr> <tr> <td>生产日期 Manufacture Date</td> <td>YYYY-MM-DD</td> <td>原产国 Place of Origin</td> <td>MADE IN CHINA</td> </tr> <tr> <td>批次号 LOT No.</td> <td>201901-001 201901-002 201901-003 201901-004 201901-005</td> <td>出货检验 QA</td> <td></td> </tr> </table>	产品名称 Product Name	ESP-WROOM-02			供方料号 Supplier P/N	M1102H1600PH3D0		厂商料号 Manufacturer P/N	XXXXXXXXXX			固件版本 SDK Version	1) V0.17.59eh (C7) 2) 408-0200-0037			采购订单编号 PO Number	PW-2019-01-0001	数量 (台) Quantity	3250 PCS	生产日期 Manufacture Date	YYYY-MM-DD	原产国 Place of Origin	MADE IN CHINA	批次号 LOT No.	201901-001 201901-002 201901-003 201901-004 201901-005	出货检验 QA	
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#### 2. 合格证/Certificate:

变更前/Before the Change	变更后/After the Change																								
 <p><b>合格证</b></p> <table border="1"> <tr> <td>机型:</td> <td colspan="2">ESP-WROOM-02</td> </tr> <tr> <td>状态:</td> <td colspan="2">PASS</td> </tr> <tr> <td>数量:</td> <td>650 PCS</td> <td>QA:</td> </tr> <tr> <td>日期:</td> <td colspan="2">2017-09-27</td> </tr> </table>	机型:	ESP-WROOM-02		状态:	PASS		数量:	650 PCS	QA:	日期:	2017-09-27		 <p><b>合格证</b></p> <table border="1"> <tr> <td>机型:</td> <td colspan="2"><b>ESP-WROOM-02</b></td> </tr> <tr> <td>状态:</td> <td colspan="2"><b>PASS</b></td> </tr> <tr> <td>数量:</td> <td><b>650</b> PCS</td> <td>QA:</td> </tr> <tr> <td>日期:</td> <td colspan="2"><b>2019-01-01</b></td> </tr> </table> <p>变更字体，增加辨识度。Changed the font size for easy recognition.</p>	机型:	<b>ESP-WROOM-02</b>		状态:	<b>PASS</b>		数量:	<b>650</b> PCS	QA:	日期:	<b>2019-01-01</b>	
机型:	ESP-WROOM-02																								
状态:	PASS																								
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状态:	<b>PASS</b>																								
数量:	<b>650</b> PCS	QA:																							
日期:	<b>2019-01-01</b>																								

#### 3. 包装方式变更/Package labeling before and after the change:



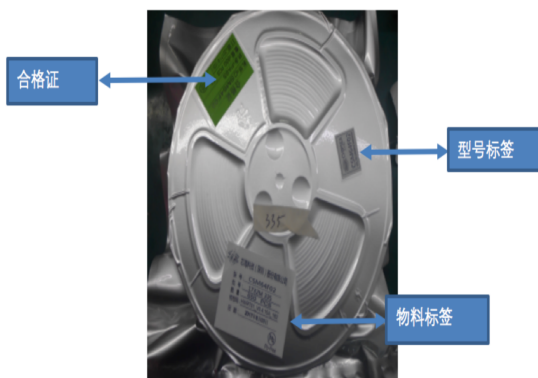
变更后/After the Change



增加 ESD 标签以警示产品为 ESD 敏感器件。Added an ESD label to denote the product's susceptibility to electrostatic discharge.

