EC05 AT Command Set



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1. AT command section

1. All commands are only effective in configuration mode.
2. All AT formats end with "\r\n".
3. All command responses begin with "\r\n" and end with "\r\n".
4. In this article, "\r" and "\n" refer to the translation characters for carriage return and newline, and are not strings.

Error code table:

Error code	illustrate
-1	Invalid command format
-2	Invalid command
-3	SMS failed to send
-4	Invalid parameters
-5	Not yet defined

Quick Command List:

instruction	illustrate
AT+EXAT	Exit AT
AT+REBT	Restart the device
AT+ RESTORE	Restore factory settings
AT+VER	Check firmware version
AT+SN	Query device ID
AT+IMEI	Query IMEI
AT+ICCID	Query ICCID
AT+CPIN	Check card status
AT+CREG	Check network status
AT+UART	Query serial port parameters
AT+UARTKALIVE	Query/Set Serial Port Heartbeat
AT+SOCK=0,”base”?	Query network protocol parameters
AT+SOCK=0,”spare”?	Set a spare address for the socket
AT+SOCK=0,”link/sw”?	Query Link Enable
AT+SOCK=0,”link/status”?	Query link status
AT+SOCK=0,”reconnet”	Set reconnection limit
AT+SOCK=0,”link/alive”?	Query heartbeat packet
AT+SOCK=0,”regist”?	Query registration package
AT+SOCK=0,”mqtt/connect”?	Query MQTT connection information
AT+SOCK=0,”mqtt/sub”?	Query subscription information
AT+SOCK=0,”mqtt/pub”?	Query published information
AT+SOCK=0,”mqtt/pub/set”?	Query and publish related configurations
AT+SOCK=0,”mqtt/sub/set”?	Query subscription related configurations
AT+SOCK=0,”ssl/set”?	Query SSL parameters Only version V2 is supported

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AT+SOCK=0,”CA/para”? AT+SOCK=0,”CC/para”? AT+SOCK=0,”CK/para”?	Query CA/CC/CK certificates Only version V2 is supported
AT+SOCK=0,”CA/send/cert”? AT+SOCK=0,”CC/send/cert”? AT+SOCK=0,”CK/send/cert”?	Send CA/CC/CK certificates Only version V2 is supported
AT+SOCK=0,”http”?	Query HTTP parameters
AT+POTOCOL	Query Protocol Distribution Mode
AT+MODBUSCOVERTOR	Query Modbus enable status
AT+APN	Query/Change APN Access Point
AT+APNEN	APN Enable
AT+SMSEN	Turn SMS pass-through on/off
AT+SMSNBR	Set SMS number filtering
AT+PASSWORDSET	Set AT password
AT+PASSWORDIN	Enter AT password
AT+NTP	Query current time
AT+NTPA	Configure NTP server parameters (address, refresh time)
AT+RSTIME	Set restart time when there is no data
AT+GPS	GPS location information query is only supported by E840-TTL (EC05-DGC).
AT+IP	Query IP address

1.1. Enter AT command

Sending +++ requires no newline. After receiving \r\n+OK\r\n, send a correct AT command within 5 seconds to enter configuration mode.

[Example]

Send +++ first

Received\r\n+OK\r\n

Send AT\r\n again

Received\r\n+OK\r\n

1.2. Exit AT commands

instruction	EXAT
Function	Exit AT command mode
send	AT+EXAT<CR><LF>

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return	<CR><LF>+OK<CR><LF>

[Example]

Send: AT+EXAT\r\n

Received:\r\n+OK\r\n

1.3. Restart the device

instruction	REBT
Function	Restart the device
send	AT+REBT<CR><LF>
return	<CR><LF>+OK<CR><LF>

[Example]

Send: AT+REBT\r\n

Received:\r\n +OK\r\n

1.4. Factory reset

instruction	RESTORE
Function	Factory reset
send	AT+RESTORE<CR><LF>
return	<CR><LF>+OK<CR><LF>

[Example]

Send: AT+RESTORE\r\n

Received:\r\n +OK\r\n

Waiting for the device to restart.

1.5. Check firmware version

instruction	VER
Function	Check firmware version
send	AT+VER<CR><LF>
return	<CR><LF>+OK=<verString><CR><LF>

[Example]

Send: AT+VER\r\n

Received:\r\n +OK=9024-0-10\r\n

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1.6. Query device ID

instruction	SN
Function	Query device ID
send	AT+SN<CR><LF>
return	<CR><LF>+OK=<snString><CR><LF>

[Example]

Send: AT+SN\r\n

Received: \r\n +OK=xxxxxxxxxxxxx \r\n

Each device has a unique serial number (SN).

