

BG95M3 Release Notes

LPWA Module Series

Rev. BG95M3_Firmware_Release_Notes_V0204_01.003.01.003

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1 Preamble

This document provides the Release Notes for BG95M3 firmware version: **BG95M3LAR02A04_01.003.01.003**. It describes major changes compared to BG95M3 firmware version **BG95M3LAR02A04_01.002.01.002**. For a detailed listing of all changes, please refer to the BG95 AT Command Set.

Before:

ATI

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BG95-M3

Revision: BG95M3LAR02A04

After:

ATI

Quectel

BG95-M3

Revision: BG95M3LAR02A04

AT+QGMR

BG95M3LAR02A04_01.003.01.003 //Added the new AT to query the full version information

AT+QAPPVER

+QAPPVER: 01.003.01.003 //Added the new AT to query the application version information

2 Matters Needing Attention

SN	Brief Description
[1]	Not support Cat-M1 CE Mode B.

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3 New Features

3.1 New Features of Modem Protocol

Item /Category	Brief description	Since
NETWORK	Added AT+QCFG="apn/display" command.	R02A03_01. 003.01.003
NETWORK	Added AT+VZMTCRAT command for Verizon.	R02A03_01. 003.01.003
NETWORK	Added support for LTE Antenna RF Tuner function.	R02A03_01. 003.01.003
NETWORK	Added AT+QCFG="irat/timer" command.	R02A03_01. 004.01.004
SIM	Added support AT+QCFG="sim/onchip" command.	R02A03_01. 005.01.005
NETWORK	Added AT+QCFG="ta" to support get the TA configuration.	R02A03_01. 006.01.006
JAMMING DETECTION	Added support cellular jamming detection.	R02A03_01. 006.01.006
SIM	Added support AT+QCFG="bip/auth" command.	R02A03_01. 006.01.006
NETWORK	Added support AT+QSPN command.	R02A03_01. 006.01.006
NETWORK	Added command AT+QNWCFG="cqi" to get CATM network band channel CQI.	R02A03_01. 009.01.009
NETWORK	Added command AT+QCFG="timer",3402 for get T3402 configuration.	R02A03_01. 009.01.009
NETWORK	Added command AT+QNWCFG="cfun_init_mode" to configure the CFUN mode when the module power on.	R02A03_01. 009.01.009
NETWORK	Added support 3GPP command AT+CEMODE .	R02A04_01. 002.01.002
NETWORK	Added support command AT+QNWCFG="esmcause" .	R02A04_01. 002.01.002
NETWORK	Added the configuration mode of AT+CEMODE .	R02A04_01. 003.01.003
NETWORK	Added AT+QCFG="timesave" [<mode>] to control whether to save the timestamp information issued by NITZ.	R02A04_01. 003.01.003
NETWORK	Added AT+QSFN to obtain the time aligned to the LTE SFN in span of 0–10240000us.	R02A04_01. 003.01.003

3.2 New Features of Modem APP

Item /Category	Brief description	Since
SMS	Added SMS function support.	R02A02_01. 002.01.002
FILE	Added File function support	R02A02_01. 002.01.002
PPP	Added PPP function support.	R02A02_01. 002.01.002
TCP/UDP	Added TCP&UDP function support.	R02A02_01. 002.01.002
HTTP	Added HTTP function support.	R02A02_01. 002.01.002
HTTPS	Added HTTPS function support.	R02A02_01. 002.01.002
FTP	Added FTP function support.	R02A02_01. 002.01.002
FTPS	Added FTPS function support.	R02A02_01. 002.01.002
MQTT	Added MQTT function support.	R02A02_01. 002.01.002
MQTTS	Added MQTTS function support.	R02A02_01. 002.01.002
SSL	Added SSL/TLS function support.	R02A02_01. 002.01.002
NITZ	Added NITZ function support.	R02A02_01. 002.01.002
PING	Added Ping function support.	R02A02_01. 002.01.002
PSM	Added PSM function support.	R02A02_01. 002.01.002
TCP/IP	Added AT+QICFG="sack" to configure TCP client SACK option.	R02A03_01. 003.01.003
QuecLocator®	Added support QuecLocator.	R02A03_01. 003.01.003
GNSS	Added support AT+QGPSCFG="autogps" command.	R02A03_01. 003.01.003
GNSS	Added support AT+QGPSCFG="nmeasrc" command.	R02A03_01. 003.01.003
GNSS	Added support AT+QGPSCFG="priority" command.	R02A03_01. 003.01.003
FILE	Added support Security folder.	R02A03_01. 003.01.003
DTLS	Added support PSK auth mode.	R02A03_01. 003.01.003