4. 真空包装/Vacuum labeling before and after the change:

变更前/Before the Change



变更后/After the Change



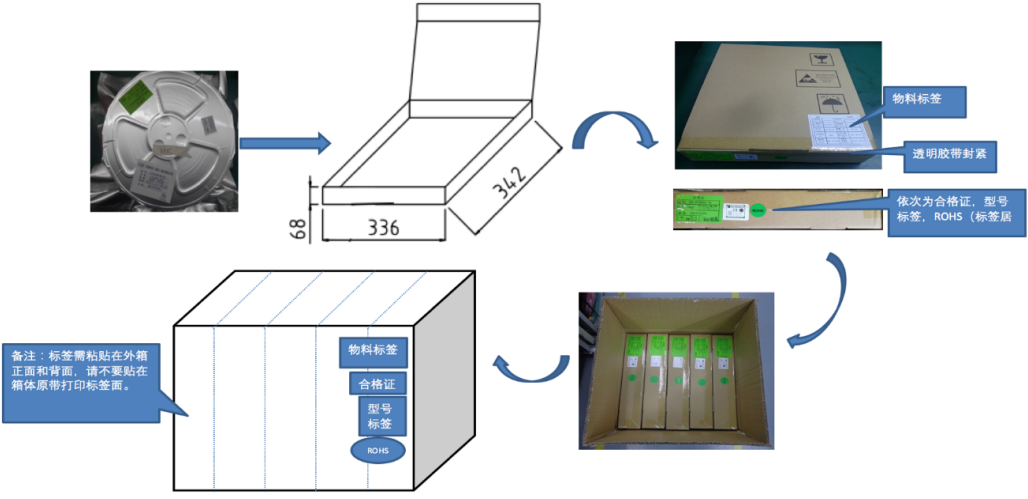
1. 增加 ESD 警示语(含湿敏等级 MSL 3) Added an ESD warning label (including MSL 3)
2. 增加 ESD 标签, RoHS 标签 Added an ESD label and a RoHS label
3. 粘贴物料标识卡 Pasted the Marterial Identification Card
4. 不再张贴合格证、型号标签。Removed the certificate and model label.

形式: 张贴标签或直接印刷在 ESD 袋上。

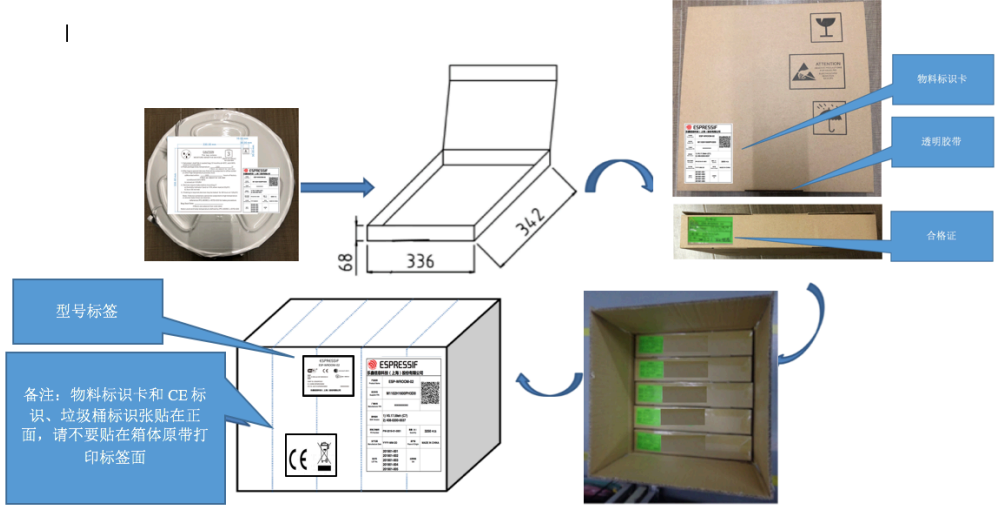
Form: the label is pasted or directly printed on the ESD bag.

5. 包装方式/Packaging:

变更前/Before the Change



变更后/After the Change






增加欧盟要求的 CE logo、垃圾桶标识、完整的型号标签。Added the CE logo, the crossed-out wheeled bin symbol, and completed the model label, according to the requirements of the European Union.

形式：张贴标签或印刷在外箱上。Form: the labels are pasted or printed on the outer box.



