

# Release Notes

## PTX1xxR IoT-Reader SDK v7.3.1

SW-NFC1K-POS-001

### **Abstract**

*This document contains the release notes for the Renesas PTX1xxR IoT-Reader Software Development Kit, version 7.3.1*

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## 1 Terms and Definitions

|     |                                   |
|-----|-----------------------------------|
| GA  | General access                    |
| LA  | Limited access                    |
| NFC | Near Field Communication          |
| SDK | Software Development Kit          |
| FW  | Firmware                          |
| API | Application Programming Interface |

## 2 Release Data

**Table 1: Information Table**

|                                       |                                |
|---------------------------------------|--------------------------------|
| <b>Software</b>                       | Software Development Kit (SDK) |
| <b>Device Number</b>                  | PTX1xxR                        |
| <b>Software Release Date</b>          | January 20th, 2026             |
| <b>Software Version Number</b>        | 7.3.1                          |
| <b>Software Release Type (Note 1)</b> | PATCH                          |

**Note 1** Releases can be of the following types: FULL (GA), FULL (LA), RELEASE CANDIDATE, ENGINEERING, PATCH or BINARY.

**Note 2** PTX1xxR IoT-Reader SDK is available for OS- and non-OS platforms. Differences in the individual SDK releases (if any) are marked in the individual Chapters with an additional label “OS” or “non-OS” in the Header, otherwise (i.e. Release Notes valid for OS and non-OS) no separate labels are used.

## 3 License

Licenses covering this SDK release are listed in the license.txt file in the SDK doc folder.

## 4 Related Documentation and References

|  |                 |
|--|-----------------|
| PTX1xxR NFC IoT-Reader API OS Stack Integration Manual     | R35US0006EE0101 |
| PTX1xxR NFC IoT-Reader API Non-OS Stack Integration Manual | R35AN0021EU0101 |

## 5 Release Description

### 5.1 Version 7.3.1

This is a PATCH release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 5.1.1 and – unless otherwise stated – all features from previous SDK releases.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

#### 5.1.1 Features of 7.3.1

**Table 2: 7.3.1 Features**

| Feature Number | Description   |
|----------------|---|
| 731_001        | Implemented improved handling of on-chip Temperature-Sensor<br>No functional / API change |

#### 5.1.2 Known Issues of 7.3.1

An active list of known issues is maintained online:

<https://pccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

#### 5.1.3 Known Limitations of 7.3.1

An active list of known limitations is maintained online:

<https://pccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

## 6 Release History

### 6.1 Version 7.3.0

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 5.1.1 and – unless otherwise stated – all features from previous SDK releases.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

#### 6.1.1 Features of 7.3.0

**Table 3: 7.3.0 Features**

| Feature Number | Description   |
|----------------|---|
| 730_001        | Removed usage of Variable-Length-Arrays (VLAs)  |
| 730_002        | Added FeliCa-polling parameters to RF-Discover-/Polling parameter structure   |
| 730_003        | Fixed issue where FeliCa-polling parameters could not be overwritten by Stack   |
| 730_004        | Added additional check(s) in FeliCa-DTE to prevent 2 Reader devices detecting each other <ul style="list-style-type: none"> <li>- Checking length of response + constant byte (SENSF_RES)</li> </ul>  |
| 730_005        | Fixed issue related to too high current consumption during RF-Discovery-/Polling when Card-Emulation is enabled in combination with LPCD  |
| 730_006        | Fixed issue where NSC.DEACTIVATE_NTF with reason Field-OFF was not correctly received in Card-Emulation mode  |
| 730_007        | Improved timing for NSC.DISCOVER_CMD where NSC.DISCOVER_RSP gets now sent back to Host before actual RF-Discovery-/Polling starts   |
| 730_008        | Extended “ptxIoTRd_CardParams_t” by “ptxIoTRd_SupportedRFProt_t” allowing to read all supported RF-protocols from a counterpart devices in Reader- / Poll-mode via Card Registry  |
| 730_009        | Added 2 new Flags to Transparent Mode API <ul style="list-style-type: none"> <li>- RX_SOF_ONLY<br/>Enables SoF-Reception only (Start-of-Frame); Type-V only</li> <li>SKIP_1ST_BYTE_CRC<br/>If enabled, 1st Byte in Tx- and Rx-direction is excluded from automatic CRC-calculation; Type-V only!</li> </ul> |

