Dragino NBSN50-95 AT Command Sets

Version	Describe	Time
V1.0	Release	2020-Mar-7
V1.1	Update to v110 commands	2020-Dec-23

目录

1 Introduction

This article describes the AT Commands Set used in Dragino NB-IoT products, it covers below products:

- NBSN50-95 NB-IoT I/O Controller

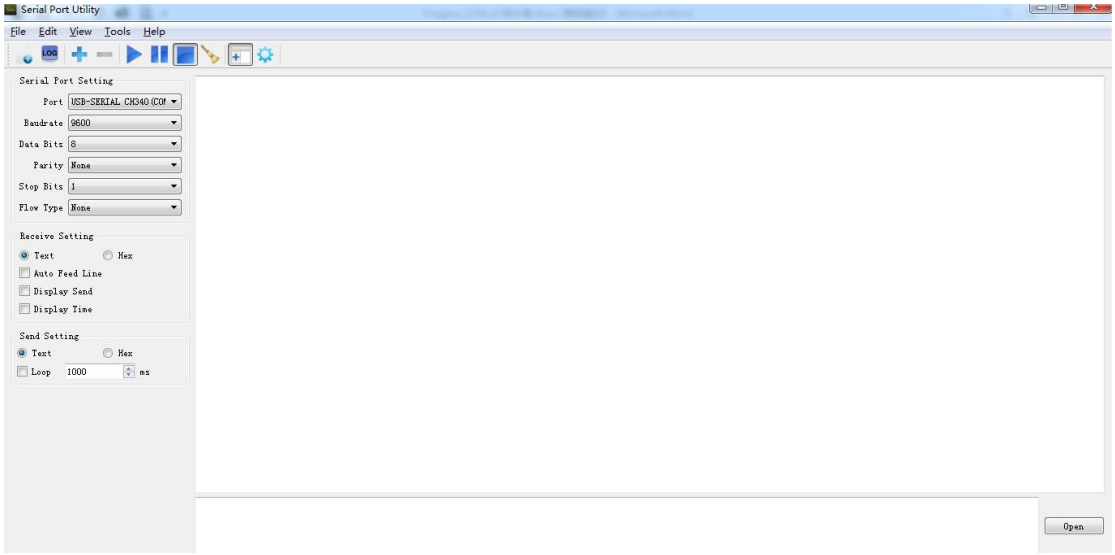
1.1 How to connect device and send AT command?

Software Setting:

An USB-TTL can be used with standard windows software such as Serial Port Utility. The chosen software should be configured with the following parameters:

- Baud rate: 9600
- Data: 8 bit
- Parity: none
- Stop: 1 bit
- Flow type: none

Figure 1 show the standard configuration for Serial Port Utility to use USB-TTL.



All the AT commands have a standard format as "AT+XXX", with XXX denoting the command. There are four available command behaviors:

- **AT+XXX?** provides a short help of the given command, for example **AT?**
- **AT+XXX** is used to run a command, such as **AT+CFG**
- **AT+XXX=?** is used to get the value of a given command, for example **AT+TDC=?**
- **AT+XXX=<value>** is used to provide a value to a command, for example

AT+TDC=600

The output of the commands is provided on the UART. The output format is as below:

<value><CR><LF>

<CR><LF><Status>

Note: <CR> stands for “carriage return” and <LF> stands for “line feed”

The <value><CR><LF> output is returned whenever the “help AT+XXX?” or the “get AT+XXX=?” commands are run.

When no value is returned, the <value><CR><LF> output is not returned at all.

Every command (except for ATZ used for MCU reset) returns a status string, which is preceded and followed by <CR><LF> in a “<CR><LF><Status>” format. The possible status are:

• OK: command run correctly without error.

• AT_ERROR: generic error

• AT_PARAM_ERROR: a parameter of the command is wrong

• AT_TEST_PARAM_OVERFLOW: the parameter is too long

• AT_RX_ERROR: error detection during the reception of the command

More details on each command description and examples are described in the next part of this section. Note that each command preceded by # is the one provided by the host to the module. Then the return of the module is printed.