TCP/IP	Added support AT+QGDCNT/AT+QAUGDCNT commands.	R02A03_01.003.01.003
CMUX	Added support CMUX function.	R02A03_01.003.01.003
HTTPS	Added support HTTPS SNI function.	R02A03_01.003.01.003
LwM2M	Added support AT+ODIS for AT&T OMA certification.	R02A03_01.003.01.003
FTM	Added support FTM function.	R02A03_01.003.01.003
GNSS	Added support GNSS GEO fence function.	R02A03_01.003.01.003
DNS	Added support AT+QCFGEXT="dnsc_timeout" to configure the timeout of DNS.	R02A03_01.003.01.003
FILE	Added support open file operations in append mode.	R02A03_01.003.01.003
PSM	Added support exit from PSM with PON_TRIG pin.	R02A03_01.003.01.003
GNSS	Added support GNSS NHz positioning function.	R02A03_01.004.01.004
NIDD	Added support NIDD(Non-IP Data Delivery) function.	R02A03_01.004.01.004
NETWORK	Added AT+QNWCFG="acqdb" to get information about the last time the network was camped.	R02A03_01.004.01.004
SIM	Added AT commands CCHO/CGLA/CCHC support.	R02A03_01.004.01.004
NETWORK	Added AT commands AT+QNWCFG="backoff" and AT+QNWCFG="clearbackoff" to support query and operation on backoff timer.	R02A03_01.004.01.004
GNSS	Added AT command AT+QGPSCFG="xtrafilesize" to support select the XTRA file size as needed.	R02A03_01.004.01.004
GNSS	Added AT+QGPSCFG="gpsdop" to support get the position accuracy data.	R02A03_01.004.01.004
FTM	Added support GSM FTM RX function.	R02A03_01.004.01.004
TCP/IP	Added support IPv6 function.	R02A03_01.004.01.004
PSM	Added AT command AT+QNWCFG="activetimer" to enable module automatically enter into PSM if there is no AT command interaction in the specified time.	R02A03_01.004.01.004
GNSS	Added AT command AT+QGPSXTRATIME to inject time for XTRA.	R02A03_01.004.01.004
GNSS	Added AT command AT+QGPSCFG="xtra_info" to get more details about the XTRA files injected into the module.	R02A03_01.004.01.004
QuecThing®	Added support QuecThing function.	R02A03_01.004.01.004
QuecOpen®	Added QAPI to support SMS related operation.	R02A03_01.005.01.005
QuecOpen®	Added QAPI to support GNSS XTRA related operation.	R02A03_01.005.01.005
QuecLocator®	Added AT+QCELLSCAN to support get the neighbor cell information.	R02A03_01.005.01.005

