

Information note

Topic **LARA-R203-03B, LARA-R202-03B, TOBY-R200-03B release to production**

UBX-20027523 C1-Public

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1 Affected products

Product name	Ordering code	Type number	Firmware	Remarks
LARA-R203	LARA-R203-03B	LARA-R203-03B-00	30.55 A01.00	
LARA-R202	LARA-R202-03B	LARA-R202-03B-00	30.55 A01.00	
TOBY-R200	TOBY-R200-03B	TOBY-R200-03B-00	30.55 A01.00	Band configuration as in TOBY-R200-82B <ul style="list-style-type: none">• LTE: 1, 2, 4, 5, 8, 12• 3G: 1, 2, 5, 8• 2G: Quad-band

2 Type

- | | |
|--------------------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> Product status change | <input checked="" type="checkbox"/> Documentation update |
| <input type="checkbox"/> Hardware/component change | <input type="checkbox"/> Certification information |
| <input checked="" type="checkbox"/> Firmware/software update | <input type="checkbox"/> Security advisory |
| <input type="checkbox"/> Label change | <input type="checkbox"/> Other |

3 Description

Various new features and improvements have been implemented in the above listed products compared to previous versions of the products. For details about the changes from the "02B" version of the products, see section 3.1. The above listed products also include improvements released in earlier PCNs, as outlined in Reference documentation (see section 9).

3.1 Firmware changes (as compared to "02B" version)

- LTE bands 1 and 8 are enabled on TOBY-R200-03B.
- [u-blox ID 4988] Usage settings and voice domain preferences are applied to ensure seamless functionality after AT&T 3G sunset (TOBY-R200, LARA-R202, TOBY-R202).
- [u-blox ID 4874] The module boot sector has been modified to minimize the number of flash write/erase operations during the boot phase to improve the module durability.
- [CA-091276 / u-blox ID 4753, 4842] Corrects an issue in which MO VoLTE is not released when network sends the SIP message "403 Forbidden" as reply to "INVITE". The consequences are that it is not possible to release the VoLTE call and user cannot perform other calls. Also, the ring tone is missing during the call, although the called party can hear the ring tone.
- [CA-069324 / u-blox ID 4577] Extension of the HTTP path to 2048 characters.
- [CA-064261 / u-blox ID 2207, 4526] Corrects an improper reset that might occur due to SIB2 information specific to UL bandwidth settings.

- [u-blox ID 4699] OMA-DM client is removed from the application code. No network activity will be started for OMA-DM, not even SMS WAP Push messages will be routed internally. Related AT commands are removed.
- [CA-069535, CA-070126 / u-blox ID 4501] The echo canceller function has been improved by the initialization procedure that is implemented in application part.
- [CA-090695 / u-blox ID 4871] Corrects an issue related to ICMP. The ICMP Time Exceeded - Fragment Reassembly - message is sent by the internal IP stack after the requested 60 s.
- [CA-087643 / u-blox ID-4818] Corrects an issue with +CIND/+UREG AT commands in LTE-only or data-only mode.
- [CA-084363 / u-blox ID 4841] Cipher suites supported:
 - TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256
 - TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384
- [CA-108693 / u-blox ID 5009] If +UPSD PDP type is set to IPv4 only, and IMS or BIP are using a IPv6 socket on a different EPS bearer, the activation of internal TCP/IP via AT+UPSDA=0,3 closes the IPv6 socket causing failures, for example in the following VoLTE call.
- [u-blox ID 4989] Corrects an issue with IPv6 addresses, IPv6 shown in AT interface is Link Local, assigned address is not shown.
- [u-blox ID 5001] Added Telus MNO profile in +UMNOCNF AT command (<MNO>=21).

4 Schedule

Samples:

IP release date:	29-Mar-2021
Estimated first shipment date ¹ :	29-Apr-2021
Documentation (e.g. release note)	Available

5 Certifications

Certification scheme	LARA-R202-03B-00	LARA-R203-03B-00	TOBY-R200-03B-00
PTCRB (PCS Type Certification Review Board)	■	■	■
RED (Europe)			■
FCC (USA)	■	■	■
FCC identification number	XPY1EIQ24NN	XPY1DIQN3NN	XPY1EHM44NN
ISED (Canada)	■	■	■
ISED certification number	8595A-1EIQ24NN	8595A-1DIQN3NN	8595A-1EHM44NN
ANATEL (Brazil)			■
AT&T (US network operator)	■	■	■
T-Mobile (US network operator)	□	□	□
USCC (US network operator)	□	□	□
Rogers (Canada network operator)	□	□	
Telus (Canada network operator)	□	□	□


Note: ■ = certified as voice and data □ = certified as data only

¹ The estimated first shipment date is the forecasted date that a customer may expect to receive a "03B" product version.

