Information Note

Topic	SARA-U201 "04" Release to Production UBX-17058162
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1 Affected Products

Product Name	Order Number	Type Number	Firmware	Remarks
SARA-U201	SARA-U201-04A	SARA-U201-04A-00	23.60	A01.06
	SARA-U201-04B	SARA-U201-04B-00	23.60	A01.06
	SARA-U201-04X	SARA-U201-04X-00	23.60	A01.06

2 Type of Change

☐ Hardware modification
☒ Firmware update
☒ Documentation update
☒ Design status changed from "Engineering Sample" to "Initial Production"

3 Description of Change

Release to Initial Production of the SARA-U201-04A/B/X module.
Restrictions compared to specifications in Annex A.
Known bugs and limitations in Annex A.2.

4 Schedule

This information is effective as of 1st November, 2017.

5 Customer Impact and Recommended Action

N/A

6 Reference Documents

[1] u-blox AT Commands Manual, u-blox Document UBX-13002752
[2] SARA-U2 series Data Sheet, u-blox document UBX-13005287
[3] SARA-U201 and SARA-U270 Automotive Data Sheet, u-blox document UBX-16024639
[4] SARA-G3 / SARA-U2 series System Integration Manual, u-blox document UBX-13000995
[5] u-blox Positioning Implementation Application Note, u-blox Document UBX-13001849
[6] u-blox Cellular Module Firmware Update Application Note, u-blox Document UBX-13001845

A Restriction compared to specifications

A.1 Firmware

A.1.1 New Features

Last gasp:
Dedicated AT command (+ULGASP) that enables sending a predefined last notification (via SMS or TCP/UDP) in case of a power outage, just before the power goes off.

2nd UART interface:
1x UART (with flow control) @ 1 Mbit/s used for data transfer, 1x UART (RX/TX only) @ 115 kbit/s for AT commands. For more details on +UFWINSTALL AT command, see u-blox AT Commands Manual [1] and SARA-G3 / SARA-U2 series System Integration Manual [4].

FOTA:
FOTA engine developed by u-blox included in the module SW for updates of the module FW over-the-air. For more details on +UFWINSTALL AT command, see u-blox AT Commands Manual [1] and u-blox Cellular Module Firmware Update Application Note [6].

CellTime™:
Dedicated AT command (+UTIME) for retrieving the precise timing using CellLocate® and/or the GNSS receiver. For more details on +UTIME AT command, see u-blox AT Commands Manual [1] and u-blox Positioning Implementation Application Note [5].

Non blocking version of +CMGS/+CMSS:
The +UDCONF=13 AT command triggers the asynchronous behavior of the SMS. The module returns the "OK" final result code immediately after the "Send Message" (+CMGS or +CMSS) command has been received by the module, without having to wait for network confirmation. By doing so, the application SW can immediately send other AT commands, while the confirmation for SMS delivering to the network will arrive with an unsolicited indication.

+USOCO non blocking command:
Dedicated +USOCO AT command that will immediately return a response without waiting for the completion of the procedure.

Out of coverage timer tuning/Smart radio coverage manager:
Dedicated commands (+UDCONF=55 and +UDCONF=57) to set custom timers which are used to control the searching and the sleep time when there is no network available, and thereby reduce power consumption in those cellular scenarios where the radio coverage or the network conditions would cause an inefficient usage of the power supply.

SNI (Server Name Indication):
Extension of SSL/TLS which allows the server to present different certificates for different base URLs pointing to the same IP address.

Extended audio setting:
Extended audio tuning commands used for configuring, activating and deactivating the extended audio processing blocks (for more details check the Application Note UBX-17005922). Dedicated for hands-free applications.

PCM uplink audio:
Audio play/record interface (8 kHz, 16 bit PCM raw) in order to:

- Play files: uplink/downlink from file system
- Record files: uplink/downlink to file system

16 kHz audio files:
Possibility of playing audio files encoded at 16 kHz.

A.1.2 Changes and bugs fixed

- [u-blox id M385G-1050]: The command to read information about the serving cell and neighbor cells (+UCELLINFO) does not work if the PIN is not inserted.
- [u-blox id M385G-1221] The UART interface does not exit from power saving mode if a file is uploaded using a direct link.
- [u-blox id M385G-1248] The device is not able to remotely wake up a Linux host from the global SLEEP mode state (S3) and to maintain the connection with a Windows host after a successful wake-up.
- [u-blox id M385G-1389] +CECALL might be unable to perform an eCall if there is an ongoing voice call; temporary workaround: use ATH to release the call before +CECALL.
- [u-blox id M385G-1469] The information text response to the read command of +UDCONF=57 is not compliant with the AT command manual.
- [u-blox id M385G-1450] HTTPS with mutual authentication fails.
- [u-blox id M385G-1456] AT+UTIME=2,0 (i.e. requesting the local RTC propagated time) always returns an error result code.
- [u-blox id M385G-1462] If a DUT with a held call is notified of an MT call, it keeps generating the tone of the incoming call even after accepting or releasing it; temporary workaround is: do not put a single active call in hold.

A.2 Known bugs and limitations

- [u-blox id M385G-917]: The SSL/TLS encrypted private keys (PKCS1 format) cannot be imported via serial I/O (see the AT+USECMNG=0,2,<internal_name>,<data_size>). Therefore, SSL/TLS connections with encrypted passwords are not supported.
- [u-blox id M385G-1438]: +UAREC/+UAPLAY provide a distorted audio output when mixing 16/8 kHz sampling, more specifically: playing an 8 kHz sample using the 16 kHz player provides a distorted audio output.
- [u-blox id M385G-1540]: If the SIM Emergency Category Information Element (EF_{ECC}) contains a value not compliant to 3GPP specifications (e.g. 0xFF), then eCall set-up fails.