1.7. Query IMEI

instruction	IMEI
Function	Query IMEI
send	AT+VER<CR><LF>
return	<CR><LF>+OK=<imeiString><CR><LF>

[Example]

Send: AT+IMEI\r\n

Received:\r\n +OK =xxxxxxxxxxxxxxx\r\n

Each device has a unique IMEI code.

1.8. Query ICCID

instruction	ICCID
Function	Query ICCID
send	AT+ICCID<CR><LF>
return	<CR><LF>+OK=<iccidString><CR><LF>

[Example]

Send: AT+ICCID\r\n

Received:\r\n+OK=xxxxxxxxxxxxx\r\n

1.9. Check card status

instruction	CPIN
Function	Check card status
send	AT+CPIN<CR><LF>

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return	<CR><LF>+OK=<status><CR><LF>
Remark	Status, 1 (normal), 0 (no card or card malfunction).

[Example]

Send: AT+ CPIN \r\n

Received:\r\n+OK=1\r\n

1.10. Query signal strength

instruction	CSQ
Function	Query signal strength
send	AT+CSQ<CR><LF>
return	<CR><LF>+OK=<status><CR><LF>
Remark	Status, signal strength

[Example]

Send: AT+CSQ \r\n

Received:\r\n+OK=22\r\n

1.11. Check network status

instruction	CREG
Function	Check network status
send	AT+CREG<CR><LF>
return	<CR><LF>+OK=<status><CR><LF>
Remark	Status, 1 (network registration successful), others either connect to the base station normally or fail to connect.

[Example]

Send: AT+ REG \r\n

Received:\r\n+OK=1\r\n

1.12. Query/Configure Serial Port Parameters

instruction	UART
Function	Query/Configure Serial Port Parameters

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Send (query)	AT+UART<CR><LF>
Return (query)	<CR><LF>+OK<baudrate,uartData,uartStop,parity,uartFlow,packLen,packTime><CR><LF>
Send (configuration)	AT+UART=<baudrate,uartData,uartStop,parity,uartFlow,packLen,packTime><CR><LF>
Return (Configuration)	<CR><LF>+OK<CR><LF>
Remark	Baudrate, baud rates: 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400; Uartdata, data bits: 8, 9; Uartstop, stop bits: 1, 2; Parity, check digits: NONE, ODD, EVEN; Uartflow, flow control: 0 is off; Packlen, pack length: 50~1024, default 1024; Packtime, packing time: 0~1000Unit: 1ms, default: 0ms;

[Example]

Query:

Send: AT+UART\r\n

Received:\r\n+OK=115200,8,1,NONE,0,1024,10\r\n

set up:

Configure the baud rate to 9600, data bits to 8, stop bits to 1, no parity and no flow control, package length to 1024, and package time to 10ms.

Send: AT+UART=9600,8,1,NONE,0,1024,10\r\n

Received:\r\n+OK\r\n

1.13. Query/Set Network Protocol Parameters

instruction	AT+SOCK=<SockID,"base">
Function	Set/Query Network Protocol Parameter Format
Send (query)	AT+SOCK=<SockID,"base"? >
Return (query)	<CR><LF>+OK=<SockID,"base",sw,workMode,sockType,shortLinkTime,DesIP,desPort><CR><LF>
Send (Settings)	AT+SOCK=<SockID,"base",sw,workMode,sockType,shortLinkTime,DesIP,desPort><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	SockID, socket number: 0, 1 "base", keyword Sw, Link Switch: 0 (Off), 1 (On) SocktypeWorking protocols: 0 (UDPC), 1 (TCPC), 2 (UDPS), 3 (TCPS), 4 (HTTP), 5 (MQTT) ShortlinktimeShort connection time 0 (off), maximum configurable 65535 DesIP, target IP address, maximum length 64, supports domain name resolution. DesPort, target port, 0~65535

[Example]

Query:

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Send: AT+SOCK=0,”base”?\r\n

Received:\r\n+OK=0,"base",0,1,0,test.ebyte.com,10687\r\n

set up:

Send: AT+SOCK=0,"base",0,1,0,test.ebyte.com,10687\r\n

Received:\r\n+OK\r\n

Note: TCPS requires an APN card, and the APN card must support the relevant functions. The device supports a total of 11 connections, with 5 connections per link.

Note: UDPS functionality is not currently supported.