6. 出货检验报告将从原有的中文版本变更为中英文对照版本。

The shipment inspection report will be changed from the current monolingual (Chinese-only) version to a bilingual version (Chinese and English).



**7. 型号标签/Model Label:**
**7.1: ESP-WROOM-02**

变更前/Before the Change	变更后/After the Change
<p>国内版/For the Chinese Market:</p>  <p>国内版/For the international market:</p> 	 <ul style="list-style-type: none"> <li>● 整合全部认证，增加公司变更后的中文全名。Integrated all certifications and added the full name of the company in Chinese.</li> <li>● XXXXXXXXXXXX (10 位): 用于标记客户定制，固件版本。XXXXXXXXXXXX (10 digits): added a 10-digit number to indicate the customer customization and firmware version of the product.</li> </ul>



**7.2 ESP32-WROOM-32**

变更前/Before the Change	变更后/After the Change
	 <ul style="list-style-type: none"> <li>● 增加公司变更后的中文全名。Added the full name of the company in Chinese.</li> <li>● XXXXXXXXXXXX (10 位): 用于标记客户定制，固件版本。XXXXXXXXXXXX (10 digits): added a 10-digit number to indicate the customer customization and firmware version of the product.</li> </ul>



### 7.3 ESP32-WROVER (I)

变更前/Before the Change	变更后/After the Change
	 <ul style="list-style-type: none"> <li>● 增加公司变更后的中文全名。Added the full name of the company in Chinese.</li> <li>● 补充认证 ID。Added the certification ID.</li> <li>● 增加 XXXXXXXXXXXX (10 位): 用于标记客户定制固件版本。XXXXXXXXXX (10 digits): added a 10-digit number to indicate the customer customization and firmware version of the product.</li> </ul>



### 7.4 ESP32-WROVER-B (IB)

变更前/Before the Change	变更后/After the Change
	 <ul style="list-style-type: none"> <li>● 增加变更后的中文全名。Added the full name of the company in Chinese.</li> <li>● QR code 定义不变。The definition of the QR code remains unchanged.</li> </ul>

### 7.5 ESP8089M16











变更前/Before the Change	变更后/After the Change
 <p>ESPRESSIF ESP8089M16 ESPRESSIF SYSTEMS (SHANGHAI) PTE LTD CMIIT ID:2018DP1957 (M) FCC ID:2AC7Z-ESP8089M16</p>	 <p>ESPRESSIF ESP8089M16 乐鑫信息科技（上海） 股份有限公司 CMIIT ID: 2018DP1957 (M) FCC ID: 2AC7Z-ESP8089M16</p> <ul style="list-style-type: none"> <li>● 增加变更后的中文全名。Added the full name of the company in Chinese.</li> <li>● QR code 定义不变。The definition of the QR code remains unchanged.</li> </ul>

### 7.6 ESP-WROOM-02D













变更前/Before the Change	变更后/After the Change
 <p>ESPRESSIF ESP-WROOM-02D Wi-Fi CE CCC R 201-171000 R-CRM-es5-ESP-WROOM-02D CMIIT ID: 2017DP7231 IC:21098-ESPWROOM02D FCC ID:2AC7Z-ESPWROOM02D</p>	 <p>ESPRESSIF ESP-WROOM-02D CE CCC CCAP18LP0160T8 R-CRM-es5-ESP-WROOM-02D R 201-171000 CMIIT ID: 2017DP7231 IC: 21098-ESPWROOM02D FCC ID: 2AC7Z-ESPWROOM02D 乐鑫信息科技（上海） 股份有限公司</p> <ul style="list-style-type: none"> <li>● 增加变更后的公司中文全名 Added the full name of the company in Chinese.</li> <li>● 规范证书 ID。Standardized the certificate ID.</li> <li>● QR code 内容变更为: XX（两位预留位）+D/C（4 位）+MAC 地址（12 位） The content of the QR code is changed to: XX (two reserved digits) +D/C (4 digits) + MAC address (12 digits).</li> </ul>



