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

ESP8266 系列模组 AT 固件升级(V1.7.3) **ESP8266 modules AT bin upgrade to V1.7.3**			
PCN 编号 PCN No.	PCN-2020-004	提出日期 Issue Date of PCN	2020-04-26
产品名称 Product Name	ESP8266 系列模组 ESP8266 Modules	变更日期 Proposed Date of Change	2020-04-26
封装类型/尺寸 Package Type/Size	Module	首次出货日期 Proposed Date of First Shipment	2020-07-16

客户批准/Customer Consent：	☑需要批准/Approval Required
	□通知，无需批准/Notification, Approval Not Required
变更等级/Classification of Change:	☑主要变更/Major　　　　□轻微变更/Minor

变更原因/Reason for Change:

由于 ESP8266 NONOS 版本升级，解决当前 SDK 出现的部分问题与功能新增；原有 AT Bin 系列模组固件从旧版本 V1.6.2（2018 年 12 月导入）需升级到 V1.7.3；

ESP8266 NONOS SDK is upgraded to fix existing issues and add new features. To better support this upgraded SDK, the existing AT Bin (V1.6.2), which was introduced in December 2018, also needs to be upgraded to a newer version (V1.7.3).

变更描述/Description of Change:

ESP8266_NonOS_AT_V1.7.3_20_03_26

Release Notes

GitHub:

ESP8266_NonOS_SDK_and_AT_Bin_on_GitHub

Feature

Update to SDK version 3.0.3 and AT version 1.7.3.0

Update to phy version 1156

Bug Fix

fix(pp): Wi-Fi tx hangs when Q2_RTS_INT and Q0_TX_COMPLETE come at the same time

fix(at): Connect to the AP with the strongest signal when sending command AT+CWJAP

ESP8266_NonOS_AT_V1.7.2_20_01_20 Release Notes

GitHub:

ESP8266_NonOS_SDK_and_AT_Bin_on_GitHub

Feature

feat: Update to SDK version 3.0.2 and AT version 1.7.2.0

feat(phy): Update to phy version 1155

feat(mbedtls): Support SSL cipher suites SSL3.0

feat(wifi): Add Wi-Fi fast connect feature

feat(system): Enhance the mac crc check

feat(at): Remove SSL size check when parsing AT command

feat(sc): Add broadcast for smartconfig

feat(net80211): Add wme info to stay compatible to some APs

feat(pp): Change wdt timeout to 3 seconds

feat(system): Store Wi-Fi parameter only when it is different from the one in flash

Bug Fix

fix(system): will not clear mac address when calling system_restore

fix(net80211): disable greenfield option

fix(system): incorrect parameter in flash may cause system crash

fix: TCP data lost when the link disconnected

fix(wpa2): fix wpa2_enterprise vulnerability issues

fix(at): AT core may not read data in the buffer in some cases

fix(net80211): fix the incorrect ecn parameter scanned when the router is wpa2_enterprise mode

fix(main): fix the Wi-Fi mode change when calling set_opmode_current

fix(at): fix wdt issue when keep sending data in high performance mode

fix(dns): Fix the seq number overflow issue

fix(dhcp): fix the system crash issue when Wi-Fi sta got IP by DHCP and set static IP, and DHCP release time out

ESP8266_NonOS_AT_V1.7.1_19_07_15 Release Notes

Feature

De-swap uart before system restart.

Remove system_phy_freq_trace_enable and disable freq trace in AT project by default.

Add vendor class id option in LwIP.

Update libphy to version 1143.

Support broadcast packets in ESP-NOW.

Bug Fix

SDK

Remove WME info by default.

Fix a memory leak issue when scanning in softAP+station mode.

Fix an issue that CCMP encryption was incompatible with some AP.

Fix an incompatibility issue that the device may fail to connect to some AP in 11b only mode.

Fix an incompatibility issue that some AP does not support status code 37 in ADDBA response.

Fix an issue of possible incorrect phy mode when connecting to AP.

Fix a seqno issue when sending auth packet to AP.

Fix an issue of connecting to a wrong AP when there is some special hidden ssid AP around.

Prohibit sending probe request in passive scan mode.

Fix a crash issue with fake beacon frame.

Revise the DHCP behavior according to protocol.

Fix an issue of sntp_setservername.

Fix an issue of setting mDNS information

Fix an issue of incorrect jsonparse_strcmp_value return value.

Fix an issue of calloc (pvPortCallocIram) failure.

