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Modules



Firmware Release Note

RC7110/RC7120

Revision History

| Rev# | Date | Updates |
|------|------------|-----------------------------------|
| 1 | 2023/12/15 | Release 1.0 (SWI216C_01.02.06.00) |
| 2 | 2024/03/06 | Release 2.0 (SWI216C_01.02.08.00) |

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1 Introduction

1.1 Document Scope

This document describes the firmware releases for the RC71xx product family, which includes RC7110 and RC7120.

Semtech highly recommends migrating to new releases when available to take advantage of any security and stability improvements.

1.2 Firmware Packages and Tools

Module resources, including firmware packages, release notes, tools and other product documentation are published on The Source at <https://source.sierrawireless.com/> and can be accessed via the device-specific page.

1.3 Document Audience

This Release Notes document may be distributed to select pre-release customers.

2 Compatibility

2.1 Hardware compatibility

The latest firmware release is compatible with commercial RC7110 and RC7120 hardware. There are no major known issues with pre-commercial hardware, but it is no longer actively tested or supported.

2.2 Software feature compatibility

The RC71xx feature set is closely compatible with the RC76xx. Refer to [1] RC71xx Migration Guide for a detailed comparison against the previous generation of products.

3 Firmware Release 2.0

Release 2.0 updates Release 1.0 with Generic PRI.

3.1 Firmware Release Description

3.1.1 Firmware Release Identification

Table 1. Firmware Release Identification – Release 2.0

| Component | Details |
|------------------------------|------------------------|
| Firmware Version | SWI216C_01.02.08.00 |
| Date of generation (UTC) | 2024/03/01 |
| IMEI SV | 0 |
| GSMA TS.25 | 2024.01.01 |
| Chipset Vendor Stack Version | QCX216.FR.1.0-0070A1.1 |
| Supported HW | RC7110, RC7120 |

3.1.2 Carrier Packages

Table 2. Carrier Packages – Release 2.0

| Carrier | Firmware | Configuration | Comment |
|-----------------|---------------------|---------------|--------------------|
| Approved | | | |
| Generic | SWI216C_01.02.08.00 | 000.006_000 | Approved by Orange |

3.1.3 Host Software Versions

The following tools were validated against this release.

Note: *Semtech recommends upgrading to newer Host Software releases when available. Refer to applicable software release notes for any compatibility restrictions.*

Table 3. Validated Host Software Tools

| SW Tools Name | Version |
|---------------|-----------|
| Tool Package | 71xx.1003 |

3.1.4 Software Changes

Table 4. Software Changes – Release 2.0

| ID | Description | Impacted Domains |
|------------|--|------------------|
| KRAKEN-11 | IP AT Cmds | MRD |
| KRAKEN-16 | Internal UDP | MRD |
| KRAKEN-17 | Internal TCP | MRD |
| KRAKEN-19 | Modem Status, Customization, and Reset Cmds | MRD |
| KRAKEN-60 | AUTO-SIM Feature | MRD |
| KRAKEN-61 | Temperature/Voltage Monitoring | MRD |
| KRAKEN-62 | SIM AT Commands | MRD |
| KRAKEN-63 | SWI Proprietary AT Commands | MRD |
| KRAKEN-64 | MQTT AT Cmds | MRD |
| KRAKEN-65 | Key Storage/Management for Secure Connections | MRD |
| KRAKEN-71 | Device Services Third Party delta FOTA (+WDSTPF) | MRD |
| KRAKEN-69 | Secure Delta FOTA | MRD |
| KRAKEN-72 | Configure UART1 Power Management (+KSLEEP) | MRD |
| KRAKEN-73 | Dynamic Update of TS.25 PLMN List | MRD |
| KRAKEN-74 | I/O AT Cmds | MRD |
| KRAKEN-80 | Critical Data Backup & Corruption Recovery | MRD |
| KRAKEN-82 | Secure Debug | MRD |
| KRAKEN-83 | Secure Boot - SWI Key | MRD |
| KRAKEN-89 | TLS1.2 | MRD |
| KRAKEN-91 | Carrier (delta) FOTA | MRD |
| KRAKEN-112 | The "OK" shall return after +++ is sent to escape the data session | MRD |
| KRAKEN-122 | [IE12][Thermal] update parameter of thermal monitor | Thermal |
| KRAKEN-377 | [RC71][LwM2M] LwM2M AT command | LWM2M |
| KRAKEN-378 | [RC71][LwM2M] LwM2M Client function | LWM2M |
| KRAKEN-379 | [RC71][LwM2M] LwM2M FoTA | LWM2M |
| KRAKEN-380 | [RC71][LwM2M] LwM2M Configuration | LWM2M |
| KRAKEN-346 | [RC7110][PTCRB/GCF][TS36.523-1/TC8.5.4.1] UE capability transfer / Success – Fail | Conformance |
| KRAKEN-348 | [RC7110][PTCRB/GCF][TS36.523-1/TC9.2.1.2.3] Successful combined attach procedure / EPS service only / MSC temporarily not reachable – Fail | Conformance |

| | | |
|------------|---|-------------|
| KRAKEN-365 | [RC7120][GCF][ETSI TS 102 230-1/TC5.2.3.2] SIM2- Electrical tests on contact C2: 1,8 V - 3 V – Fail | Conformance |
| KRAKEN-366 | [RC7120][GCF][ETSI TS 102 230-1/TC5.2.4.2] SIM2- Electrical tests on contact C3: 1,8 V - 3 V – Fail | Conformance |
| KRAKEN-328 | [RC7120][GCF][TS36.521-3/TC7.3.29_2] E-UTRAN FD-FDD Radio Link Monitoring Test for In-sync in DRX for UE Category 1bis – Fail | Conformance |
| KRAKEN-318 | [RC7120][GCF][TS36.523-1/TC9.1.5.1] EMM information procedure – Fail | Conformance |
| KRAKEN-446 | [RC7120][PTCRB/GCF] [3GPP TS 31.124/TC27.22.2] TERMINAL PROFILE items mismatch | Conformance |

3.1.5 Known Issues

Note: This section reflects known issues in Release 2.0 as of the Date of Generation UTC) indicated in the Release 2.0 Release Identification section above.