6 Customer impact and recommended action

u-blox has taken utmost care to ensure full backward compatibility to the previous versions. Successor versions are pin-to-pin compatible with their predecessors. The firmware changes introduced in the products, compared to previous versions, do not affect module performance.

The new firmware version can be applied to older type numbers as outlined in the table in section 7, migrating the previous versions to the related successor.

-  It is strongly recommended to apply the firmware update to all products in the field to ensure seamless functionality after AT&T 3G sunset.

Certification impact due to migrating from previous versions of the products:

- Mobile network operators:
 - mobile network operators' approvals for predecessors also apply to successor versions.
 - u-blox recommends that integrators having any MNO approvals in place for the host product notify the related mobile network operator of the change in the product.
- Conformance:
 - PTCRB certification available for predecessors is also achieved for successor versions.
 - u-blox recommends that integrators having the PTCRB certification in place for the host product execute the PTCRB certification process due to the change in the product.
- Regulatory:
 - Country regulatory approvals for predecessors remain valid for the successor versions.
 - FCC and IC IDs of previous versions of the products remain unchanged.
 - u-blox recommends that integrators migrating from TOBY-R200-02B product version to TOBY-R200-03B product version check with their preferred certification body the action needed for the RED conformance of the host product, considering LTE bands 1 and 8 are enabled on the TOBY-R200-03B compared to the TOBY-R200-02B.

6.1 Telus MNO configuration

Customers using Telus SIM cards shall disable VoLTE and CSFB with the following AT commands sequence:

Command	Response	Description
AT+CFUN=4	OK	Set the module in airplane mode.
AT+UIMSCFG=0,1,50,0	OK	Disable IMS client.
AT+CEVDP=4	OK	Set UE's voice domain preference to IMS PS voice only.
AT+CFUN=1	OK	Set the module in full mode. Now module has both VoLTE and CSFB disabled

6.2 USCC MNO configuration

Customers using USCC SIM cards, after having configured the USCC MNO profile, shall overwrite the APN used for the initial default bearer with a **blank APN**:

Command	Response	Description
AT+CFUN=4	OK	Set the module in airplane mode.
AT+CGDCONT=1,"IPV4V6","" OK	OK	Define the APN for the initial default bearer by using the correct <PDP_type> and APN value.

Command	Response	Description
AT+CFUN=1	OK	Set the module in full mode. After registration, the network will configure the correct APN (no matter if the cellular module is in home or roaming condition).

7 Firmware update

New firmware can be used to update old type number modules. A list of modules to which firmware update is applicable is specified in the table below. After the module has been updated with the new firmware it will represent itself with the new identification.

