Product change note

Topic	**SARA-R500S-61B SARA-R510S-61B, SARA-R510M8S-61B firmware update** UBX-22037395 C1-Public
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1 Affected products

Product name	Ordering code	Type number (old)	Firmware (old)	Type number (new)	Firmware (new)
SARA-R500S	SARA-R500S-61B	SARA-R500S-61B-00	03.25, A00.01	SARA-R500S-61B-01	03.25, A00.02
SARA-R510S	SARA-R510S-61B	SARA-R510S-61B-00	03.25, A00.01	SARA-R510S-61B-01	03.25, A00.02
SARA-R510M8S	SARA-R510M8S-61B	SARA-R510M8S-61B-00	03.25, A00.01	SARA-R510M8S-61B-01	03.25, A00.02

2 Type

☐ Product status change   ☒ Documentation update

☐ Hardware/component change   ☒ Certification information

☒ Firmware/software update   ☐ Security advisory

☐ Label change   ☐ Other

3 Description

A new firmware release is available for the affected products and will be applied in production according to the schedule below. The changes made on the firmware are as follows:

- [u-blox ID 589] SoftECC introduced to increase file system robustness.
- [u-blox ID 61-32][u-blox ID 61-25] [u-blox ID 61-19] Improvements to fix issues encountered during NTT DoCoMo certification. Changes are network operator specific and applied only to DoCoMo +UMNOPROF profile.

4 Schedule

Product type number (new)	Estimated first shipment date[1]
All products listed above	2023 CW05

5 Customer impact and recommended action

- It is recommended to use this PCN FW version on new devices starting certification activities.

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[1] The estimated first shipment date is the forecasted date when a customer may expect to receive the changed product with the new type number. This is determined by the estimated date of inventory depletion on the PCN issue date. This may be affected by fluctuations in supply and demand. Consequently, although customers should be prepared to receive the changed product on this date, u-blox will continue to ship the pre-changed product until the inventory has been depleted. This may result in the pre-changed product being shipped to customers after this forecasted date.

- EVK units may be shipped with the 03.25, A00.01 FW version during the inventory depletion period. Customers should check the FW of the EVKs and upgrade it to the PCN FW version 03.25, A00.02.

6   Certifications

The existing certifications of the "61B-00" type numbers remain unchanged and valid for the "61B-01" type numbers.

The NTT DoCoMo IoT approval has been added for "61B-01" type numbers.

7   Firmware update

- SARA-R5 61B-00 (03.25, A00.01) units can be updated to this PCN firmware.

7.1   Firmware update packages and md5 signature

Product / delivery	Filename	md5sum
SARA-R500S		
EasyFlash	SARA-R500S-61B-01-IP-0325A0002-004K00.dof	1f87a2885e89da5ce2570f2b30e2f0f7
FOAT	SARA-R500S-61B-01-IP-0325A0002-004K00.upd	10d996d41726425d5992aacc07fc40c6
FOTA A00.01 to A00.02 uFOTA ID: 1864	SARA-R500S-61B-00-IP-0325A0001-004K00_SARA-R500S-61B-01-IP-0325A0002-004K00.upd	71a53f2f1b297401d2e0d9d4f7f8c560
FOTA test ENG1199 to 03.25 uFOTA ID: 1867	SARA-R500S-61B-01-XX-0325ENG1199A0002-004K00_SARA-R500S-61B-01-IP-0325A0002-004K00.upd	54f91eab0777230340ff0c09d254fbae
FOTA test 03.25 to ENG1199 uFOTA ID:1866	SARA-R500S-61B-01-IP-0325A0002-004K00_SARA-R500S-61B-01-XX-0325ENG1199A0002-004K00.upd	8fad6eb744c159db6ae7c4ff6ff43a8b
SARA-R510M8S		
EasyFlash	SARA-R510M8S-61B-01-IP-0325A0002-006K00.dof	2179e99f42ad05f58f6b766a2994deea
FOAT	SARA-R510M8S-61B-01-IP-0325A0002-006K00.upd	fa39fe33ea87f62b02f762d3ea668053
FOTA A00.01 to A00.02 uFOTA ID: 1868	SARA-R510M8S-61B-00-IP-0325A0001-006K00_SARA-R510M8S-61B-01-IP-0325A0002-006K00.upd	a528b8b1d3bd871aec67983578f1d015
FOTA test ENG1199 to 03.25 uFOTA ID: 1871	SARA-R510M8S-61B-01-XX-0325ENG1199A0002-006K00_SARA-R510M8S-61B-01-IP-0325A0002-006K00.upd	d56d62a06ea17b4cdb7a5f7c5f121b7d
FOTA test 03.25 to ENG1199 uFOTA ID:1870	SARA-R510M8S-61B-01-IP-0325A0002-006K00_SARA-R510M8S-61B-01-XX-0325ENG1199A0002-006K00.upd	b7614ad036e50f6edc17e1b97669f305
SARA-R510S		
EasyFlash	SARA-R510S-61B-01-IP-0325A0002-005K00.dof	66c805fc3b5ebfe07db93ac8d307820b
FOAT	SARA-R510S-61B-01-IP-0325A0002-005K00.upd	510dbe400c6c4ba09eddb3870ac4041c
FOTA A00.01 to A00.02 uFOTA ID: 1872	SARA-R510S-61B-00-IP-0325A0001-005K00_SARA-R510S-61B-01-IP-0325A0002-005K00.upd	8354baef56825957f89008566d747ede