2 General Command

2.1 AT: Attention

AT: Attention	
Test Command: **AT**	Response: **OK**

2.2 AT?: Short Help

AT?: Short Help	
Test Command: **AT?**	Response: **AT+<CMD>?:help on <CMD>** **AT+<CMD>:run <CMD>** **AT+<CMD>=<value>:set the value** **AT+<CMD>=?:get the value** **<followed by the help of all commands>** **OK**

2.3 ATZ: MCU Reset

ATZ: MCU Reset	
Test Command: **ATZ?**	Response: **ATZ: Trig a reset of the MCU** **OK**
Test Command: **ATZ**	Response: **DRAGINO NBSN50-95 NB-IoT Sensor Node** **Image Version: XX** **NB-IoT Stack : XX** **<followed by the help of all commands>** **Please ENTER Password to active AT Command Line**

2.4 AT+TDC: Application Data Transmission Interval

AT+TDC: Application Data Transmission Interval< The default TDC is 1200 S>	
Test Command: **AT+TDC?**	Response: **AT+TDC: Get or set the application data transmission interval in seconds**

	OK
AT+TDC=?	Response: **600** **OK**
AT+TDC=600	Set TDC to 10 minutes. Response: **OK**

2.5 AT+CFG: Print all configurations

AT+CFG: Print all configurations	
Test Command: **AT+CFG**	Response: **AT+CFGMOD=1** **AT+PWORD=12345678** **AT+SERVADDR=123.57.29.36:5683** **AT+URI=/mqtt/COAPTEXT?c=460043331608879** **AT+TDC=600** **…** **OK**

2.6 AT+CFGMOD: Working mode selection

AT+CFGMOD: Working mode selection	
Test Command: **AT+CFGMOD?**	Response: **Working mode selection** **OK**
Test Command: **AT+CFGMOD=?**	Response: **1** **OK**
Test Command: **AT+CFGMOD=1**	Response: **OK**

2.7 AT+INTMOD:Set the trigger interrupt mode

AT+INMOD:Set the trigger interrupt mode	
Test Command: **AT+INTMOD?**	Response: **Set the trigger interrupt mode** **(0:Disable,1:falling or rising,2:falling,3:rising)** **OK**
Test Command: **AT+INTMOD =?**	Response: **1** **OK**
Test Command: **AT+INTMOD =1**	Response: **OK**

2.8 AT+5VT: Set extend the time of 5V power

AT+5VT: Get or Set extend the time of 5V power	
Test Command: **AT+5VT?**	Response: **Get or Set extend the time of 5V power** **Unit: ms** **OK**
Test Command: **AT+5VT=?**	Response: **1000** **OK**
Test Command: **AT+5VT=1000**	Response: **OK**

2.9 AT+WEIGRE: Get weight or set weight to 0g

AT+ WEIGRE: Set the weight to 0g	
Test Command: **AT+WEIGRE**	Response: **Get weight or set weight to 0g** **OK**
Test Command: **AT+WEIGRE=?**	Response: **963g** **OK**

2.10 AT+WEIGAP: Get or Set the GapValue of weight

AT+WEIGAP: Get or Set the GapValue of weight	
Test Command: **AT+WEIGAP?**	Response: **Get or Set the GapValue of weight** **OK**
Test Command: **AT+WEIGAP=?**	Response: **409.3 g** **OK**
Test Command: **AT+WEIGAP=400.0**	Response: **OK**

2.11 AT+PRO: Choose agreement

AT+PRO: Get or Set usage agreement	
Test Command: **AT+PRO?**	Response: **Get or Set usage agreement (1:COAP,2:UDP,3:MQTT,4:TCP)** **OK**
Test Command: **AT+PRO=?**	Response: **1** **OK**
Test Command: **AT+PRO=1**	Response: **OK**

2.12 AT+RXDL: Extend the sending and receiving time

AT+RXDL: Get or Set confirmation mode< The default value is 0>	
Test Command: **AT+RXDL?**	Response: **Get or Set the receiving time** **Unit: ms** **OK**
Test Command: **AT+RXDL=?**	Response: **0** **OK**
Test Command: **AT+RXDL=1000**	Response: **OK**

2.13 AT+CNTFAC: Get or set counting parameters

AT+CNTFAC: Get or set counting parameters	
Test Command: **AT+CNTFAC?**	Response: **Get or set counting parameters** **OK**
Test Command: **AT+CNTFAC=?**	Response: **1.0** **OK**
Test Command: **AT+CNTFAC=1.5**	Response: **OK**

