

Information note

Topic **LEXI-R10801D-00B Initial production**
UBXDOC-686885345-2101 C1-Public

Author Marco Zavatta

Date 31-Jul-2024

Copying, reproduction, modification or disclosure to third parties of this document or any part thereof is only permitted with the express written permission of u-blox. The information contained herein is provided "as is" and u-blox assumes no liability for its use. No warranty, either express or implied, is given, including but not limited, with respect to the accuracy, correctness, reliability and fitness for a particular purpose of the information. This document may be revised by u-blox at any time. For most recent documents, visit www.u-blox.com.
Copyright© u-blox AG.

1 Affected products

Product name	Ordering code	Type number	Firmware
LEXI-R10801D	LEXI-R10801D-00B	LEXI-R10801D-00B-00	Modem: 01.05 Application: A00.02
ADP-R10801D	ADP-R10801D-00	ADP-R10801D-00-00	Same as LEXI-R10801D-00B
EVK-R10801D	EVK-R10801D-00	EVK-R10801D-00-00	Same as LEXI-R10801D-00B

2 Type

- | | |
|--|--|
| <input checked="" 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 checked="" type="checkbox"/> Label change | <input type="checkbox"/> Other |

3 Description

Status of the above product 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 sections 3.1, 3.2.

Label updated to include relevant certifications information.

3.1 Hardware changes

No changes from ES.

3.2 Software changes

The following issues have been fixed:

Network services

- [u-blox ID 876]: +UDCONF=81 AT command for LTE authentication disabling is not functional.
- [u-blox ID 1262]: The +CEDRXP URC is not issued when eDRX, previously assigned, is not granted after re-registration or registration failure.
- [u-blox ID 1309]: Paging reception is not working after a AT+COPS=2 / AT+COPS=0 cycle. It is recommended to use AT+CFUN=0 / AT+CFUN=1 cycle instead.
- [u-blox ID 1348]: The +CREG AT command returns registered status even if the network accepts the registration for EPS services only.

- [u-blox ID 1872]: When <mode>=8 and <urc_reporting>=1 (saved in profile), +UCGED? returns <mode>=0 and it is not possible to restore the default mode functionality.
- [u-blox ID 1808]: AT+UFPLMNDEL=1 deletes also FPLMN list on SIM.
- [u-blox ID 1709]: Ping-pong among cells of different bands and priorities may occur.
- [u-blox ID 1565 / 2156]: The context IDs <cid> in the range [12 -15] are accepted but are not actually supported.
- [u-blox ID 2074]: AT+COPS=0,0 returns ERROR. Use AT+COPS=0.

SIM

- [u-blox ID 364]: The BIP client always reserves a separate <cid> even if there was already one available with the same APN and IP type. This might cause BIP failures if the network does not allow multiple PDN connections with the same APN.
- [u-blox ID 1143]: The +CCHO URC misses the string "+CCHO" in the module response +CCHO: <sessionid>.

System functionalities

- [u-blox ID 1980]: Fast power off with GPIO triggered during a file writing can fail to power off the DUT.
- [u-blox ID 1995]: If an access point advertises a 32-character long SSID, the +UWIFISCAN command response might be malformed.
- [u-blox ID 2072]: When updating the module via FOAT, the "+UUFWINSTALL: 128" URC is not issued on the auxiliary UART interface.
- [u-blox ID 2068]: When updating module via FOTA, the "+UUFWINSTALL: 128" URC is not issued on the USB interface.

Local Connectivity

- [u-blox ID 1931]: The +CMUX AT command does not accept all the documented parameters. Only a maximum of 7 parameters are currently accepted.

Power saving

- [u-blox ID 1402]: The module enters Sleep-1 instead of Hibernate at PSM T3324 expiry after early wake-up and MO SMS.