MQTT	Added AT+QMQTTPUBEX to support publish JSON format data.	R02A03_01. 005.01.005
GENERAL	Added AT+QCFGEXT="pwm" to support PWM related operation.	R02A03_01. 005.01.005
FILE	Added AT+QFCRC/AT+QFCPY commands.	R02A03_01. 006.01.006
DNS	Added AT+QIDNSCFG to support configure module DNS address.	R02A03_01. 006.01.006
GNSS	Added AT+QGPSCFG="nmea_epe" & AT+QGPSCFG="estimation_error" commands.	R02A03_01. 006.01.006
GNSS	Added AT+QGPSCFG="xtra_apn" command.	R02A03_01. 006.01.006
GENERAL	Added support configure debug UART as second AT command port.	R02A03_01. 006.01.006
CoAP	Added support CoAP AT commands.	R02A03_01. 006.01.006
CMUX	Added support AT+QCFG="cmux/flowctrl" to enable/disable flow control in CMUX mode.	R02A03_01. 006.01.006
GNSS	Added AT+QGPSCFG="xtra_download" command to support manual triggering of download XTRA files.	R02A03_01. 006.01.006
NIDD	Added support RAI for NIDD(Non-IP Data Delivery) function.	R02A03_01. 006.01.006
GENERAL	Added Fast powered down function.	R02A03_01. 009.01.009
QuecOpen®	Added QAPI to support SMS list operation.	R02A03_01. 009.01.009
QuecOpen®	Added QAPI to support XTRA operation.	R02A04_01. 001.01.001
QuecOpen®	Added QAPI support to read and write DFOTA file storage partition.	R02A04_01. 001.01.001
QuecOpen®	Added support SPI multi-slaver function.	R02A04_01. 001.01.001
DFOTA	Added support DFOTA download thru FTP(s).	R02A04_01. 002.01.002
DFOTA	Added new command AT+QCFGEXT="SNI" to support configure SNI function during DFOTA HTTP download progress.	R02A04_01. 002.01.002
GENERAL	Added support 2Mbps transfer rate on main UART AT port.	R02A04_01. 002.01.002
MQTT	Added support MQTT-SN topic can be wakeup by PSM.	R02A04_01. 002.01.002
QuecOpen®	Added new QAPI to support configuring whether module automatically downloads XTRA file.	R02A04_01. 002.01.002
SSL	Added support new encryption suites and TLS_PSK_WITH_AES_128_CCM_8(0XC0A8) and TLS_PSK_WITH_AES_128_CBC_SHA256(0X00AE).	R02A04_01. 002.01.002
USB	Added new command AT+QCFGEXT="usbnet" to support configure module support ECM port or the 2 nd USB AT port.	R02A04_01. 002.01.002

SSL	Added cipher suites for DTLS PSK certification: TLS_PSK_WITH_AES_128_CCM_8(0XC0A8) and TLS_PSK_WITH_AES_128_CBC_SHA256(0X00AE)	R02A04_01. 003.01.003
SSL	Added cipher suite TLS-ECDHE-ECDSA-WITH-AES-128-CCM-8(0XC0AE).	R02A04_01. 003.01.003
TCP	Added AT+QICFG="ipv6prior" to configure whether to preferentially activate IPv6 data call in IPv4v6 dual-mode.	R02A04_01. 003.01.003

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4 Improved Features

4.1 Improved Features of Modem Protocol

Item/Category	Brief description	Since
NETWORK	Fixed the bug that incorrect band information returned occasionally while module camping on the network.	R02A03_01.003.01.003
NETWORK	Fixed the bug that incorrect result returned when CEREG=4 mode.	R02A03_01.003.01.003
NETWORK	Optimized AT+QCFG="band"/"nwscanmode"/"iotopmode"/"nwscanseq" commands match different project configurations.	R02A03_01.003.01.003
NETWORK	Optimized that configure eDRX disabled as default.	R02A03_01.003.01.003
NETWORK	Optimized that incorrect RAT description in QENG command.	R02A03_01.003.01.003
NETWORK	Fixed the bug that where AT+COPS? returned the wrong operator name.	R02A03_01.003.01.003
NETWORK	Fixed the bug that AT+QENG="servingcell" returning incorrect RRC status when module is in connection state.	R02A03_01.003.01.003
NETWORK	Optimized that AT+COPS=? only search GSM network when module under GSM network.	R02A03_01.004.01.004
NETWORK	Fixed the bug that AT+CEDRXS=? returned incorrect result.	R02A03_01.004.01.004
SIM	Fixed the bug that AT+QPINC occasionally returned error.	R02A03_01.005.01.005
NETWORK	Optimized that AT command AT+CSCS no longer affects the result of AT+COPS? .	R02A03_01.005.01.005
NETWORK	Fixed the bug that AT+QNWINFO returning incorrect network information.	R02A03_01.005.01.005
NETWORK	Fixed the bug that configure AT+CGREG=4 , the result format reported by URC is incorrect.	R02A03_01.006.01.006
SIM	Optimization that add CR2758392 to fix USCC SIM profile activate failure issue.	R02A03_01.009.01.009
NETWORK	Added CR2748699/CR2761613 to solve the problem of data transmission failure when switching GNSS/LTE.	R02A03_01.009.01.009

