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CANFD Protocol Converter

AT Command

USR-CAN315/CAN316

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Directory

1. The AT instruction sets the protocol

This document provides a detailed description of the AT directive supported by the USR-CAN316. The device supports entering the AT instructions through the serial port.

Serial port AT instruction refers to the instruction set that the user transmits commands through UART and module in command mode, and the use format of AT instruction will be explained in detail later.

After the successful startup, the module can be set through UART.

The default UART port parameters of the module are: port rate 115200, no check, 8-bit data bit, and 1-bit stop bit.

<Instruction>

Switch from working mode to temporary command mode:

1. The serial port device will continuously send "+ + +" to the module. After CAN316 receives the "+ + +", it will send an "A" to the serial port device. No data can be sent during the package time before sending the + + + message.

2. When the serial port device receives an 'A', it must send a 'A' to the CAN316 within 3 seconds.

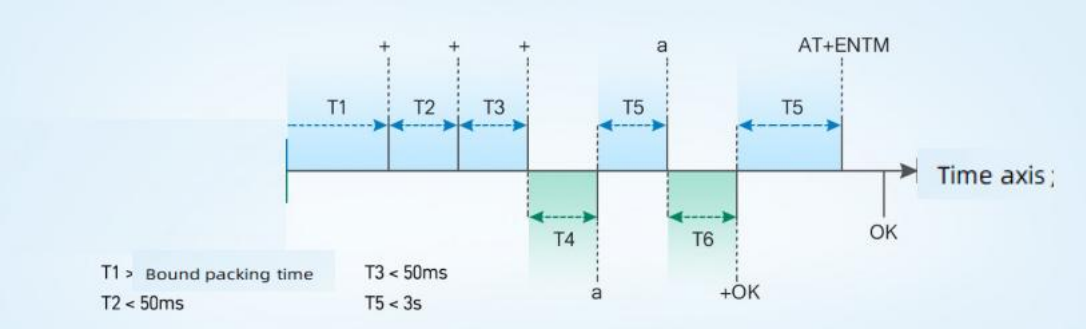
3. CAN316 After receiving the "a", send the "+ OK" to the serial port device and enter the "AT instruction mode".

4. After receiving the "+ OK", the serial port device knows that the module has entered the "AT instruction mode" and can send AT instructions to it.

Switching from AT instruction mode to network transmission transmission time sequence:

1. The serial port device sends the instruction "AT + ENTM" to CAN316.

2. CAN316 After receiving the instruction, return "OK" and return to the previous working mode.



1.Switch the command mode time sequence

2. Directive introduction

AT instruction is "question and answer" instruction, which is divided into two parts: "answer" and "answer"."Ask" means that the device sends AT commands to CAN315/316, and "Answer" means that CAN315/316 replies to the device。

1 symbol description

symbolic name	meaning
<>	The included content is required
[]	The included content is non-essential
{}	Included content is a string of this special meaning in the document
~	Parameter range, example A~B, the parameter range is from A to B
CMD	Indicates the instruction code
OP	Indicates the operator

para-n	Indicates the parameter
CR	Represents the "return operator" in the ASCII code and the hexadecimal number as 0x0D
LF	Represents "newline" in ASCII code and hexadecimal number as 0x0A

2.1. Format of the "ask" in the instruction

Directive string: AT+<CMD>[op][para-1,para-2,para-3,para-4...]<CR>

2 symbol description

command code	meaning	Is it a necessity
AT+	AT command header	yes
CMD	Functional attributes of the instruction	yes
OP	Operator, such as =,,,?, =?	No
PARA	The parameters executed	No
CR	Enter the car, the command end character	yes

Instructions type description:

3 symbol description

Type	Directive string format	instruction
0	<AT+><CMD>?<CR>	Do the action of the instruction or query the current parameter value
1	<AT+><CMD><CR>	Do the action of the instruction or query the current parameter value
2	<AT+><CMD>=[para-1,para-2,para-3,para-4...]<CR>	Set the parameter value for the instruction

3. AT Commands

4 AT order set

number	instruct	Functional description
Basic instructions		
1	AT	test
2	AT+E	Query / set display enable
3	AT+Z	Restart the module

4	AT+ENTM	Exit configuration mode
5	AT+VER	Query the firmware version number
6	AT+CFGTF	Save the run parameters is the user parameter
7	AT+RELD	The recovery module is set to the user's default parameters
8	AT+CLEAR	Restore the factory and restart
9	AT+MID	Query / set the device name
10	AT+SN	Query the SN code
The CAN communication instruction		
1	AT+CAN	Query / set the base CAN parameters
2	AT+CANFD	Query/set basic CANFD mode parameters
3	AT+CANBAUD	Query / set the phase buffer and frequency division value of the custom baud rate
4	AT+CANFDBAUD	Query/set the phase buffer segment and divide value of the CANFD data domain custom baud rate
5	AT+CANLT	Query / set the CAN filtering mode
6	AT+ADDLIST	Query / set the filter frame ID whitelist
7	AT+DELLIST	Delete the corresponding frame ID in the whitelist of the filter frame ID
8	AT+TRDIR	Query / set the CAN conversion transfer direction
9	AT+TMODE	Query / set the CAN protocol transformation mode
10	AT+MSG	Query / set the enable frame ID, enable frame information
11	AT+MARK	Query / set the transparent band ID parameter position and length
12	AT+UDMHT	Query / set the frame header and frame tail in the custom conversion mode
13	AT+CANMODE	Query/set CAN working mode
14	AT+CANPACK	Query/set CAN packing time and frame number
Serial port instructions (only CAN316)		
1	AT+UART	Query/set serial port parameters
2	AT+PACKLEN	Query/set serial packet length
Network port instructions (only CAN315)		
1	AT+WANN	Query/set the local IP of the device and get the way
2	AT+SOCKAEN/SOCKBEN	Check/ set whether the socketN of the port is enabled
3	AT+SOCKA/SOCKB	Query/set the socketN parameter of the port