Internet applications

- [u-blox ID 1796]: The +UHTTTPC AT command fails if the length of <path> parameter is greater than 259 characters.
- [u-blox ID 1807/1828]: The +UHTTTPC AT command fails if the length of <filename> parameter is greater than 63 characters.
- [u-blox ID 1874]: The +UHTTTPC AT command fails if a DELETE is performed on a IPV6 connection established using a PDP context other than the default bearer.
- [u-blox ID 2017]: An AoN socket created with a specified local port is closed when the module exits from the deep sleep state. The +UUSOCL URC is sent.
- [u-blox ID 2016]: Data sent on a AoN UDP socket after the wake up from deep sleep are sent using a different local port.
- [u-blox ID 1997]: no URC is printed when session resumption data is stored in the secure profile, so the status of the session resumption data shall be checked with AT+USECPRF=<prof_id>,13,0. If the response is +USECPRF: <prof_id>,13,0,1, the session

resumption feature is enabled but the session data has not been stored yet. If the response is +USECPRF: <prof_id>,13,0,0, the session resumption feature is disabled.

- [u-blox ID 1979]: AoN socket after wake-up are no longer set as AoN and Hibernate / Sleep-2 are inhibited.
- [u-blox ID 1975]: The +UUSORD URC is printed instead of +UUSORF URC if UDP socket is used without +USOCO.
- [u-blox ID 1963]: When using the +USOCR, +USOCO, +USOSEC AT commands in sequence and the secure connection fails, the session is not cleared properly, and this leads to unpredictable behavior.
- [u-blox ID 1954]: The +UDNSCFG AT command does not check the validity of the provided IPv6 server address.
- [u-blox ID 1908]: When using UDP secure sockets (DTLS), only one socket per time can be connected with +USOCO or +USOST.
- [u-blox ID 1904]: The DNS cache details are erased when entering into Sleep-2 or Hibernate deep-sleep modes.
- [u-blox ID 1902]: When trying to establish a secure (TLS) connection with a non-secure (no TLS enabled) server, the functionality of the following operations of the sockets is broken.
- [u-blox ID 1817]: The PKCS#8 with AES encryption is not supported.
- [u-blox ID 2065]: The +USOSEC command timeout may expire and return ERROR while performing a TLS/DTLS handshake connection if the +USOCO command was already issued.

4 Schedule

First production parts will be available in 2024 calendar week 33.

5 Firmware update

Modules with Prototypes or Engineering Samples firmware can be upgraded to Initial Production firmware only via EasyFlash.

5.1 Firmware update packages and md5 signature

Product / delivery	Filename	md5sum
LEXI-R10801D-00B		
EasyFlash	LEXI-R10801D-00B-00-IP-0105A0002-002K01.dof	95fda3380485703c6c0acb403c437b8e
FOAT & FOTA test from 01.05,A00.02 to 01.05,ENG02.99,A00.02	LEXI-R10801D-00B-00-IP-0105A0002-002K01_LEXI-R10801D-00B-00-XX-0105ENG0299A0002-002K01.par	0abc93a6105699c0be2dd84cd6dc3fad
FOAT & FOTA test from 01.05,ENG02.99,A00.02 to 01.05,A00.02	LEXI-R10801D-00B-00-XX-0105ENG0299A0002-002K01_LEXI-R10801D-00B-00-IP-0105A0002-002K01.par	15e1a3cb03ef47665abc39ebc356ac7c

Click to download the EasyFlash .dof images from the table above.

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

For more details of FW update, see the FW update application note [6].

6 Tools

- [u-blox evaluation tool m-center v02.09.00 for Windows](#)
- [u-blox FW flash tool EasyFlash 14.04 for Windows](#)

7 Related documentation

- [1] u-blox LEXI-R10 series AT commands manual, [UBXDOC-686885345-1786](#)
- [2] u-blox LEXI-R10 series data sheet, [UBX-23007594](#)
- [3] u-blox LEXI-R10 series system integration manual, [UBX-23008149](#)
- [4] u-blox LEXI-R10 series application development guide, [UBXDOC-686885345-1983](#)
- [5] u-blox LEXI hardware migration app note, [UBXDOC-686885345-2019](#)
- [6] u-blox LEXI-R10 FW update application note, [UBXDOC-686885345-2005](#)

Appendix

A Known limitations

Network services

- [u-blox ID 561]: Alphanumeric network names are not returned by the +COPS test or read commands. The +COPN AT command is not supported.
- [u-blox ID 1952 / 2055]: The setting of the diagnostic +UCGED AT command is lost when entering Sleep-2 or Hibernate deep-sleep modes.
- [u-blox ID 2292]: The +CCLK time gets shifted by TZ setting.
- [u-blox ID 2362]: Long registration time may occur if the AT+COPS=0 is used transitioning from AT+COPS=1 in roaming. To restore automatic mode after having selected a given PLMN, it is recommended to issue AT+COPS=0 in between a +CFUN=0/1 cycle. In this manner, detach/reattach is performed, but the current RPLMN will be selected.
- [u-blox ID 77_1]: When T3396 starts at failed activation of PDN connection on CID different than 1, activation of PDN connection cannot be retried until the timer has elapsed. Reboot the module to clear the condition.

