RT58x SDK Release Notes

Contents

1.RT58x_SDK_v1.9.5

● New Features

-Platform

- ➢ Added SPI DMA Master and Slave example projects
- ➢ Implemented PLL lock protection mechanism

-SubG

- ➢ Added SubG audio TRX example project

-Thread

- ➢ Introduced library Git version tracking for easier management

● Feature Changes

-Platform

- ➢ Modified system_cm3_mcu.c to set the default clock to 32MHz

-Zigbee

- ➢ Updated OTA start address handling upon OTA termination

-Thread

- ➢ Added CFG_USE_CENTRAL_CONFIG option: when enabled in Sub-GHz FTD and MTD, the Leader proactively creates network information
- ➢ Revised and organized the RT58x Thread Quick Start Guide
- ➢ Disabled OpenThread data request RX and CSMA backoff (now handled by firmware)
- ➢ Updated OpenThread parameters for testing with 300 FTD nodes
- ➢ [OpenThread] Fixed an issue where the link request state was not reset correctly
- ➢ [OpenThread] Resent link request and response when receiving a link request to refresh the full link information

● **Bug Fixes**

-SubG

- ➤ Fixed BAND_SUBG_470M setting in tx_power_set APIs

-Thread

- ➤ Fixed system clock drift at boot by increasing lock attempt count
- ➤ Fixed OTA unicast issue where the sequence index was not reset on the second execution

2.RT58x_SDK_v1.9.4

- ## New Features

  -NONE

- ## Feature Changes

  -Platform

  ➢ Modify the version info API to retrieve the application version.

  -SubG

  ➢ Add the BAND_SUBG_470M and BAND_SUBG_OQPSK_470M options to the band type.

- ## Bug Fixes

  -Platform

  ➢ Fix the de-bounce issue in the comparator driver.
  ➢ Fix the issue with the PWM driver stop function.
  ➢ Fix the configuration parameter issue in the I2S example.

  -Thread

  ➢ Fix the issue where the TX channel parameter is not updated.

3.RT58x_SDK_v1.9.3

- **New Features**

  -NONE

- **Feature Changes**

  -Thread

  ➢ Add MAC direct transfer function

  -Zigbee

  ➢ Add gateway commands
    - Install code setup command
    - Manufacture cluster command
    - Add timer cluster on gateway module
    - Add command to send permit join request packet
  ➢ Update document and SDK

  -Tool

  ➢ Update Zigbee PC tool and user guide
  ➢ Update ISP tool and user guide

- **Bug Fixes**

  -Platform

  ➢ Fix SADC polling example

4.RT58x_SDK_v1.9.2

- ## New Features
-NONE

- ## Feature Changes
-Platform

  ➤ Update PMU default setting

-SubG

  ➤ Enable whitening as default.
  ➤ RFB Add Rx reserve command & API

-Zigbee

  ➤ Update gateway command document.

- ## Bug Fixes
-Zigbee

  ➤ Fixed orphaning rejoin
  ➤ Fixed gateway extended address response error

5.RT58x_SDK_v1.9.1

● **New Features**

-Thread

➢ Add configuration to set selection of eid64(mac) address.

-Zigbee

➢ Add DoorLock example.

● **Feature Changes**

-Tool (Upgrade VS2012 to VS2022 version)

➢ ISP tool, RF lab test tool, FOTA tool, MP tool.

-SubG

➢ Update RFB tx_continuous_wave_set API.
➢ Update demo project to support Tx power function.

-Zigbee

➢ Update Lighting and Move commands with OptionMask, OptionOverride byte.

● **Bug Fixes**

-Thread

➢ Fixed OTA bitmap memory-free issues.

-SubG

➢ Fixed tx_power_set API band definition.

6.RT58x_SDK_v1.9.0

● **New Features**

-Thread

  ➢ Add 2.4G MTD Project

- SubG

  ➢ Add support tx_continuous_wave_set API.