Table 5. Known Issues – Release 2.0

| ID | Description | Impacted Domains |
|------------|---|------------------|
| KRAKEN-425 | [AVL_DDR][LTE-BTR-1-6940][EPS update type is not combined LA/TA] | AT&T |
| KRAKEN-431 | [AVL_DDR][LTE-BTR-1-3984][UE failed to camp on PLMN 310-110 4G network] | AT&T |
| KRAKEN-445 | [AVL_DDR][LTE-BTR-1-3500][UE doesn't send NO SERVICE] | AT&T |

4 Firmware Release 1.0

4.1 Firmware Release Description

4.1.1 Firmware Release Identification

Table 6. Firmware Release Identification – Release 1.0

| Component | Details |
|------------------------------|---------------------|
| Firmware Version | SWI216C_01.02.06.00 |
| Date of generation (UTC) | 2023/12/15 |
| IMEI SV | 01 |
| GSMA TS.25 | N/A |
| Chipset Vendor Stack Version | QCX216.FR.1.0-0063 |
| Supported HW | RC7110, RC7120 |

4.1.2 Carrier Packages

Table 7. Carrier Packages – Release 1.0

| Carrier | Firmware | Configuration | Comment |
|-------------|---------------------|---------------|-------------|
| Test | | | |
| Generic | SWI216C_01.02.06.00 | 000.003_000 | Release 1.0 |

4.1.3 Host Software Versions

The following tools were validated against this release.

Note: *Semtech recommends upgrading to newer Host Software releases when available. Refer to applicable software release notes for any compatibility restrictions.*

Table 8. Validated Host Software Tools

| SW Tools Name | Version |
|---------------|-----------|
| Tool Package | 71xx.1001 |

4.1.4 Software Changes

Table 9. Software Changes – Release 1.0

| ID | Description | Impacted Domains |
|-----------|---|------------------|
| KRAKEN-8 | Linux USB Driver | MRD |
| KRAKEN-9 | Windows (USB) Driver | MRD |
| KRAKEN-10 | USB Name (Device Descriptor) | MRD |
| KRAKEN-11 | IP AT Cmds | MRD |
| KRAKEN-12 | Internal HTTP/HTTP(S) | MRD |
| KRAKEN-13 | Internal FTP/FTPS (Client only) | MRD |
| KRAKEN-14 | CMUX over UART | MRD |
| KRAKEN-15 | SMS | MRD |
| KRAKEN-16 | Internal UDP | MRD |
| KRAKEN-17 | Internal TCP | MRD |
| KRAKEN-18 | PPP | MRD |
| KRAKEN-19 | Modem Status, Customization, and Reset Cmds | MRD |
| KRAKEN-20 | Dual SIM Single Standby (DSSS) | MRD |
| KRAKEN-22 | Internal IP Protocol (IPv4/v6) | MRD |
| KRAKEN-24 | 3GPP UE Capable Release Compliance | MRD |
| KRAKEN-25 | Cat1bis Data Throughput | MRD |
| KRAKEN-26 | VID/PID | MRD |
| KRAKEN-28 | Cat1bis Full Duplex | MRD |
| KRAKEN-29 | USB Serial | MRD |
| KRAKEN-31 | USB 2.0 | MRD |
| KRAKEN-32 | GPIO | MRD |
| KRAKEN-34 | SIM Interfaces - UIM1 and UIM2 | MRD |
| KRAKEN-35 | UART | MRD |

4.1.5 Known Issues

Note: This section reflects known issues in Release 1.0 as of the Date of Generation (UTC) indicated in the Release 1.0 Release Identification section above.

Table 10. Known Issues – Release 1.0

| ID | Description | Impacted Domains |
|------------|--|------------------|
| KRAKEN-372 | Module failed to boot up if the power is removed during firmware download | Download |
| KRAKEN-296 | UIM2 still enable after at!custom="UIM2ENABLE";0 | AT Command |
| KRAKEN-368 | Firmware downgrade is allowed (sftl/sftw) | Tool |
| KRAKEN-399 | There was showed error message while query Emergency Shutdown setting status (without set any Emergency Shutdown setting before query) | AT Command |

5 Related Documentation

Module resources, including product documentation, firmware packages and tools are published on The Source at <https://source.sierrawireless.com>.

Table 11. Reference Documents

| Reference Document | Document # |
|--|------------|
| [1] RC71xx Migration Guide | 41114702 |
| [2] RC71xx AT Command Reference | 41114675 |
| [3] RC71xx Product Technical Specification | 41114670 |

6 Abbreviations and Definitions

Table 12. Abbreviations and Acronyms

| Abbreviation / Acronym | Definition |
|------------------------|--|
| CVE | Common Vulnerabilities and Exposures |
| DV | Design Verification |
| FDT | Firmware Download Tool |
| FTM | Factory Test Mode |
| QMI | Qualcomm MSM Interface Qualcomm Modem Interface |