SIM

- [u-blox ID 2387]: If PPP is used on CID different from attach, BIP close channel causes PPP disconnect, if BIP is also using same PDN. When using PPP on <cid> different from the attach bearer, it is mandatory to send AT+CGACT=1,<cid> before starting the PPP session. In this way when BIP terminates the PPP connection does not drop.

System functionalities

- [u-blox ID 935]: The ATV0 command is not supported.
- [u-blox ID 1859/1912]: Sometimes the +UWIFISCAN AT command with <wifiPriority> set to 0 returns OK without displaying any Wi-Fi networks, if the module is performing data traffic or receives SMSs.
- [u-blox ID 2234]: At MUX clear-down, up to 16 buffered URCs will be sent out on UART after the first AT command.

Local Connectivity

- [u-blox ID 671]: The AT interface over MUX at 115200 bps is not reliable, if PPP is active in parallel with an uplink or downlink communication on another channel.
- [u-blox ID 1693]: Uplink Data loss (contiguous bytes lost, less than 1%) in direct link mode at UART maximum speed (3 Mbit/s).
- [u-blox ID 2044]: When using the direct link in uplink via MUX, data loss can happen with frame size minor than 200 bytes.
- [u-blox ID 2119]: The RING line for URCs or data events is not toggled if MAIN UART data is blocked by Flow Control (RTS OFF). Recommended workaround is to disable the hardware flow control on the AT interfaces that are not in use.
- [u-blox ID 2433, 86_1]: MUX protocol replies with a SABM (0x3F) control byte instead of an UA+F bit (0x73) at a SABM request with DLC address > 0.

Networking

- [u-blox ID 2428]: When bounding RNDIS to a CID and trying to reach with +UPING an IP address that belongs to the same subnet of the UE and Host, the ping does not work.

Internet applications

- [u-blox ID 2243 / 86_1]: The +UPING command may fail due to the wrong name resolution type used. We recommend to resolve the name with +UDNSRN first and then use +UPING with the IP address.
- [u-blox ID 2419 / 78_1]: The first HTTP download may fail if the filesystem is not initialized correctly. We recommend to write a file in filesystem before using HTTP so to initialize it.
- [u-blox ID 2429]: In case USOCL=<id> is issued in out of coverage with data queued for sending, even if the linger time is enabled, the command returns ERROR at 5s timeout: the <id> socket is locally closed, but all socket AT commands will not work and will return ERROR as long as the out of coverage condition persists. AT+CFUN=0/CFUN=1 can be used to clear the error condition. The linger time option is not yet effective in protecting OOC conditions or abnormal cases where e.g. the server does not reply to the FIN packet; given that +USOCL command has a short response time, we suggest to avoid using linger time on this product version and apply the suggested recovery procedure in case of +USOCL timeout.
- [u-blox ID 2408 / 98_1]: If the +UMQTT logout command (AT+UMQTTC=0) is executed in out of coverage condition, the logout URC (+UUMQTTC: 0,1) may be reported after about 2 minutes; during this time any other the +UMQTTC AT command will return "+CME ERROR: 3 (Operation not allowed)". To avoid this behavior configure the linger time to disabled by setting its value to 0 (AT+UMQTT=10,...,0).

B Usage notes

- Every time the module is powered on, it issues the message "^boot.rom'v'\n" on the main UART interface at 115200 bit/s (8-n-1). This message shall be ignored, and the module shall be considered ready to receive AT commands only after the "+UUSTATUS: READY" greeting text (factory-programmed value) is returned.
- To allow the lowest deep-sleep modes disable the SIM PIN.