EG91-NA-FB Release Notes

LTE Standard Module Series

Rev. EG91-NA-FB_Firmware_Release_Notes_V0507_30.003.30.003

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1. Preamble

This document provides the Release Notes for EG91-NA-FB firmware version **EG91NAFBR05A07M4G_30.003.30.003**. It describes major changes compared to EG91-NA-FB firmware version **EG91NAFBR05A07M4G_30.002.30.002**.

2. Matters Needing Attention

SN	Brief Description
[1]	To extend the service life of flash, the following operations should be avoided to be performed frequently: powering on/off the module, CFUN switching, SIM card hot swapping, dual-SIM switching, and repeated execution of NVM commands.
[2]	It is not recommended to directly modify the pre-set APN profiles. Please create an APN profile after the existed CID number. Suppose you modify the APN profile of IMS, SOS, etc. with added specific attributes, these attributes are hidden after modification, causing the profile to still be unavailable.
[3]	**AT+QGDCNT=1** and **AT+QPDPGDCNT=1** will write data to the flash. Therefore, please do not execute the AT commands frequently. **AT+QAUGDCNT** is used in conjunction with the above commands to automatically save the packet data counter. 1. If there is no mandatory need, it is not recommended to use these AT commands; 2. The time interval set by the timer needs to be lengthened when you use these AT commands.
[4]	Cross-baseline software version update is not supported. For **EG91NAFBR05A07M4G_30.003.30.003**, "R05" represents the baseline information. This Quectel module does not support updating to a firmware version other than R05. If you have any related requirements, please contact Quectel Technical Support.

3. New Features

Item/Category	Brief description	Since
AUDIO	Added the support of MAX9860 Codec.	R05A07_30 .003.30.003
NETWORK	Relevant technical controls have been carried out to restrict normal network registration in regions such as RUS and IRN, thus ensuring that the module can be used only for civilian applications.	R05A07_30 .003.30.003

NETWORK	Change the roaming state to home service when 313-100 SIM is registered on a 310-410 PLMN.	R05A07_30.003.30.003
NETWORK	Added **AT+QNWCFG="rej_cause_7_mapping"** command to control whether to map the network rejection reason value #7.	R05A07_30.002.30.002
TCP SSL	Enabled client renegotiation on the module through **AT+QSSLCFG="renegotiation"**.	R05A07_30.002.30.002
TCP/UDP	Added the AT command **AT+QCFG="TCP/SendMode"** to configure TCP sending mode.	R05A07_30.002.30.002
UAC	Added the AT command **AT+QAUDCFG="uac_fs"** to configure UAC sampling rate.	R05A07_30.002.30.002
GENERAL	Supported T-Mobile SIM card (311-882).	R05A07_30.002.30.002
GENERAL	Added **AT+QCFG="epcflag"** to set EPC capability value in attach request.	R05A07_30.002.30.002
GENERAL	Updated the list of mbedtls encryption library kit.	R05A07_30.002.30.002
GENERAL	Added **AT+QCFG="airplane"** to configure airplane mode.	R05A07_30.002.30.002
GENERAL	Added AT command **AT+QCFG="fast/poweroff"** to control whether to power off the module quickly.	R05A07_30.002.30.002
GENERAL	Added AT command **AT+QCFG="usbmode"** to get USB mode.	R05A07_30.002.30.002
GENERAL	Supported USCC MBN.	R05A07_30.002.30.002
GENERAL	Added AT command **AT+QCFG="secbootstat"** to get SecBoot status.	R05A07_30.002.30.002
DTMF	Added AT command **AT+QWDTMF** to play DTMF files or send it to Far-end.	R05A07_30.001.30.001
MQTT	Added AT command **AT+QMTCFG="protocol/check"** to configure whether to check MQTT header information.	R05A07_30.001.30.001
GENERAL	Added AT command **AT+QFTPCFG="restenable"** to control whether to enable FTP server to support REST command.	R05A07_30.001.30.001
GENERAL	Supported RDA PA.	R05A07_30.001.30.001
GENERAL	Added AT command **AT+QAPRDYIND** to configure whether to report the specified URC.	R05A07_30.001.30.001
GENERAL	Supported Rogers MBN.	R05A07_30.001.30.001
GENERAL	Added Rogers back-off mechanism for certification.	R05A07_30.001.30.001
GENERAL	Added class 6 APN for Verizon.	R05A07_01.001.01.001
DTMF	Added **AT+QDTMFDETSET** to support configuring/obtaining DTMF DETECTION module parameters in ACDB.	R05A07_01.001.01.001