1.14. Query/Set Link Enable

instruction	AT+SOCK=<SockID,"link/sw">
Function	Query/Set Link Enable
Send (query)	AT+SOCK=<SockID,"link/sw"? >
Return (query)	<CR><LF>+OK=< SockID,"link/sw",sw><CR><LF>
Send (Settings)	AT+SOCK=<SockID,"link/sw",sw>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	SockID, socket number: 0, 1 "link/sw", keyword Sw, Link Switch: 0 (Off), 1 (On)

[Example]

Query:

Send: AT+SOCK=0,”link/sw”?\r\n

Received:\r\n+OK=0,”link/sw”,1\r\n

set up:

Send: AT+SOCK=0,”link/sw”,1\r\n

Received:\r\n+OK\r\n

1.15. Query link status

instruction	AT+SOCK=<SockID,"link/status"? >
Function	Query link status
send	AT+SOCK=<SockID,"link/status"? ><CR><LF>
return	<CR><LF>+OK=<SockID,"link/status"status><CR><LF>
Remark	SockID, socket number: 0, 1 "link/status", keyword status, link status:0(Disconnected), 1 (Connecting), 2 (Connection Successful)

[Example]

Query:

Send: AT+SOCK=0,”link/status”?\r\n

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Received:\r\n+OK=0,"link/status",0\r\n

1.16. Query/Set Heartbeat Packet

instruction	AT+SOCK=<SockID,"keep/alive">
Function	Query settings/heartbeat packet
Send (query)	AT+SOCK=<SockID,"keep/alive"? >
Return (query)	<CR><LF>+OK=<SockID,"keep/alive",sw,keepAliveType,infoType,defaultData,time><CR><LF>
Send (Settings)	AT+SOCK=<SockID,"keep/alive",sw,keepAliveType,infoType,defaultData,time><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	SockID, socket number: 0, 1 "keepalive", keyword sw, switch: 0 (off), 1 (on) KeepaliveType, heartbeat packet mode, 0 (IMEI), 1 (ICCID)2 (Custom), 3 (GPS) infoTypeData format: 0 (ASCII), 1 (HEX) defaultDataCustomize heartbeat packet content: Maximum configuration size 64 bytes Time, heartbeat duration, range: 1-65535 seconds, default 60.

[Example]

Query:

Send: AT+SOCK=<SockID,"keep/alive"? >\r\n

Received:\r\n+OK=0,"keep/alive",1,0,0,KeepAlive,60\r\n

set up:

Send: AT+SOCK=0,"keep/alive",1,0,0,KeepAlive,60\r\n

Received:\r\n+OK\r\n

1.17. Query/Set up registration package

instruction	AT+SOCK=<SockID,"regist">
Function	Query/Set up registration package
Send (query)	AT+SOCK=<SockID,"regist"?>
Return (query)	<CR><LF>+OK=<SockID,"regist",sw,registType,infoType,defaultData,way><CR><LF>
Send (Settings)	AT+SOCK=<SockID,"regist",sw,registType,infoType,defaultData,way><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	SockID, socket number: 0, 1, 2, 3 "regist", keyword Sw, Switch: 0 (Off), 1 (On) registtype, registration package mode: 0 (IMEI), 1 (ICCID), 2 (SN), 3

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	(custom). infoTypeData format: 0 (ASCII), 1 (HEX) defaultDataCustomize heartbeat packet content: Maximum configuration size 64 bytes Way: 0 (sends once per connection), 1 (before each data packet)

[Example]

Query:

Send: AT+SOCK=0,”regist”?\r\n

Received:\r\n+OK=0,"regist",0,0,0,Regist,0\r\n

set up:

Send: AT+SOCK=0,"regist",0,0,0,Regist,0\r\n

Received:\r\n+OK\r\n

1.18. Query/Set MQTT Connection Information

instruction	AT+SOCK=<SockID,”mqtt/connet>
Function	Query/Set MQTT Connection Information
Send (query)	AT+SOCK=<SockID,”mqtt/connet”?>
Return (query)	<CR><LF>+OK=<sockID,"mqtt/connet",mode,productKey,deviceName,deviceSecret><CR><LF>
Send (Settings)	AT+SOCK=<sockID,"mqtt/connet",mode,productKey,deviceName,deviceSecret><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	SockID, socket number: 0, 1 "mqtt/connet", keyword Mode, Cloud Platform: 0 (Alibaba Cloud), 1 (ONENET), 2 (Baidu Cloud), 3 (Huawei Cloud), 4 (3.1 Standard MQTT) productKey: Alibaba product key, Baidu device key, ONENET device ID (64 bytes) deviceName: Alibaba device name, Baidu username, ONENET product ID (64 bytes) deviceSecret: Alibaba device key, Baidu password, ONENET authentication information (64 bytes)

[Example]

Query:

Send: AT+SOCK=0,"mqtt/connect"?\r\n

Received:\r\n+OK=0,"mqtt/connet",0,a1GlhuTU1yN,DEV01,7e0e9087838525\r\n

set up:

Send: AT+SOCK=0,"mqtt/connet",0,a1GlhuTU1yN,DEV01,7e0e9087838525\r\n

Received:\r\n+OK\r\n

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1.19. Query/Set Subscription Topics

instruction	AT+SOCK=<SockID,”mqtt/sub/topic>
Function	Query/Set Subscription Topics
Send (query)	AT+SOCK=<SockID,”mqtt/sub/topic?>
Return (query)	<CR><LF>+OK=<sockID,"mqtt/sub/topic",First group subscribes to topic, second group subscribes to topic, third group subscribes to topic><CR><LF>
Send (Settings)	AT+SOCK=<sockID,"mqtt/sub1/topic", group number, subscribed topic><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	SockID, socket number: 0 "mqtt/sub/topic", keyword Which group to configure,0 (Group 1), 1 (Group 2), 2 (Group 3) Subscribe to the topic.theme

[Example]

Query:

Send: AT+SOCK=0,"mqtt/sub/topic"?\r\n

Received:\r\n+OK=0,"mqtt/sub/topic",/a1GlhuTU1yN/DEV01/user/1234,/a1GlhuTU1yN/DEV01/user/123 4,/hshdgsghsdkmjjhjhgjh4684211dwdwd/grfsefss,all/000000090005800025353550944 11/sub\r\n

set up:

Send: AT+SOCK=0,"mqtt/sub/topic",2,/hshdgsghsdkmjjhjhgjh4684211dwdwd/grfsefss\r\n

Received:\r\n+OK\r\n

1.20. Query/Set Subscription Related Configurations

instruction	AT+SOCK=<SockID,”mqtt/sub/set>
Function	Query/set relevant configurations for subscribed topics
Send (query)	AT+SOCK=<SockID,"mqtt/sub/set”?>
Return (query)	<CR><LF>+OK=<sockID,"mqtt/sub/set",sw,withthemedistributionsw,qos><CR><LF>
Send (Settings)	AT+SOCK=<sockID,"mqtt/sub/set",sw,withtheme_distribute_sw,qos><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	SockID, socket number: 0 "mqtt/sub/set", keyword Sw, Switch: 0 (Off), 1 (On) Send SW with theme.0 (Off), 1 (On) QoS, Service Level, 0, 1, 2

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[Example]
Query:
Send: AT+SOCK=0,"mqtt/sub/set"?\r\n
Received:\r\n+OK=0,"mqtt/sub/set",1,0,0\r\n
set up:
Send: AT+SOCK=0,"mqtt/sub/set",1,1,0\r\n
Received:\r\n+OK\r\n

1.21. Query/Set up publishing topics

instruction	AT+SOCK=<SockID,”mqtt/pub/topic>
Function	Query/Set up publishing topics
Send (query)	AT+SOCK=<SockID,”mqtt/pub/topic"?>
Return (query)	<CR><LF>+OK=<sockID,"mqtt/pub/topic", topic 1, topic 2, topic 3><CR><LF>
Send (Settings)	AT+SOCK=<sockID,"mqtt/pub/topic", group number, TopicName><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	SockID, socket number: 0 "mqtt/pub/topic", keyword Which group:0 (Group 1), 1 (Group 2), 2 (Group 3) TopicName, the topic you subscribe to.

[Example]
Query:
Send: AT+SOCK=0,"mqtt/pub/topic"?\r\n
receive:
\r\n+OK=0,"mqtt/pub/topic",1fsefr090t0wdsw/442c458hv,6fsefr090t0wdsw/442c458hv,ac/fsefr090twdsw/442c458hv\r\n
set up:
Send: AT+SOCK=0,"mqtt/pub/topic",1,ac/fsefr090t0wdsw/442c458hv\r\n
Received:\r\n+OK\r\n

1.22. Query/Set Up Topic-Related Configurations

instruction	AT+SOCK=<SockID,”mqtt/pub/set>
Function	Query/set relevant configurations for creating topics
Send (query)	AT+SOCK=<SockID,"mqtt/pub/set”?>
Return (query)	<CR><LF>+OK=<sockID,"mqtt/pub/set",sw,qos,timeout,number of retries><CR><LF>
Send (Settings)	AT+SOCK=<sockID,"mqtt/pub/set", sw,qos,timeout,number of retries><CR><LF>
Return	<CR><LF>+OK<CR><LF>

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(Settings)	
Remark	SockID, socket number: 0 "mqtt/pub/set", keyword QoS, Service Level, 0, 1, 2 Timeout period, 1-10 Number of retries, 1-10

[Example]

Query:

Send: AT+SOCK=0,"mqtt/pub/set"?\r\n

Received:\r\n+OK=0,"mqtt/pub/set",1,0,2,2\r\n

set up:

