Information note

Topic	**SARA-R500S-61B / SARA-R510S-61B / SARA-R510M8S-61B MP information note** UBX-22009525 C1-Public
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1   Affected products

Product name	Ordering code	Type number	Firmware		Remarks
SARA-R500S	SARA-R500S-61B	SARA-R500S-61B-00	Modem: Application:	03.25 A00.01	
SARA-R510S	SARA-R510S-61B	SARA-R510S-61B-00	Modem: Application:	03.25 A00.01	
SARA-R510M8S	SARA-R510M8S-61B	SARA-R510M8S-61B-00	Modem: Application:	03.25 A00.01	

2   Type

- ☒ Product status change
- ☐ Hardware/component change
- ☒ Firmware/software update
- ☐ Label change

- ☒ Documentation update
- ☐ Certification information
- ☐ Security advisory
- ☐ Other

3   Description

Status of the above listed products has changed from Engineering Samples (ES) to Mass Production (MP). For the details of the new features and improvements implemented in the MP version, see next sections. Known issues are listed in the appendix.

3.1   Hardware changes

No hardware changes.

3.2   Software changes

Below issues have been fixed:

- [u-blox ID 6821] The +UJAD settings are not stored in NVM when the selected RAT is NB-IoT.
- [u-blox ID 7142] PLMN search timeout increased to 10 minutes for LTE Cat.M1.
- [u-blox ID 7085] HTTP custom header size increased to 512 bytes.
- [u-blox ID 7138] Potential race condition in rare cases when UL data are to be delivered while the UE is locally detaching.
- [u-blox 7197] Proper error result code returned by +CEDRXRDP AT command if executed when in +CFUN: 0 or +CFUN: 4.
- [u-blox ID 7024] Retransmission of DNS queries shall comply with Softbank requirements.

- [u-blox ID 6871] On Softbank network the UE shall not send Service Request messages if service is rejected due to congestion.

4 Schedule

Samples:	
Estimated first shipment date:	2022 CW16
Documentation (e.g. release note)	Available

5 Customer impact and recommended action

MP firmware version (03.25 A00.01) is required for new devices entering certification labs.

6 Firmware update

SARA-R5 "61B" ES units can be updated to MP firmware (03.25 A00.01) via EasyFlash, FOAT and FOTA.

SARA-R5 "61B" PT units, SARA-R5 "01B" units and SARA-R5 "00B" units cannot be updated to this firmware.

6.1 Firmware update packages and md5 signature

Product / delivery	Filename	md5sum
SARA-R500S		
EasyFlash	SARA-R500S-61B-00-IP-0325A0001-004K00.dof	12d97c3f76757b98ab6007f7daa1d4e7
FOAT	SARA-R500S-61B-00-IP-0325A0001-004K00.upd	cad2d609682398f0022aef12a17fa7d4
FOTA 03.21 A00.01 to 03.25 A00.01 uFOTA ID: 1474	SARA-R500S-61B-00-ES-0321A0001-004K00_SARA-R500S-61B-00-IP-0325A0001-004K00.upd	ca66f2c8f9daf3069ee072bb863c7e90
FOTA test 03.25 to 03.25_ENG0099 uFOTA ID: 1476	SARA-R500S-61B-00-IP-0325A0001-004K00_SARA-R500S-61B-00-XX-0325ENG0099A0001-004K00.upd	e0a55137792ff7ba78a0d0f2e6fcb6b6
FOTA test 03.25_ENG0099 to 03.25 uFOTA ID: 1480	SARA-R500S-61B-00-XX-0325ENG0099A0001-004K00_SARA-R500S-61B-00-IP-0325A0001-004K00.upd	062a7760b5476a92aba6d6db80940808
SARA-R510M8S		
EasyFlash	SARA-R510M8S-61B-00-IP-0325A0001-006K00.dof	edf36445d68e9976b070556f62784b54
FOAT	SARA-R510M8S-61B-00-IP-0325A0001-006K00.upd	6a99418485f9d80c0c36d644e7e0b19c
FOTA 03.21 A00.01 to 03.25 A00.01 uFOTA ID: 1485	SARA-R510M8S-61B-00-ES-0321A0001-006K00_SARA-R510M8S-61B-00-IP-0325A0001-006K00.upd	0c2b7787777b74c4909f1c4a44d4ef09
FOTA test 03.25 to 03.25_ENG0099 uFOTA ID: 1487	SARA-R510M8S-61B-00-IP-0325A0001-006K00_SARA-R510M8S-61B-00-XX-0325ENG0099A0001-006K00.upd	8512136d950b1e2606900369704403e0
FOTA test 03.25_ENG0099 to 03.25	SARA-R510M8S-61B-00-XX-0325ENG0099A0001-006K00_SARA-	bee5abc8370e29e71edce86c68b17761

Product / delivery	Filename	md5sum
uFOTA ID: 1489	`R510M8S-61B-00-IP-0325A0001-006K00.upd`	
SARA-R510S		
EasyFlash	`SARA-R510S-61B-00-IP-0325A0001-005K00.dof`	`9780a99e3fecb9c16b8153fcc1ce2e68`
FOAT	`SARA-R510S-61B-00-IP-0325A0001-005K00.upd`	`3410f5b28e96c1e21b34172045f9f7e5`
FOTA 03.21 A00.01 to 03.25 A00.01 uFOTA ID: 1492	`SARA-R510S-61B-00-ES-0321A0001-005K00_SARA-R510S-61B-00-IP-0325A0001-005K00.upd`	`6d08b915b8bf032245b86d9ff447fec3`
FOTA test 03.25 to 03.25_ENG0099 uFOTA ID: 1494	`SARA-R510S-61B-00-IP-0325A0001-005K00_SARA-R510S-61B-00-XX-0325ENG0099A0001-005K00.upd`	`78c55b9fc614ace587021b9a2076a693`
FOTA test 03.25_ENG0099 to 03.25 uFOTA ID: 1496	`SARA-R510S-61B-00-XX-0325ENG0099A0001-005K00_SARA-R510S-61B-00-IP-0325A0001-005K00.upd`	`35368bece3a841cb4c280910e29274b6`

7 Tools

- m-center v02.05.00 – Download from the u-blox.com website via this page: m-center
- EasyFlash 13.00 – Download from the u-blox.com website via this link: EasyFlash

8 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   Restrictions compared to specifications

A.1   Hardware

None.

A.2   Firmware

None.

B   Known bugs and 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 belong 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.

Security

- [u-blox ID 6488] ZTP certificates cannot be imported during a C2C secure session with +USECMNG AT command.

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.

Mouser Electronics

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