

# BC68 Release Notes

## NB-IoT Module Series

Rev. BC68\_Firmware\_Release\_Notes\_V0107

Date: 2018-08-21



## 1. Preamble

This document provides the Release Notes for BC68 firmware version **BC68JAR01A07**. It describes major changes compared to BC68 firmware version **BC68JAR01A05**. For a detailed listing of all changes, refer to the BC68 AT Command Set.

## 2. New Features

Item /Category	Brief Description	Since
<b>NETWORK</b>	Added the function of In-Band, Guard-band and Stand-alone.	R01A01
<b>NETWORK</b>	Added the function of control plane data.	R01A01
<b>NETWORK</b>	Added the function of paging.	R01A01
<b>DFOTA</b>	Added differential Firmware Upgrade Over-The-Air (DFOTA).	R01A01
<b>NETWORK</b>	Added the function of Cell Reselection.	R01A01
<b>NETWORK</b>	Added the function of Single-tone 3.75KHZ.	R01A01
<b>NETWORK</b>	Added the function of Single-tone 15KHZ.	R01A01
<b>NETWORK</b>	Added the function of Multi-tone.	R01A01
<b>C-DRX</b>	Added the function of C-DRX.	R01A01
<b>NONIP</b>	Added the function of Non-IP.	R01A01
<b>SMS</b>	Added the function of SMS.	R01A01
<b>PSM</b>	Added the function of PSM.	R01A01
<b>eDRX</b>	Added the function of eDRX .	R01A01
<b>GENERAL</b>	Added the function of NETLIGHT, the function is closed by default. Using <b>AT+QLEDMODE=1</b> can open the function.	R01A02
<b>UART</b>	Supported baud rate 230400/460800.	R01A03
<b>TCP</b>	Added the function of TCP data transmission.	R01A03
<b>GENERAL</b>	Added the function of indication to user when UL data send out in air interface.	R01A03
<b>GENERAL</b>	Added the function of BIP.	R01A03
<b>NETWORK</b>	Added the function of background PLMN Search.	R01A03

<b>GENERAL</b>	Added the function of data transmission over IPv6 support.	R01A03
<b>DTLS</b>	Added the function of updating DTLS PSK by remote.	R01A03
<b>DFOTA</b>	Added the function of updating KV by FOTA.	R01A03
<b>CoAP</b>	Added AT commands which are also supported by BC95 ( <b>AT+NMGS/NMGR/NNMI/NSMI/NQMGR/NQMGS/NMSTATUS</b> ).	R01A03
<b>GENERAL</b>	Added the function of show SSB version in response of <b>AT+CGMR</b> .	R01A03
<b>GENERAL</b>	Added <b>AT+CGAUTH</b> command to set APN with user name and password.	R01A05
<b>GENERAL</b>	Added <b>AT+NCSEARFCN</b> command to clear the stored EARFCN.	R01A05
<b>NETWORK</b>	Added <b>AT+CGCONTRDP</b> command to get DNS sever address.	R01A05
<b>NETWORK</b>	Added <b>AT+NIPINFO</b> command to report IP address information.	R01A05
<b>GENERAL</b>	Added <b>AT+NQPODCP</b> command to query the pending originating data list via the control plane.	R01A05
<b>NETWORK</b>	Added <b>AT+NCPCDPR</b> command to configure PDP context dynamic parameter items to read.	R01A05
<b>NETWORK</b>	Added <b>AT+CNMPSD</b> command to indicate that no application on the MT is expected to exchange data.	R01A05
<b>TCP</b>	Added <b>+NSOCLI</b> URC to notify that socket has been closed.	R01A05
<b>GENERAL</b>	Added configure options of <b>AT+NCONFIG</b> command.	R01A05
<b>NETWORK</b>	Added Rel-14 Release Assistant Indication.	R01A05
<b>NETWORK</b>	Supported Rel-13 Multi-PRB.	R01A05
<b>NETWORK</b>	Supported Rel-14 Power Class 14dBm.	R01A05
<b>NETWORK</b>	Supported to send and receive data on Multi-PDN.	R01A05
<b>NETWORK</b>	Provided an interface to handle the timeout of getting IPv6 prefix during attach process, the timer for waiting IPv6 prefix can be set by <b>+NCONFIG:IPV6_GET_PREFIX_TIME</b> .	R01A05
<b>DTLS</b>	Added <b>AT+QRESETDTLS</b> command to set whether the DTLS connection needs to reestablished by the terminal.	R01A05
<b>DTLS</b>	Added <b>AT+QDTLSSTAT</b> command to query DTLS status.	R01A05
<b>GENERAL</b>	Added <b>AT+QDNS</b> command to trigger the DNS domain name resolution.	R01A05
<b>TCP/UDP</b>	Added <b>AT+NSONMI</b> command to set the format of unsolicited message to notify that data has been received on a socket.	R01A07
<b>MQTT</b>	Added AT commands to implement basic MQTT functionality ( <b>AT+QMTCFG/QMTENAUTH/QMTOPEN/QMTCLOSE/QMTCON</b>	R01A07

	N/QMTDISC/QMTSUB/QMTUNS/QMTPUB).	
GENERAL	Added <b>AT+QCHIPINFO</b> command to get chip temperature and voltage of module.	R01A07

### 3. Improved Features

Item /Category	Brief Description	Since
CoAP	Modified the indication for receiving downlink CoAP data, in order to be compatible with the AT command of BC95( <b>+NNMI</b> :<length>,<data>).	R01A03
GENERAL	Optimized the function of NETLIGHT.	R01A03
GENERAL	Optimized the response of the <b>AT+NBAND</b> command.	R01A03
GENERAL	Optimized RF performance.	R01A04
GENERAL	Optimized cell search process under inter frequency network.	R01A05
LwM2M	Changed LwM2M send and receive data to use the socket interface. LwM2M initialization will occupy a socket number.	R01A05
DTLS	Modified <b>AT+QSECSWT</b> command to delete old parameter <renegotiationtime> and add <NAT type>.	R01A05
GENERAL	Added error code: 528(configuration conflicts), 529(FOTA is updating), 530(Not the AT command allocated socket).	R01A05
CoAP	Updated parameters of <b>AT+NMGS</b> and <b>AT+NSMI</b> commands.	R01A05
LwM2M	Added RELEASE_AFTER_REPLY RAI flag for using <b>AT+QLWULDATAEX</b> to send Non-confirmable(NON) messages.	R01A07
SMS	Modified the format of the result returned by the <b>AT+CMGC</b> and <b>AT+CMGS</b> commands.	R01A07
GENERAL	Optimized the power consumption when the UE in IDLE of <b>DRX/eDRX</b> .	R01A07
NITZ	Fixed a problem where the read time is not accurate when the local time zone did not exist.	R01A07
TCP	Optimized the response of URC when UE establish TCP connection with remote server, UE can't notice the connection has been closed when the server close the connection initiative.	R01A07
GENERAL	Modified the result of the <b>AT+NCPDPR=?</b> command.	R01A07
PSM	Optimized the wakeup time from PSM after 1-2 days.	R01A07
GENERAL	Removed SNR limitation of 20dB reported in the log.	R01A07

## 4. Functions

### Basic Function

SMS

Y

### Protocol Function

NITZ	PING	CoAP	NONIP	TCP/UDP <sup>1)</sup>	MQTT <sup>2)</sup>
Y	Y	Y	Y	Y	Y

### Special Function

DFOTA	PSM
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> TCP function supports from R01A03.
4. <sup>2)</sup> MQTT function supports from R01A07.