Send: AT+SOCK=0,"mqtt/pub/set",1,1,3,3\r\n

Received:\r\n+OK\r\n

instruction	AT+SOCK=<SockID,”mqtt/pub/topic>
Function	Query/Set Up Topic-Related Configurations
Send (query)	AT+SOCK=<SockID,”mqtt/pub/topic"?>
Return (query)	<CR><LF>+OK=<sockID,"mqtt/pub/topic", topic 1, topic 2, topic 3><CR><LF>
Send (Settings)	AT+SOCK=<sockID,"mqtt/pub/topic", group number, TopicName><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	SockID, socket number: 0 "mqtt/pub/topic", keyword Which group:0(Group 1), 1 (Group 2), 2 (Group 3) Set group number: After the MQTT packet sending switch is turned onThe first byte of the data to be sent is the group number, sent in hexadecimal.The rules are as follows:: 00 0000 Do not send 01 0001 topic1 02 0010 topic2 03 0011 topic1+2 04 0100 topic3 05 0101 Topic 1+3 06 0110 topic2+3 07 0111 topic1+2+3 TopicName, the topic you subscribe to.

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[Example]

Query:

Send: AT+SOCK=0,"mqtt/pub/topic"?\r\n

receive:

\r\n+OK=0,"mqtt/pub/topic",1fsefr090t0wdsw/442c458hv,6fsefr090t0wdsw/442c458hv,ac/fsefr090twdsw/442c458hv\r\n

set up:

Send: AT+SOCK=0,"mqtt/pub/topic",1,ac/fsefr090t0wdsw/442c458hv\r\n

Received:\r\n+OK\r\n

1.23. Query/Set SSL Parameters

instruction	AT+SOCK=<SockID,"ssl/set>
Function	Query/Set SSL Parameters
Send (query)	AT+SOCK=<SockID,"ssl/set"?>
Return (query)	<CR><LF>+OK=<sockID,"ssl/set", sw,mod ,UploadTimeout ><CR><LF>
Send (Settings)	AT+SOCK=<sockID,"ssl/set",sw,mod ,UploadTimeout><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	SockID, socket number: 0 "ssl/set"keywords" sw, switch: 0 (off), 1 (on) mod, verification mode: 0 (no verification), 1 (one-way verification), 2 (two-way verification) UploadTimeout, timeout period (10-65535 seconds)

[Example]

Query:

send:AT+SOCK=0, "ssl/set"?\r\n

Received:\r\n+OK=0, "ssl/set",0,0,10\r\n

set up:

send:AT+SOCK=0," ssl/set ",1,2,10\r\n

Received:\r\n+OK\r\n

1.24. Query CA/CC/CK certificate information

instruction	AT+SOCK=<SockID," CA/para"> AT+SOCK=<SockID," CC/para"> AT+SOCK=<SockID," CK/para">

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Function	Query CA/CC/CK certificate information
Send (query)	AT+SOCK=<SockID,” CA/para”?> AT+SOCK=<SockID,” CC/para?> AT+SOCK=<SockID,” CK/para?>
Return (query)	<CR><LF>+OK=<sockID," CA/para", size,XOR><CR><LF> <CR><LF>+OK=<sockID," CC/para", size,XOR><CR><LF> <CR><LF>+OK=<sockID," CK/para", size,XOR><CR><LF>
Remark	SockID, socket number: 0 “CA/para"keywords" “CC/para"keywords" “CK/para"keywords" sizeCertificate size XOR, Certificate"XOR and"Check value

[Example]
Query:
send:AT+SOCK=0,"CA/para"?\r\n
Received:\r\n+OK=0, "CA/para ", 1333,5D4C\r\n

1.25. Send CA/CC/CK certificates

instruction	AT+SOCK=<SockID,” CA/send/cert”> AT+SOCK=<SockID,” CC/send/cert”> AT+SOCK=<SockID,” CK/send/cert”>
Function	Send CA/CC/CK certificates
send	AT+SOCK=<sockID,"CA/send/certSize <CR><LF> AT+SOCK=<SockID,” CC/send/certSize <CR><LF> AT+SOCK=<SockID,” CK/send/certSize <CR><LF>>
return	See [Example]
Remark	SockID, socket number: 0 “CA/send/cert"keywords" “CC/send/cert"keywords" “CK/send/cert"keywords" SizeCertificate size

[Example]
send:AT+SOCK=0,"CA/send/cert",1333\r\n
receive:\r\n +BEGING\r\n
Send: Certificate data (1024 bytes)
Received: A
Send: Certificate data (309 bytes)
Received: +QFUPL: 1333,5d4cr\n (5d4c is)"XOR and"(Check value)

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+OK

When sending certificate data, 1024 bytes are sent per frame, and the returned number is received."A"Then, send the next frame.
Version 15 requires waiting for the status light to stop flashing before sending the certificate.
Version 16 requires entering DEBUG3 mode to send certificates.