### 7.7 ESP-WROOM-02U



变更前/Before the Change	变更后/After the Change
<div data-bbox="306 331 778 698" style="border: 1px solid black; padding: 10px;"> <p style="text-align: center;"><b>ESPRESSIF</b> <b>ESP-WROOM-02U</b></p> <p style="text-align: center;">R-CRM-es5-ESP-WROOM-02U</p> <p style="text-align: center;">    </p> <p style="text-align: center;">  211-171104         </p> <p style="text-align: center;">           CMIIT ID:2017DP7124(M)            IC:21098-ESPWROOM02U            FCC ID:2AC7Z-ESPWROOM02U         </p>  </div>	<div data-bbox="917 331 1374 689" style="border: 1px solid black; padding: 10px;"> <p style="text-align: center;"><b>ESPRESSIF</b> <b>ESP-WROOM-02U</b></p> <p style="text-align: center;">   211-171104            </p> <p style="text-align: center;">  </p> <p style="text-align: center;">           CMIIT ID:2017DP7124 (M)            IC: 21098-ESPWROOM02U            FCC ID: 2AC7Z-ESPWROOM02U         </p> <p style="text-align: center;">           乐鑫信息科技（上海）            股份有限公司         </p>  </div> <ul style="list-style-type: none"> <li>● 增加变更后的公司</li> <li>● 中文全名 Added the full name of the company in Chinese.</li> <li>● 规范证书 ID。Standardized the certificate ID.</li> <li>● QR code 内容变更为：XX（两位预留位）+D/C（4 位）+<u>MAC 地址（12 位）</u></li> </ul> <p>The content of the QR code is changed to: XX (two reserved digits) +D/C (4 digits) + MAC address (12 digits).</p>

### 7.8 ESP32-WROOM-32D



变更前/Before the Change	变更后/After the Change
<div data-bbox="386 1319 715 1686" style="border: 1px solid black; padding: 10px;"> <p style="text-align: center;"><b>ESPRESSIF</b> <b>ESP32-WROOM-32D</b></p> <p style="text-align: center;">    </p> <p style="text-align: center;">   211-171102         </p> <p style="text-align: center;">           FCC ID:2AC7Z-ESPWROOM32D            IC:21098-ESPWROOM32D            CMIIT ID:2018DP2467         </p>  </div>	<div data-bbox="997 1319 1310 1668" style="border: 1px solid black; padding: 10px;"> <p style="text-align: center;"><b>ESPRESSIF</b> <b>ESP32-WROOM-32D</b></p> <p style="text-align: center;">    </p> <p style="text-align: center;">   211-171102         </p> <p style="text-align: center;">           FCC ID:2AC7Z-ESPWROOM32D            IC:21098-ESPWROOM32D            CMIIT ID:2018DP2467         </p> <p style="text-align: center;">           乐鑫信息科技（上海）            股份有限公司         </p>  </div> <ul style="list-style-type: none"> <li>● 增加变更后的公司中文全名 Added the full name of the company in Chinese.</li> <li>● QR code 内容变更为：XX（两位预留位）+D/C（4 位）+<u>MAC 地址（12 位）</u></li> </ul> <p>The content of the QR code is changed to: XX (two reserved digits) +D/C (4 digits) + MAC address (12 digits).</p>