4	AT+SOCKPORT/SOCKBPORT	Query/set the socketN local port number
5	AT+SOCKLK/SOCKBLK	Check the connection status of port socketN
6	AT+SOCKSL/SOCKBSL	Query/set the short connection Function of port socketN
7	AT+SHORTO/SHORBTO	Query/set the short connection time of port socketN
8	AT+UDPAFLT/UDPBFLT	Query/set the port socketN UDP IP port number filtering Function
9	AT+DNS	Query/set DNS address configuration
10	AT+DNSMODE	How to query/set DNS access
11	AT+TCPSE	Query/sets whether TCPS kicks out old links
12	AT+MAXSK	Query/set the maximum number of TCPS connections
13	AT+TCPREIP/TCPBREIP	Query/set the target IP address/domain name of port socketN
14	AT+RCTIM	Query/set TCPC data reconnection time
15	AT+UDPFLT	Query/set UDP IP port number filtering Function
16	AT+HEARTEN	Query/set heartbeat packet enable
17	AT+HEARTDT	Query/set the content of a custom heartbeat packet
18	AT+HEARTDTHEX	Query/set the content of custom heartbeat packet in HEX format
19	AT+CANHEART	Query/set the content of custom heartbeat packet in HEX format
20	AT+HEARTTTM	Query/set heartbeat packet time
21	AT+HEARTSND	Query/set the direction of heartbeat packet transmission
22	AT+REGDT	Query/set custom data for the registration package
23	AT+REGDTHEX	Query/set custom data for HEX format registration package
24	AT+REGEN	Query/set the registration package type
25	AT+REGSND	Query/set the registration package sending method
26	AT+PING	Query/set the PING command
27	AT+DHCPEN	Query/set the DHCP switch
28	AT+SEARCH	Query/set the network AT command port number and keyword
29	AT+RSTIM	Query/set the data-free reboot time

Modbus Command		
1	AT+MDBSEN	Query/set Modbus gateway function enabled
2	AT+MDBSMOD	Query/set Modbus working mode
3	AT+RDSDLIST	Query to send a message
4	AT+ADDSDLIST	Add the sending message
5	AT+DELSDLIST	Delete the sending message
6	AT+RDSDPOINT	Query to send data (mapping variables)
7	AT+ADDSDPOINT	Add data to be sent (mapping variables)
8	AT+DELSDPOINT	Delete the data sent (mapping variables)
9	AT+RDRVLIST	Query the incoming message
10	AT+DELRVLIST	Delete the received message
11	AT+RDRVPOINT	Query to receive data (mapping variables)
12	AT+ADDRVPOINT	Add received data (mapping variables)
13	AT+DELRVPOINT	Delete received data (mapping variables)

3.1. Format of the "answer" in the instruction

Note: The response information of instructions is divided into two types: show back and no back. The display means that when entering an instruction, CAN315/316 will return the input content first, and then respond to the instruction. The CAN315/316 does not return the input and only responds to the instructions. In the following instructions, the no-back display pattern is taken as an example.

command string ： <CR><LF>+<RSP>[op] [para-1,para-2,para-3,para-4...]<CR><LF>

5 symbol description

command code	meaning	Is it a necessity
CR	Return to the car	Yes
LF	line break	yes
+	Response message prefix	yes
RSP	Response string, "OK" indicates success	yes
para-n	An "ERR" indicates a failure	No
CR	Query returns parameter or error code	yes
LF	Return to the car	yes

3.2. AT error prompt

The error code is as follows:

6 Error code list

Error code	explain
ERROR:1	Invalid command format, which does not meet the AT instruction format
ERROR:2	Invalid command, the AT instruction was not found
ERROR:3	Invalid operator, not match the query or set format
ERROR:4	Invalid parameter, parameter range, or quantity is incorrect

4. AT Commands explanation

4.1. AT

	explain	Examples and Remarks
Function	test	
query	AT{CR}{LF} {CR}{LF}OK{CR}{LF}	AT OK
set up	/	
parameter	/	

4.2. AT+E

	explain	Examples and Remarks
Function	Query / set display enable	
query	AT+E<CR>Or AT+E?<CR> <CR><LF>+E:<status><CR><LF> <CR><LF>OK<CR><LF>	AT+E +E:OFF OK
set up	AT+E=<status><CR> <CR><LF>OK<CR><LF>	AT+E=ON OK
parameter		
status	Back to show the state ON：open OFF：close	by default OFF

4.3. AT+Z

	Explain	Examples and Remarks
Function	Equipment restart	
query	/	/
set up	AT+Z<CR> <CR><LF>OK<CR><LF>	AT+Z OK
parameter	/	

4.4. AT+ENTM

	Explain	Examples and Remarks
Function	Exit AT command mode and enter the transmission mode	After the command is correctly executed, the module switches from AT command mode to transmission mode
query	/	
set up	AT+ENTM<CR> <CR><LF>OK<CR><LF>	AT+ENTM OK
parameter	/	

4.5. AT+VER

	Explain	Examples and Remarks
Function	Query Module firmware version	
query	AT+VER<CR>Or AT+VER?<CR> <CR><LF>+VER:<ver><CR><LF> <CR><LF>OK<CR><LF>	AT+VER +VER:V1.0.00.000000.0000 OK
set up	/	/
parameter		
ver	Firmware version number	

4.6. AT+CFGTF

	Explain	Examples and Remarks
Function	Will the current parameter Save as the user default parameter	

query	/	/
set up	AT+CFGTF<CR> <CR><LF>OK<CR><LF> <CR><LF><save_sta><CR><LF>	AT+CFGTF OK saved
parameter		
save_sta	<save_sta>: keep parameter fruit saved - keep parameter success failed - keep parameter defeate	

4.7. AT+RELD

	Explain	Examples and Remarks
Function	Recovery module set up Default for user parameter	
query	/	/
set up	AT+RELD<CR> <CR><LF>OK<CR><LF>	AT+RELD OK rebooting..
parameter	/	

4.8. AT+CLEAR

	Explain	Examples and Remarks
Function	Restore factory	
query	/	/
set up	AT+CLEAR<CR> <CR><LF>OK<CR><LF>	AT+CLEAR OK rebooting...
parameter	/	

4.9. AT+MID

	Explain	Examples and Remarks
Function	query/set up Module name	
query	AT+MID<CR>Or AT+MID?<CR> <CR><LF>+MID:< name ><CR><LF>	AT+MID +MID:USR-TCP232-302

	<CR><LF>OK<CR><LF>	OK
set up	AT+MID=<ModuleName><CR> <CR><LF>OK<CR><LF>	AT+MID=USR-CAN114 OK
parameter		
Module Name	Module name, 1 to 14 bytes, not empty	Default device model

4.10. AT+SN

	Explain	**Examples and Remarks**
Function	Query SN	
query	AT+SN<CR>Or AT+SN?<CR> <CR><LF>+SN:<SN><CR><LF> <CR><LF>OK<CR><LF>	AT+SN +SN:03500324092600069753 OK
set up	/	
parameter		
SN	module SN	

4.11. AT+CAN

	Explain	**Examples and Remarks**
Function	Query/set basic CAN mode parameters	
Query	AT+CAN<CR> Or AT+CAN?<CR> <CR><LF>+CAN:<baudrate,can_id,mode ><CR><LF> <CR><LF>OK<CR><LF>	AT+CAN +CAN:custom(666.66K),1,NDTF OK
Set up	AT+CAN=<baudrate,can_id,mode><CR><LF> <CR><LF>OK<CR><LF>	AT+CAN=125,0,NDTF OK
Parameter		
baudrate	CAN Baud rate; range：5~1000(kbps) custom（custom ）、5、10、20、50、100、120、125、150、200、250、400、500、600、750、1000	（1）Default value: 100. （2）When the query CAN port rate is custom, the calculated port rate is displayed. The custom port rate is displayed with two decimal places fixed. （3）custom The string exists

		only in the return result of the query command, and the configuration command must pass the baud rate value. （4）When using a custom baud rate, you need to use the AT+CAN command to configure the frame ID and frame type first. At this time, the baud rate can be set to any value within the range, such as 100
can_id	CAN id: Hexadecimal format, without 0x scope: Standard frame: 0-7FF Extended frame: 0-1FFFFFFF	Default value: 1
mode	Frame mode: NDTF (standard frame), EDTF (extended frame)	Windows default:NDTF

