

# **BG96** Release Notes

## **LTE Module Series**

Rev. BG96 Firmware\_Release\_Notes\_V0208.01.009.01.009

Date: 2019-01-29



## 1. Preamble

This document provides the Release Notes for BG96 firmware version: **BG96MAR02A08M1G\_01.009.01.009**. It describes major changes compared to BG96 firmware version **BG96MAR02A08M1G\_01.008.01.008**. For a detailed listing of all changes, please refer to the BG96 AT Command Set.

Before:

**ATI**

**Quectel**

**BG96**

**Revision: BG96MAR02A08M1G**

After:

**ATI**

**Quectel**

**BG96**

**Revision: BG96MAR02A08M1G**

**AT+QGMR**

**BG96MAR02A08M1G\_01.009.01.009** //Added new AT to query the full version information;

**AT+QAPPVER**

**+QAPPVER: 01.009.01.009** //Added new AT to query the application version information;

## 2. New Features

### 2.1 New Features of Modem Protocol

No update.

### 2.2 New Features of Modem APP

Item /Category	Brief description	Since
<b>GENERAL</b>	Added AT Command <b>AT+QGMR</b> to query the full version information, including the protocol version number and application version number of the modem.	R02A08_01.008.01.008
<b>GENERAL</b>	Added AT Command <b>AT+QCFG="airplanecontrol"</b> to enable/disable airplane mode.	R02A08_01.008.01.008

GENERAL	Added AT Command <b>AT+QCFG="gpio"</b> to configure some of the GPIOs.	R02A08_01.008.01.008
LwM2M	Added AT Command <b>AT+QLWM2M="psk"</b> to enable automatic generation of PSK data.	R02A08_01.008.01.008
GENERAL	Added USB suspend function.	R02A08_01.008.01.008
GENERAL	Added AT Command <b>AT+QICFG="recvind"</b> to control whether to append the received data length in the URC.	R02A08_01.008.01.008
GENERAL	Added AT Command <b>AT+QCFG="simeffect"</b> .	R02A08_01.008.01.008
GENERAL	Added AT Command <b>AT+CSIM</b> .	R02A08_01.008.01.008
GENERAL	Added AT Command <b>AT+QAPPVER</b> .	R02A08_01.008.01.008
GENERAL	Added AT Command <b>AT+QCFG="sibinfo"</b> .	R02A08_01.008.01.008
LwM2M	Added support for China Telecom cloud platform access function.	R02A08_01.008.01.008
FILE	Added AT Commands <b>AT+QFCRC/AT+QFCPY</b> .	R02A08_01.008.01.008
GENERAL	Added AT Command <b>AT+QCFG="emmtimer"</b> to query the T3402 and T3412 configuration.	R02A08_01.008.01.008
GENERAL	Added AT Command <b>AT+QCFG="msclass"</b> to configure GPRS/EDGE multi slot.	R02A08_01.008.01.008
GENERAL	Added AT Command <b>AT+QVBATT</b> .	R02A08_01.008.01.008
GENERAL	Added AT Command <b>AT+QRIR</b> .	R02A08_01.008.01.008
GENERAL	Added AT Command <b>AT+QCFG="gpio"</b> .	R02A08_01.008.01.008
GENERAL	Added AT Command <b>AT+QCFGEXT="apn"</b> to set APN for FOTA thread.	R02A08_01.008.01.008
GENERAL	Added AT Command <b>AT+QCPWR</b> .	R02A08_01.008.01.008
QuecLocator	Added support <b>QuecLocator™</b> under GSM and Cat.M1 network.	R02A08_01.008.01.008
GENERAL	Added AT Command <b>AT+QCFGEXT="disusb"</b> to enable/disable USB port function.	R02A08_01.008.01.008
GENERAL	Added URC <b>"APP RDY"</b> to prompt ATFWD command is ready.	R02A08_01.008.01.008
SSL	Add AT Command <b>AT+QSSLCFG="sni"</b> to support SNI feature.	R02A08_01.009.01.009
NETWORK	Added IPV6 features.	R02A08_01.009.01.009
FILE	Added AT command to support access AP file system.	R02A08_01.009.01.009
SSL	Add AT Command <b>AT+QSSLCFG="ignorecertchain"</b> to support ignore verify cert chain.	R02A08_01.009.01.009
NETWORK	Add AT Command <b>AT+QCFG="rrcabort"</b> to terminate RRC connection from UE side.	R02A08_01.009.01.009
QuecOpen	Added QAPI to support getting random number which generated by hardware.	R02A08_01.009.01.009

<b>LwM2M</b>	Add AT Command <b>AT+QLWM2M="carrier_cfg"</b> to access carrier_cfg configure file. & AT+QLWM2M="lwm2m_cfg"	R02A08_01.009.01.009
<b>LwM2M</b>	Add AT Command <b>AT+QLWM2M="lwm2m_cfg"</b> to access lwm2m_cfg configure file.	R02A08_01.009.01.009
<b>MQTT</b>	Add AT Command <b>AT+QMTCFG="recv/mode"</b> to enable or disable the payload length shown in the <b>+QMTRECV</b> .	R02A08_01.009.01.009

### 3. Improved Features

#### 3.1 Improved Features of Modem Protocol

No update.