Voice Call	Added AT command **AT+QCFG="voice_busytone"** to enable/disable busy tone playback for Verizon network.	R05A07_01 .001.01.001
SMS	Supported SMS black and white list.	R05A07_01 .001.01.001
GENERAL	Added AT command **AT+QICFG="recv/buffersize"** to manually configure the threshold of wm_high in socket application layer.	R05A07_01 .001.01.001
SIMCARD	Added AT commands **AT+QSIMWRFREQ** to record the frequency of EF files written to SIM card and **AT+QSIMVOL** to configure SIM card supply voltage.	R05A07_01 .001.01.001
GENERAL	Added AT command **AT+QOPS** to scan full frequency and display a list of network information of all available operators in the current physical location.	R05A07_01 .001.01.001
GENERAL	Enabled DSCI reporting for emergency call without SIM card inserted.	R05A07_01 .001.01.001
FTP	Fixed the problem of FTPS not displaying SSL.	R05A07_01 .001.01.001
GENERAL	Supported SMTP server's analysis of multiple responses.	R05A07_01 .001.01.001
Voice Call	Added AT command **AT+QCFG="call_control"** to control MO or MT of voice call.	R05A07_01 .001.01.001
QuecLocator2.0	Added AT command **AT+QLBSCFG="contextid"** to configure the QuecLocator context ID.	R05A07_01 .001.01.001
FTP	Added commands EPSV/EPRT to match IPv6 FTP.	R05A06_01 .001.01.001
MQTT	Supported publishing up to 10K messages at a time via **AT+QMTPUBEX**.	R05A06_01 .001.01.001
TCP SSL	Added AT command **AT+QSSLRECV** to read the remaining data.	R05A06_01 .001.01.001
AUDIO	Added AT command **AT+QAUDCFG="aig"**.	R05A05_01 .005.01.005
AUDIO	Added ALC5660 codec.	R05A05_01 .005.01.005
GENERAL	Added ADB and UART security features.	R05A05_01 .005.01.005
GENERAL	Added AT command **AT+QCFG="urcdelay"**.	R05A05_01 .005.01.005
GENERAL	Supported AT&T OMA-DM to use the specified APN.	R05A05_01 .005.01.005
QuecLocator 2.0	Added the positioning function of **AT+QLBS**.	R05A05_01 .005.01.005
NETWORK	Added AT command **AT+QNWLOCK="common/lte"**.	R05A05_01 .005.01.005
QuecLocator 2.0	Added AT command **AT+QLBSCFG="latorder"**.	R05A05_01 .005.01.005