● **Feature Changes**

-Platform

  ➢ Update flash DS (Data Set) examples

-Tool

  ➢ ISP tool：Auto reset and write/clear signature public key

  ➢ FOTA tool：Output signature bin option for ISP tool.

● **Bug Fixes**

- Thread

  ➢ Fix MTD task idle can't enter sleep issue.

- Platform

  ➢ Fix flash DS API read fail issue.

7.RT58x_SDK_v1.8.0

- ## New Features

  -Platform

    - ➢ Add examples project:
      Flash_RW/GPIO_Interrupt/GPIO_Input/GPIO_Output
      SADC_Polling/Timer_Periodic/Timer_Freerun/WDT_Interrupt

  -SubG

    - ➢ Add 470~510MHz band
    - ➢ Keep Tx constant power (15dBm) regardless Vbat voltage (Frequency: 433~510MHz)

  -Thread

    - ➢ Add SubG frequency band setting (915M, 868M, 433M)

- ## Feature Changes

  -Tool

    - ➢ RF lab test tool: add SubG 470~510MHz

- ## Bug Fixes

  - None

8.RT58x_SDK_v1.8.0

- ## New Features

  -Platform

  - ➤ Add examples project:
    Flash_RW/GPIO_Interrupt/GPIO_Input/GPIO_Output
    SADC_Polling/Timer_Periodic/Timer_Freerun/WDT_Interrupt

  -SubG

  - ➤ Add 470~510MHz band
  - ➤ Keep Tx constant power (15dBm) regardless Vbat voltage (Frequency: 433~510MHz)

  -Thread

  - ➤ Add SubG frequency band setting (915M, 868M, 433M)

- ## Feature Changes

  -Tool

  - ➤ RF lab test tool: add SubG 470~510MHz

- ## Bug Fixes

  - None

9.RT58x_SDK_v1.7.0

- ## New Features

  -BLE

  - ➢ Add privacy demo example
  - ➢ Support LE secure connection

  -BLE Mesh

  - ➢ Server library support BLE TRSP service

  -Thread

  - ➢ Add Thread example and document

- ## Feature Changes

  -Zigbee

  - ➢ Modify gateway command document

  -Tool

  - ➢ Mobile App add BLE commission for Sub_G device to join Sub_G network

- ## Bug Fixes

  - None

10. RT58x_SDK_v1.6.0

● New Features

-SubG

> ➢ Support 433MHz

-BLE

> ➢ Add Privacy for Direct ADV, Scan

-BLE Mesh

> ➢ Gateway supports BLE Transparent Transmission

● Feature Changes

-Platform

> ➢ SRAM power enable at the start of system initial function. To avoid operation abnormal after wakeup from Deep Sleep

-Tool

> ➢ ISP tool add SubG Tx power selection - band0 [915Mhz] and band2 [433Mhz].

> ➢ RF Lab Test Tool add SubG Tx power selection - band0[915Mhz] to band2 [433Mhz].

● Bug Fixes

-Tool

> ➢ MP Tool apply RF Trim calibration value to solve random RX fail issue

- Platform

> ➢ Modify WDT setting to let WDT can reset all blocks
> ➢ Fix Bootloader OTA decoder error at some image length

11. RT58x_SDK_v1.5.0

- **New Features**

- **Feature Changes**

-Platform

➢ Modify VS Code and SDK Getting Start document.
➢ Add SDK Quick Start document

-Tool

➢ BLE Mesh app: Android app support Scenes, Rafael TRSP Server, and Rafael TRSP Client modes
➢ MP Tool v1.4.0: support Sub-G power trim, matter production with certificates, and 1 to 16 parallel test

-BLE Mesh

➢ Implement gateway project and document
➢ Restructure the file and folder for client model

- **Bug Fixes**

-BLE Mesh

➢ Fixed provisioning fail issue

- **Known Issues**

-None

12. RT58x_SDK_v1.4.0

- **New Features**

  -Platform

  - ➢ Add 2MB Flash FLM
  - ➢ Update flash driving setting to improve RX sensitivity

- **Feature Changes**

  -Tool

  - ➢ MP_tool support 2MB flash

  -Multi Protocol

  - ➢ Modify Zigbee/BLE application document for first time join Zigbee network

  -Other

  - ➢ 2MB flash OTA support secure upgrade

  -FW

  - ➢ Enable MAC features for multi-mode
  - ➢ Support Up to 32 Sets of Source Match Address
  - ➢ Security key setup failed when BLE is enabled on multi-mode FW

- **Bug Fixes**

  -Platform

  - ➢ Fix Deep Sleep issue
  - ➢ Turn off LDO Enable when not loading 80251 FW.

