Information note

Topic	**SARA-R500S-01B / SARA-R510S-01B / SARA-R510M8S-01B IP information note**
	UBX-21038301 C1-Public
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Date	22-Dec-2021

1   Affected products

Product name	Ordering code	Type number	Firmware		Remarks
SARA-R500S	SARA-R500S-01B	SARA-R500S-01B-00	Modem: Application:	03.15 A00.01	
SARA-R510S	SARA-R510S-01B	SARA-R510S-01B-00	Modem: Application:	03.15 A00.01	
SARA-R510M8S	SARA-R510M8S-01B	SARA-R510M8S-01B-00	Modem: Application:	03.15 A00.01	

2   Type

☒ Product status change   ☒ Documentation update

☐ Hardware/component change   ☐ Certification information

☒ Firmware/software update   ☐ Security advisory

☐ Label change   ☐ Other

3   Description

Status of the above listed products has changed from Engineering Samples (ES) to Initial Production (IP). For the details of the new features and improvements implemented in the IP 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 5863] DCD is wrongly set to OFF state after sending an SMS during OLCM.
- [u-blox ID 5070] Last gasp's GPIO pin does not match the +ULGASP AT command settings.
- [u-blox ID 6154] Read/Set actions for +USECPRF AT command for PSK-based ticket session resumption are yet to be implemented.
- [u-blox ID 6153] In +USECPRF the URC for PSK-based ticket session resumption to determine if the session resumption has been performed is currently not available.
- [u-blox ID 5570] AS RAI is supported by the module but cannot be enabled and used by internal IP clients.

- [u-blox ID 5815] The module does not complete a network registration if the network does not support attach without PDN and if UE is configured with AT+CIPCA=0,1. In these cases, an attach without PDN shall be manually disabled.
- [u-blox ID 5666] The +USECMNG AT command does not work with a baud rate equal or higher than 460,800 b/s.
- [u-blox ID 6161] The bandmask setting is wrongly applied to the RAT not currently in use.
- [u-blox ID 6050] No SMS is sent when the last gasp is triggered.
- [u-blox ID 4515][SARA-R510M8S] GNSS data ready not working when power saving (+UPSV) is enabled.
- [u-blox ID 5926] The module does not enter deep sleep if Control Plane CIoT EPS optimization is enabled and supported by the network.
- [u-blox ID 5959] AT+CFUN=16 and AT+CPWROFF do not reboot or power off the module when there is an early wake-up with +UPSMVER bit 4 enabled. To properly execute the commands, the AT+CFUN=126 command shall be sent beforehand.

4 Schedule

Samples:	
Estimated first shipment date:	2021 CW52
Documentation (e.g. release note)	Available

5 Customer impact and recommended action

IP firmware version (03.15 A00.01) is required for new devices entering certification labs.

6 Firmware update

SARA-R5 "01B" ES units can be updated to IP firmware (03.15 A00.01) via EasyFlash, FOAT and FOTA.

SARA-R5 "01B" PT 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-01B-00-IP-0315A0001-004K00.dof	7b663a7621937486ee5f5956b62515c3
FOAT	SARA-R510S-01B-00-IP-0315A0001-005K00.upd	98d9c458215c4b5d55637c6c6d76f956
FOTA 03.14 A00.01 to 03.15 A00.01 uFOTA ID: 1353	SARA-R500S-01B-00-ES-0314A0001-004K00_SARA-R500S-01B-00-IP-0315A0001-004K00.upd	5c90f7c99de57016cb76b1b86f556b60
FOTA test 03.15 to 03.15_ENG0099 uFOTA ID: 1354	SARA-R500S-01B-00-IP-0315A0001-004K00_SARA-R500S-01B-00-XX-0315ENG0099A0001-004K00.upd	cf849f61b850b481afd522bd306da5db
FOTA test 03.15_ENG0099 to 03.15 uFOTA ID: 1357	SARA-R500S-01B-00-XX-0315ENG0099A0001-004K00_SARA-R500S-01B-00-IP-0315A0001-004K00.upd	a06dfebcc2201b3843f735ec3001771e

Product / delivery	Filename	md5sum
SARA-R510M8S		
EasyFlash	SARA-R510M8S-01B-00-IP- 0315A0001-006K00.dof	c1ad96c6e0ce501ab93902a328d1c7e3
FOAT	SARA-R510M8S-01B-00-IP- 0315A0001-006K00.upd	42e9c9b85a828e50a053bd03cd60d4e5
FOTA 03.14 A00.01 to 03.15 A00.01 uFOTA ID: 1358	SARA-R510M8S-01B-00-ES- 0314A0001-006K00_SARA-R510M8S- 01B-00-IP-0315A0001-006K00.upd	38919d5a4d01eae30fdf8bce07537130
FOTA test 03.15 to 03.15_ENG0099 uFOTA ID: 1359	SARA-R510M8S-01B-00-IP- 0315A0001-006K00_SARA-R510M8S- 01B-00-XX-0315ENG0099A0001- 006K00.upd	7bcd068654336a6a43d3cd7848bb3a40
FOTA test 03.15_ENG0099 to 03.15 uFOTA ID: 1360	SARA-R510M8S-01B-00-XX- 0315ENG0099A0001-006K00_SARA- R510M8S-01B-00-IP-0315A0001- 006K00.upd	83fc8f44117ffb6c477c5eee801f5b8b
SARA-R510S		
EasyFlash	SARA-R510S-01B-00-IP-0315A0001- 005K00.dof	03d39144733e5cdcebcd6c8dc063f4c4
FOAT	SARA-R510S-01B-00-IP-0315A0001- 005K00.upd	d82e9e3a8ac86bb3d87c7ec0d8a6e35b
FOTA 03.14 A00.01 to 03.15 A00.01 uFOTA ID: 1350	SARA-R510S-01B-00-ES-0314A0001- 005K00_SARA-R510S-01B-00-IP- 0315A0001-005K00.upd	daeb9ff7500cbb74adb5674733b59e4c
FOTA test 03.15 to 03.15_ENG0099 uFOTA ID: 1351	SARA-R510S-01B-00-IP-0315A0001- 005K00_SARA-R510S-01B-00-XX- 0315ENG0099A0001-005K00.upd	a67ad740dcb82509392c89055030f1aa
FOTA test 03.15_ENG0099 to 03.15 uFOTA ID: 1352	SARA-R510S-01B-00-XX- 0315ENG0099A0001-005K00_SARA- R510S-01B-00-IP-0315A0001- 005K00.upd	6a2a4c2d2f0ce17e7e577d3b2485358a

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] SARA-R5 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 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 4237] The response to AT+UMQTT=6 (read all unread MQTT messages) command may be truncated when the content of unread messages is longer than 1 kB. It is suggested to read messages one by one with AT+UMQTTC=6,1.
- [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 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 in case of multiple PLMN with the same operator name. Manual registration (AT+COPS=1) with alphanumeric format is not recommended.

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.

SIM management

- [u-blox ID 1433] The +UUSIMSTAT: 3 URC is not displayed when the PUK is blocked.

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.

Security

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

Others

- [u-blox ID 6821] The +UJAD settings are not stored in NVM when the selected RAT is NB-IoT.
- [u-blox ID 6861] The +UUSTS: 2,2 URC is printed every 2 s once the temperature threshold is reached instead of just once.