SIMCARD	Added AT command **AT+CCHO**, **AT+CCHC** and **AT+CGLA**.	R05A05_01 .005.01.005
TCP SSL	Added command of **AT+QSSLSEND=0** to query the cache status of the **AT+QSSLSEND**.	R05A05_01 .005.01.005
AUDIO	Added UAC function.	R05A05_01 .005.01.005
GENERAL	Added AT command **AT+QODM="hostdevice"**.	R05A05_01 .005.01.005
MQTT	Added AT command **AT+QMTCFG="willex"** to configure will_msg.	R05A04_01 .005.01.005
NETWORK	Added AT command **AT+QCFG="cops_no_mode_change"**.	R05A04_01 .004.01.004
NETWORK	Added AT command **AT+QLTENGBR**.	R05A04_01 .004.01.004
TCP SSL	Added AT command **AT+QSSLCFG="clientkey"**.	R05A04_01 .004.01.004
TCP SSL	Added AT command **AT+QSSLCFG="closetimemode",<ssl_ctx_id>[,<closetime_mode>]**.	R05A04_01 .004.01.004
SMS	Added AT command **AT+QCFG="ltesms/format"**.	R05A04_01 .004.01.004
TCP SSL	Added below AT commands: **AT+QSSLCFG="ignoremulticertchainverify",<ssl_ctx_id>[,<ignore_multicertchain_verify>]** **AT+QSSLCFG="ignoreinvalidcertsign",<ssl_ctx_id>[,<ignore_invalidcertsign>]**	R05A04_01 .004.01.004
GENERAL	Added new number 000 to emergency number list without sim card and added AT command **AT+QECCNUM=4**.	R05A04_01 .004.01.004
NETWORK	Added AT command **AT+QCOPSCFG**.	R05A04_01 .004.01.004
GENERAL	Added AT command **AT+QODM="hostdevice"** for AT&T OMA.	R05A04_01 .004.01.004
GENERAL	Added feature of ECBM for Verizon.	R05A04_01 .004.01.004
GENERAL	Refreshed NV settings for AT&T when inserting SIM card of AT&T.	R05A04
GENERAL	Added AT command **AT+QCFG="dhcppktfltr"**.	R05A04
GENERAL	Added AT command **AT+QNETINFO**.	R05A04

4. Improved Features

Item/Category	Brief description	Since
MQTT	Fixed the problem that the Keepalive PING packet was not sent successfully, which led to the abnormal disconnection of MQTT.	R05A07_30.003.30.003
Voice Call	Fixed the problem that the module may be abnormal due to hanging up the phone.	R05A07_30.003.30.003
GENERAL	Restored **AT+QLWCFG="startup"** to configure the startup mode of LwM2M client.	R05A07_30.003.30.003
GENERAL	1. Fixed the problem that GALILEO satellite could not be obtained in the United States. 2. Fixed the problem that QZSS could not be used for positioning after **AT+QGPSCFG="gnssconfig"** was executed.	R05A07_30.003.30.003
FTP	Optimized the status value of the implicit server Alert.	R05A07_30.002.30.002
HTTP	Fixed the problem that the module was unstable after receiving RST during HTTPS handshake.	R05A07_30.002.30.002
HTTP	Optimized the problem that the error code 702 was reported in a small probability when HTTPS files were uploaded.	R05A07_30.002.30.002
SMTP	Solved the problem of slow sending 10 M files for SMTP.	R05A07_30.002.30.002
GENERAL	Extended **AT+QDAI** command to set number of slots and slot mapping values.	R05A07_30.002.30.002
GENERAL	Set voice centric for Verizon MBN.	R05A07_30.002.30.002
GENERAL	Solved the problem that **AT+ODIS** failed to set.	R05A07_30.002.30.002
GENERAL	Modified the T-Mobile MBN to solve the problem that IPv4 could not be used in T-Mobile network.	R05A07_30.002.30.002
GENERAL	Solved the problem that executing **AT+QISEND** ending with character "\r\n" would cause the server to receive data abnormally.	R05A07_30.002.30.002
GENERAL	Optimized back-off algorithm of Rogers operator.	R05A07_30.002.30.002
GENERAL	Updated some time zones to fix the problem that the time queried by **AT+CCLK?** was wrong after **AT+CTZU=3** was set.	R05A07_30.002.30.002
GENERAL	Solved the problem of invalid value returned by **AT+QCSQ** command caused by the delay in RSSI reporting.	R05A07_30.002.30.002
GENERAL	Optimized **AT+CUSD** command.	R05A07_30.002.30.002
AUDIO	Modified the value returned by **AT+CRSL=?** from (0,5) to (0-7).	R05A07_30.001.30.001
DFOTA	Solved the problem that DFOTA upgrade failed when special	R05A07_30