#### 6.1.2 Known Issues of 7.3.0

An active list of known issues is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

#### 6.1.3 Known Limitations of 7.3.0

An active list of known limitations is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

## PTX1xxR IoT-Reader SDK v7.3.1

### 6.2 Version 7.2.0

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.2.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

#### 6.2.1 Features of 7.2.0

**Table 4: 7.2.0 Features**

| Feature Number | Description  |
|----------------|--|
| 720_001        | Changed SDK license to BSD-3 for majority of source files  |
| 720_002        | Improved description of API Init-/Open-functions (clarified usage of allocated vs. initialized)  |
| 720_003        | Added new member "ReadCCVariant" to T2T-NDEF-OP initialization parameters to select if the Capability Container CC gets read initially via Block 3 (default) or Block 0. |
| 720_004        | Added support for B-Prime RF-Technology in Transparent-Mode API  |
| 720_005        | Integrated "Transparent Data Channel (TDC)" implementation (moved from PTX130W WLC Poller SDK)   |
| 720_006        | Upgraded project files to E2 Studio 2023-10 and FSP 5.1  |
| 720_007        | Integrated Extension-Prototype (RFU)   |

#### 6.2.2 Known Issues of 7.2.0

An active list of known issues is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

#### 6.2.3 Known Limitations of 7.2.0

An active list of known limitations is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

### 6.3 Version 7.1.0

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.3.1.

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PTX1xxR IoT-Reader SDK v7.3.1

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

### 6.3.1 Features of 7.1.0

**Table 5: 7.1.0 Features**

| Feature Number | Description  |
|----------------|--|
| 710_001        | Upgraded project files to Renesas E2 Studio 2022-10 and FSP 4.2    |
| 710_002        | Removed State-protection for the call to ptxIoTRd_Get_RSSI_Value() |
| 710_003        | Added new Add-On APIs:<br>- Transparent-Mode                       |

### 6.3.2 Known Issues of 7.1.0

An active list of known issues is maintained online:

<https://lpcss-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

### 6.3.3 Known Limitations of 7.1.0

An active list of known limitations is maintained online:

<https://lpcss-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

## PTX1xxR IoT-Reader SDK v7.3.1

### 6.4 Version 7.0.0

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.4.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

#### 6.4.1 Features of 7.0.0

**Table 6: 7.0.0 Features**

| Feature Number | Description   |
|----------------|---|
| 700_001        | Added I2C and UART reference implementations for Renesas RA4M2-MCU  |
| 700_002        | Refactored Stack-initialization parameters related to communication/host-interface parameters                           |
| 700_003        | Introduced new compile/build switches related to communication/host-interfaces (PTX_INTF_UART/_I2C/_SPI)                |
| 700_004        | Added reference communication/host-interface definitions (POS & IoT) related to used speed/bitrate                      |
| 700_005        | Added new parameter "flags" to PLAT-API function "ptxPLAT_TRx" to allow passing general purpose flags to TRx-operation. |
| 700_006        | Bug-fix added to FeliCa-DTE API (bitrate 424 kBit/s now supported too)  |
| 700_007        | Minor bug-fixes related to T5T to achieve NFC Forum CR13 compliance (Reader-device)                                     |
| 700_008        | Corrected issue in HCE-mode where RF-On/-Off was not correctly indicated on some systems                                |
| 700_009        | Implemented State-protection for the call to ptxIoTRd_Get_RSSI_Value()  |
| 700_010        | Extended RF-Discover-structure by parameters "PollStartTechnology" and "PollBailOutFlags"                               |

#### 6.4.2 Known Issues of 7.0.0

An active list of known issues is maintained online:

<https://pccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

#### 6.4.3 Known Limitations of 7.0.0

An active list of known limitations is maintained online:

<https://pccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

## 6.5 Version 6.3.2

This is an ENGINEERING release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.5.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

### 6.5.1 Features of 6.3.2

**Table 7: 6.3.2 Features**

| Feature Number | Description   |
|----------------|---|
| 632_001        | Changed format of output data of "ptxIoTRd_T3T_SENSFRequest" (indicates a collision within same timeslot) |