4.12. AT+CANFD

	Explain	**Examples and Remarks**
Function	Query/set basic CANFD mode parameters	After the configuration of the current instruction, the normal baud rate is automatically switched
Query	AT+CANFD<CR> Or AT+CANFD?<CR> <CR><LF>+CANFD:<sta1,sta2,baudrate ><CR><LF> <CR><LF>OK<CR><LF>	AT+CANFD +CANFD:1,1,100 OK
Set up	AT+CAN=<sta1,sta2,baudrate><CR><LF> <CR><LF>OK<CR><LF>	AT+CANFD=1,1,100 OK
Parameter		
sta1	Enable CANFD mode: 1: Turn on 0: Off	The default is 0
Sta2	Enable CANFD acceleration mode: 1: Turn on 0: Off	The default is 0

baudrate	Data domain baud rate, ranging from 100kbps to 5Mkbps	（1）Default value: 100. （2）If the AT+CANFDBAUD command is used for configuration, the format of the AT+CANFD command found is: +CANFD:0,0,custom(2000.00K) （3）If the baud rate configured by AT+CANFD is used, the format of AT+CANFD command found is: +CANFD:0,0,2000

4.13. AT+CANBAUD

	Explain	Examples and Remarks
Function	Query/set the phase buffer segment and divide value for custom baud rate	1. Custom port rate, manual setting of phase buffer section and frequency division 2. After setting, the baud rate of AT+CAN will automatically change to custom Baud rate =60M / [(BS1+2 + BS2+1) * (BRP+1)] 3. After the current instruction is configured, the custom baud rate is automatically switched to use
Query	AT+CANBAUD<CR> Or AT+CANBAUD?<CR> <CR><LF>+CANBAUD:<BS1,BS2,BRP,SJW><CR><LF> <CR><LF>OK<CR><LF>	AT+CANBAUD +CANBAUD:6,1,75,1 OK
Set up	AT+CANBAUD=<BS1,BS2,BRP,SJW><CR><LF> <CR><LF>OK<CR><LF>	AT+CANBAUD=6,1,75,1 OK
Parameter		
BS1	Sync jump width, range: 0~15	Default value: 0
BS2	Frequency value, range: 0~255	Default value: 0
BRP	Phase buffer section 2, range: 0~7	Default value: 0
SJW	Phase buffer section 1, range: 0~63	Default value: 0

4.14. AT+CANFDBAUD

	Explain	Examples and Remarks
Function	Query/set the phase buffer segment and divide value of the CANFD data domain custom baud rate	1. Custom port rate, manual setting of phase buffer section and frequency division 2. After setting, the baud rate of AT+CAN will automatically change to custom Baud rate =60M / ((BS1+2 + BS2+1) * (BRP+1)) 3. After the current instruction is configured, the custom baud rate is automatically switched and the CANFD acceleration is automatically enabled 4. If you need to turn off the acceleration, use AT+CANFD command
Query	AT+CANFDBAUD<CR> Or AT+CANFDBAUD?<CR> <CR><LF>+CANFDBAUD:<BS1,BS2,BRP,SJW><CR><LF> <CR><LF>OK<CR><LF>	AT+CANFDBAUD +CANFDBAUD:6,1,75,1 OK
Set up	AT+CANFDBAUD=<BS1,BS2,BRP,SJW><CR><LF> <CR><LF>OK<CR><LF>	AT+CANFDBAUD=6,1,75,1 OK
Parameter		
BS1	Sync jump width, range: 0~7	Default value: 0
BS2	Frequency value, range: 0~255	Default value: 0
BRP	Phase buffer section 2, range: 0~7	Default value: 0
SJW	Phase buffer section 1, range: 0~15	Default value: 0

4.15. AT+CANLT

	Explain	Examples and Remarks
Function	Query/set CAN filter mode	
Query	AT+CANLT<CR> Or AT+CANLT?<CR> <CR><LF>+CANLT:<mode><CR><LF> <CR><LF>OK<CR><LF>	AT+CANLT +CANLT:OFF OK

Set up	AT+CANLT=<mode>{CR} {CR}{LF}OK{CR}{LF}	AT+CANLT=OFF OK
Parameter		
mode	filtered model, OFF: Turn off the filter NDTF: Filter standard frames EDTF: Filter extended frames USER: Custom range	by default OFF

4.16. AT+ADDLIST

	Explain	**Examples and Remarks**
Function	Query/set the whitelist of filter frame ID	Supports up to 32 groups
Query	AT+ADDLIST<CR> Or AT+ADDLIST?<CR> <CR><LF>+ADDLIST:<mode,can_id><CR><LF> <CR><LF>OK<CR><LF>	AT+ADDLIST +ADDLIST:NDTF,1 OK
Set up	AT+ADDLIST=<mode,can_id>{CR} {CR}{LF}OK{CR}{LF}	AT+SDPEN=NDTF,1 OK
Parameter		
mode	Frame mode: NDTF (standard frame), EDTF (extended frame)	
can_id	CAN id: 16-bit format, without 0x scope: Standard frame: 0-7FF Extended frame: 0-1FFFFFFF	Default null (empty)

4.17. AT+DELLIST

	Explain	**Examples and Remarks**
Function	Remove the corresponding frame ID from the whitelist of filter frame ID	
Query	/	/
Set up	AT+DELLIST=<mode,can_id>{CR} {CR}{LF}OK{CR}{LF}	AT+DELLIST=NDTF,1 OK
Parameter		
mode	Frame mode: NDTF (standard frame), EDTF	

	(extended frame)	
can_id	CAN id: 16-bit format, without 0x scope: Standard frame: 0-7FF Extended frame: 0-1FFFFFFF	

4.18. AT+TRDIR

	Explain	Examples and Remarks
Function	Query/set the CAN conversion transmission direction	
Query	AT+TRDIR<CR> Or AT+TRDIR?<CR> <CR><LF>+TRDIR:<mode><CR><LF> <CR><LF>OK<CR><LF>	AT+TRDIR +TRDIR:BOTHWAY OK
Set up	AT+TRDIR=<mode>{CR} {CR}{LF}OK{CR}{LF}	AT+TRDIR=BOTHWAY OK
Parameter		
mode	Transmission direction: BOTHWAY: Two-way transmission CAN-UART: Only CAN to serial port UART-CAN: Only serial port to CAN	The default is BOTHWAY