1.26. Query/Set HTTP Mode

instruction	AT+SOCK=<SockID,”http>
Function	Query/Set HTTP Mode
Send (query)	AT+SOCK=<SockID,”http"?><CR><LF>
Return (query)	<CR><LF>+OK=<sockID,"http",method,url,head><CR><LF>
Send (Settings)	AT+SOCK==<sockID,"http",method, url,head><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	SockID, socket number: 0 "http", keyword method, 0 (GET), 1 (POST) URL, resource path, maximum configurable 64 bits. head, packet header, maximum configurable 128 bits

[Example]
Query:
Send: AT+SOCK=0,"http"?\r\n
Received: \r\n+OK=0,"http",0,/url, Host:www.ebyte.com\r\n
set up:
Send: AT+SOCK=0,"http",1,/url, Host:www.ebyte.com\r\n
Received:\r\n+OK\r\n

1.27. Query/Set Multi-Link Protocol Distribution Mode

instruction	AT+POTOCOL
Function	Query/Set Multi-Link Protocol Distribution Mode
Send (query)	AT+ POTOCOL<CR><LF>
Return (query)	<CR><LF>+OK=<Sw><CR><LF>
Send (Settings)	AT+POTCOL=<Sw><CR><LF> (Limited to 2-255s, 0 for off)
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	SwSwitches: 0 (off), 1 (on)

[Example]

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Query:

Send: AT+POTOCOL\r\n

Received:\r\n+OK=0\r\n

set up:

Send: AT+POTOCOL=1\r\n

Received:\r\n+OK\r\n

1.28. Query/Configure Modbus TCP to Modbus RTU Enable

instruction	AT+MODBUSCOVERTOR
Function	Query/Set Modbus TCP to Modbus RTU Enable
Send (query)	AT+MODBUSCOVERTOR<CR><LF>
Return (query)	<CR><LF>+OK=<sw,mtcpid><CR><LF>
Send (Settings)	AT+MODBUSCOVERTOR=<sw,mtcpid><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	Sw, switch: 0 (Off), 1 (On) Mtcpid specifies the Modbus address to be converted: 0 indicates any address, 1~255

[Example]

Query:

Send: AT+MODBUSCOVERTOR \r\n

Received:\r\n +OK=1,0\r\n

set up:

Send: AT+MODBUSCOVERTOR=1,0\r\n

Received:\r\n+OK\r\n

1.29. Query/Configure Serial Heartbeat

instruction	AT+UARTKALIVE
Function	Query/Set Serial Port Heartbeat
Send (query)	AT+UARTKALIVE<CR><LF>
Return (query)	<CR><LF>+OK=time,infoType,defaultData<CR><LF>
Send (Settings)	AT+UARTKALIVE=<5,1,123><CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	Time: Heartbeat duration: Configurable range 0-300s, 0 is off (default). Data format: 0, HEX

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	infoTypeData format: 0 (ASCII), 1 (HEX) defaultDataCustomize heartbeat packet content: Maximum configuration size 64 bytes

[Example]

Query:

Send: AT+UARTKALIVE \r\n

Received:\r\n +OK=0,0,123\r\n

set up:

Send: AT+UARTKALIVE= 0,0,123\r\n

Received:\r\n+OK\r\n

1.30. Query/Set Socket Backup Address

instruction	AT+SOCK
Function	Query/SettingsSocket backup address
Send (query)	AT+SOCK=0,"spare"?<CR><LF>
Return (query)	<CR><LF>+OK=0,"spare",en,addr,port<CR><LF>
Send (Settings)	AT+SOCK=0,"spare",en,addr,port<CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	En: Enable 0 means off, 1 means on. Addr: Server address, 64 bytes long, supports domain name resolution. Port: 0-65535

[Example]

Query:

Send: AT+SOCK=0,"spare"?

Received:\r\n+OK=0,"spare",1,123.com,8888\r\n

set up:

Send: AT+SOCK=0,"spare",1123.com, 8888\r\n

Received:\r\n+OK\r\n

1.31. Query/Set APN

instruction	AT+APN
Function	Query APN access point
Send (query)	AT+APN<CR><LF>
Return (query)	<CR><LF>+OK=addr,username,password,mode<CR><LF>
Send (Settings)	AT+APN=addr,username,password<CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	addrAddress (maximum configurable 64 bytes)

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	usernameUsername (maximum configurable 64 bytes) passwordPassword (maximum configurable 64 bytes) Mode: 0 (None), 1 (PAP), 2 (CHAP)

[Example]

Query:

Send: AT+APN

Received:\r\n+OK=addr,username,password,1\r\n

set up:

Send: AT+APN=addr,username,password,1\r\n

Received:\r\n+OK\r\n

1.32. Query/Set APN Enable

instruction	AT+APNEN
Function	Query/Set APN Enable
Send (query)	AT+APNEN<CR><LF>
Return (query)	<CR><LF>+OK=SW<CR><LF>
Send (Settings)	AT+APNEN=SW<CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	SWSwitch: 0 indicates off; 1 indicates on.