Product name	Ordering code	Type number	FW version released earlier	New FW	New Identification
TOBY-R200	TOBY-R200-82B	TOBY-R200-82B-00	30.53 A01.03	30.55 A01.00	TOBY-R200-82B-01
TOBY-R200	TOBY-R200-42B	TOBY-R200-42B-00	30.53 A01.02	30.55 A01.00	TOBY-R200-42B-01
LARA-R202	LARA-R202-02B	LARA-R202-02B-00	30.42 A01.00	30.55 A01.00	LARA-R202-03B-00
LARA-R202	LARA-R202-02B	LARA-R202-02B-01	30.42 A01.01	30.55 A01.00	LARA-R202-03B-00
LARA-R202	LARA-R202-02B	LARA-R202-02B-02	30.42 A01.02	30.55 A01.00	LARA-R202-03B-00
LARA-R202	LARA-R202-02B	LARA-R202-02B-03	30.44 A01.02	30.55 A01.00	LARA-R202-03B-00
LARA-R202	LARA-R202-82B	LARA-R202-82B-00	30.53 A01.03	30.55 A01.00	LARA-R202-03B-00
LARA-R203	LARA-R203-02B	LARA-R203-02B-00	30.39 A01.00	30.55 A01.00	LARA-R203-03B-00
LARA-R203	LARA-R203-02B	LARA-R203-02B-01	30.39 A01.02	30.55 A01.00	LARA-R203-03B-00
LARA-R203	LARA-R203-02B	LARA-R203-02B-02	30.39 A01.03	30.55 A01.00	LARA-R203-03B-00
LARA-R203	LARA-R203-02B	LARA-R203-02B-03	30.41 A01.03	30.55 A01.00	LARA-R203-03B-00
LARA-R203	LARA-R203-02B	LARA-R203-02B-34	30.54 A01.00	30.55 A01.00	LARA-R203-03B-00
TOBY-R200	TOBY-R200-02B	TOBY-R200-02B-00	30.31 A01.01	30.34 A01.00	TOBY-R200-02B-05
TOBY-R200	TOBY-R200-02B	TOBY-R200-02B-01	30.31 A02.00	30.34 A01.00	TOBY-R200-02B-05
TOBY-R200	TOBY-R200-02B	TOBY-R200-02B-02	30.31 A02.01	30.34 A01.00	TOBY-R200-02B-05
TOBY-R200	TOBY-R200-02B	TOBY-R200-02B-03	30.31 A02.02	30.34 A01.00	TOBY-R200-02B-05
TOBY-R200	TOBY-R200-02B	TOBY-R200-02B-04	30.33 A02.02	30.34 A01.00	TOBY-R200-02B-05
TOBY-R202	TOBY-R202-02B	TOBY-R202-02B-00	30.31 A01.01	30.55 A01.00	TOBY-R202-02B-05
TOBY-R202	TOBY-R202-02B	TOBY-R202-02B-01	30.31 A02.00	30.55 A01.00	TOBY-R202-02B-05
TOBY-R202	TOBY-R202-02B	TOBY-R202-02B-02	30.31 A02.01	30.55 A01.00	TOBY-R202-02B-05
TOBY-R202	TOBY-R202-02B	TOBY-R202-02B-03	30.31 A02.02	30.55 A01.00	TOBY-R202-02B-05
TOBY-R202	TOBY-R202-02B	TOBY-R202-02B-04	30.33 A02.02	30.55 A01.00	TOBY-R202-02B-05

Table 1: Products to which firmware packages are applicable.

The product type numbers “02B”, “42B”, “82B” can be updated with new FW as specified in [Table 1](#). After FW update is performed, modules will behave as “03B” product version (improvements and new features introduced in “03B” product version will become available).



The band configuration on TOBY-R200-02B after FW update will remain unchanged (LTE Band 1 and 8 are not enabled after update).

To all customers not upgrading to the latest FW

All customers not using voice services (e.g. using SIM cards not capable of VoLTE) must change the +CEMODE command setting to data centric (+CEMODE: 2) to avoid loss of cellular connectivity when the MNOs dismiss legacy RATs (3G/2G) and CSFB service. They are also invited to disable IMS if not using it (+UIMSCFG....).

All customers using voice services (VoLTE or CSFB, depending on SIM cards and roaming agreements) are invited to change the +CEMODE command setting to data centric (+CEMODE: 2) if they also use cellular connectivity and want to keep it in case speech services are not supported on the current PLMN (i.e. VoLTE services not allowed, CSFB not possible due to lack of legacy RAT).

For all customers

If speech services are of higher priority (e.g. emergency services, alarm panels), then the +CEMODE UE usage setting shall be left to “voice centric”. This is the current setting for global voice profile (+UMNOCNF: 10).

