BC28 Release Notes

NB-IoT Module Series

Rev. BC28_ Firmware_Release_Notes_V0107

Date: 2018-08-23

1. Preamble

This document provides the Release Notes for BC28 firmware version **BC28JAR01A07**. It describes major changes compared to BC28 firmware version **BC28JAR01A05**. For a detailed listing of all changes, refer to the BC28 AT Command Set.

2. New Features

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

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

	N/QMTDISC/QMTSUB/QMTUNS/QMTPUB).	
GENERAL	Added **AT+QCHIPINFO** 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(**+NNMI**:<length>,<data>).	R01A03
GENERAL	Optimized the function of NETLIGHT.	R01A03
GENERAL	Optimized the response of the **AT+NBAND** 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 **AT+QSECSWT** 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 **AT+NMGS** and **AT+NSMI** commands.	R01A05
LwM2M	Added RELEASE_AFTER_REPLY RAI flag for using **AT+QLWULDATAEX** to send Non-confirmable(NON) messages.	R01A07
SMS	Modified the format of the result returned by the **AT+CMGC** and **AT+CMGS** commands.	R01A07
GENERAL	Optimized the power consumption when the UE in IDLE of **DRX/eDRX**.	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 **AT+NCPCDPR=?** 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[1]	MQTT[2]
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. [1] TCP function supports from R01A03.
4. [2] MQTT function supports from R01A07.