### 6.5.2 Known Issues of 6.3.2

An active list of known issues is maintained online:

<https://pccs-docs.renesas.com/PTX1xxX-SDK-kill-docs/index.html>

### 6.5.3 Known Limitations of 6.3.2

An active list of known limitations is maintained online:

<https://pccs-docs.renesas.com/PTX1xxX-SDK-kill-docs/index.html>

## 6.6 Version 6.3.1

This is an ENGINEERING release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.6.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

### 6.6.1 Features of 6.3.1

**Table 8: 6.3.1 Features**

| Feature Number | Description  |
|----------------|--|
| 631_001        | Rework of FeliCa-DTE component <ul style="list-style-type: none"> <li>- Removed member-variable "CheckResult" from component structure.</li> </ul>   |
| 631_002        | Example application of SDK and FeliCa-DTE API extended: <ul style="list-style-type: none"> <li>- Added option to run multiple FeliCa-DTE sequences in any order</li> <li>- Added option to execute FrameStructure-subsequences individually</li> </ul> |

### 6.6.2 Known Issues of 6.3.1

An active list of known issues is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

### 6.6.3 Known Limitations of 6.3.1

An active list of known limitations is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

## PTX1xxR IoT-Reader SDK v7.3.1

### 6.7 Version 6.3.0

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.7.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

#### 6.7.1 Features of 6.3.0

**Table 9: 6.3.0 Features**

| Feature Number | Description   |
|----------------|---|
| 630_001        | Removed function ptxIoTRd_Send_Data<br>- deprecated, ptxHCE_Send_Data shall be used instead         |
| 630_002        | Introduced option for Polling-/Discover-command to enable/disable generation of LPCD-Notifications. |
| 630_003        | Added option to ptxIoTRd_Get_Status to read out the number of received LPCD-Notifications.          |
| 630_004        | Extended FeliCa-DTE by "FeliCa Reader/Writer Digital Protocol" test-sequences                       |

#### 6.7.2 Known Issues of 6.3.0

An active list of known issues is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

#### 6.7.3 Known Limitations of 6.3.0

An active list of known limitations is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

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PTX1xxR IoT-Reader SDK v7.3.1

## 6.8 Version 6.2.0

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.8.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

### 6.8.1 Features of 6.2.0

**Table 10: 6.2.0 Features**

| Feature Number | Description  |
|----------------|--|
| 620_001        | Added new revision info type "Product ID" for ptxIoTRd_Get_Revision_Info |
| 620_002        | Fixed bitrate-information in card parameters                             |
| 620_003        | Wavebank meta-info format changed (absolute % of 100% wavebank)          |
| 620_004        | Marked some functions in IoT-API related to HCE as deprecated            |

### 6.8.2 Known Issues of 6.2.0

An active list of known issues is maintained online:

<https://lpcps-docs.renesas.com/PTX1xxX-SDK-klI-docs/index.html>

### 6.8.3 Known Limitations of 6.2.0

An active list of known limitations is maintained online:

<https://lpcps-docs.renesas.com/PTX1xxX-SDK-klI-docs/index.html>

## 6.9 Version 6.1.0 (non-OS)

This is an ENGINEERING release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.9.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

### 6.9.1 Features of 6.1.0 (non-OS)

**Table 11: 6.1.0 Features**

| Feature Number | Description  |
|----------------|--|
| 610_001        | Switch from Renesas S128 MCU platform to Renesas RA4M2 MCU for non-OS Stacks |

### 6.9.2 Known Issues of 6.1.0 (non-OS)

An active list of known issues is maintained online:

<https://pccs-docs.renesas.com/PTX1xxX-SDK-kill-docs/index.html>

### 6.9.3 Known Limitations of 6.1.0 (non-OS)

An active list of known limitations is maintained online:

<https://pccs-docs.renesas.com/PTX1xxX-SDK-kill-docs/index.html>

## 6.10 Version 6.0.1

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.10.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

### 6.10.1 Features of 6.0.1

**Table 12: 6.0.1 Features**

| Feature Number | Description                            |
|----------------|--|
| 601_001        | Bug-fixed added for PRBS-9/15 function |