	characters included in the HTTP URL.	.001.30.001
FTP	Solved the problem of timeout error (error code 609 returned) when executing **AT+QFTPOPEN** to log in to the FTP(S) server.	R05A07_30 .001.30.001
MQTT	Solved the problem that the SFS encrypted certificate failed to establish a two-way authentication connection with the mosquito, FTP or HTTP server.	R05A07_30 .001.30.001
SIMCARD	Solved the problem that the SIM card hot-plug function could not work normally after selecting slot2.	R05A07_30 .001.30.001
TCP SSL	Solved the problem that the SSL server could not be connected normally after setting the SSL version to SSL3.0.	R05A07_30 .001.30.001
TCP SSL	Improved the stability of the module when TCP SSL was multiplexed at the same time.	R05A07_30 .001.30.001
GENERAL	Solved the problem that ACDB files on Modem side could not be obtained by **AT+QACDBLOAD?**.	R05A07_30 .001.30.001
GENERAL	Optimized the ubi read-write partition mounting and exception handling mechanism.	R05A07_30 .001.30.001
GENERAL	Optimized **AT+QPOWD=0** to fast shut down the module.	R05A07_30 .001.30.001
GENERAL	Updated the AT&T MBN version to 202105271 to use the MTU size allocated by the network and change ue_usage_setting to DATA Centric.	R05A07_30 .001.30.001
GENERAL	Updated SE13 TABLE date to 2020/12/21.	R05A07_30 .001.30.001
GENERAL	Solved the problem that the uploaded AT&T APN name of Object 11 instance 0 is null.	R05A07_30 .001.30.001
GENERAL	Modified the configuration of the 2nd profile (IMS) for T-Mobile to change the OVRRIDEHOPDP to IPV6.	R05A07_30 .001.30.001
GENERAL	Disabled fast dormancy for T-Mobile and updated T-Mobile MBN version to 202106241.	R05A07_30 .001.30.001
MQTT	Solved the problem that after setting willmessage with a length of 256 bytes through **AT+QMTCFG="WILLEX"**, willtopic will also be returned after willmessage in URC.	R05A07_01 .001.01.001
NETWORK	Optimized **AT+QCFG="fast_dormancy"** to support fast dormancy mode 3.	R05A07_01 .001.01.001
GENERAL	Modified MultiMBN policy to solve the problem of frequently writing FLASH during MBN activation.	R05A07_01 .001.01.001
HTTP	Solved the problem that the module worked improperly after asking an HTTP request with wrong URL.	R05A07_01 .001.01.001
GENERAL	Solved the problem that the AT port could not work normally after **AT+QRXIIR?** exectuion.	R05A07_01 .001.01.001
GENERAL	Solved the problem of disconnection after USB suspended and then resumed.	R05A07_01 .001.01.001