4.19. AT+UART

	Explain	Examples and Remarks
Function	query/set up Port interface parameter	
query	AT+UART<CR>Or AT+UART?<CR> <CR><LF>+UART:<baudrate,data_bits,stop_bit,parity > <CR><LF> <CR><LF>OK<CR><LF>	AT+UART +UART:115200,8,1,NONE OK
set up	AT+UART=<baudrate,data_bits,stop_bit,parity><CR><LF> <CR><LF>OK<CR><LF>	AT+UART=115200,8,1,NONE OK
parameter		
baudrate	Baud rate，600~230.4K(bps)	Windows default：115200
data_bits	data bit，7、8	Windows default：8

stop_bits	stop bit ，1、2	Windows default：1
parity	check bit： 8 data bits 0：NONE，1：EVEN，2：ODD。 7data bits 1：EVEN，2：ODD，3：MARK，4：SPACE。	Windows default：NONE

4.19. AT+TMODE

	Explain	Examples and Remarks
Function	query/set up CAN Protocol conversion mode	
query	AT+TMODE<CR>Or AT+TMODE?<CR> <CR><LF>+TMODE:<mode><CR><LF> <CR><LF>OK<CR><LF>	AT+TMODE +TMODE:TRANS OK
set up	AT+TMODE=<mode>{CR} {CR}{LF}OK{CR}{LF}	AT+TMODE=TRANS OK
parameter		
mode	Conversion mode： TRANS：Transparent conversion TPRTL：Clear band ID conversion PROTOL：Standard conversion MODBUS：MODBUS change USER：Custom frame head and frame tail conversion	by default TRANS

4.20. AT+MSG

	Explain	Examples and Remarks
Function	query/set up Enabling frame ID, enabling frame information	
query	AT+MSG<CR>Or AT+MSG?<CR> <CR><LF>+MSG:<sta1,sta2><CR><LF> <CR><LF>OK<CR><LF>	AT+MSG +MSG:0,0 OK
set up	AT+MSG=<sta1,sta2>{CR}	AT+MSG=0,0

	{CR}{LF}OK{CR}{LF}	OK
parameter		
sta1	Enable frame ID: 1：open 0：close	by default：0
sta2	Enable frame information: 1：open 0：close	by default：0

4.21. AT+MARK

	Explain	**Examples and Remarks**
Function	query/set up Transparent band ID position and length	
query	AT+MARK<CR>Or AT+MARK?<CR> <CR><LF>+MARK:<site,length><CR><LF> <CR><LF>OK<CR><LF>	AT+MARK +MARK:0,2 OK
set up	AT+MSG=<site,length>{CR} {CR}{LF}OK{CR}{LF}	AT+MARK=0,2 OK
parameter		
site	Transparent band ID parameter position： range0~7	Windows default：0
mode	Transparent band ID parameter length： Standard frame：range1~2 Extended frame：range1~4	Windows default：2

4.22. AT+UDMHT

	explain	**Examples and Remarks**
Function	Query / set the frame header and frame tail in the custom conversion mode	
query	AT+UDMHT<CR>Or AT+UDMHT?<CR> <CR><LF>+UDMHT:<frame1,frame2><CR><LF> <CR><LF>OK<CR><LF>	AT+UDMHT +UDMHT:AA,FF OK
set up	AT+UDMHT=<frame1,frame2>CR}	AT+UDMHT=AA,FF

	{CR}{LF}OK{CR}{LF}	OK
parameter	/	
frame1	Custom frame header, 16 decimal, 1 byte (00 to FF)	Windows default:AA
frame2	Custom frame tail, 16 px, 1 byte (00 to FF)	Windows default:FF

4.23. AT+PACKLEN

	explain	**Examples and Remarks**
Function	Query / set the length of serial port subcontracting	
query	AT+PACKLEN<CR> or AT+PACKLEN?<CR> <CR><LF>+PACKLEN:<length><CR><LF> <CR><LF>OK<CR><LF>	AT+PACKLEN +PACKLEN:512 OK
set up	AT+PACKLEN=<length>CR} {CR}{LF}OK{CR}{LF}	AT+PACKLEN=512 OK
parameter		
length	Serial port subcontracting length, range: 256~512	Default value: 512

Net port version (CAN315) independent functions: ⬇

4.24. AT+CANMODE

	Explain	**Examples and Remarks**
Function	Query/set CAN working mode	
Query	AT+CANMODE<CR> Or AT+CANMODE?<CR> <CR><LF>+CANMODE:<mode><CR><LF> <CR><LF>OK<CR><LF>	AT+CANMODE +CANMODE:NORMAL OK
Set up	AT+CANMODE=<mode>{CR} {CR}{LF}OK{CR}{LF}	AT+CANMODE=NORMAL OK
Parameter		
mode	CAN work pattern: NORMAL: Normal	The default is NORMAL

	SILENT: Just listen LOOPBACK: Loop	

4.25. AT+CANPACK

	Explain	Examples and Remarks
Function	Query/set CAN packing time and frame number	
Query	AT+CANPACK<CR> Or AT+CANPACK?<CR> <CR><LF>+CANPACK:<num,time><CR><LF> <CR><LF>OK<CR><LF>	AT+CANPACK +CANPACK:100,10 OK
Set up	AT+CANPACK=<num,time>{CR} {CR}{LF}OK{CR}{LF}	AT+CANPACK=100,10 OK
Parameter		
num	CAN packing time: 1~254	The default is 10
time	Number of CAN packed frames: 1~100	The default is 100

4.26. AT+WANN

	Explain	Examples and Remarks
Function	The WAN port IP (DHCP/STATIC) obtained by the query/set module	
Query	AT+WANN<CR> Or AT+WANN?<CR> <CR><LF>+WANN:<mode,address,mask,gateway><CR><LF> <CR><LF>OK<CR><LF>	AT+WANN +WANN:STATIC,192.168.0.7,255.255.255.0,192.168.0.1
Set up	AT+WANN=<mode,address,mask,gateway><CR> <CR><LF>OK<CR><LF>	AT+WANN=STATIC,192.168.0.7,255.255.255.0,192.168.0.1 OK
Parameter		
mode	Network IP mode STATIC: Static IP DHCP: Dynamic IP (address, mask, gateway parameters omitted)	The default is:STATIC
address	Gateway address	The default is 192.168.0.1
mask	subnet mask	Default is 255.255.255.0
gateway	IP address	The default is 192.168.0.7

4.27. AT+SOCKAEN/SOCKBEN

	Explain	Examples and Remarks
Function	Check/set whether the socketN of the port is enabled	N=A/B
Query	AT+SOCKNEN<CR> Or AT+SOCKNEN?<CR> <CR><LF>+SOCKNEN:<sta><CR><LF>	AT+SOCKAEN +SOCKAEN:ON
Set up	AT+SOCKNEN=<sta><CR> <CR><LF>OK<CR><LF>	AT+SOCKAEN=TCPS,192.168.0.201,23 OK
Parameter		
sta	ON: Turn on the short connection Function OFF: Turn off the short connection Function	give tacit consent to:ON