#### 3.2 Improved Features of Modem APP

Item/Category	Brief description	Since
<b>MQTT</b>	Optimized <b>AT+QMTPUB</b> to enable the specifying of load length.	R02A08_01.008.01.008
<b>GENERAL</b>	Fixed the bug that DTR pin is not internal pulled up when module powers on.	R02A08_01.008.01.008
<b>GENERAL</b>	Fixed the bug that DCD pin cannot be controlled by <b>AT&amp;C</b> command.	R02A08_01.008.01.008
<b>MQTT</b>	Fixed the bug that data transmission sometime fails when sending data with a long-time interval.	R02A08_01.008.01.008
<b>GENERAL</b>	Optimized the file system performance.	R02A08_01.008.01.008
<b>GENERAL</b>	Optimized <b>AT+QCFGEXT="nipdr"</b> to support the display of returned data in hexadecimal format.	R02A08_01.008.01.008
<b>GENERAL</b>	Optimized <b>AT+QLWM2M</b> commands.	R02A08_01.008.01.008
<b>GENERAL</b>	Fixed the bug of incorrect format when executing <b>AT+QPSMCFG=?/AT+QPSMEXTCFG=?</b> .	R02A08_01.008.01.008
<b>TCP/IP</b>	Fixed the bug that TCP handshake fails when setting TCP window scale option to 14.	R02A08_01.008.01.008
<b>TCP/IP</b>	Fixed the bug of potential memory leak under TCP connection stress test.	R02A08_01.008.01.008
<b>DFOTA</b>	Optimized FOTA download mechanism.	R02A08_01.008.01.008
<b>GENERAL</b>	Optimized AT Command <b>AT+QCFG="ledmode"</b> to support the adjustment of PWM setting of the NETLIGHT pin.	R02A08_01.008.01.008

<b>LwM2M</b>	Fixed the bug that reporting of firmware version number includes compiling timestamp when client connects to server.	R02A08_01.008.01.008
<b>LwM2M</b>	Fixed the bug that Error#506 is reported when the module starts FOTA progress.	R02A08_01.008.01.008
<b>LwM2M</b>	Added URCs to prompt starting and completion of DFOTA package downloading of In-Band mode.	R02A08_01.008.01.008
<b>LwM2M</b>	Fixed the bug that LwM2M client cannot perform the firmware package downloading when executing motive case#11.01 repeatedly in the case that the server has an invalid/mismatch DFOTA package.	R02A08_01.008.01.008
<b>GENERAL</b>	Fixed the bug that Power-On URC is reported when the module enables the UART hardware FC.	R02A08_01.008.01.008
<b>GNSS</b>	Fixed the bug that the module crashes occasionally when switching on/off GNSS for over 5000 times.	R02A08_01.008.01.008
<b>GENERAL</b>	Optimized AT Command <b>AT+QCSCON</b> .	R02A08_01.008.01.008
<b>FILE</b>	Fixed the bug that cannot use "+++" to exit from data mode when downloading file of over 1MB from the module.	R02A08_01.008.01.008
<b>TCP/IP</b>	Optimized the IPV6 feature.	R02A08_01.008.01.008
<b>PSM</b>	Adjusted the minimum threshold value when entering into PSM.	R02A08_01.008.01.008
<b>SMS</b>	Fixed the bug that the URC "+CMTI: -1" is reported when the module receives WAP message.	R02A08_01.008.01.008
<b>GENERAL</b>	Fixed the bug that <b>AT+CFUN=1,1</b> cannot be executed after setting the module to enter into FTM mode.	R02A08_01.008.01.008
<b>CMUX</b>	Fixed the bug that CMUX work abnormally when setting the CMUX frame size to over 127.	R02A08_01.008.01.008
<b>GENERAL</b>	Optimization for the <b>AT+QFOTADL</b> to support the URL longer than 100 characters, up to 1000 characters.	R02A08_01.009.01.009
<b>GNSS</b>	Optimization for <b>AT+QGPSCFG</b> to support configure the baud rate of the UART NMEA port.	R02A08_01.009.01.009
<b>SMS</b>	Fixed the bug that unexpected URC "+CMTI: -1" reported when module received WAP push type message.	R02A08_01.009.01.009
<b>SMS</b>	Fixed the bug that module cannot receive new message after got a WAP format message.	R02A08_01.009.01.009
<b>FTP</b>	Optimized hostname processing mechanism.	R02A08_01.009.01.009
<b>QuecOpen</b>	Fixed the bug that IIC working abnormal in QuecOpen solution.	R02A08_01.009.01.009
<b>FILE</b>	Fixed the bug that file system abnormal if delete the file which still in downloading.	R02A08_01.009.01.009
<b>FTM</b>	Fixed the bug that <b>AT+QRXFTM</b> returns an abnormal query value.	R02A08_01.009.01.009

<b>LwM2M</b>	Fixed the bug that <b>AT+QLWM2M="device_object"</b> cannot configure correctly occasionally.	R02A08_01.009.01.009
<b>NETWORK</b>	Fixed the bug when change module to another RAT, "No service" returned by <b>AT+QNWINFO</b> occasionally.	R02A08_01.009.01.009
<b>SMS</b>	Fixed the bug that "+CMS ERROR code 500" reported when execute <b>AT+CMGS</b> .	R02A08_01.009.01.009
<b>MQTT</b>	Fixed the bug that result of <b>+QMTRECV</b> will be abnormal when includes '\0' data.	R02A08_01.009.01.009
<b>LwM2M</b>	Fixed the bug that invalid manufacture name reported occasionally when LwM2M client boot up.	R02A08_01.009.01.009
<b>SIM</b>	Fixed the bug that error result reported occasionally when query IMSI number immediately after module power on.	R02A08_01.009.01.009
<b>NETWORK</b>	Fixed the bug when SIM EPLMN is 310170 and the module registered to the network (PLMN is 310410), show that the module is in roaming state.	R02A08_01.009.01.009

## 4. Functions

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

#### NOTES

1. Y means the firmware supports this function.
2. N means the firmware does not support this function.
3. <sup>1)</sup> Supports UFS FILE only.
4. <sup>2)</sup> Supports FTPS-Implicit SSL only.