### 6.10.2 Known Issues of 6.0.1

An active list of known issues is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

### 6.10.3 Known Limitations of 6.0.1

An active list of known limitations is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

## PTX1xxR IoT-Reader SDK v7.3.1

## 6.11 Version 6.0.0

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.11.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

### 6.11.1 Features of 6.0.0

**Table 13: 6.0.0 Features**

| Feature Number | Description   |
|----------------|---|
| 600_001        | Added add-on module to support PTX1K GPIOs 5 - 12 and DAC0-control  |
| 600_002        | Introduced support for low-power mode for Host Card Emulation (HCE)   |
| 600_003        | Added new Add-On APIs: <ul style="list-style-type: none"> <li>- RF-Test (supports PRBS9 and PRBS15 RF-sequences)</li> <li>- FeliCa-DTE (supports FeliCa Performance tests)</li> </ul> |
| 600_004        | Added new API-functions: <ul style="list-style-type: none"> <li>- ptxIoTRd_Set_RSSI_Mode</li> <li>- ptxIoTRd_Get_RSSI_Value</li> </ul>  |

### 6.11.2 Known Issues of 6.0.0

An active list of known issues is maintained online:

<https://pccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

### 6.11.3 Known Limitations of 6.0.0

An active list of known limitations is maintained online:

<https://pccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

## 6.12 Version 5.0.0

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.12.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

### 6.12.1 Features of 5.0.0

**Table 14: 5.0.0 Features**

| Feature Number | Description   |
|----------------|---|
| 500_001        | Added support for higher bitrates up to 848 kBit/s in Reader-Mode |

### 6.12.2 Known Issues of 5.0.0

An active list of known issues is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

### 6.12.3 Known Limitations of 5.0.0

An active list of known limitations is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

### 6.13 Version 4.0.0

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.13.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

#### 6.13.1 Features of 4.0.0

**Table 15: 4.0.0 Features**

| Feature Number | Description   |
|----------------|---|
| 400_001        | Introduced Host Card Emulation (HCE) Module <ul style="list-style-type: none"><li>- Host Card Emulation supporting Type 4 Tag</li><li>- Added generic Loopback-application to demonstrate HCE usage</li></ul> |

#### 6.13.2 Known Issues of 4.0.0

An active list of known issues is maintained online:

<https://lpcps-docs.renesas.com/PTX1xxX-SDK-klI-docs/index.html>

#### 6.13.3 Known Limitations of 4.0.0

An active list of known limitations is maintained online:

<https://lpcps-docs.renesas.com/PTX1xxX-SDK-klI-docs/index.html>

## PTX1xxR IoT-Reader SDK v7.3.1

### 6.14 Version 3.0.0

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.14.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

#### 6.14.1 Features of 3.0.0

**Table 16: 3.0.0 Features**

| Feature Number | Description   |
|----------------|---|
| 300_001        | Refactored demo applications  |
| 300_002        | Removed deprecated functions: <ul style="list-style-type: none"> <li>- ptxIoTRd_Get_Discover_Status</li> <li>- ptxIoTRd_Get_System_State</li> </ul> |
| 300_003        | Added support for new power-amplifier error notification  |
| 300_004        | Improved SPI packet transfers   |

#### 6.14.2 Known Issues of 3.0.0

An active list of known issues is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-klI-docs/index.html>

#### 6.14.3 Known Limitations of 3.0.0

An active list of known limitations is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-klI-docs/index.html>

## PTX1xxR IoT-Reader SDK v7.3.1

### 6.15 Version 2.0.0

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.15.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

#### 6.15.1 Features of 2.0.0

**Table 17: 2.0.0 Features**

| Feature Number | Description   |
|----------------|---|
| 200_001        | Refactored API (introduced additional constants / defines, mainly demo application)   |
| 200_002        | Introduced API-function "ptxIoTRd_Get_Status_Info" (replacement for deprecated functions)   |
| 200_003        | Deprecated functions: <ul style="list-style-type: none"> <li>- ptxIoTRd_Get_Discover_Status</li> <li>- ptxIoTRd_Get_System_State</li> </ul> |
| 200_004        | Added new Add-On APIs: <ul style="list-style-type: none"> <li>- Native Tag</li> <li>- NDEF</li> </ul>                                       |

