Information note

Topic	**SARA-R510AWS-01B initial production**
	UBX-23002330 C1-Public
Author	Harald Kroell
Date	06-Apr-2023

1   Affected products

Product name	Ordering code	Type number	Firmware	Remarks
SARA-R510AWS	SARA-R510AWS-01B	SARA-R510AWS-01B-00	Modem: 83.19 Application: A80.01	

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 Initial Production (IP). The module labels have been updated to include related certification information.

New features and improvements implemented in the IP version as well as known limitations are described in the Appendix.

4   Schedule

Samples:	
Estimated first shipment date:	12-Apr-2023
Documentation (e.g., information note)	Available

5   Certifications

5.1   Certifications achieved

Certification	**SARA-R510AWS**
PTCRB	•
CE Europe	•
UKCA Great Britain	•
FCC United States	•
FCC ID	XPYUBX19KM01

Certification	SARA-R510AWS
ISED Canada	●
ISED certification number	8595A-UBX19KM01
GITEKI Japan	●
[R] Certificate Number	003-230059
[T] Certificate Number	D230029003
AT&T with FirstNet	●
Verizon	●

6   Firmware update

- ES units can be upgraded to the IP firmware by the u-blox EasyFlash tool and FOTA procedures.
- An IP unit cannot be downgraded with the ES firmware.
- It is not possible to upgrade SARA-R510AWS PT units to the IP firmware.

6.1   Firmware update packages and md5 signature

Product / delivery	Filename	md5sum
SARA-R510AWS-01B		
EasyFlash v13.07	`SARA-R510AWS-01B-00-IP-8319A8001-009K00.dof`	`7ee7048c36c2974fdeb27161488d1cfd`
FOTA/FOAT 83.18,A80.01 to 83.19,A80.01 uFOTA ID: 1887	`SARA-R510AWS-01B-00-ES-8318A8001-009K00_SARA-R510AWS-01B-00-IP-8319A8001-009K00.upd`	`31dcdfecea21a8832d1cb8ae10f5fa3a`
FOTA/FOAT 83.19,A80.01 to 83.19_ENG0199A8001 uFOTA ID: 1888	`SARA-R510AWS-01B-00-IP-8319A8001-009K00_SARA-R510AWS-01B-00-XX-8319ENG0199A8001-009K00.upd`	`f826fd48aaa86cc69e2ee83799c694a1`
FOTA/FOAT 83.19_ENG0199A8001 to 83.19,A80.01 uFOTA ID: 1889	`SARA-R510AWS-01B-00-XX-8319ENG0199A8001-009K00_SARA-R510AWS-01B-00-IP-8319A8001-009K00.upd`	`1702442d3df50d2ff603a11b81a06554`

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

7   Tools

- m-center v02.07.00
- EasyFlash 13.07

8   Related documentation

[1]   u-blox SARA-R510AWS series data sheet, UBX-22016999
[2]   u-blox SARA-R5 series system integration manual, UBX-19041356
[3]   AWS IoT ExpressLink Programmer's Guide v1.1, https://docs.aws.amazon.com/iot-expresslink/latest/programmersguide/expresslink-pg.pdf#elpg
[4]   SARA-R510AWS application development guide, UBX-22017004
[5]   AWS IoT ExpressLink examples on GitHub, https://github.com/aws/iot-expresslink

Appendix

A Improvements and added features compared to ES version

Added support for the AT+SLEEP command with duration parameter. Other improvements and fixes include:

- Introduction of diagnostic AT commands (e.g., AT+DIAG CEER)
- Improved error codes for the AT+CONNECT command on 'out-of-coverage' and 'network reject' cases.
- LwM2M disabled for AT&T by default

B Known limitations

The firmware provided on the u-blox SARA-R510AWS module does NOT support all the features of the AWS IoT ExpressLink command set:

- AWS IoT Device Shadow functionality described in the AWS IoT ExpressLink documentation [3] is not supported.
- **CONFMODE** and **OTW** commands are not supported.
- OTA of the module is supported only through u-blox uFOTA, since it must work within the constraints applied by the cellular network operators. Therefore, in case of module OTA, all the OTA commands are not supported except for the **AT+OTA?**
- For the **CONF** command, only the following parameters are supported: **About**, **Version**, **ThingName**, **Certificate**, **Endpoint**, **APN**, **TopicRoot**, **Topic#** (where # can be an integer from 1 to 16, i.e., the maximum number of topics is 16).
- The behavior of the **WAKE** pin described in the AWS IoT ExpressLink documentation [3] is not supported.
- The behavior of the **RST** pin described in the AWS IoT ExpressLink documentation [3] is offered by the **RESET_N** pin of the module.