Product / delivery	Filename	md5sum
FOTA test ENG1199 to 03.25 uFOTA ID: 1875	SARA-R510S-61B-01-XX-0325ENG1199A0002-005K00_SARA-R510S-61B-01-IP-0325A0002-005K00.upd	6485c9affd42686e28bbbc1b19a995ad
FOTA test 03.25 to ENG1199 uFOTA ID:1874	SARA-R510S-61B-01-IP-0325A0002-005K00_SARA-R510S-61B-01-XX-0325ENG1199A0002-005K00.upd	82627564aef1b6c3ae76810c7884f7ce

For the FW packages, contact u-blox technical support, www.u-blox.com/support.

8 Tools

- m-center v02.07.00 – Download from the u-blox.com website via this page: m-center
- EasyFlash 13.06 – Download from the u-blox.com website via this link: EasyFlash

9 Related documentation

[1] SARA-R5 series AT commands manual, UBX-19047455
[2] SARA-R5 series data sheet, UBX-19016638
[3] SARA-R5 series system integration manual, UBX-19041356
[4] EVK-R5 user guide, UBX-19042592
[5] SARA-R5 application development guide, UBX-20009652
[6] Internet applications development guide, UBX-20032566
[7] SARA-R4 / SARA-R5 GNSS implementation application note, UBX-20012413
[8] LwM2M objects and commands application note, UBX-18068860
[9] SARA-R5 firmware update application note, UBX-20033314

Appendix

A   Known limitations

Connectivity
- [u-blox ID 1645] The CONNECT result code is not returned after entering data mode via ATO.
- [u-blox ID 4565] The ATO command does not respond if the "NO CARRIER" final result code is received during OLCM. Suggestion: ATO shall be issued only if the module is in OLCM.
- [u-blox ID 6980] When AT&D0 is set, a DTR transition during packet switched data mode leads to a context deactivation instead of a no action as expected.
- [u-blox ID 5898] The +UUSIMSTAT URC may return an extra space before the reported value.

Internet suite
- [u-blox ID 4723] Keep-alive packets are not sent when the feature is enabled.
- [u-blox ID 3925] Two +UUPSDD URCs are issued when the internal PDP context is mapped to a specific context identifier.
- [u-blox ID 4237] The AT+UMQTT=6 output (read all unread MQTT messages) may be truncated when unread messages content is larger than 1 kB. It is recommended to read messages one by one with AT+UMQTTC=6,1.
- [u-blox ID 6567] The DNS configuration via +UPSD AT command cannot be applied to initial default bearer DNSs.

Registration/Network services
- [u-blox ID 4578] Manual registration (AT+COPS=1) with alphanumeric format may lead to long PLMN scans if the name in <oper> field belonged to multiple PLMNs (same name, but different MCC and MNC). Manual registration (AT+COPS=1) with alphanumeric format is not recommended, it is instead suggested to use numeric format.

Power saving
- [u-blox ID 3642] A module reboot is needed to apply +UPSV: 2 (power saving controlled by UART RTS line) when the UART interface is used in 4-wire configuration.
- [u-blox ID 3708] The module is not able to enter deep-sleep mode if the UART with hardware flow control is enabled, RTS is OFF and some data (e.g., an URC) is ready to be sent to the DTE.

System time
- [u-blox ID 4580] [SARA-R510M8S] [SARA-R500S] Wake-up from +CALA alarm is delayed by the time elapsed between the alarm set and the module power-off event. It is suggested to set the +CALA AT command as the last operation before the module power-off. Exit from PSM deep sleep mode is delayed by about 2 s.

u-blox features
- [u-blox ID 6861] The +UUSTS: 2,2 URC is printed every 2 s once the temperature threshold is reached instead of just once.

GPIO
- [u-blox ID 6770] Unable to disable the pin set as SIM card detection. As a workaround, after a first attempt to disable the pin, a reboot shall be issued with AT+CFUN=16. After a second attempt, the pin will be disabled.