### 7.9 ESP32-WROOM-32U



变更前/Before the Change	变更后/After the Change
 <p>ESPRESSIF ESP32-WROOM-32U WiFi CE CCC 211-171103 R-CRM-es5-ESP32WROOM32U FCC ID:2AC7Z-ESP32WROOM32U IC:21098-ESPWROOM32U CMIIT ID:2017DP712300</p>	 <p>ESPRESSIF ESP32-WROOM-32U WiFi® CE CCC CCAH18LP0090T1 R-CRM-es5-ESP32WROOM32U 211-171103 FCC ID:2AC7Z-ESP32WROOM32U IC:21098-ESPWROOM32U CMIIT ID:2017DP7123 (M) 乐鑫信息科技（上海） 股份有限公司</p> <ul style="list-style-type: none"> <li>● 增加变更后的公司中文全名 Added the full name of the company in Chinese.</li> <li>● 规范认证 logo&amp;ID。Standardized the certification logo &amp; ID.</li> <li>● QR code 内容变更为：XX（两位预留位）+D/C（4位）+MAC 地址（12位） The content of the QR code is changed to: XX (two reserved digits) +D/C (4 digits) + MAC address (12 digits).</li> </ul>

### 7.10 ESP32-SOLO-1

变更前/Before the Change	变更后/After the Change
 <p>ESPRESSIF ESP32-SOLO-1 CE CCC CCAP18LP0040T1 R-CRM-es5-ESP32SOLO1 211-180105 FCC ID:2AC7Z-ESP32SOLO1 IC:21098-ESP32SOLO1 CMIIT ID:2018DP1904</p>	 <p>ESPRESSIF ESP32-SOLO-1 WiFi® CE CCC CCAP18LP0040T1 R-CRM-es5-ESP32SOLO1 211-180105 FCC ID:2AC7Z-ESP32SOLO1 IC:21098-ESP32SOLO1 CMIIT ID:2018DP1904 乐鑫信息科技（上海） 股份有限公司</p> <ul style="list-style-type: none"> <li>● 增加变更后的公司中文全名. Added the full name of the company in Chinese.</li> <li>● 补充认证 logo。Added the certification logo.</li> <li>● QR code 内容变更为：XX（两位预留位）</li> </ul>

	<p>+D/C (4 位) +<b>MAC 地址 (12 位)</b></p> <p>The content of the QR code is changed to: XX (two reserved digits) +D/C (4 digits) + MAC address (12 digits).</p>
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### 7.11 ESP32-PICO-KIT

变更前/Before the Change	变更后/After the Change
 <p>The image shows the label before the change. It features the Wi-Fi logo, 'ESP32-PICO-KIT', 'ESPRESSIF', 'ESPRESSIF SYSTEMS (SHANGHAI) PTE LTD', CE mark, and 'FCC ID:2AC7Z-ESP32PICOKIT'.</p>	 <p>The image shows the label after the change. It features 'ESPRESSIF', 'ESP32-PICO-KIT', CE mark, '211-181224' certification ID, 'FCC ID: 2AC7Z-ESP32PICOKIT', and 'ESPRESSIF SYSTEMS (SHANGHAI) CO.,LTD.'.</p>
	<ul style="list-style-type: none"> <li>● 更新变更后的公司英文全名 Updated the full name of the company in English.</li> <li>● 补充认证 ID。Added the certification ID.</li> </ul>

变更影响/Impact of Change:

- 1) 外观 Product appearance
- 2) 交付 Delivery

变更识别方式/ Change Identification Method:

外观检查 Appearance check

变更前后产品处理/:How to Deal with Products:

FIFO 方式，平稳过渡到新的包装规范中。工厂需要一定的备料和切换时间，该变更需要逐步切换。  
 The FIFO (first-in, first-out) method is adopted to ensure a smooth transition to the new packaging specifications. The factory needs time to prepare the materials for the packaging changes which should, therefore, be implemented on a step-by-step basis.

**相关报告/Report(s) Attached:**

<input checked="" type="checkbox"/> Related ECN No.:	E2019021501
<input type="checkbox"/> Reliability Report or Plan:	N/A; without design changes
<input type="checkbox"/> Function Test Report:	N/A; without design changes
<input type="checkbox"/> RoHS/HF Test Report:	N/A; without material changes
<input type="checkbox"/> Other Reports (Pls specify):	N/A

**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](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: <input type="checkbox"/> 批准/Approval <input type="checkbox"/> 不批准/Disapproval <input type="checkbox"/> 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:	