NETWORK	Fixed the bug that incorrect network information returned by QNWINFO after module registration with BAND27/B85.	R02A03_01.009.01.009
NETWORK	Fixed the bug that RRC was released but AT+QENG="SERVINGCELL" returned an incorrect RRC status.	R02A03_01.009.01.009
NETWORK	Added CR2761912 to solve CAT-M network 5RB registration issue.	R02A03_01.009.01.009
NETWORK	Fixed the bug that AT+QENG="neighbourcell" always returning error when profile is deactivated by AT+CGATT=0 .	R02A04_01.002.01.002
NETWORK	Added support new RF PA drivers.	R02A04_01.002.01.002
NETWORK	Added support handing reject cause#35 as well as #11.	R02A04_01.002.01.002
SIM	Merged Qualcomm CR#2962986 to fix the bug that time cannot be synced with NITZ.	R02A04_01.002.01.002

4.2 Improved Features of Modem APP

Item/Category	Brief description	Since
FTP	Fixed the bug that FTP connection failed in explicit FTP mode over TLS.	R02A03_01.003.01.003
FTP	Fixed the bug that URC output abnormally after uploading files in implicit FTP mode over TLS.	R02A03_01.003.01.003
GENERAL	Fixed the bug that no URC output after enable the AP READY function by AT+QCFG="apready" command.	R02A03_01.003.01.003
HTTP	Fixed the bug that HTTP get data timeout retry but always return 703 error result.	R02A03_01.003.01.003
GENERAL	Fixed the bug that AT+QCFG="airplanecontrol" configuration but no effect.	R02A03_01.003.01.003
QuecOpen®	Fixed the bug that data is easily lost when being output via UART port quickly.	R02A03_01.003.01.003
FILE	Optimized that report error 405 while deleting a nonexistent file.	R02A03_01.003.01.003
GENERAL	Fixed the bug that PSM_IND pin behave incorrectly in PSM.	R02A03_01.003.01.003
GENERAL	Fixed the bug that power down URC cannot output issue.	R02A03_01.003.01.003
MQTT	Fixed the bug that incomplete data reception after MQTT session recovery was enabled.	R02A03_01.003.01.003