#### 6.15.2 Known Issues of 2.0.0

An active list of known issues is maintained online:

<https://pccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

#### 6.15.3 Known Limitations of 2.0.0

An active list of known limitations is maintained online:

<https://pccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

## 6.16 Version 1.2.1 (OS)

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.16.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

### 6.16.1 Features of 1.2.1 (OS)

**Table 18: 1.2.1 Features**

| Feature Number | Description   |
|----------------|---|
| 121_001        | Changed GPIO-Pin used for IRQ-connection from 9 to 3 for PMOD-connector |

### 6.16.2 Known Issues of 1.2.1 (OS)

An active list of known issues is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

### 6.16.3 Known Limitations of 1.2.1 (OS)

An active list of known limitations is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

## 6.17 Version 1.2.0

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.17.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

### 6.17.1 Features of 1.2.0

**Table 19: 1.2.0 Features**

| Feature Number | Description   |
|----------------|---|
| 120_001        | Removed function "ptxIoTRd_Set_Timeout" (timeout handled via application-timeout) |
| 120_002        | Added new API function "ptxIoTRd_Get_System_Info"                                 |
| 120_003        | Added support for VDPA auto-calibration   |
| 120_004        | Extended Native Tag API by Type-V / T5T   |
| 120_005        | Extended NDEF(-Operations) API by Type-V / T5T                                    |
| 120_006        | Added "Sleep"-option to function "ptxIoTRd_Reader_Deactivation"                   |

### 6.17.2 Known Issues of 1.2.0

An active list of known issues is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kill-docs/index.html>

### 6.17.3 Known Limitations of 1.2.0

An active list of known limitations is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kill-docs/index.html>

## PTX1xxR IoT-Reader SDK v7.3.1

### 6.18 Version 1.1.0

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.18.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

#### 6.18.1 Features of 1.1.0

**Table 20: 1.1.0 Features**

| Feature Number | Description  |
|----------------|--|
| 110_001        | Tag-Type feature extensions including: <ul style="list-style-type: none"> <li>- Set RF-timeout (T1T, T2T, T3T, T5T)</li> <li>- Sending SENSF_REQ (T3T)</li> <li>- Sending EoF-packet (T5T)</li> <li>- Added Presence-check functionality (ISO-/NFC-DEP)</li> </ul> |
| 110_002        | Introduced ptxIoTRd_Bits_Exchange_Mode to enable / disable Type-A bitstream-mode   |
| 110_003        | System-feature extensions including: <ul style="list-style-type: none"> <li>- Temperature sensor calibration</li> </ul>  |

#### 6.18.2 Known Issues of 1.1.0

An active list of known issues is maintained online:

<https://lpcss-docs.renesas.com/PTX1xxX-SDK-kill-docs/index.html>

#### 6.18.3 Known Limitations of 1.1.0

An active list of known limitations is maintained online:

<https://lpcss-docs.renesas.com/PTX1xxX-SDK-kill-docs/index.html>

## PTX1xxR IoT-Reader SDK v7.3.1

### 6.19 Version 1.0.1 (OS)

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.18.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

#### 6.19.1 Features of 1.0.1 (OS)

**Table 21: 1.0.1 Features**

| Feature Number | Description   |
|----------------|---|
| 101_001        | System-feature extensions including: <ul style="list-style-type: none"> <li>- Low-Power-Card-Detection ("LPCD")</li> <li>- Stand-by mode</li> <li>- Thermal- and overcurrent error protection</li> <li>- RF bit exchange (Type-A)</li> <li>- Dynamic update of RF- and System-configuration</li> <li>- Revision information readable via API</li> </ul> |

#### 6.19.2 Known Issues of 1.0.1 (OS)

An active list of known issues is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

#### 6.19.3 Known Limitations of 1.0.1 (OS)

An active list of known limitations is maintained online:

<https://lpccs-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

## PTX1xxR IoT-Reader SDK v7.3.1

### 6.20 Version 1.0.0 (non-OS)

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.20.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