7.1 Firmware update packages and md5 signature

Product/delivery	File name	md5sum
TOBY-R200-82B-01		
EasyFlash	TOBY-R200-82B-01_FW30.55_A01.00_IP.dof	aa0892f1aba9eb548abfddfab005765b
FOAT (+UFWUPD)	TOBY-R200-82B-01_FW30.55_A01.00_IP.fls	672150af65635f1f3b3cf4082adfd1fc
FOTA (+UFWINSTALL)	TOBY-R200-82B-00-IP-3053A0103_TOBY-R200-82B-01-IP-3055A0100.upd	c19b7211737c49c673d83d2f177f316c
FOTA test 30.55 to 99.01	TOBY-R200-82B-01-IP-3055A0100_TOBY-R200-82B-01-EN-3055_ENG0299A0100.upd	effe5b466344109877d8e70b5282d24f
FOTA test 99.01 to 30.55	TOBY-R200-82B-01-EN-3055_ENG0299A0100_TOBY-R200-82B-01-IP-3055A0100.upd	90387053438fd19aa74a38579c17b561
TOBY-R200-42B-01		
EasyFlash	TOBY-R200-42B-01_FW30.55_A01.00_IP.dof	56892b250397ce7ee3516b0312fe1ee5
FOAT (+UFWUPD)	TOBY-R200-42B-01_FW30.55_A01.00_IP.fls	6516e723e3fe3c7039cafb509972362e
FOTA (+UFWINSTALL)	TOBY-R200-42B-00-IP-3053A0102_TOBY-R200-42B-01-IP-3055A0100.upd	04dca68d5fa6d1a23272b75b36d02cb2
FOTA test 30.55 to 99.01	TOBY-R200-42B-01-IP-3055A0100_TOBY-R200-42B-01-EN-3055_ENG0299A0100.upd	5c768309e26ef36f818118f43b03170f
FOTA test 99.01 to 30.55	TOBY-R200-42B-01-EN-3055_ENG0299A0100_TOBY-R200-42B-01-IP-3055A0100.upd	49e864a2f7ad63a2f1bdf59cbadb4f96
LARA-R202-03B-00		
EasyFlash	LARA-R202-03B-00_FW30.55_A01.00_IP.dof	47995e475f8374526ab89ab01f942914
FOAT (+UFWUPD)	LARA-R202-03B-00_FW30.55_A01.00_IP.fls	46340a37d9ac844c085d8f803a205939
FOTA (+UFWINSTALL)	LARA-R202-02B-00-IP-3042A0100_LARA-R202-03B-00-IP-3055A0100.upd	5766ba481fdfc5783b48146f61415bbf
	LARA-R202-02B-01-IP-3042A0101_LARA-R202-03B-00-IP-3055A0100.upd	df32b7ce9191b306a653ad6e0e45ae64

Product/delivery	File name	md5sum
	LARA-R202-02B-02-IP-3042A0102_LARA-R202-03B-00-IP-3055A0100.upd	1e8615374c7dc55f90cc77100ae83c36
	LARA-R202-02B-03-IP-3044A0102_LARA-R202-03B-00-IP-3055A0100.upd	dac7009929f62812bbe9c102e93547b6
	LARA-R202-82B-00-IP-3053A0103_LARA-R202-03B-00-IP-3055A0100.upd	1d3c1cd726329bb4f93d0fd33edceee1
FOTA test 30.55 to 99.01	LARA-R202-03B-00-IP-3055A0100_LARA-R202-03B-00-EN-3055_ENG0299A0100.upd	324f88d33d1531f4c172e054023bd4ec
FOTA test 99.01 to 30.55	LARA-R202-03B-00-EN-3055_ENG0299A0100_LARA-R202-03B-00-IP-3055A0100.upd	b994a47d4571e9f3d21ad2e2a9edd01
LARA-R203-03B-00		
EasyFlash	LARA-R203-03B-00_FW30.55_A01.00_IP.dof	72fb3c938a97779410b8d06437f736b2
FOAT (+UFWUPD)	LARA-R203-03B-00_FW30.55_A01.00_IP.fls	56aa4321277e9fd3feb6376f7963f245
FOTA (+UFWINSTALL)	LARA-R203-02B-00-IP-3039A0100_LARA-R203-03B-00-IP-3055A0100.upd	83ed9f391d95716d59a26d4263ec2f4a
	LARA-R203-02B-01-IP-3039A0102_LARA-R203-03B-00-IP-3055A0100.upd	b2591ab3f8f5bc439fa2031ec44a1567
	LARA-R203-02B-02-IP-3039A0103_LARA-R203-03B-00-IP-3055A0100.upd	022e77a1b67162adbb276b4e373d2a86
	LARA-R203-02B-03-IP-3041A0103_LARA-R203-03B-00-IP-3055A0100.upd	f6dec15d6d2cf327c09b1d81d4265edd
	LARA-R203-02B-34-IP-3054A0100_LARA-R203-03B-00-IP-3055A0100.upd	26fccc1f3bcf7f371f19666e33b056e
FOTA test 30.55 to 99.01	LARA-R203-03B-00-IP-3055A0100_LARA-R203-03B-00-EN-3055_ENG0299A0100.upd	1aa737ce404a7826aedc283eca99241d
FOTA test 99.01 to 30.55	LARA-R203-03B-00-EN-3055_ENG0299A0100_LARA-R203-03B-00-IP-3055A0100.upd	92d77065d44d0c36157f922dc091165b
TOBY-R200-02B-05		
EasyFlash	TOBY-R200-02B-05_FW30.34_A01.00_IP.dof	0852304ae6194110675fc5c6b8016c4f
FOAT (+UFWUPD)	TOBY-R200-02B-05_FW30.34_A01.00_IP.fls	ed45c3b3195793bcb65770ca6c8d729f
FOTA (+UFWINSTALL)	TOBY-R200-02B-00-IP-3031A0101_TOBY-R200-02B-05-IP-3034A0100.upd	127d9c4542a2faf49626e92f6c2df7c3
	TOBY-R200-02B-01-IP-3031A0200_TOBY-R200-02B-05-IP-3034A0100.upd	9ca5d7977553436656878cdaaaea313f
	TOBY-R200-02B-02-IP-3031A0201_TOBY-R200-02B-05-IP-3034A0100.upd	317211cb444e1132ae9bfb8addcdf7e4
	TOBY-R200-02B-03-IP-3031A0202_TOBY-R200-02B-05-IP-3034A0100.upd	1426f20cd4f1bbc948de7bdbdc8d62a1
	TOBY-R200-02B-04-IP-3033A0202_TOBY-R200-02B-05-IP-3034A0100.upd	a4d450196451a8c5d54371bc21f3ba0d
FOTA test 30.34 to 99.01	TOBY-R200-02B-05-IP-3034A0100_TOBY-R200-02B-05-EN-3034_ENG0399A0100.upd	f8aa9f269b282dc68a12a7d1a471eac
FOTA test 99.01 to 30.34	TOBY-R200-02B-05-EN-3034_ENG0399A0100_TOBY-R200-02B-05-IP-3034A0100.upd	41fe5c248233d4fd0863d402efec8553
TOBY-R202-02B-05		

