

BG96 Release Notes

LPWA Module Series

Rev. BG96 Firmware_Release_Notes_V0208.01.012.01.012

Date: 2019-04-01



1. Preamble

This document provides the Release Notes for BG96 firmware version: **BG96MAR02A08M1G_01.012.01.012**. It describes major changes compared to BG96 firmware version **BG96MAR02A08M1G_01.009.01.009**. 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_01.012.01.012 //Added new AT to query the full version information;

AT+QAPPVER

+QAPPVER: 01.012.01.012 //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
GENERAL	Added AT Command AT+QGMR to query the full version information, including the protocol version number and application version number of the modem.	R02A08_01.008.01.008
GENERAL	Added AT Command AT+QCFG="airplanecontrol" to enable/disable airplane mode.	R02A08_01.008.01.008

GENERAL	Added AT Command AT+QCFG="gpio" to configure some of the GPIOs.	R02A08_01.008.01.008
LwM2M	Added AT Command AT+QLWM2M="psk" 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 AT+QICFG="recvind" to control whether to append the received data length in the URC.	R02A08_01.008.01.008
GENERAL	Added AT Command AT+QCFG="simeffect" .	R02A08_01.008.01.008
GENERAL	Added AT Command AT+CSIM .	R02A08_01.008.01.008
GENERAL	Added AT Command AT+QAPPVER .	R02A08_01.008.01.008
GENERAL	Added AT Command AT+QCFG="sibinfo" .	R02A08_01.008.01.008
LwM2M	Added support for China Telecom cloud platform access function.	R02A08_01.008.01.008
FILE	Added AT Commands AT+QFCRC/AT+QFCPY .	R02A08_01.008.01.008
GENERAL	Added AT Command AT+QCFG="emmtimer" to query the T3402 and T3412 configuration.	R02A08_01.008.01.008
GENERAL	Added AT Command AT+QCFG="msclass" to configure GPRS/EDGE multi slot.	R02A08_01.008.01.008
GENERAL	Added AT Command AT+QVBATT .	R02A08_01.008.01.008
GENERAL	Added AT Command AT+QRIR .	R02A08_01.008.01.008
GENERAL	Added AT Command AT+QCFG="gpio" .	R02A08_01.008.01.008
GENERAL	Added AT Command AT+QCFGEXT="apn" to set APN for FOTA thread.	R02A08_01.008.01.008
GENERAL	Added AT Command AT+QCPWR .	R02A08_01.008.01.008
QuecLocator	Added support QuecLocator™ under GSM and Cat.M1 network.	R02A08_01.008.01.008
GENERAL	Added AT Command AT+QCFGEXT="disusb" to enable/disable USB port function.	R02A08_01.008.01.008
GENERAL	Added URC "APP RDY" to prompt ATFW command is ready.	R02A08_01.008.01.008
SSL	Add AT Command AT+QSSLCFG="sni" 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	Added AT Command AT+QSSLCFG="ignorecertchain" to support ignore verify cert chain.	R02A08_01.009.01.009
NETWORK	Added AT Command AT+QCFG="rrcabort" 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

LwM2M	Added AT Command AT+QLWM2M="carrier_cfg" to access carrier_cfg configure file. & AT+QLWM2M="lwm2m_cfg"	R02A08_01.009.01.009
LwM2M	Added AT Command AT+QLWM2M="lwm2m_cfg" to access lwm2m_cfg configure file.	R02A08_01.009.01.009
MQTT	Added AT Command AT+QMTCFG="recv/mode" to enable or disable the payload length shown in the +QMTRECV .	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
MQTT	Optimized AT+QMTPUB to enable the specifying of load length.	R02A08_01.008.01.008
GENERAL	Fixed the bug that DTR pin is not internal pulled up when module powers on.	R02A08_01.008.01.008
GENERAL	Fixed the bug that DCD pin cannot be controlled by AT&C command.	R02A08_01.008.01.008
MQTT	Fixed the bug that data transmission sometime fails when sending data with a long-time interval.	R02A08_01.008.01.008
GENERAL	Optimized the file system performance.	R02A08_01.008.01.008
GENERAL	Optimized AT+QCFGEXT="nipdr" to support the display of returned data in hexadecimal format.	R02A08_01.008.01.008
GENERAL	Optimized AT+QLWM2M commands.	R02A08_01.008.01.008
GENERAL	Fixed the bug of incorrect format when executing AT+QPSMCFG=?/AT+QPSMEXTCFG=? .	R02A08_01.008.01.008
TCP/IP	Fixed the bug that TCP handshake fails when setting TCP window scale option to 14.	R02A08_01.008.01.008
TCP/IP	Fixed the bug of potential memory leak under TCP connection stress test.	R02A08_01.008.01.008
DFOTA	Optimized FOTA download mechanism.	R02A08_01.008.01.008
GENERAL	Optimized AT Command AT+QCFG="ledmode" to support the adjustment of PWM setting of the NETLIGHT pin.	R02A08_01.008.01.008

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

LwM2M	Fixed the bug that AT+QLWM2M="device_object" cannot configure correctly occasionally.	R02A08_01.009.01.009
NETWORK	Fixed the bug when change module to another RAT, "No service" returned by AT+QNWINFO occasionally.	R02A08_01.009.01.009
SMS	Fixed the bug that "+CMS ERROR code 500" reported when execute AT+CMGS .	R02A08_01.009.01.009
MQTT	Fixed the bug that result of +QMTRECV will be abnormal when includes '\0' data.	R02A08_01.009.01.009
LwM2M	Fixed the bug that invalid manufacture name reported occasionally when LwM2M client boot up.	R02A08_01.009.01.009
SIM	Fixed the bug that error result reported occasionally when query IMSI number immediately after module power on.	R02A08_01.009.01.009
NETWORK	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
MQTT	Fixed the bug that module received a large amount of data in GSM mode and could not output to the serial port occasionally.	R02A08_01.012.01.012
MQTT	Optimized QMT PUB which supports up to 4K bytes data input.	R02A08_01.012.01.012
GNSS	Fixed the bug that module cannot output NMEA data to USB NMEA port occasionally.	R02A08_01.012.01.012
GNSS	Fixed the bug that incorrect location status after GNSS lost its location.	R02A08_01.012.01.012
FTM	Fixed the bug that incorrect result returned of QRXFTM when module is tested under Band 13.	R02A08_01.012.01.012
TCP/IP	Optimization for IPV6 support.	R02A08_01.012.01.012
NETWORK	Fixed the bug that there is a redundant parameter returned when configure AT+CEREG=4 .	R02A08_01.012.01.012

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 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								
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. ¹⁾ Supports UFS FILE only.
4. ²⁾ Supports FTPS-Implicit SSL only.