PPP	Fixed the bug that PPP cannot work issue.	R02A03_01. 003.01.003
PSM	Adjust the PSM threshold value to 20 seconds.	R02A03_01. 003.01.003
QPING	Fixed the bug that a memory leak caused by continuous execution of AT+QPING command.	R02A03_01. 003.01.003
GNSS	Fixed the bug that an extra '\0' with NMEA statement output.	R02A03_01. 003.01.003
GENERAL	Optimized that when an abnormal crash is encountered, the default behavior of the optimization module is reset mode.	R02A03_01. 003.01.003
DFOTA	Fixed the but that the parameter " <i>timeout</i> " configuration did not take effect.	R02A03_01. 004.01.004
SSL	Optimized SSL to support a new cipher suite 0XC02B.	R02A03_01. 004.01.004
GNSS	Fixed the bug that negative values in GNSS latitude and longitude results.	R02A03_01. 004.01.004
GNSS	Optimized the AT command AT+QGPSCFG="priority" configuration take effect immediately.	R02A03_01. 004.01.004
TCP/IP	Fixed the bug that module lost the listening mode occasionally after abnormally handshake.	R02A03_01. 004.01.004
GENERAL	Optimized AT+QCFG="band" to support parameter configuration starting with 0x hex string.	R02A03_01. 004.01.004
LwM2M	Fixed the bug that abnormal operation on GPIO26 after enabling LwM2M function.	R02A03_01. 004.01.004
FTM	Fixed the bug that abnormal function of GSM FTM TX.	R02A03_01. 004.01.004
TCP/IP	Fixed the bug that AT+QIRD get incorrect data in TCP buffer data mode.	R02A03_01. 004.01.004
MQTT	Fixed the bug that module lost URC corresponding to QMTOPEN and QMTCLOSE under weak network signal.	R02A03_01. 004.01.004
GENERAL	Optimized GSM RF Antenna tuner function.	R02A03_01. 004.01.004
GENERAL	Fixed the bug that incorrect result reported after enabled AT+QINDCFG="csq",1 .	R02A03_01. 004.01.004
TCP/IP	Fixed the bug that AT+QAUGDCNT returned incorrect result.	R02A03_01. 004.01.004
GNSS	Fixed the bug that returned incorrect timestamp in the GNSS NMEA sentences.	R02A03_01. 004.01.004
PSM	Fixed the bug that where the module could not access PSM properly after the SIM card was unlocked	R02A03_01. 004.01.004
GENERAL	Fixed the bug that still can get the CCID number after unplugging the SIM card.	R02A03_01. 004.01.004
QuecLocator®	Fixed the bug that module crashed occasionally while issue	R02A03_01.

	AT+QLBS under CAT.M network.	004.01.004
GENERAL	Fixed the bug that AT+CPOL command returned incorrect characters.	R02A03_01. 004.01.004
GENERAL	Fixed the bug that AT+COPS? command returned incorrect PLMN.	R02A03_01. 004.01.004
TCP/IP	Fixed the bug that the reported data length is not correct when AT+QICFG="recvind" is enabled.	R02A03_01. 005.01.005
FTP	Fixed the bug that module returned error when using AT+QFTPGET to get files with file names longer than 254 characters.	R02A03_01. 005.01.005
NIDD	Fixed the bug that module occasionally crashed when using AT+QCFGEXT="nipdr" to receive hexadecimal data.	R02A03_01. 005.01.005
FTM	Fixed the bug that Antenna RF tuner doesn't work under GSM RAT.	R02A03_01. 005.01.005
QuecOpen®	Fixed the bug that ADC cannot be closed completely by QAPI.	R02A03_01. 005.01.005
GENERAL	Optimized that unexpected abnormal power consumption during idle mode.	R02A03_01. 005.01.005
GENERAL	Fixed the bug that when the voltage is lower than 3.2V, the voltage percentage queried by the AT+CBC command is always 100%	R02A03_01. 005.01.005
GENERAL	Fixed the bug that module using the AT+QCFG="band" query command returned an incorrect list of GSM bands.	R02A03_01. 005.01.005
GENERAL	Fixed the bug that AT+CPSMS?/AT+QPSMEXTCFG?/AT+QPSMCFG? returned the result which don't match the description in the guidance document.	R02A03_01. 005.01.005
GENERAL	Optimized that change the USB descriptor as Quectel.	R02A03_01. 005.01.005
GENERAL	Fixed the bug that AT+CTZU command probability returned an incorrect time.	R02A03_01. 005.01.005
NIDD	Fixed the bug that unexpected URC reported when disconnect NIDD connection.	R02A03_01. 006.01.006
DFOTA	Fixed the bug that HTTP download under IPV6 network.	R02A03_01. 006.01.006
DFOTA	Optimized to support HTTP URL length to 2048 characters.	R02A03_01. 006.01.006
DFOTA	Fixed the bug that HTTP authentication exception in DFOTA download.	R02A03_01. 006.01.006
DFOTA	Fixed the but that where APN configuration did not take effect using AT+QCFGEXT="fota_apn".	R02A03_01. 006.01.006
UDP	Added AT+QISENDEX command support to configure RAI function.	R02A03_01. 006.01.006
QuecOpen®	Fixed the bug that qapi_time_get returns incorrect time after module had been running for a long time (more than 49.7 days).	R02A03_01. 006.01.006