Product/delivery	File name	md5sum
EasyFlash	TOBY-R202-02B-05_FW30.55_A01.00_IP.doF	09b02f9040caf51e7a187f322901de02
FOAT (+UFWUPD)	TOBY-R202-02B-05_FW30.55_A01.00_IP.fls	9c3d615bf886bbd11551adc1a029dfbf
FOTA (+UFWINSTALL)	TOBY-R202-02B-00-IP-3031A0101_TOBY-R202-02B-05-IP-3055A0100.upd	52d1efcf021e144c9aa4920e8b891e10
	TOBY-R202-02B-01-IP-3031A0200_TOBY-R202-02B-05-IP-3055A0100.upd	80f6450d069dda5567dca0bfc3231858
	TOBY-R202-02B-02-IP-3031A0201_TOBY-R202-02B-05-IP-3055A0100.upd	4c48a1ac722545975f42a92cbb989899
	TOBY-R202-02B-03-IP-3031A0202_TOBY-R202-02B-05-IP-3055A0100.upd	8a55a55c3fcaed4c79d18b3783f9268f
	TOBY-R202-02B-04-IP-3033A0202_TOBY-R202-02B-05-IP-3055A0100.upd	c69670f6cac038a272d7e813d4b9e75a
FOTA test 30.55 to 99.01	TOBY-R202-02B-05-IP-3055A0100_TOBY-R202-02B-05-EN-3055_ENG0299A0100.upd	37d1c0d3afcb9914c7fb3edfeba02a47
FOTA test 99.01 to 30.55	TOBY-R202-02B-05-EN-3055_ENG0299A0100_TOBY-R202-02B-05-IP-3055A0100.upd	bcf2d90a8c429605efde9d4a38b1ac97
TOBY-R200-03B-00		
FOTA test 30.55 to 99.01	TOBY-R200-03B-00-IP-3055A0100_TOBY-R200-03B-00-EN-3055_ENG0299A0100.upd	69c01d06cc7e029c6dea3918d0b7a86a
FOTA test 99.01 to 30.55	TOBY-R200-03B-00-EN-3055_ENG0299A0100_TOBY-R200-03B-00-IP-3055A0100.upd	78988c375f073af2666eaf940c5b97fd

8 Tools

- m-center v.02.03.00 – Download from the u-blox.com website via this page: [m-center](#)
- EasyFlash v.12.08 – Download from the u-blox.com website via this link: [EasyFlash 12-08](#)

9 Reference documentation

- [1] u-blox AT commands manual, [UBX-13002752](#)
- [2] u-blox LARA-R2 series data sheet, [UBX-16005783](#)
- [3] u-blox LARA-R2 series system integration manual, [UBX-16010573](#)
- [4] u-blox TOBY-R2 series data sheet, [UBX-16005785](#)
- [5] u-blox TOBY-R2 series system integration manual, [UBX-16010572](#)
- [6] u-blox LARA-R211-02B-03 product change notification, [UBX-20012865](#)