4.28. AT+SOCKA/SOCKB

	Explain	Examples and Remarks
Function	Query/set the socketN parameter of the port	SOCKA:A road SOCKB: B line
Query	AT+SOCKN<CR> Or AT+SOCKN?<CR> <CR><LF>+SOCKN:<work_mode,ip_addr,port ><CR><LF>	AT+SOCKA +SOCKA:TCPC,192.168.0.201,8234
Set up	AT+SOCKN=< work_mode,ip_addr,port ><CR> <CR><LF>OK<CR><LF>	AT+SOCKA=TCPS,192.168.0.201,23 OK
Parameter		
work_mode	protocol type: TCPS corresponds to TCP Server TCPC corresponds to TCP Client UDPS corresponds to UDP Server The UDPC corresponds to UDP Client	Default value: TCPS socketB Only TCPC/UDPC is supported
ip_addr	Local IP / target IP or domain name (64 characters) According to the C/S mode, when the module is set to "Client", the IP address is the remote server IP; when it is set to "Server", it is the local server IP	Default value: 192.168.0.201

Port	Protocol port, decimal number, 0~65535 When port = 0, it is a random port number	Default value: 23

4.29. AT+SOCKPORT/SOCKBPORT

	Explain	Examples and Remarks
Function	Query/set the socketN local port number	SOCKPORT:A road SOCKBPORT:B road
Query	AT+SOCKPORT<CR> Or AT+SOCKPORT?<CR> <CR><LF>+SOCKPORT:<server>,<local><CR><LF>	AT+SOCKPORT +SOCKPORT:8234,20108
Set up	AT+SOCKPORT=<server>,<local><CR> <CR><LF>OK<CR><LF>	AT+SOCKPORT=0 OK
Parameter		
server	The server port number that needs to be connected when client is running	
local	The local port number for client (0<= port <=65535) When port = 0, it is a random port number 0	Default value: 0

4.30. AT+SOCKLK/SOCKBLK

	Explain	Examples and Remarks
Function	Check the connection status of port socketN	SOCKLK：A road SOCKBLK：B road
Query	AT+SOCKLK<CR> Or AT+SOCKLK?<CR> <CR><LF>+SOCKLK:<para><CR><LF>	AT+SOCKLK +SOCKLK:disconnect
Set up	/	
Parameter		
para	Current link status connect-Connection established disconnect-No connection established	disconnect

4.31. AT+SOCKSL/SOCKBSL

	Explain	Examples and Remarks
Function	Query/set the short connection Function of port socketN	SOCKLK：A road SOCKBLK：B road
Query	AT+SOCKSL<CR> Or AT+SOCKSL?<CR>	AT+SOCKSL

	<CR><LF>+SOCKSL:<sta><CR><LF>	+SOCKSL:OFF
Set up	AT+SOCKSL=<sta><CR> <CR><LF>OK<CR><LF>	AT+SOCKSL=OFF OK
Parameter		
sta	ON: Turn on the short connection Function OFF: Turn off the short connection Function	Windows default:OFF

4.32. AT+SHORTO/SHORBTO

	Explain	**Examples and Remarks**
Function	Query/set the short connection time of port socketN	SHORTO：A road SHORBTO：B road
Query	AT+SHORTO<CR> Or AT+SHORTO?<CR> <CR><LF>+SHORTO:<time><CR><LF>	AT+SHORTO +SHORTO:3
Set up	AT+SHORTO=<time><CR> <CR><LF>OK<CR><LF>	AT+SHORTO1=3 OK
Parameter		
time	Short connection time, 3-255s	Default value: 3

4.33. AT+UDPAFLT/UDPBFLT

	Explain	**Examples and Remarks**
Function	Query/set port socketN UDP IP port number filtering Function	
Query	AT+UDPFLT<CR> Or AT+UDPFLT?<CR> <CR><LF>+UDPFLT:<sta><CR><LF>	AT+UDPFLT +UDPFLT:OFF
Set up	AT+UDPFLT=<sta><CR> <CR><LF>OK<CR><LF>	AT+UDPFLT=OFF OK
Parameter		
sta	ON: Enable the UDP IP port number filtering Function OFF: Turn off the UDP IP port number filtering Function	Windows default:OFF

4.34. AT+DNS

	Explain	Examples and Remarks
Function	Query/set the address of the DNS server module	
Query	AT+DNS<CR> Or AT+DNS?<CR> <CR><LF>+DNS:< address ><CR><LF>	AT+DNS +DNS:208.67.222.222
Set up	AT+DNS=< address ><CR> <CR><LF>OK<CR><LF>	AT+DNS=114.114.114.114 OK
Parameter		
address	DNS server address	The default is 208.67.222.222

4.35. AT+DNSMODE

	Explain	Examples and Remarks
Function	Query/set the DNS acquisition mode of the module	
Query	AT+DNSMODE<CR> Or AT+DNSMODE?<CR> <CR><LF>+DNSMODE:< mode><CR><LF>	AT+DNSMODE +DNSMODE:=AUTO
Set up	AT+DNSMODE=< mode><CR> <CR><LF>OK<CR><LF>	AT+DNSMODE=AUTO OK
Parameter		
mode	DNS acquisition method AUTO-Automatic acquisition MANUAL-Static Settings	Default value: AUTO

4.36. AT+TCPSE

	Explain	Examples and Remarks
Function	Query/set the mode of the TCPS that exceeds the maximum number of connections	
Query	AT+TCPSE<CR> Or AT+TCPSE?<CR> <CR><LF>+TCPSE:<way><CR><LF>	AT+TCPSE +TCPSE:KICK
Set up	AT+TCPSE=<way><CR> <CR><LF>OK<CR><LF>	AT+TCPSE=KICK

		OK
Parameter		
way	<way>: The way to handle new connections KEEP-After the full connection of TCPS, when a new connection is connected, the existing connection is maintained and the access to the new connection is rejected KICK-After the full connection of TCPS, when a new connection is connected, the oldest existing connection is actively disconnected and the new connection is accepted	Windows default:KICK

4.37. AT+MAXSK

	Explain	**Examples and Remarks**
Function	Query/set the maximum number of connections to a port	
Query	AT+MAXSK<CR> Or AT+MAXSK?<CR> <CR><LF>+MAXSK:<conn_max><CR><LF>	AT+MAXSK +MAXSK:8
Set up	AT+MAXSK=<conn_max><CR> <CR><LF>OK<CR><LF>	AT+MAXSK=8 OK
Parameter		
conn_max	TCP Server Supports the maximum number of connections, 1~4	Default value: 2

