

BC66 Release Notes

LPWA Module Series

Rev. BC66-NB_Firmware_Release_Notes_V0107

Date: 2019-06-20

1. Preamble

This document provides the Release Notes for BC66 firmware version **BC66NBR01A07**. It describes major changes compared to firmware version **BC66NBR01A06**. For a detailed listing of all changes, refer to the BC66 AT Command Set.

2. New Features

Item /Category	Brief Description	Since
GENERAL	Added AT+QPOWD command to power off the module.	R01A03
GENERAL	Added AT+QSCLK command to control module sleep mode.	R01A03
GENERAL	Added AT+CBC command to query module supply voltage.	R01A03
NETWORK	Optimized modem performance.	R01A03
NETWORK	Support Full BAND (15 bands).	R01A03
NETWORK	Support Full BAND (16 bands, band 4 is newly added).	R01A06
TCP/IP)	Added data mode for TCP/UDP to transfer data more flexibly.	R01A06
MQTT	Added data mode for MQTT to transfer data more flexibly.	R01A06
LwM2M	Added LwM2M command to support DTLS and Bootstrap. Uplink / downlink method is based on OBJ 19.	R01A06
TCP/IP)	Added AT+QISEND=<connectid>,0 command to query TCP acked and non-acked bytes in total.	R01A06
GENERAL	Support OpenCPU and Standard mode all in one.	R01A06
GENERAL	Added AT+QRELOCK command to release the sleep lock of ATCI layer. The default time is 10s.	R01A06
NETWORK	Added AT+QCFG="epco",<enable/disable> command to configure pco and epco mode.	R01A06
GENERAL	Added AT+QCFG="atlocktime" command to configure the sleep lock duration of AT commands.	R01A07
GENERAL	Added AT+QCFG="dsevent" command to configure the deep sleep indication.	R01A07
GENERAL	Added AT+QCFG="initlocktime" command to configure the sleep duration of module when reboot or wakeup from deep sleep.	R01A07
GENERAL	Added AT+QCFG="ripin" command to configure the initial level for RI pin.	R01A07

GENERAL	Added AT+QCFG="autopdn" command to configure the auto PDN activation enable or disable after reboot.	R01A07
GENERAL	Added AT+QCCLK command for more flexibility time management.	R01A07
NETWORK	Added AT+QENG=2 mode to query the TX/RX total working time.	R01A07
NETWORK	Added operating mode parameter indication of current network when queried by AT+QENG=0 .	R01A07
OpenCPU	Added external watchdog feeding feature which needs GPIO configuration in OpenCPU.	R01A07
OpenCPU	Added the GPIO pins (GPIO0, USB_MODE, GPIO6 ~GPIO8).	R01A07
OpenCPU	Added the GPIO pins (USB_MODE, GPIO1 ~GPIO4) support EINT.	R01A07
OpenCPU	Added QI_UART_GetOption API to query UART parameters.	R01A07
OpenCPU	Added QI_ADC_Read API to single read ADC values.	R01A07
OpenCPU	Added QI_OS_GetTaskTickCount and QI_OS_GetTaskTickCountFromISR for system tick counting.	R01A07
OpenCPU	Added QI_OS_GetCurrenTaskLeftStackSize API for querying remaining stack size for dedicated task.	R01A07
OpenCPU	Added QI_Delay_us API to microsecond delay.	R01A07
OpenCPU	Added QI_Timer_Delete API to delete current timer ID.	R01A07
OpenCPU	Added timer API for microsecond counting.	R01A07
LwM2M	Added buffer mode for Standard LwM2M.	R01A07
LwM2M	Added custom object management for Standard LwM2M.	R01A07
LwM2M	Added AT+QLWSTATUS command to query current LwM2M status.	R01A07
TCP(IP)	Added AT+QIDNSCFG command to configure DNS server.	R01A07
TCP(IP)	Added echo mode configuration option for TCP/UDP message publishing in data mode.	R01A07
MQTT	Added echo mode configuration option for MQTT message publishing in data mode.	R01A07