GENERAL	Updated the cefs version to EG91_NA_V00008_202006171.	R05A07_01 .001.01.001
GENERAL	For non-Chinese operators, turned on AGPS function by default.	R05A07_01 .001.01.001
GENERAL	Solved the problem that data sent and received by the module would lose after the module connected to the DTLS server.	R05A07_01 .001.01.001
GENERAL	Solved the problem that after using **AT+QCFG="usbnet"** to set the usbnet mode to RNDIS, rebooting the module, PC could not connect to the Internet.	R05A07_01 .001.01.001
FTP	Solved the problem that there may be no response or 603 error code reported during FTP download and upload.	R05A07_01 .001.01.001
FTP	Improved FTPS implicit mode compatibility.	R05A07_01 .001.01.001
FTP	Solved the problem that the module may not work normally or error codes 603 or 627 returned when data was downloaded discontinuously through FTP.	R05A07_01 .001.01.001
FTP	Solved the problem that the AT port could not work normally when the FTPS data were obtained under implicit/explicit encryption mode.	R05A07_01 .001.01.001
FTP	Optimized the process of compatibility with various server connections and interactions.	R05A07_01 .001.01.001
GENERAL	Updated the first profile of T-Mobile to support T-Mobile data transmission.	R05A07_01 .001.01.001
TCP/UDP	Solved the problem that the number of actually connected clients did not match the set clients when the module was used as a TCP server.	R05A07_01 .001.01.001
FTP	Solved the problem that the module could not work normally due to uploading a large number of files (10M) to FTP via UFS after the module established a non-authenticated explicit/implicit connection with the FTP server.	R05A07_01 .001.01.001
MQTT	Corrected the response format of **AT+QMTUNS=?** from +QMTSUB to +QMTUNS.	R05A07_01 .001.01.001
FTP	Solved the problem that error code 619 may be returned when PUT file via FTP.	R05A07_01 .001.01.001
GENERAL	Solved the problem that **AT+QEEC?** could not get echo cancellation parameters.	R05A07_01 .001.01.001
GENERAL	Fixed the deadlock occurred when loading/unloading Mac driver.	R05A07_01 .001.01.001
SMS	Not saved WAP PUSH SMS in OMA.	R05A07_01 .001.01.001
GENERAL	Update Verizon MBN version to 201911221.	R05A06_01 .001.01.001
GENERAL	Solved the problem of USB port disconnection due to long time for USB resume.	R05A06_01 .001.01.001
SMS	Supported reading and writing SMS in the case of no SMS storage area in the SIM card.	R05A06_01 .001.01.001

DFOTA	Updated recovery to fix the problem of log being output during FOTA.	R05A06_01 .001.01.001
SIMCARD	Enabled invalid SIM card identification.	R05A06_01 .001.01.001
GENERAL	Updated hVoLTE-Verizon to 0xEE000102.	R05A05_01 .005.01.005
GENERAL	Changed the value of disable_ recovery_ upon_ infinite_ null as 1.	R05A05_01 .005.01.005
GENERAL	Supported to restore configurations of **AT+QECCNUM** to default value automatically if an error about NV value occurred.	R05A05_01 .005.01.005
TCP SSL	Extended the command **AT+QSSLCFG="cacertex"** to add multiple CA certificates.	R05A05_01 .005.01.005
RMNET	Solved the problem that error occurred after executing command **AT$QCRMCALL**.	R05A05_01 .005.01.005
DFOTA	Opened the serial port for URC output at the baud rate that the customer set during the recovery process.	R05A05_01 .005.01.005
DFOTA	Solved the problem that no URC reported about FOTA upgrade.	R05A05_01 .005.01.005
DFOTA	Supported HTTPs protocol download in the process of FOTA upgraded.	R05A05_01 .005.01.005
FTP	Solved the problem that an error would be reported unexpectedly when the FTP transmission was not continuous.	R05A05_01 .005.01.005
FTP	Solved the problem of serial port abnormality while returned ERROR directly after returning CONNECT via commands **AT+QFTPPUT**, **AT+QFTPGET**, **AT+QFTPLIST** and **AT+QFTPNLST** under PORT mode.	R05A05_01 .005.01.005
GENERAL	Solved the problem that no URC for manufacturer command when executed **AT+CMEE=0**.	R05A05_01 .005.01.005
GENERAL	Solved the problem of returned format error when executed AT command **AT+CCLK?**.	R05A05_01 .005.01.005
GENERAL	Solved the problem that when set the parameter of **AT+CTZU** to illegal value 2, it would be set and take effect unexpectedly, not fail.	R05A05_01 .005.01.005
GENERAL	Optimized RF TX under non-signaling mode.	R05A05_01 .005.01.005
GENERAL	Updated Telus-Commercial to 0x05800C60.	R05A05_01 .005.01.005
GENERAL	Solved the problem that quectel-gps-handle process taken too much CPU resource and failed to support USB hot plugging.	R05A05_01 .005.01.005
GENERAL	Updated Roger-Commercial_VoLTE to 0x05800D80	R05A05_01 .005.01.005
GENERAL	Modified the default value of command **AT+QCFG="pdp/duplicatechk"** to be 0.	R05A05_01 .005.01.005
Dual UART	Solved the problem that debug port could not perform AT command when rebooting the module after executing **AT+QDIAGPORT=1**.	R05A05_01 .005.01.005