#### 6.20.1 Features of 1.0.0 (non-OS)

**Table 22: 1.0.0 Features**

| Feature Number | Description   |
|----------------|---|
| 100_001        | Basic Reader-functionality including: <ul style="list-style-type: none"> <li>- Card discovery of Type-A, -B, -F and -V</li> <li>- Support for multiple cards / protocols</li> <li>- Reading card details</li> <li>- RF Data exchange</li> <li>- RF Deactivation</li> <li>- Example data exchanges for all NFC-Forum Tag Types</li> </ul>                |
| 100_002        | System-feature extensions including: <ul style="list-style-type: none"> <li>- Low-Power-Card-Detection ("LPCD")</li> <li>- Stand-by mode</li> <li>- Thermal- and overcurrent error protection</li> <li>- RF bit exchange (Type-A)</li> <li>- Dynamic update of RF- and System-configuration</li> <li>- Revision information readable via API</li> </ul> |

#### 6.20.2 Known Issues of 1.0.0 (non-OS)

An active list of known issues is maintained online:

<https://lpcds-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

#### 6.20.3 Known Limitations of 1.0.0 (non-OS)

An active list of known limitations is maintained online:

<https://lpcds-docs.renesas.com/PTX1xxX-SDK-kl-docs/index.html>

## PTX1xxR IoT-Reader SDK v7.3.1

### 6.21 Version 1.0.0 (OS)

This is a FULL (GA) release of the IoT-Reader SDK for the PTX1xxR device supporting all the features listed in section 6.21.1.

The SDK deliverable itself may also contain (source code) modules which are intended to be released in a future SDK version and are marked either as “Partially” and / or “Not fully verified yet”. Such modules should not be considered for final application development using the current SDK version.

#### 6.21.1 Features of 1.0.0 (OS)

**Table 23: 1.0.0 Features**

| Feature Number | Description  |
|----------------|--|
| 100_001        | Basic Reader-functionality including: <ul style="list-style-type: none"> <li>- Card discovery of Type-A, -B, -F and -V</li> <li>- Support for multiple cards / protocols</li> <li>- Reading card details</li> <li>- RF Data exchange</li> <li>- RF Deactivation</li> <li>- Example data exchanges for all NFC-Forum Tag Types</li> </ul> |

#### 6.21.2 Known Issues of 1.0.0 (OS)

An active list of known issues is maintained online:

<https://lpcss-docs.renesas.com/PTX1xxX-SDK-klI-docs/index.html>

#### 6.21.3 Known Limitations of 1.0.0 (OS)

An active list of known limitations is maintained online:

<https://lpcss-docs.renesas.com/PTX1xxX-SDK-klI-docs/index.html>

## Appendix A Software Versioning Rules

This describes the software version numbers and does not apply to documentation version numbers (as found in the footer of this document).

Each software version number string consists of four numbers: MAJOR. BRANCH. MINOR. and BUILD.

**#MAJOR:** It is increased (by one only) if the project undergoes a major modification, for example, major ROM changes. It usually changes only when the project sources undergo major restructuring affecting most of the repository. It is initialized at 1.

**#BRANCH:** Used in the case of concurrent projects that for special reasons need to be spun off the major repository. It corresponds to different versions of the repository code that have to be supported concurrently. In this case, each branch number corresponds to a different GIT branch. The basic project has BRANCH id 0.

**#MINOR:** Odd numbers indicate Engineering (or Patch or Binary) versions, and even numbers indicate Full release versions or Release Candidates of Full versions. Each Full release increases this number by one. After the Full release, the number is increased by one again. Therefore, Project releases correspond to release numbers like 2.0.1.xxx, 2.0.2.xxx, and so forth. The #MINOR number is initialized at 1.

**#BUILD:** The # BUILD number increases by one at every repository update and thus indicates the total number of changes since repository initialization. The BUILD number is initialized at 1.

## Document Revision History

This section summarizes the changes made to this document and not to the Software that this document describes.

| Revision | Date        | Description  |
|----------|-------------|--|
| 1.0.0    | 07-Jul-2025 | Initial Release after migrating from .txt to MS-Word format. |

**Status Definitions**

| Status                  | Definition   |
|-------------------------|--|
| DRAFT                   | The content of this document is under review and subject to formal approval, which may result in modifications or additions. |
| APPROVED<br>or unmarked | The content of this document has been approved for publication.  |

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## PTX1xxR IoT-Reader SDK v7.3.1

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