4.38. AT+TCPREIP/TCPBREIP

	Explain	**Examples and Remarks**
Function	Query/set the target IP address/domain name of port socketN	TCPREIP：A road TCPBREIP：B road
Query	AT+TCPREIP<CR> Or AT+TCPREIP?<CR> <CR><LF>+TCPREIP:<ip_addr><CR><LF>	AT+TCPREIP +TCPREIP:192.168.0.201
Set up	AT+TCPREIP=<ip_addr><CR> <CR><LF>OK<CR><LF>	AT+TCPREIP=192.168.0.201 OK
Parameter		
ip_addr	<ip_addr>：Target IP address	Default is：192.168.0.201

4.39. AT+RCTIM

	Explain	Examples and Remarks
Function	Query/set the TCPC data-free reboot time	
Query	AT+RCTIM<CR> Or AT+RCTIM?<CR> <CR><LF>+OK=<time><CR><LF>	AT+RCTIM +OK=0
Set up	AT+RCTIM=<time><CR> <CR><LF>+OK<CR><LF>	AT+RCTIM=0 +OK
Parameter		
time	Data reset time: 0~99999s,0 is to turn off this Function	Default is: 0 (Close)

4.40. AT+HEARTEN

	Explain	Examples and Remarks
Function	Query/sets whether the port is open for heartbeat packets (default is network heartbeat packets)	
Query	AT+HEARTEN<CR> Or AT+HEARTEN?<CR> <CR><LF>+HEARTEN:<status><CR><LF>	AT+HEARTEN +HEARTEN:OFF
Set up	AT+ HEARTEN =<status><CR> <CR><LF>OK<CR><LF>	AT+HEARTEN=OFF OK
Parameter		
status	ON: Turn on heartbeat packets OFF: Turn off heartbeat packets	Default is: OFF

4.41. AT+HEARTDT

	Explain	Examples and Remarks
Function	Query/set the content of a custom heartbeat packet	
Query	AT+HEARTDT<CR> Or AT+HEARTDT?<CR> <CR><LF>+HEARTDT:< heartbeat><CR><LF>	AT+HEARTDT +HEARTDT:www.usr.cn
Set up	AT+HEARTDT=< heartbeat><CR>	AT+HEARTDT=www.usr.cn

	<CR><LF>OK<CR><LF>	OK
Parameter		
heartbeat	The maximum length of heartbeat packet is 40 bytes	Default is: www.usr.cn

4.42. AT+HEARTDTHEX

	Explain	**Examples and Remarks**
Function	Query/set the content of custom heartbeat packet in HEX format	
Query	AT+HEARTDTHEX<CR> Or AT+HEARTDTHEX?<CR> <CR><LF>+HEARTDTHEX:<heartbeat><CR><LF>	AT+HEARTDTHEX +HEARTDTHEX:01 02
Set up	AT+HEARTDTHEX=<heartbeat><CR> <CR><LF>OK<CR><LF>	AT+HEARTDTHEX=01 02 OK
Parameter		
heartbeat	Heartbeat packet content, HEX format; 0~80 bytes	

4.43. AT+CANHEART

	Explain	**Examples and Remarks**
Function	Query/set CAN heartbeat packet content	
Query	AT+CANHEART<CR> Or AT+CANHEART?<CR> <CR><LF>+CANHEART:<heartbeat><CR><LF>	AT+CANHEART +CANHEART:88 12 34 56 78 01 02 03 04 05 06 07 08
Set up	AT+CANHEART=<heartbeat><CR> <CR><LF>OK<CR><LF>	AT+CANHEART=88 12 34 56 78 01 02 03 04 05 06 07 08 OK
Parameter		
heartbeat	CAN heartbeat packet content, CAN frame format	

4.44. AT+HEARTTM

	Explain	Examples and Remarks
Function	Query/set the heartbeat packet period of the port	
Query	AT+HEARTTM<CR> Or AT+HEARTTM?<CR> <CR><LF>+HEARTTM:< heart_times><CR><LF>	AT+HEARTTM +HEARTTM:30
Set up	AT+HEARTTM=< heart_times><CR> <CR><LF>OK<CR><LF>	AT+HEARTTM=30 OK
Parameter		
heart_times	The heartbeat time is 30s by default, and the range is 1 to 65535s	Default is: 30

4.45. AT+HEARTSND

	Explain	Examples and Remarks
Function	Query/sets the direction of heartbeat packets sent to the port	
Query	AT+HEARTSND<CR> Or AT+HEARTSND?<CR> <CR><LF>+HEARTSND:< dec><CR><LF>	AT+HEARTSND +HEARTSND:NET
Set up	AT+HEARTSND=< dec ><CR> <CR><LF>OK<CR><LF>	AT+HEARTSND=NET OK
Parameter		
dec	NET: Enable the network heartbeat packet Function CAN: Enable the CAN port heartbeat packet Function OFF-Turn off the heartbeat packet Function and only query	Default: OFF

4.46. AT+REGEN

	Explain	Examples and Remarks
Function	Query/set the registration packet type of the port	
Query	AT+REGEN<CR> Or AT+REGEN?<CR>	AT+REGEN

	<CR><LF>+REGEN:<reg_mode><CR><LF>	+REGEN:OFF
Set up	AT+REGEN=<reg_mode><CR> <CR><LF>OK<CR><LF>	AT+REGEN=OFF OK
Parameter	/	
reg_mode	<reg_mode>: Registration package enable mode MAC-Use MAC as the content of the registration package USR-Custom registration package content OFF-Close the registration package	Default is: OFF

4.47. AT+REGSND

	Explain	**Examples and Remarks**
Function	Query/set the registration packet sending mode of the port	
Query	AT+REGSND<CR> Or AT+REGSND?<CR> <CR><LF>+REGSND:<reg_snd_mode><CR><LF>	AT+REGSND +REGSND:FIRST
Set up	AT+REGSND=<reg_snd_mode><CR> <CR><LF>OK<CR><LF>	AT+REGSND=FIRST OK
Parameter		
reg_snd_mode	FIRST: Connect to send the registration packet EVERY: A registration packet is carried in front of each data packet ALL: Both are supported	Default is: First

4.48. AT+REGDT

	Explain	**Examples and Remarks**
Function	Query/set the content of the custom registration package for the port, which only supports ASCII	
Query	AT+REGDT<CR> Or AT+REGDT?<CR> <CR><LF>+REGDT:<reg_data><CR><LF>	AT+REGDT +REGDT:www.usr.cn
Set up	AT+REGDT=<reg_data><CR> <CR><LF>OK<CR><LF>	AT+REGDT=www.usr.cn OK
Parameter		

reg_data	Custom registration packets, up to 40 bytes in length, are supported only in ASCII	Default is: register