GENERAL	Optimized UE identity reporting process.	R05A05_01 .005.01.005
GENERAL	Improved the IMEI backup protection mechanism.	R05A05_01 .005.01.005
GENERAL	Solved the problem that **AT+QGPSSUPLCA** testing failed under the mode of MT SMS.	R05A05_01 .005.01.005
GENERAL	Improved the stability of Modem.	R05A05_01 .005.01.005
GENERAL	Removed the default value of appid for Verizon.	R05A05_01 .005.01.005
MMS	Improved module stability when executing **AT+QMMSEDIT=5,1**.	R05A05_01 .005.01.005
MMS	Solved the problem that no error report when the parameter of **AT+QMMSCFG="sendparam"** was missing.	R05A05_01 .005.01.005
MQTT	Solved the problem that the module could not receive more than 1024 bytes of data sent by the MQTT server.	R05A05_01 .005.01.005
MQTT	Corrected the MSG_ID that reported when MQTT sending message timeout.	R05A05_01 .005.01.005
NETWORK	Added cell blacklist function when RRC access failure reached a certain condition.	R05A05_01 .005.01.005
NETWORK	Solved the problem that there was no LTE result when executing **AT+QCOPS=7,0** and **AT+QCOPS=4,0**.	R05A05_01 .005.01.005
NETWORK	Changed the maximum band number that allowed to queried by command **AT+QCOPS**.	R05A05_01 .005.01.005
NETWORK	Expanded AT command **AT+QNETINFO** to query system frame number and subframe number.	R05A05_01 .005.01.005
NETWORK	Improved the stability when executing **AT+QNETINFO=2,2** or **AT+QNETINFO=2,f** with unstable network.	R05A05_01 .005.01.005
GENERAL	Solved the problem that AT&T OMADM could not connect DM server caused by a failure of SSL handshake.	R05A05_01 .005.01.005
GENERAL	Disabled URC auto report features for AT&T OMA by default.	R05A05_01 .005.01.005
QMI	Optimized QMI process to avoid stuck QMI message rarely.	R05A05_01 .005.01.005
TCP SSL	Modified the domain name length of **AT+QSSLOPEN** from 39 bytes to 255 bytes.	R05A05_01 .005.01.005
HTTP	Solved the problem of returning +CME ERROR: 702 when executing AT commands **AT+QHTTPPOST** and **AT+QHTTPPUT**.	R05A05_01 .005.01.005
TCP/UDP	Optimized the module stability when receiving more than 751 bytes under TCP hex mode.	R05A05_01 .005.01.005
TCP/UDP	Optimized the process when sending UDP data on different destination port.	R05A05_01 .005.01.005
TCP/UDP	Solved the problem that if TCP half-closed, error returned when executing **AT+QISEND=0,0**.	R05A05_01 .005.01.005