[Example]

Query:

Send: AT+APNEN

Received:\r\n+OK=1\r\n

set up:

Send: AT+APNEN=1\r\n

Received:\r\n+OK\r\n

1.33. Set SMS target number

instruction	AT+SMSNBR
Function	Query/Set SMS Target Number
Send (query)	AT+SMSNBR<CR><LF>
Return (query)	<CR><LF>+OK=number<CR><LF>
Send (Settings)	AT+SMSNBR=number<CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	number: Target phone number, 20 bytes in length

[Example]

Query:

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Send: AT+SMSNBR\r\n
Received:\r\n+OK=123123123\r\n
set up:
Send: AT+SMSNBR=123123123\r\n
Received:\r\n+OK\r\n

1.34. SMS number filtering

instruction	AT+SMSFILTER
Function	Query/set SMS number filtering (whitelist), enable to only receive SMS numbersTarget numberThe content can be closed to receive calls from any number.
Send (query)	AT+SMSFILTER<CR><LF>
Return (query)	<CR><LF>+OK=SW<CR><LF>
Send (Settings)	AT+SMSFILTER=SW<CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	SWSwitch: 0 indicates off; 1 indicates on.

[Example]
Query:
Send: AT+SMSFILTER\r\n
Received:\r\n+OK=1\r\n
set up:
Send: AT+SMSFILTER=1\r\n
Received:\r\n+OK\r\n

1.35. SMS passthrough enable

instruction	AT+SMSEN
Function	Query/Set SMS Pass-through Enable
Send (query)	AT+SMSEN<CR><LF>
Return (query)	<CR><LF>+OK=SW<CR><LF>
Send (Settings)	AT+SMSEN=SW<CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	SWSwitch: 0 indicates off; 1 indicates on.

[Example]
Query:
Send: AT+SMSEN\r\n
Received:\r\n+OK=1\r\n

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set up:
Send: AT+SMSEN=1\r\n
Received:\r\n+OK\r\n

1.36. Query/Set Security Configuration Password Enable

instruction	AT+PASSWORDEN
Function	Query/set whether security configuration is enabled (a password is required when entering AT command configuration).
Send (query)	AT+PASSWORDEN<CR><LF>
Return (query)	<CR><LF>+OK=SW<CR><LF>
Send (Settings)	AT+PASSWORDEN=SW<CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	SWSwitch: 0 indicates off (default); 1 indicates on.

[Example]
Query:
Send: AT+PASSWORDEN\r\n
Received:\r\n+OK=0\r\n
set up:
Send: AT+PASSWORDEN=1\r\n
Received:\r\n+OK\r\n

1.37. Query/Set Security Configuration Password

instruction	AT+PASSWORDSET
Function	To configure security settings (a password is required to enter the configuration), send this command + password to enter AT command mode in pass-through mode. 1、After AT command security authentication is enabled, this password is used to unlock AT commands. The process is as follows: (1) Send +++; (2) Send AT+PASSWORDSET=Password; (3) Send standard AT commands for configuration; 2、In AT command mode, sending the command again will change the password; 3、After enabling the Quick AT command (network AT, SMS AT, serial port AT), this password serves as the command header. The Quick AT

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	command format is as follows: (1) Password + Keyword + AT Command
Send (query)	AT+PASSWORDSET<CR><LF>
Return (query)	<CR><LF>+OK=Password<CR><LF>
Send (Settings)	AT+PASSWORDSET=Password<CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	Password: Password (default is not available, 0-32 bytes)

[Example]
Query:
Send: AT+PASSWORDSET\r\n
Received:\r\n+OK=12345678911\r\n
set up:
Send: AT+PASSWORDSET=12345678\r\n
Received:\r\n+OK\r\n

1.38. Query current time

instruction	AT+NTP
Function	Query current time
Send (query)	AT+NTP<CR><LF>
Return (query)	<CR><LF>+OK=2023.04.14,17:28:56<CR><LF>
Remark	Note the return format.

[Example]
Query:
send:AT+NTP\r\n
receive:+OK=2023.04.14,17:28:56

1.39. Query/Set No Data Restart Time

instruction	AT+RSTIME
Function	Set restart time when there is no data
Send (query)	AT+RSTIME<CR><LF>
Return (query)	<CR><LF>+OK=time<CR><LF>
Send (Settings)	AT+RSTIME=time<CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	time: Time, in minutes. Default is 30, range is 0-65535.