- **Known Issues**

  -None

13. RT58x_SDK_v1.3.0

● New Features

-Zigbee:

> ➢ New flash update algorithm
> ➢ Add library version

-Tool:

> ➢ Android app: add Zigbee smart home

● Feature Changes

-Zigbee:

> ➢ Power on/off 5 times to reset light device
> ➢ Gateway for Home Automation
>   - ■ Add sensor related clusters
> ➢ Modify private cluster ID

-BLE:

> ➢ Use 2 bytes to indicate LL TX data sequence
> ➢ FOTA flow update to support image compression

-BLE Mesh:

> ➢ Change ADV_enable complete event response timing from "TX_complete" to "constant_delay"

-SubG:

> ➢ Add SubG_Field_Test demo

-Platform:

- ➢ Bootloader Support LZMA decompression for FOTA
- ➢ Add "volatile" to avoid optimization in Sleep mode

-Tool:

- ➢ Android app: modify BLE Mesh demo
- ➢ MP_tool
  - ■ Separate BLE/Zigbee Tx power target
  - ■ Manual set X'tal cap
- ➢ ISP_tool
  - ■ Support SubG
  - ■ FOTA with image compression

● **Bug Fixes**

-Peripheral:

- ➢ Update ADC setting to overcome chip variation issue.

-Zigbee:

- ➢ Solve one interoperability issue with Legacy Zigbee gateway
- ➢ Fix under multi-PAN environment, device may accept packet from different PAN_ID.

-BLE Mesh:

- ➢ Fixed bug: in transparent transmission, different packet size stress test assert
- ➢ Fixed bug: sometimes Provision fail

-Sub G:

- ➢ Fixed GCC project
- ➢ Fixed received data sequence in SubG TRX demo example

● **Known Issues**

-Platform:

- ➢ Cortex M3 can't enter deep sleep mode if communication subsystem still working. Will fix it in SDK_v1.3.1

14. RT58x_SDK_v1.2.3_BLE_Mesh

- **New Features**

  - None.

- **Feature Changes**

  -BLE Mesh:

    ➢ Implement Model and Lighting Demo.
    ➢ BLE Mesh Performance Tuning.
    ➢ BLE Mesh Document.

- **Bug Fixes**

  - None.

- **Known Issues**

  - None.

15. RT58x_SDK_v1.2.2_Zigbee

- **New Features**

  - None.

- **Feature Changes**

  -Zigbee:

    - ➢ Gateway module:
    - Revise binding command
    - Add read attribute, write attribute, configure report command
    - ➢ Light:
    - Add OTA client cluster
    - Add finding & binding process
    - ➢ Switch:
    - Remove endpoint 1&3
    - Add OTA client cluster
    - Add finding & binding process
    - ➢ OTA Server:
    - Removed (gateway module replace)
    - ➢ OTA Client:
    - Removed (light/switch replace)

- **Bug Fixes**

  - None.

- **Known Issues**

  - None.

16. RT58x_SDK_v1.2.1

● **New Features**

 - Tools:

   ➢ MP_Tool add Tx power 0/4 dBm target

● **Feature Changes**

 -Zigbee:

   ➢ Optimize RX current consumption

   ➢ Device send leave command to gateway after factory reset

● **Bug Fixes**

 - None.

● **Known Issues**

 - None.

17. RT58x_SDK_v1.2.0

New Features

-BLE:

➢ Add Privacy and connect CTE API.