CMUX	Fixed the bug that module cannot enter into slow clock mode in CMUX mode.	R02A03_01.006.01.006
FTM	Fixed the bug that module cannot switch from GSM TX FTM to LTE TX FTM.	R02A03_01.006.01.006
FTM	Fixed the bug that the first time of FTM RX returns an incorrect value.	R02A03_01.006.01.006
TCP/IP	Fixed the bug that the modem side data service would fail due to the AP side data service.	R02A03_01.006.01.006
CoAP	Fixed the bug that module crashed occasionally with send CON type data.	R02A03_01.009.01.009
DFOTA	Optimized DFOTA package download mechanism to improve download success rate.	R02A03_01.009.01.009
FILE	Fixed the bug that AT+QFCRC/AT+QFCPY did not support file paths prefixed with "UFS:".	R02A03_01.009.01.009
GENERAL	Fixed the bug that AT command combinations using semicolon connections did not execute correctly.	R02A03_01.009.01.009
GENERAL	Fixed the bug that "APP RDY" loss issue.	R02A03_01.009.01.009
GNSS	Fixed the bug that incorrect error code returned by AT+QGPSCFG="estimation_error" when GPS is off.	R02A03_01.009.01.009
GNSS	Fixed the bug that module crashed occasionally when inject XTRA file.	R02A03_01.009.01.009
GNSS	Fixed the bug that module stopped positioning early during GNSS positioning.	R02A03_01.009.01.009
GNSS	Fixed the bug that the GNSS NMEA sentence had only 5 decimal places but should have been 6 decimal places.	R02A03_01.009.01.009
Jamming Detection	Optimized Jamming Detection function under CAT-M network.	R02A03_01.009.01.009
LwM2M	Optimized LwM2M AT commands.	R02A03_01.009.01.009
NETWORK	Fixed the bug that GSM FTM TX continuous mode work abnormally.	R02A03_01.009.01.009
PING	Fixed the bug that URC results were not returned for a period of time after AT+QPING was executed continuously.	R02A03_01.009.01.009
QuecLocator®	Fixed the bug that provided WiFi information but the module was still unable to locate successfully under NBIoT network.	R02A03_01.009.01.009
QuecOpen®	Fixed the bug that QAPI of ATC Pipe send out data was incomplete when it encountered '\0'.	R02A03_01.009.01.009
SSL	Fixed the bug that data loss during SSL retransmission.	R02A03_01.009.01.009
GENERAL	Fixed the bug that AT+CGCONTRDP=? returned incorrect result.	R02A04_01.001.01.001
GENERAL	Optimized that disabled the QXDM log output by default.	R02A04_01.