3. Improved Features

Item/Category	Brief Description	Since
MQTT	Fixed the bug that the module is crash when downlink data length is 1024 bytes and the outputted data format is configured as hex.	R01A06
GENERAL	Change the AT+QBAND? response which is indicated as setting band not operating band.	R01A06
OpenCPU	Unrestricted the time interval limitation of ADC sampling. The minimum time interval can be configured as 10ms.	R01A06
OpenCPU	Modified the implementation of QI_OS_GetMessage for dedicated scenarios – ADC/Normal EINT/Normal TIMER. This function will not return after the callback is called. It will go to the message receive code again internally to fetch the next message.	R01A06
OpenCPU	Fixed the bug that some GPIOs will hop during power on phase.	R01A06
NETWORK	Fixed the bug that SINR value is probability show as invalid value -127 when executing AT+QENG=0 command.	R01A06
GENERAL	Fixed the bug that AT+QSCLK command is returned ERROR when executed in lower case format.	R01A06
NETWORK	Improved the network searching mechanism. Preferred band and preferred frequencies is selected according to the EHPLMN/HPLMN of inserted SIM card.	R01A06
NETWORK	Fixed the bug that low probability crash or hang up when executing AT+COPS and AT+CGATT .	R01A06
LwM2M	Improved the stability of Standard LwM2M and changed some format of AT commands.	R01A07
OpenCPU	Fixed the bug that module probability crash issue when using hardware SPI interface.	R01A07
OpenCPU	Fixed the bug that UART will be stuck when receive 1400 more bytes in one time.	R01A07
OpenCPU	Fixed the bug that UART data is corrupted when using multiple UART ports.	R01A07
OpenCPU	Fixed the bug that the time reading result is wrong when set a time-zone not equal to 32 using QI_SetLocalTime API.	R01A07
NETWORK	Fixed the bug that module low probability stuck when switch CFUN frequently.	R01A07
NETWORK	Fixed the bug that the extended T3412 can not be configured to 320H by AT+CPSMS command.	R01A07
GENERAL	Fixed the bug that module will be waked up by RTC timer if enable when in power down mode.	R01A07
NETWORK	Fixed the bug that module can't enter PSM mode when RRC connection released.	R01A07

GENERAL	Improved the accuracy timing of RTC.	R01A07
TCP(IP)	Fixed the bug that AT+QIDNSGIP command can't show the correct resolved IPV6 address.	R01A07
TCP(IP)	Fixed the bug that data transfer failed when special characters contained in payload via AT+QISEND command.	R01A07
MQTT	Fixed the bug that there is an invalid "00" after +QMTPUB: 0,0,0 when in the mode of qos:0 msgid:0 condition.	R01A07
MQTT	Fixed the bug that URC is not prompted when special characters (+ or #) are included in the payload.	R01A07
MQTT	Fixed the bug that data transfer failed when special characters contained in payload via AT+QMTPUB command.	R01A07
NTP	Fixed the bug that DNS resolution always fail when executing AT+QNTP command.	R01A07
GENERAL	Fixed the bug that module low probability can't enter deep sleep which is caused by GPT timer.	R01A07
GENERAL	Fixed the issue that Minimum Output Power error for category NB1.	R01A07
GENERAL	Fixed the issue that General ON/OFF Time Mask failed for category NB1.	R01A07
GENERAL	Fixed the bug that there is no +CPIN: NOT READY reported when SIM card is not inserted after booting the module.	R01A07
NETWORK	Fixed the bug that +CSCON URC abnormal reporting issue.	R01A07

4. Functions

Basic Function

Protocol Function

TCP/UDP	NITZ	PING	NTP	LwM2M	MQTT
Y	Y	Y	Y	Y	Y

Special Function

DFOTA	PSM	OpenC PU
Y	Y	Y

NOTES

1. Y means the firmware supports this function.
2. N means the firmware does not support this function.