4.49. AT+REGDTHEX

	Explain	Examples and Remarks
Function	Query/set custom data for HEX format registration package	
Query	AT+REGDTHEX<CR> Or AT+REGDTHEX?<CR> <CR><LF>+REGDTHEX:<reg_data><CR><LF>	AT+REGDTHEX +REGDTHEX:010203
Set up	AT+REGDTHEX=<reg_data><CR> <CR><LF>OK<CR><LF>	AT+REGDTHEX=010203 OK
Parameter		
reg_data	Register package content, HEX format; 0~80 bytes	

4.50. AT+PING

	Explain	Examples and Remarks
Function	Set the target IP of active ping Function and execute a ping action	
Query	/	
Set up	AT+PING=<address><CR> <CR><LF>OK=<result><CR><LF>	AT+PING=www.baidu.com OK=SUCCESS
Parameter		
address	<address>: Target address, domain name, for example: www.baidu.com (64 characters)	
result	<result>: The result of PING success-Network connectivity timeout-ping timeout	

4.51. AT+DHCPEN

	Explain	Examples and Remarks
Function	Query/set DHCP enable for the port	
Query	AT+DHCPEN<CR> Or AT+REGEN?<CR>	AT+DHCPEN

	<CR><LF>+DHCPEN:<status><CR><LF>	+DHCPEN:OFF
Set up	AT+DHCPEN=<status><CR> <CR><LF>OK<CR><LF>	AT+DHCPEN=OFF OK
Parameter	/	
status	<status>: Device DHCP enabled status ON-Enable DHCP device to automatically obtain IP through router OFF-To turn off the DHCP device, you need to manually set a static IP	Default is: OFF

4.52. AT+SEARCH

	Explain	**Examples and Remarks**
Function	Set/Query the network AT search command and port number	
Query	AT+SEARCH<CR> Or AT+SEARCH?<CR> <CR><LF>+SEARCH:<search_port,search_order><CR><LF>	AT+SEARCH +SEARCH:48899,www.usr.cn
Set up	AT+SEARCH=<search_port,search_order><CR><LF> <CR><LF>OK<CR><LF>	AT+SEARCH=48899,www.usr.cn OK
Parameter		
search_port	The maximum number of bytes for an Internet AT search command is 32	Default : 48899
search_order	Network AT port number, range [0,65535]	Default : www.usr.cn

4.53. AT+RSTIM

	Explain	**Examples and Remarks**
Function	Query/set the data-free reboot time	
Query	AT+RSTIM<CR> Or AT+RSTIM?<CR> <CR><LF>+RSTIM:<time><CR><LF>	AT+RSTIM +RSTIM:0
Set up	AT+RSTIM=<time><CR> <CR><LF>OK<CR><LF>	AT+RSTIM=0 OK
Parameter		
time	Data reset time: 0,60-65535s,0 is to turn off this	Default is: 0 (close)

	Function	

4.54. AT+MDBSEN

	Explain	Examples and Remarks
Function	Query/set Modbus Gateway Function enabled	
Query	AT+MDBSEN<CR>Or AT+MDBSEN?<CR> <CR><LF>+MDBSEN:<status><CR><LF>	AT+MDBSEN +MDBSEN:OFF
Set up	AT+MDBSEN=<status><CR> <CR><LF>OK<CR><LF>	AT+MDBSEN=OFF OK
parameter	/	
status	<status>: Status of Modbus gateway function enabled on the device ON - Open Modbus gateway OFF - Close Modbus gateway	Default: OFF

4.55. AT+MDBSMOD

	Explain	Examples and Remarks
Function	Query/set Modbus working mode	
Query	AT+MDBSMOD<CR> Or AT+MDBSMOD?<CR> <CR><LF>+MDBSMOD:<mode><CR><LF> <CR><LF>OK<CR><LF>	AT+MDBSMOD +MDBSMOD:RTUM OK
Set up	AT+MDBSMOD=<mode>{CR} {CR}{LF}OK{CR}{LF}	AT+MDBSMOD=RTUM OK
parameter		
mode	Modbus work pattern : RTUM: RTU master station RTUS: RTU slave station TCPM: TCP master station TCPS: TCP slave station	Default: RTUM

4.56. AT+RDSDLIST

	Explain	Examples and Remarks
Function	Query to send a message	
Query the total number	AT+RDSDLIST<CR>Or AT+RDSDLIST?<CR>	AT+RDSDLIST

of messages sent	<CR><LF>+RDSDLIST:<num><CR><LF> <CR><LF>OK<CR><LF>	+RDSDLIST:10 OK
parameter		
num	Query the number of messages sent	0~64
Query the content of the sending message	AT+RDSDLIST=<num> <CR><LF>+RDSDLIST:<num>,<sid>,<name>,<mode>,<canid>,<remote>,<length>,<report>,<time>,<s_mode>,<s_canid><CR><LF> <CR><LF>OK<CR><LF>	AT+RDSDLIST=1 +RDSDLIST:1,1,R01,NDTF,1,1,8,0,1,NDTF,1000 OK
parameter		
num	Message number, integer number	Range: 1 to 64, default 1
sid	Slave address	Range: 1-255, default 1
name	Message name	Supports numbers and English, up to 8 bytes, default R01
mode	frame type NDTF（Standard frame）、EDTF(Expand the frame)	default ： NDTF
canid	Frame ID, in HEX format Standard frame：0-7FF Expand the frame：0-1FFFFFFF	default ： 1
remote	Remote frame, invalid in CANFD mode 0：No 1：Yes	Default：0
length	DL： CAN：0·8 CANFD：0~8，12，16，20，24，32，48，64	Default：8
report	Send rules 0-Periodic send 1-Changes sent 2-Send once 3-Frame ID triggered	Default：0

time	generation time ： 0~65535ms	Default：1000ms
s_mode	Trigger frame type NDTF（Standard frame）、EDTF(Expand the frame)	It only takes effect when the frame ID is triggered
s_canid	Trigger frame ID in HEX format Standard frame：0-7FF Expand the frame：0-1FFFFFFF	It only takes effect when the frame ID is triggered

4.57. AT+ADDSDLIST

	Explain	Examples and Remarks
Function	Add the sending message	
query	/	/
Set up	AT+ADDSDLIST=<num>,<sid>,<name>,<mode>,<canid>,<remote>,<length>,<report>,<time>,<s_mode>,<s_canid><CR><LF> <CR><LF>OK<CR><LF>	AT+ADDSDLIST=1,1,R01,NDTF,1,1,8,0,1,NDTF,1000 OK
parameter		
num	Message number, integer number	Range: 1 to 64, default is 1
sid	Slave Address	Range: 1-255, default 1
name	Message name	Supports numbers and English, up to 8 bytes, default R01
mode	frame type NDTF（Standard frame）、EDTF(Expand the frame)	Default：NDTF
canid	Frame ID, in HEX format Standard frame：0-7FF Expand the frame：0-1FFFFFFF	Default：1
remote	Remote frame, invalid in CANFD mode 0：No 1：Yes	Default：0
length	DL： CAN：0·8	Default：8