		001.01.001
CoAP	Fixed the bug that in CoAP over TLS session where TLS context was not properly released.	R02A04_01.002.01.002
DFOTA	Added support user-defined HTTP headers of DFOTA HTTP download.	R02A04_01.002.01.002
DFOTA	Fixed the bug that error 506 would be reported when AT+QFOTADL=1 and the DFOTA package size is 2048 integer multiples +4 bytes.	R02A04_01.002.01.002
DTLS	Fixed the bug that connection cannot be disconnected when issue AT+QSSLCLOSE .	R02A04_01.002.01.002
GENERAL	Merged Qualcomm CR#2968381 to fix the bug that CCLK time not correct after module back from OOS status.	R02A04_01.002.01.002
GENERAL	Optimized that module USB DM port can be loaded automatically if the module enters into crash DUMP mode.	R02A04_01.002.01.002
QuecOpen®	Merged Qualcomm CR#2974502 to fix the bug that incorrect time display after 49.7 days of continuous operation of the device.	R02A04_01.002.01.002
QuecOpen®	Fixed the bug that AP_READY cannot be controlled correctly in QuecOpen application.	R02A04_01.002.01.002
QuecOpen®	Fixed the bug that an error occurred when qapi_QT_Get_File_Hash() conducted MD5 calculation on the file containing null characters.	R02A04_01.003.01.003
COAP	Fixed the bug that the \n contained in the downlink data was automatically converted to \r\n.	R02A04_01.003.01.003
PING	Fixed the bug that the data call established by the specified APN profile cannot be used to send an ICMP request through AT+QPING when LwM2M was running.	R02A04_01.003.01.003
FTP	Fixed the bug that the response error of commands occurred because the server could not recognize the extra spaces when sending FTP PWD and PASV command by executing AT+QFTPPWD and AT+QFTPLIST .	R02A04_01.003.01.003
COAP	Supported CoAP over IPv6.	R02A04_01.003.01.003
ECM	Fixed the bug that data could not be routed and forwarded when ECM was connected under roaming network.	R02A04_01.003.01.003
SSL	Fixed the bug that under SSL multiplexing, if any connection was closed, other connections would be abnormal.	R02A04_01.003.01.003
TCP	Fixed the bug that the module failed to restore data transmission after the network was reconnected after the disconnection.	R02A04_01.003.01.003
DFOTA	Fixed the bug that the imported CA certificate and client certificate could not be deleted in some scenarios of the DFOTA over HTTPS application.	R02A04_01.003.01.003
SIM	Fixed the bug that the SIM card could not be detected after the hot-plug function was enabled.	R02A04_01.003.01.003

SIM	Fixed the bug that it was failed to open channel 02 to get eSIM EID by using AT+CSIM .	R02A04_01. 003.01.003
FTP	Fixed the bug that CME ERROR 603 was not reported by executing AT+QFTPGET for the third time when URC was not reported by executing AT+QFTPGET to transmit the data.	R02A04_01. 003.01.003
QuecLocator®	Fixed the bug of locating exceptions caused by sending invalid cell information when using AT+QLBS to locate.	R02A04_01. 003.01.003
TCP	Fixed the memory leak caused by entering the illegal characters when executing AT+QISENDEX .	R02A04_01. 003.01.003
TCP	Supported the URC +QIURC:"closed" reporting when the server actively disconnected the TCP connection if there was data in the TCP receive buffer under buffer access mode.	R02A04_01. 003.01.003
SSL	Fixed the bug of memory leak caused by abnormal socket state during SSL handshake.	R02A04_01. 003.01.003
DNS	Fixed the bug of no URC report if the failure occurred caused by the network exception when TCPIP application protocol performed DNS parsing.	R02A04_01. 003.01.003

5 Known Issues

NA.

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6 Functions

Basic Function								
SMS	Voice Call	Data Call	Fax	USSD	PHB	STK	CMUX	Dual UART
Y	N	N	N	N	N	N	Y	N
FILE ¹⁾	Triple UART							
Y	N							
Protocol Function								
TCP/UDP	PPP	FTP	HTTP	NITZ	PING	HTTPS	TCP SSL	FTPS ²⁾
Y	Y	Y	Y	Y	Y	Y	Y	Y
MQTT	LwM2M							
Y	Y							
Special Function								
GNSS	DFOTA	PSM	Quec Open®	Quec Locator®	Quec Thing®			
Y	Y	Y	Y	Y	Y			

NOTES

1. Y means the firmware supports this function.
2. N means the firmware does not support this function.
3. ¹⁾ Supports UFS FILE only.