-Zigbee:

➢ Now can pre-configure the network parameters.

➢ Add OTA function in new gateway demo.

-Multi-protocol:

➢ Zigbee Easy Gateway: implement Zigbee gateway by one RT582 chip. Running BLE/Zigbee multi-protocol on RT582 to replace traditional Zigbee gateway.

➢ Utilize BLE to reset Zigbee Device when Gateway is broken or offline.

-Tools:

➢ Android app: Easy Gateway app

➢ Android app: utilize BLE to reset Zigbee Device

Feature Changes

-   Zigbee AES by HW accelerator.

Bug Fixes

- Zigbee address generation form MAC address in flash OTP

Known Issues

- None.

18. RT58x_SDK_v1.1.1

New Features

- None.

Feature Changes

- Modify PMU DCDC initial setting to enhance the stability under

  stress environment.

Bug Fixes

- None.

Known Issues

- None.

19. RT58x_SDK_v1.1.0

New Features

-Added examples: I2S digital microphone

-Modify PWM example

-BLE:

 ➢ Added UART_cmd demo

 ➢ Added Beacon demo

-Zigbee:

 ➢ Gateway example support more commands

 ➢ Added User_specific_cluster

 ➢ Added Scene in light demo

 ➢ Added Thermostat cluster

-Multi-protocol:

 ➢ Added Zigbee ZED with BLE OTA demo

-Tools:

 ➢ RF_Lab_Test_Tool: supports SubG RF test. On the GUI,

   remove WiSun mode and change to SubG mode

 ➢ ISP_Tool: (1) remove MP_sector Download and Erase button

(2) Judge If IC had been MP_calibrated or not? If not, UI show

warning message.

- Android App: add BLE Mesh On/Off demo

Feature Changes

- Projects include TX_power compensation. Default is disable

Bug Fixes

- Fixed Zigbee two end-point bug.

- Fixed Zigbee OTA buffer issue.

Known Issues

- None.

20. RT58x_SDK_v1.0.1

New Features

- Added software PMU calibration.

Feature Changes

- Extend Zigbee maximum network nodes to 200.

Bug Fixes

- Fixed low speed timer reload abnormal issue under low temperature.

Known Issues

- None.

21. RT58x_SDK_v1.0.0_Mesh

New Features

- Added BLE Mesh demo example.

  ➢ \Project\Application\BLE_Mesh\GenericOnOff\.

- Added BLE Mesh App.

  ➢ \Tools\Android App\.

- Added BLE Mesh documents.

  ➢ \Tools\Android App\User guide\

  Android_APP_BLE_Mesh_user_guide_V1.2.pdf.

  ➢ \Docs\RT58x_BLE_Mesh_User_Guide_V1.0.pdf.

  ➢ \Docs\RT58x_SDK_for_BLE_Mesh_Demo_Guide_V1.0.pdf.

Feature Changes

- None.

Bug Fixes

- None.

Known Issues

- None.

22. RT58x_SDK_v1.0.0

New Features

- Added peripheral drivers and examples for I2S, Timer, Watchdog, and SADC.

- Added BLE demo example with low power mode mechanism.

- Added BLE UART_TRSP demo with low power mode mechanism and wakeup by URAT break in "Rafael UART_Break tool".

- Added more tools.

  ➢ Upgraded xcode from v5.5 to v5.6 in iOS App.

  ➢ Added Zigbee/BLE multi-standard demo in iOS App.

  ➢ Added UART_Break_Tool to send break signal to wakeup BLE before sending characters for BLE UART_TRSP demo.

  ➢ Added Tx Power trim, ADC trim, and Comparator trim to MP_Tool.

- Added related documents.

  ➢ [SW_15]RT58x_Zigbee_Gateway_Light_Switch_Operation_ Guide_V1.0.

  ➢ RT58x SDK Reference Guide in Doxygen format.

Feature Changes

- Removed Direct_Test_Mode demo and integrated DTM function into "RF_Lab_Test_Tool_FW".