TCP/UDP	Solved the problem of URC reporting error when UDP server connected to multiple clients.	R05A05_01 .005.01.005
TCP/UDP	Supported to report the data length within TCPIP URC reported.	R05A05_01 .005.01.005
TCP/UDP	Solved the problem that when multiple TCP connection was established, it was abnormally to loop QIRD quickly.	R05A05_01 .005.01.005
GENERAL	Solved the problem that AT side could not enter into Sleep mode after executing **AT+QGPSEND** to disable GPS.	R05A05_01 .005.01.005
NETWORK	Solved the problem that network status light was not working properly.	R05A05_01 .005.01.005
AUDIO	Solved the issue that audio settings did not take effect.	R05A04_01 .005.01.005
GENERAL	Solved the issue that no URC reported for manufacturer command when executed **AT+CMEE=0**.	R05A04_01 .005.01.005
AUDIO	Solved the issue of one parameter was missing when queried via AT command **AT+QDAI=?**.	R05A04_01 .005.01.005
NTP	Solved the problem of one more blank space returning when queried default value via **AT+QCFG="NTP"**.	R05A04_01 .005.01.005
GENERAL	Disabled AT command **AT+QODM="hostdevice",0** for AT&T.	R05A04_01 .005.01.005
MQTT	Fixed stuck issue when sending/receiving MQTT data in weak signal.	R05A04_01 .004.01.004
NETWORK	Optimized **AT+QCOPS** to speed up the execution of this command.	R05A04_01 .004.01.004
NETWORK	Added cell blacklist function when RRC access failure reached a certain condition.	R05A04_01 .004.01.004
NETWORK	Extended AT command **AT+QCOPS** to display multiple band points of a single LTE band in the response result.	R05A04_01 .004.01.004
GENERAL	Solved the issue that no response returned for manufacturer command when executed **AT+CMEE=0**.	R05A04_01 .004.01.004
NETWORK	Fixed stuck issue when APN settings was set for thousands of times without stopping.	R05A04_01 .004.01.004
GENERAL	Fixed the following issues that FTM RX value was incorrect for the first time and the RX value was always 0 when entered or exited the factory mode.	R05A04_01 .004.01.004
TCP SSL	Fixed the issue that qsslsend&qisend still received data when socket was closed which could cause memory run out.	R05A04_01 .004.01.004
MQTT	Fixed the issue that the module would be stuck when AT command **AT+QMTPUBEX** sent data under the weak signal.	R05A04_01 .004.01.004
NETWORK	Fixed the issue that when TCP/UDP connected, the module would run out of memory when under weak signal.	R05A04_01 .004.01.004
MQTT	Fixed the issue that when MQTT connection was established in the SSL mode, if the data delivered by the subscribed topic longer than 1024 bytes, the module could not report data.	R05A04_01 .004.01.004

NETWORK	Fixed the issue when switching **AT+COPS=2** to **AT+COPS=0** or **AT+COPS=1** would cause the module unable to register the network before IMSI was ready.	R05A04_01.004.01.004
NETWORK	Fixed the problem that no service got from CEREG/CGREG/CREG while module was actually registering network after executing **AT+COPS=2** and **AT+COPS=1,2,"plmn"**.	R05A04_01.004.01.004
TCP SSL	Modified SSL to support TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384.	R05A04_01.004.01.004
NETWORK	Optimized AT command **AT+QCOPS** to restore band capability after executing this command.	R05A04_01.004.01.004
NETWORK	Optimized AT command **AT+QCOPS** to show more LTE cells.	R05A04_01.004.01.004
NETWORK	Optimized AT command **AT+QCOPS** to solved issue that executing **AT+COPS=0** would cause PPP disconnection.	R05A04_01.004.01.004
GENERAL	Optimized AT command **AT+QDSIM** that card slot was 1 under boot Initialization when this command set to an illegal value.	R05A04_01.004.01.004
TCP/UDP	Optimized AT command **AT+QISTATE** and **AT+QIACT?** to display IPV6 address.	R05A04_01.004.01.004
MQTT	Optimized AT command could subscribe to five topics at the same time at most.	R05A04_01.004.01.004
NTP/MQTT/FTP	Optimized NTP/MQTT/FTP to support IPV6 connection.	R05A04_01.004.01.004
GENERAL	Optimized USB enumeration logic.	R05A04_01.004.01.004
HTTP	Optimized AT command **AT+QHTTPSTOP** to solve blocked issue.	R05A04_01.004.01.004
TCP/UDP	Solved the issue that AT command **AT+QICLOSE** returned for long time when the TCP server return (FIN, ACK) at the same time.	R05A04_01.004.01.004
NETWORK	Solved the issue that scanning flag was not cleared when executing **AT+QCOPS** returned error.	R05A04_01.004.01.004
TCP/UDP	Solved the problem that after the TCP connection successfully established, immediately established the connection with the same parameters again would cause a dump.	R05A04_01.004.01.004
TCP/UDP	Solved the problem that when establishing multiple TCP connection, it would abnormally loop QIRD quickly.	R05A04_01.004.01.004
AUDIO	Supported new codec nauc8810.	R05A04_01.004.01.004
AUDIO	Fixed the issue AUDIO related command couldn't be executed when rebooting without codec.	R05A04_01.004.01.004
SMS	Fixed the issue that when under the VERIZON network, it would fail to used AT command **AT+QCMGS** to send the content with the international number.	R05A04_01.004.01.004
GENERAL	Included Telus MBN.	R05A04_01.004.01.004