2.14 AT+SERVADDR: Server Address

AT+SERVADDR: Server Address	
Test Command: **AT+SERVADDR?**	Response: **AT+SERVADDR: Get or Set the Device Address** **OK**
Test Command: **AT+SERVADDR=?**	Response: (**While Error in format, return AT_PARAM_ERROR)** **123.57.29.36,5683** **OK**
Test Command: **AT+SERVADDR=123.57.29.36,5683**	Response: **OK**

3 CoAP management

3.1 AT+URI: Resource parameters

AT+URI: Get or set CoAP options (detail refer AT+QCOAPOPTION from BC95-G documents)	
Test Command: **AT+URI?**	Response: **AT+URI: Get or set CoAP options** **OK**
Test Command: **AT+URI=?**	Response: **5,11,"mqtt",11,"coap",12,"0",15,"c=text1",23,"0"** **OK**
Test Command: **AT+URI=5,11,"mqtt",11,"coap",12,"0",15,"c=text1",23,"0"**	Response:(**System will write new value to URI,**While Error in format, return **AT_PARAM_ERROR**) **OK**

4 UDP management

4.1 AT+CFM: Upload confirmation mode (only valid for UDP)

AT+CFM: Get or Set confirmation mode	
Test Command: **AT+CFM?**	Response: **Get or Set confirmation mode (0: Off 1: On)** **OK**
Test Command: **AT+CFM=?**	Response: **1** **OK**
Test Command: **AT+CFM=1**	Response: **OK**

5 MQTT management

5.1 AT+CLIENT: Get or Set MQTT client

AT+CLIENT: Get or Set the MQTT clientID<The default value is NULL, invalid value><No more than 40 bytes>	
Test Command: **AT+CLIENT?**	Response: **AT+CLIENT: Get or Set the MQTT clientID** **OK**

Test Command: **AT+CLIENT=?**	Response: **T1** **OK**
Test Command: **AT+CLIENT=T1**	**OK**

5.2 AT+UNAME: Get or Set MQTT Username

AT+UNAME: Get or Set the MQTT Username<The default value is NULL, invalid value><No more than 40 bytes>	
Test Command: **AT+UNAME?**	Response: **AT+UNAME: Get or Set the MQTT Username** **OK**
Test Command: **AT+UNAME=?**	Response: **root** **OK**
Test Command: **AT+UNAME=root**	**OK**

5.3 AT+PWD: Get or Set MQTT password

AT+PWD: Get or Set the MQTT password<The default value is NULL, invalid value><No more than 40 bytes>	
Test Command: **AT+PWD?**	Response: **AT+PWD: Get or Set the MQTT password** **OK**
Test Command: **AT+PWD=?**	Response: **123456** **OK**
Test Command: **AT+PWD=123456**	**OK**

5.4 AT+PUBTOPIC: Get or Set MQTT publish topic

AT+PUBTOPIC: Get or set MQTT publishing topic<The default value is NULL, invalid value><No more than 64 bytes>	
Test Command: **AT+PUBTOPIC?**	Response: **AT+PUBTOPIC: Get or set MQTT publishing topic** **OK**

Test Command: **AT+PUBTOPIC=?**	Response: **Topic1** **OK**
Test Command: **AT+PUBTOPIC=Topic1**	**OK**

5.5 AT+SUBTOPIC: Get or Set MQTT subscription topic

AT+SUBTOPIC: Get or set MQTT subscription topic<The default value is NULL, invalid value><No more than 64 bytes>	
Test Command: **AT+SUBTOPIC?**	Response: **AT+SUBTOPIC: Get or set MQTT subscription topic** **OK**
Test Command: **AT+SUBTOPIC=?**	Response: **Topic2** **OK**
Test Command: **AT+SUBTOPIC=Topic2**	**OK**

6 Information

6.1 AT+FDR: Factory Data Reset

AT+FDR: Factory Data Reset	
Test Command: **AT+FDR**	Response: **DRAGINO NBSN50-95 NB-IoT Sensor Node** **Image Version: XX** **NB-IoT Stack : XX** **<followed by the help of all commands>** **Please ENTER Password to active AT Command Line**
Test Command: **AT+FDR?**	Response: **AT+FDR: Reset Parameters to Factory Default** **OK**

6.2 AT+PWORD: Serial Access Password

AT+ PWORD: Password<The default password is 12345678><Up to 8 digits>	
Test Command:	Response:

AT+PWORD=?	**12345678** **OK**
Test Command: **AT+PWORD?**	Response: **AT+PWORD: Get or set the System password** **OK**
Test Command: **AT+PWORD=12345678**	Response: **OK**