Bug Fixes

- Fixed bug in BLE multi-link demo.

Known Issues

- None.

Notes

- SDK includes MCU peripheral examples, BLE examples, and Zigbee examples. All examples support Keil and GCC projects.

  ➢ Peripheral: \Project\Examples\.

  ➢ BLE: \Project\Application\BLE_Demo\.

  ➢ Zigbee: \Project\Application\Zigbee_Demo\.

  ➢ Zigbee & BLE: \Project\Application\Multi_Protocol_Demo\.

- For all examples to work properly, the bootloader needs to be downloaded first. Please refer to the documentation for details.

  ➢ \Docs\[SW_02]RT58x_SDK_IOT_Application_Overview_V1.0.

- Measure sleep power consumption project.

- ➢ \Project\Examples\Sleep.

- Tool and test image to measure RF performance.

  - ➢ \Tools\IOT_Evaluation_Tool.

  - ➢ \Tools\IOT_Evaluation_Tool\RF_Lab_Test_Tool_FW.

23. RT58x_SDK_v0.3.1

New Features

- Added GCC project for all examples.

- Added Zigbee/BLE multi-protocol demo.

- Added more Zigbee examples, eg: Gateway, OTA, etc.

- Added more tools.

  ➢ ISP_Tool

  ➢ RF_Lab_Test_Tool

  ➢ Security_Boot_Tool

  ➢ Mass_Production_Tool

  ➢ Android_App

  ➢ iOS_App

- Added related documents.

  ➢ [SW_01]RT58x_SOC_Platform_Getting_Started_V1.1

  ➢ [SW_02]RT58x_SDK_IOT_Application_Overview_V1.0

  ➢ [SW_03]RT58x_Zigbee_SDK_User_Guide_V1.0

  ➢ [SW_04]RT58x_Zigbee_Application_Guide_V1.0

  ➢ [SW_06]RT58x_BLE_SDK_User_Guide_V1.0

  ➢ [SW_07]RT58x_BLE_SDK_Application_Guide_v1.0

➢ [SW_08]RT58x_BLE_SDK_OTA_Guide_V1.0

➢ [SW_09]RT58x_BLE_SDK_Service_Profile_Guide_V1.0

➢ [SW_13]RT58x_Multi_Protocol_Application_Guide_V1.0

Feature Changes

- Unified application architecture of different protocols.

- Modified power saving example.

Bug Fixes

- None.

Known Issues

- None.

24. RT58x_SDK_v0.2.0

New Features

- For SubG only.

Feature Changes

- None.

Bug Fixes

- None.

Known Issues

- None.

25. RT58x_SDK_v0.1.0

New Features

- Initial version.

- Added peripheral drivers and examples.

- Added BLE stack and BLE applications.

Feature Changes

- None.

Bug Fixes

- None.

Known Issues

- None.

Revision History

Date	Version	Description
2021/11/05	0.1.0 (alpha)	- Initial version
2022/01/11	0.2.0 (alpha)	- For SubG only
2022/02/16	0.3.1 (alpha)	- Added GCC project for all examples - Added Zigbee/BLE multi-protocol demo - Added more Zigbee examples - Added more tools and related documents - Unified application architecture of different protocols - Modified power saving example
2022/03/31	1.0.0	- Added more peripheral drivers and examples - Added BLE demos with low power mode mechanism - Added more tools and related documents - Integrated DTM function - Fixed bug in BLE multi-link demo
2022/04/08	1.0.0 (Mesh)	- Added BLE Mesh demo example - Added BLE Mesh App - Added BLE Mesh documents
2022/05/18	1.0.1	- Added software PMU calibration - Extend Zigbee maximum network nodes - Fixed low speed timer reload issue
2022/06/10	1.1.0	-Added examples: I2S digital microphone -Added Address protect in flash driver. -Modify PWM example -Added BLE UART_cmd demo -Added BLE Beacon demo -Added Zigbee Gateway command example -Added Zigbee User_specific cluster -Added Thermostat cluster -Fixed Zigbee two end-point bug -Fixed Zigbee OTA buffer issue -RF_Lab_Test_Tool support SubG RF test
2022/07/08	1.1.1	- Modify PMU DCDC initial setting to enhance the stability under stress environment
2022/07/19	1.2.0	-BLE: add Privacy and connect CTE API -Zigbee: now can pre-configure network parameter.