GENERAL	Optimized AT command **AT+QODM="dme",2,"ui"** during DFOTA process.	R05A04_01.004.01.004
GENERAL	Optimized file system protection mechanism.	R05A04_01.004.01.004
GENERAL	Optimized the OVRRIDEHOPDP type to null when T-Mobile MBN was activated.	R05A04_01.004.01.004
GENERAL	Changed response format of **AT+CEER** to +CEER: <locationID>,<cause>.	R05A04
GENERAL	Supported to configure numeric and string code by **AT+CEER** Default is numeric.	R05A04
GENERAL	Extended **AT+QCOPS** command to support display LTE cell id.	R05A04
GENERAL	Fixed bug that module will be stuck when neighbor cell list is too much for **AT+QENG="neighbourcell"**.	R05A04
HTTP	Fixed bug that URC of HTTP time out is blocked when socket connection could not be established.	R05A04
HTTP	Changed maximum time out value to 5000ms to close HTTP socket.	R05A04
PPP	Fixed bug that NO CARRIER couldn't be reported in rare cases.	R05A04
GENERAL	Fixed the band to B4 and B13 when inserting SIM card of Verizon.	R05A04

5. Known Issues

Item/Category	Brief Description
/	/

6. Functions

Basic Function								
SMS	Voice Call	Data Call	USSD	PHB	CMUX	FILE[1]	FAX	STK
Y	Y	N	N	Y	Y	Y	N	N

Protocol Function								
QMI	TCP/UDP	PPP	FTP	NITZ	NTP	HTTP	PING	TCP SSL
Y	Y	Y	Y	Y	Y	Y	Y	Y
MQTT	MMS[2]	SMTP	SMTPS	HTTPS				
Y	Y	Y	Y	Y				

Special Function								
SIM Detection	DFOTA	DTMF[3]	Dual UART	TTS	Quec Locator 2.0[4]	DSSS	UAC	LowPower
Y	Y	Y	Y	Y	Y	Y	Y	Y
RMNET	ECM	RNDIS						
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 RAM FILE only.
4. [2] Supports MMS sending only.
5. [3] Supports DTMF decoding only.
6. [4] QuecLocator2.0 is an efficient location technology developed by Quectel, while it's not free, you need pay for it if you would like to use it.
7. Verification Environment is shown below. For more details, please contact Quectel technical support.

For Windows,
USB Driver: Quectel_Windows_USB_Driver(Q)_NDIS_V2.7.1
Qflash Tool: QFlash_V6.5

For Linux,
QFirehose Tool：QFirehose_Linux_Android_V1.4.15

USB Driver: Quectel_Linux_USB_Serial_Option_Driver_V1.0
Quectel-CM Tool: Quectel_QConnectManager_Linux_V1.6.5
QLog Tool: Quectel_QLog_Linux&Android_V1.5.19
QMI_WWAN Driver: Quectel_Linux&Android_QMI_WWAN_Driver_V1.2.2
GobiNet Driver: Quectel_Linux&Android_GobiNet_Driver_V1.6.5