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[Example]
Query:
send:AT+RSTIME\r\n
Received:\r\n+OK=60\r\n
set up:
send:AT+RSTIME=60\r\n
Received:\r\n+OK\r\n

1.40. Query GPS location information

instruction	AT+GPS
Function	Query GPS location information
Send (query)	AT+GPS<CR><LF>
Return (query)	<CR><LF>+OK=x，Number1N,Number2E<CR><LF>
Remark	X: Validity, 1 indicates valid location, 0 indicates invalid location; Number1:north latitude;Number 2: East LongitudeThe update frequency is 1Hz.

[Example]
Query:
send:AT+GPS\r\n
Location successfully received:\r\n+OK=1,30.462303N, 104.560493E\r\n
Location failed. Received:\r\n+OK=0\r\n

1.41. Query IP address

instruction	AT+IP
Function	Query device IP information
Send (query)	AT+IP<CR><LF>
Return (query)	<CR><LF>+OK=IP<CR><LF>
Remark	IP: The device's IP address.

[Example]
Query:
send:AT+IP\r\n
Received:\r\n+OK=10.51.249.160\r\n

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2. Quick AT Command Description

With Quick AT Commands enabled, you can directly execute AT commands by sending the security configuration password + keyword + AT command via network data, serial port data, or SMS data, without needing to enter AT mode. When disabled, you can only enter command mode by sending +++ via the serial port. It is disabled by default; a restart is required for configuration changes to take effect. You can restart by sending a Quick AT command separately or by using the keyword in the command.

The specific format is as follows:

	Configure password	Keywords	AT commands
Case	EBT	*	AT+VER<CR><LF>

Note: In SMS AT command mode, <CR> and <LF> represent carriage returns.

Keyword description:

*	The device will not restart after this command is executed.
#	After executing this command, the device will immediately restart, and will not be able to receive any other commands during the restart process.

2.1. Query/Set Quick AT Command Enable

instruction	AT+FASTAT
Function	Query/Set Quick AT Enable
Send (query)	AT+FASTAT<CR><LF>
Return (query)	<CR><LF>+OK=sersw,netsw,smssw<CR><LF>
Send (Settings)	AT+FASTAT=sersw,netsw,smssw<CR><LF>
Return (Settings)	<CR><LF>+OK<CR><LF>
Remark	sersw: Fast serial port AT enable 0 (disabled), 1 (enabled) netsw: Fast Network AT Enable: 0 for Off, 1 for Enable smssw: Quick SMS AT Enable 0 (Disable), 1 (Enable)

[Example]

Query:

send:AT+FASTAT\r\n

Received:\r\n+OK=0,0,1\r\n

set up:

send:AT+FASTAT=1,0,0\r\n

Received:\r\n+OK\r\n

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2.2. Quick AT Commands - SMS AT

After enabling Quick Command Mode - SMS AT, you can directly execute configuration commands by sending an SMS from your mobile phone to the device's phone number.

instruction	VER
Function	Check firmware version
send	pwd*AT+VER<CR><LF>
return	<CR><LF>+OK=<verString><CR><LF>
illustrate	pwd is used to configure a secure password. verString is the version number.

[Example] Taking querying the version number as an example, the current security configuration password is "EBT".

sending a text message:EBT*AT+VER\r\n

Received SMS reply:\r\n +OK=9024-0-10\r\n

Note: In SMS AT command mode, the SMS message ends with a carriage return; if the keyword is #, the device will restart after returning a value.

2.3. Quick AT Commands - Network AT

After enabling Quick Command Mode - Network AT, you can directly execute configuration commands by sending data to the device using a socket link.

instruction	VER
Function	Check firmware version
send	pwd*AT+VER<CR><LF>
return	<CR><LF>+OK=<verString><CR><LF>
illustrate	pwd is used to configure a secure password.

[Example] Taking querying the version number as an example, the current security configuration password is "EBT".

Send data:EBT*AT+VER\r\n

Data response received: \r\n +OK=9024-0-10\r\n

2.4. Quick AT Commands - Serial Port AT

After enabling the Quick Command Mode - Serial Port AT, users no longer need to navigate through complex AT command procedures: first sending +++, then entering the configuration security password, and then sending the AT command. Single-command configuration can be achieved simply by using the Quick AT command format.

instruction	VER
Function	Check firmware version
send	pwd*AT+VER<CR><LF>

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return	<CR><LF>+OK=<verString><CR><LF>
illustrate	pwd is used to configure a secure password.

[Example] Taking querying the version number as an example, the current security configuration password is "EBT".

Send data:EBT*AT+VER\r\n

Data response received: \r\n +OK=9024-0-10\r\n

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2.0	2026-5-29	Increase Set	ZYD

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