Product change note

Topic | **TOBY/MPCI-L200-03S /L210-03S/L280-03S/L201-02S product change notification**
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1 Affected products

Product name	Ordering code	Old type number	Old FW version	New type number	New FW version
TOBY-L201	TOBY-L201-02S	TOBY-L201-02S-02	20.06 A01.00	TOBY-L201-02S-03	20.06 A01.01
TOBY-L200	TOBY-L200-03S	TOBY-L200-03S-02	17.00 A01.00	TOBY-L200-03S-03	17.00 A01.01
TOBY-L210	TOBY-L210-03S	TOBY-L210-03S-02	17.00 A01.00	TOBY-L210-03S-03	17.00 A01.01
TOBY-L280	TOBY-L280-03S	TOBY-L280-03S-02	17.00 A01.00	TOBY-L280-03S-03	17.00 A01.01
MPCI-L201	MPCI-L201-02S	MPCI-L201-02S-02	20.06 A01.00	MPCI-L201-02S-03	20.06 A01.01
MPCI-L200	MPCI-L200-03S	MPCI-L200-03S-02	17.00 A01.00	MPCI-L200-03S-03	17.00 A01.01
MPCI-L210	MPCI-L210-03S	MPCI-L210-03S-02	17.00 A01.00	MPCI-L210-03S-03	17.00 A01.01
MPCI-L280	MPCI-L280-03S	MPCI-L280-03S-02	17.00 A01.00	MPCI-L280-03S-03	17.00 A01.01

☞ Note: The new FW version can be used to update an old type number (field update)

Table 1: Affected products in production

2 Type

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

☒ Documentation update
☐ Certification information
☐ Security advisory
☐ Other

3 Firmware changes

For quality improvement purposes, we are releasing TOBY-L2 and MPCI-L2 series modules with new firmware.

- [u-blox ID- 3039] Under very rare circumstances, some units may fail to boot. The issue is evident predominantly at high temperatures (i.e., 85 °C) while at lower temperatures normal module behavior is typically restored. The issue has been observed on units belonging to a specific production lot (units produced in 2021).The root cause is related to a mismatch on refresh timing set for the RAM memory and the actual characteristics of specific RAM memory parts themselves. To solve the issue and improve product robustness, the new firmware implements new RAM refresh timing.

4 Schedule

Changes in production will be introduced with immediate effect after the new type number has been released to IP with estimated first shipment date as outlined below:

Samples	Dates
IP release date:	27-Sep-2021
Estimated first shipment date:	27-Oct-2021
Documentation (e.g., release note)	Available

5 Customer impact and recommended action

It is recommended to apply the firmware update to products in the field using units shipped after March 2021.

☞ Modem performance is not affected by updates. There are no changes to interfaces.

The new firmware version can be applied to older type numbers, as outlined in section 6.1.

Unless customer informs u-blox in written by October 1st 2021 u-blox will re-assign all the open orders to the new type number.

Certification impact

Product certification schemes that are in place for the predecessor product type numbers as outlined in TOBY/MPCI-L200-03S/L210-03S/L280-03S PCN [6] and in TOBY/MPCI-L201-02S PCN [7] are in place also for the related successor product type numbers.

- u-blox recommends integrators having any MNO approvals in place for the host product to notify the related Mobile Network Operator of the change in the product
- u-blox recommends integrators having PTCRB certification in place for the host product to execute the PTCRB ECO certification process due to the change in the product
- Country regulatory approvals that are in place for predecessors remain valid for the related successor product type numbers: the change has no impact in the regulatory conformity

6 Firmware update

The new firmware can be used to update old type number modules listed in the table below.

6.1 Affected products no longer in production that can be updated

Product name	Ordering code	Type number	FW version released earlier		New FW
TOBY-L201	TOBY-L201-02S	TOBY-L201-02S-01	20.03 A01.02	20.03 A01.04 20.04 A01.00	20.06 A01.01
TOBY-L200	TOBY-L200-03S	TOBY-L200-03S-01	16.19 A01.02	16.19 A01.04	17.00 A01.01
TOBY-L210	TOBY-L210-03S	TOBY-L210-03S-01	16.19 A01.02	16.19 A01.04	17.00 A01.01
TOBY-L280	TOBY-L280-03S	TOBY-L280-03S-01	16.19 A01.02	16.19 A01.04	17.00 A01.01
MPCI-L201	MPCI-L201-02S	MPCI-L201-02S-01	20.03 A01.02	20.03 A01.04 20.04 A01.00	20.06 A01.01
MPCI-L210	MPCI-L210-03S	MPCI-L210-03S-01		16.19 A01.04	17.00 A01.01

6.2 How to apply new firmware the in field

- Apply the new firmware to modules in the field via FOAT (+UFWUPD AT command) or FOTA (+UFWINSTALL AT command). For more information, see the u-blox AT commands manual [1] and the u-blox cellular modules firmware update application note [5].
- All needed files (*.bin or *.zip) are provided by u-blox together with the md5 to be used in the related AT commands.

☞ Warning for FOTA:

- When using FOTA (+UFWINSTALL) it is important to check the status of the cache partition first. In rare cases this cache partition can become damaged or be removed. This is typically caused by an improper power on/off sequence applied to the module.

Checking status of the cache partition

- If `AT+ULSTFILE=1,"RAMDUMP"` returns a value other than zero, then the update is safe. This indicates there is an intact cache partition, and the firmware update can be performed.
- If `AT+ULSTFILE=1,"RAMDUMP"` returns 0, then the update is not safe. A value of 0 indicates that there is no available memory space in the cache partition (cache partition has been damaged/removed). In this case, please contact u-blox technical support.

7 Tools

- m-center v. 02.04 – 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] u-blox AT commands manual, UBX-13002752
[2] TOBY-L2 series data sheet, UBX-13004573
[3] MPCI-L2 series data sheet, UBX-13004749
[4] TOBY-L2 / MPCI-L2 series system integration manual, UBX-13004618
[5] u-blox firmware update application note, UBX-13001845
[6] TOBY/MPCI-L200-03S/L210-03S/L280-03S firmware update PCN, UBX-20033492
[7] TOBY/MPCI-L201-02S PCN, UBX-20036068