		-Zigbee: add OTA function in new gateway demo -Zigbee: AES by HW accelerator. -Add multi-protocol demo: Zigbee Easy Gateway -Add multi-protocol demo: utilize BLE to reset Zigbee device -Add Android app for multi-protocol demos.
2022/09/05	1.2.1	-Tools: MP_Tool add Tx power 0/4 dBm target -Zigbee: optimize RX current consumption -Zigbee: device send leave command to gateway after factory reset
2022/09/30	1.2.2	Zigbee Gateway module: - Revise binding command - Add read attribute, write attribute, configure report command Zigbee Light: - Add OTA client cluster - Add finding & binding process Zigbee Switch: - Remove endpoint 1&3 - Add OTA client cluster - Add finding & binding process Zigbee OTA Server: - Removed (gateway module replace) Zigbee OTA Client: - Removed (light/switch replace)

2022/10/13	1.2.3	BLE Mesh:
		    -Implement Model and Lighting Demo.
		    -BLE Mesh Performance Tuning
		    -BLE Mesh Document

2023/01/17	1.3.0	Platform & Peripheral: - Update ADC setting to improve accuracy of chip variation - Bootloader support FOTA image decompression. Zigbee: - Power on/off 5 times to reset light device - Add sensor related clusters - New flash update algorithm - Add library version

		- Modify private cluster ID - Improve interoperability with other Zigbee device - Fix under multi-PAN environment, device may accept packet from different PAN_ID. BLE: - Use 2 bytes to indicate LL TX data sequence - FOTA flow update. Support image compression BLE Mesh: - Fixed transparent transmission bug: now different packet size are all right Sub-G: - Add OQPSK 6.25k data rate - Add field test demo code Tool: - Android app: support BLE Mesh demo - Android app: support Zigbee smart home - MP_tool: separate BLE/Zigbee Tx power target - FOTA tool: support OTA image compression - RF_lab_test_tool: modify SubG test option
2023/03/07	1.4.0	Platform: - Add 2MB Flash FLM - Update flash driving setting to improve RX sensitivity - Fix Deep Sleep issue - Turn off LDO Enable when not loading 80251 FW. Tool: - MP_tool support 2MB flash Multi-Protocol: - Modify Zigbee/BLE application document Other: - 2MB flash OTA add secure upgrade FW: - Fixed getting wrong RSSI value when TX power is very low on Sub-G - Enable MAC features for multi-protocol - Support up to 32 sets of source match address - Security key setup failed when BLE is enabled on multi-protocol FW

2023/06/29	1.5.0	[Platform]:
		- Modify VS Code and SDK Getting Start document.
		- Add SDK Quick Start document
		[Tool]:
		- MP Tool v1.4.0 support Sub-G power trim, matter production with certificates, and 1 to 16 parallel test
		- BLE Mesh Android app support Scenes, Rafael TRSP Server, and Rafael TRSP Client modes
		[BLE Mesh]:
		- Add gateway project and document
		- Restructure the file and folder for client model
		- Fixed provisioning fail issue
2023/08/23	1.6.0	[Platform]:
		- Add SRAM power enable at initial function.
		- Modify WDT setting to let WDT can reset all blocks
		- Modify WDT example
		- Fix Bootloader OTA decoder error at some image length
		[SubG]:
		- Support 433MHz
		[BLE]:
		- Add Privacy for Direct ADV, Scan
		[BLE Mesh]:
		- Gateway support BLE Transparent Transmission
		[Tool]:
		- MP Tool apply RF Trim calibration value
		- RF Lab Test Tool add SubG Tx power selection for band0 915Mhz to band2 433Mhz.
2024/01/08	1.7.0	[BLE]:
		- Add privacy demo example
		- Support LE Secure Connection
		[BLE Mesh]:
		- Server library support BLE TRSP service
		[Thread]:
		- Add Thread example and document
		[Zigbee]:
		- Modify gateway command document
		[Tool]:

		- Mobile App add LE commission for SubG device to join SubG network
2024/03/21	1.8.0	[Platform]: - Add examples projects: Flash_RW, GPIO_Interrupt, Gpio_Input, GPIO_Output, SADC_Polling, Timer_Periodic, Timer_Freerun, WDT_Interrupt [SubG]: - Support 470~510MHz - Keep Tx constant power (15dBm) regardless Vbat voltage [Thread]: -Add SubG frequency band setting (915M, 868M, 433M) [Tool]: -RF lab test tool: add SubG 470~510MHz
2024/05/06	1.9.0	[Platform]: - Update flash DS (Data Set) examples - Fix flash DS API read fail issue. [Thread]: -Add 2.4G MTD Project -Fix MTD task idle can't enter sleep issue. [SubG]: -Add support tx_continuous_wave_set API. [Tool]: -ISP tool：Auto reset and write/clear signature public key -FOTA tool：Output signature bin option for ISP tool.
2024/06/21	1.9.1	[Zigbee]: - Add DoorLock examples - Update Lighting and Move commands with OptionMask, OptionOverride byte [Thread]: - Add configuration to set selection of eid64(mac) address. - Fixed OTA bitmap memory-free issue. [SubG]: - Update RFB tx_continuous_wave_set API - Update demo project to support TX power function [Tool]: - Upgrade VS2012 to VS2022 version. Include ISP tool/ RF lab test tool/ FOTA tool/ MP tool

2024/08/02	1.9.2	[Platform]: - Update PMU default setting [Zigbee]: - Update gateway command document. - Fixed orphaning rejoin. - Fixed gateway extended address response error. [SubG]: - Enable whitening as default. - RFB Add Rx reserve command & API

2024/10/20	1.9.3	[Platform]:
		-Fix SADC Polling examples
		[Thread]:
		- Add MAC direct transfer function
		[Zigbee]:
		- Add gateway commands
		   - Install code setup command
		   - Manufacture cluster command
		   - Add timer cluster on gateway module
		   - Add command to send permit join request packet
		- Update document and SDK
		[Tool]:
		- Update Zigbee PC tool and user guide
		- Update ISP tool and user guide

2024/12/27	1.9.4	[Platform] -Modify the version info API to retrieve the application version. -Fix the de-bounce issue in the comparator driver. -Fix the issue with the PWM driver stop function. -Fix the configuration parameter issue in the I2S example. [SubG] -Add the BAND_SUBG_470M and BAND_SUBG_OQPSK_470M options to the band type. [Thread] - Fix the issue where changing the TX channel fails. -
2025/07/04	1.9.5	[Platform] -Added SPI DMA Master and Slave example projects

		-Implemented PLL lock protection mechanism
		-Modified system_cm3_mcu.c to set the default clock to 32MHz
		[SubG]
		-Added SubG audio TRX example project
		Fixed incorrect BAND_SUBG_470M setting in tx_power_set APIs
		[Zigbee]
		-Updated OTA start address handling upon OTA termination
		[Thread]
		-Introduced library Git version tracking for easier management
		-Added CFG_USE_CENTRAL_CONFIG option: when enabled in Sub-GHz FTD and MTD, the Leader proactively creates network information
		Revised and organized the RT58x Thread Quick Start Guide
		-Disabled OpenThread data request RX and CSMA backoff (now handled by firmware)
		-Updated OpenThread parameters for testing with 300 FTD nodes
		-[OpenThread] Fixed an issue where the link request state was not reset correctly
		-[OpenThread] Resent link request and response when receiving a link request to refresh the full link information
		-Fixed system clock drift at boot by increasing lock attempt count
		-Fixed OTA unicast issue where the sequence index was not reset on the second execution