Fix an issue of the default hostname.

Fix an issue of returning ERR_MEM when calling espconn_gethostbyname.

AT

Fix an issue that fail to create AT SSL connection without cert or ca partition.

Fix an issue that it may take a long time to get a ping result.

Fix an issue that AT should return error directly when domain length is 64.

ESP8266_AT_V1.7.0_18_08_24 Release Notes

Major Changes

SDK

Memory optimization: iram can be used as memory, thus **saving about 17KB memory** for user application.

AT

Update AT's version to 1.7.0.0.

Limited by the size of the AT bin files, only 1024+1024 flash map is supported by default. Therefore, please choose 16Mbit/32Mbit-C1 flash size when flashing these AT bin files with Espressif's Flash Download Tools.

New Features and Optimizations

SDK

Add partition table to manage flash partition, more details are in ESP8266_NONOS_SDK/documents/readme.

system_partition_table_regist

system_partition_get_ota_partition_size

system_partition_get_item

Add WiFi APIs to set sleep level of modem sleep and light sleep.

wifi_set_sleep_level

wifi_get_sleep_level

wifi_set_listen_interval

wifi_get_listen_interval

Add signalling measurement feature

wifi_enable_signaling_measurement

wifi_disable_signaling_measurement

Support random DHCP transaction id

Add libhal.a for the new compiler

AT

Add command AT+SYSMSG_DEF and AT+SYSMSG_CUR to instead of AT+SYSMSG.

Add AT+CIPCLOSEMODE to select TCP close mode.

Add a parameter in AT+CWJAP_CUR and AT+CWJAP_DEF to disable the connection to open/wep router

Add AT+CIPRECVLEN to get the length of received data in passive receiving mode.

Add `AT+CIPRECVMODE` to set TCP receive mode.

Add commands to configure SSL client authentication

`AT+CIPSSLCCONF?`

`AT+CIPSSLCCONF=<ssl_mode>`

Replace ssl with mbedtls in AT

Make SmartConfig optional, users can disable it in application for smaller bin size and more memory.

Disable `AT+RFAUTOTRACE` command.

Bug Fix

SDK

Fix issue that system crashes when calling `os_printf_plus` in interrupt handler.

fix issue that mbedtls cannot set the fragment to be 2048.

fix issue that OTA may crash with some server.

Fix issue that beacon info does not update after `wifi_station_scan`.

Fix softAP compatibility issue.

Fix issue that fails to scan hidden AP in station mode.

AT

Fix issue that GPIO related commands always return OK even without GPIO number.

Fix issue that extra 0x0A displayed in SNTP time string

变更影响/Impact of Change:

新版本兼容旧版本

The newer version, which is compatible with the previous version, has:

1. 解决因为部分校准导致的概率性连接不上 Wi-Fi 的问题；Fixed the issue of possible failures to establish a Wi-Fi connection due to calibration bias.

2. 修复每次调用 Wi-Fi 相关函数接口时，数据会重复保存到 flash 的问题；Fixed the issue that same data is saved repetitively to the flash when calling Wi-Fi APIs.

3. 优化 Wi-Fi 兼容性问题；Optimized Wi-Fi compatibility.

4. 优化内存，但可能会对高透传吞吐下的应用场景有性能影响；Optimized the memory usage (However, the performance for applications with high transmission throughput could be affected by this optimization.)

5. 在 AT 固件中支持最新 SDK，SSL 默认采用 mbedtls 库，以便支持更多的加密套件。Supported the latest SDK in AT firmware, and used the mbedtls lib for SSL to support more cipher suites.

变更识别方式/ Change Identification Method:
变更前 AT 版本：V1.6.2.0
Before change: V1.6.2.0
变更后 AT 版本：V1.7.3.0
After change: V1.7.3.0

变更前后产品处理/:How to Deal with Products:
FIFO

相关报告/Report(s) Attached:

☑Related ECN No.:　　　　　　ECN-2020-012

☐Reliability Report or Plan:

☐Function Test Report:

☐RoHS/HF Test Report:

☐Other Reports (Pls specify):

<table>
<tr><td align="center">邮件订阅
Espressif Email Notifications</td></tr>
<tr><td>乐鑫为注册用户提供电子邮件通知服务，用户可通过<u>乐鑫订阅系统</u>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 <u>here</u>.</td></tr>
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客户响应要求

Customer Response Requirements

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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:			
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 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:	