	CANFD：0~8，12，16，20，24，32，48，64	
report	Send rules 0-Periodic send 1-Changes sent 2-Send once 3-Frame ID triggered	Default：0
time	periodic time： 0~65535ms	Default：1000ms
s_mode	Trigger frame type NDTF（Standard frame）、EDTF(Expand the frame)	It only takes effect when the frame ID is triggered
s_canid	Trigger frame ID in HEX format Standard frame：0-7FF Expand the frame：0-1FFFFFFF	It only takes effect when the frame ID is triggered

4.58. AT+DELSDLIST

	Explain	Examples and Remarks
Function	Delete the sending message	
Set up	AT+DELSDLIST=<num><CR><LF> <CR><LF>OK<CR><LF>	AT+DELSDLIST=10 OK
parameter		
num	Message number, integer number	Range: 1 to 64, default is 1

4.59. AT+RDSDPOINT

	Explain	Examples and Remarks
Function	Query the number of mapped variables (send message)	
Set up	AT+RDSDPOINT<CR>或 AT+RDSDPOINT?<CR> <CR><LF>+RDSDPOINT:<num><CR><LF> <CR><LF>OK<CR><LF>	AT+RDSDPOINT +RDSDPOINT:10 OK

parameter		
num	Map the amount of data	

4.60. AT+ADDSDPOINT

	Explain	Examples and Remarks
Function	Add data to be sent (mapping variables)	
查询	/	/
Set up	AT+ADDSDPOINT=<num1>,<num2>,<name>,<datatype>,<move>,<regtype>,<regadd>,<seq><CR><LF> <CR><LF>OK<CR><LF>	AT+ADDSDPOINT=1,1,var01,0,0,3,0,1 OK
parameter		
num1	Message number, associated with the corresponding message	Range: 1~64, default is 1
num2	Variable number	
name	Variable name	Supports numbers and English, up to 8 bytes, default var01
datatype	Data Type: All（Whole frame data） 0-BYTE 1-WORD 2-DWORD 3-QWORD	Default：0
move	Offset CAN：0·8 CANFD：0~64	Default：0
regtype	function code ： 3--Holding Registers (4x) 4 --Input Registers (3x)	Default：3
regadd	Register address. Range 0-65535 bytes	Default：0
seq	Byte order 0-Little-Endian	Default：1

	1-Big-Endian	

4.61. AT+DELSDPOINT

	Explain	Examples and Remarks
Function	Delete the data sent (mapping variables)	
Set up	AT+DELSDPOINT=<num1>,<num2><CR><LF> <CR><LF>OK<CR><LF>	AT+DELSDPOINT=1,1 OK
parameter		
num1	Message number	Range: 1 to 64, default is 1
num2	Variable number	

4.62. AT+RDRVLIST

	Explain	Examples and Remarks
Function	Query the incoming message	
查询接收报文总数量	AT+RDRVLIST<CR>或 AT+RDRVLIST?<CR> <CR><LF>+RDRVLIST:<num><CR><LF> <CR><LF>OK<CR><LF>	AT+RDRVLIST +RDRVLIST:10 OK
parameter		
num	Query the number of received messages	0~64
查询接收报文内容	AT+RDRVLIST=<num> <CR><LF>+RDRVLIST:<num>,<name>,<canid>,<mode>,<sid><CR><LF> <CR><LF>OK<CR><LF>	AT+RDRVLIST=1 +RDRVLIST:1,T01,1,NDTF,1,1 OK
parameter		
num	Message number, integer number	Range: 1 to 64, default is 1
name	Message name	Supports numbers and English, up to 8 bytes, default ： T01
canid	Frame ID, in HEX format Standard frame: 0-7FF Extended frame: 0-1FFFFFFF	Default：1
mode	frame type NDTF（Standard frame）、EDTF(Expand the frame)	Default：NDTF
sid	Slave Address	Range: 1-255, default is 1

4.63. AT+ADDRVLIST

	Explain	Examples and Remarks
Function	Add a receive message	
查询	/	/
Set up	AT+ADDRVLIST=<num>,<name>,<canid>,<mode>,<sid><CR><LF> <CR><LF>OK<CR><LF>	AT+ADDRVLIST=1,T01,1,NDTF,1,1 OK
parameter		
num	Message number, integer number	Range: 1 to 64, default is 1
name	Message name	Supports numbers and English, up to 8 bytes, default： T01
canid	Frame ID, in HEX format Standard frame：0-7FF Expand the frame：0-1FFFFFFF	Default：1
mode	frame type NDTF（Standard frame）、EDTF(Expand the frame)	Default：NDTF
sid	Slave Address	Range: 1-255, default is 1

4.64. AT+DELRVLIST

	Explain	Examples and Remarks
Function	Delete the received message	
Set up	AT+DELRVLIST=<num><CR><LF> <CR><LF>OK<CR><LF>	AT+DELRVLIST=10 OK
parameter		
num	Message number, integer number	Range: 1 to 64, default is 1

4.65. AT+RDRVPOINT

	Explain	Examples and Remarks
Function	Query the number of mapped variables (receive message)	
Set up	AT+RDRVPOINT<CR>或 AT+RDRVPOINT?<CR>	AT+RDRVPOINT

	<CR><LF>+RDRVPOINT:<num><CR><LF> <CR><LF>OK<CR><LF>	+RDRVPOINT:10 OK
parameter		
num	Map the amount of data	

4.66. AT+ADDRVPOINT

	Explain	Examples and Remarks
Function	Add received data (mapping variables)	
查询	/	/
Set up	AT+ADDRVPOINT=<num1>,<num2>,<name>,<datatype>,<move>,<reg type>,<reg add><CR><LF> <CR><LF>OK<CR><LF>	AT+ADDRVPOINT=1,1,var01,0,0,3,0 OK
parameter		
num1	Message number, associated with the corresponding message	Range: 1 to 64, default is 1
num2	Variable number	
name	Variable name	Supports numbers and English, up to 8 bytes, default ： var01
datatype	Data Type All（Whole frame data） 0-BYTE 1-WORD 2-DWORD 3-QWORD	Default：0
move	offset CAN：0·8 CANFD：0~64	Default：0
Reg type	function code 3--Holding Registers (4x) 4 --Input Registers (3x)	Default：3
Reg add	Register address. Range 0-65535 bytes	Default：0

4.67. AT+DELRVPOINT

	Explain	Examples and Remarks
Function	Delete received data (mapping variables)	
Set up	AT+DELRVPOINT=<num1>,<num2><CR><LF> <CR><LF>OK<CR><LF>	AT+DELRVPOINT=1,1 OK
parameter		
num1	Message number, associated with the corresponding message	Range: 1~64, default is 1
num2	Variable number	

5. Contact information

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7. Update history

Firmware version	Update content	Refresh time
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