GigaDevice Semiconductor Inc.

GD32VW553 AT Command User Guide

Application Notes
AN151

Revision 1.3

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1. AT command formats

1.1. Command types

Table 1-1. Command types

Type	Format	Description
Help command	AT+<x>=?	View command parameters and value ranges
Query command	AT+<x>?	Query the current parameter value of the specified target
Execution command	AT+<x> or AT+<x>=<…>	Run command Set the specified target parameter value

1.2. Command formats

Table 1-2. Command formats

Field	Description
AT	Command prefix
<CMD>	Command string
[ ]	Optional part
<>	Mandatory part. For specific commands, some parameters are mandatory to be entered
[p1],[p2],[p3],…	Parameters, which support both strings and numbers. Enter the IP address in the string format "x.x.x.x" String: Must be enclosed in double quotation marks Number: Both decimal and hexadecimal numbers are supported

Note: AT [+<CMD>] [=] [p1],[p2],[p3],

1.3. Response formats

Table 1-3. Response formats

Output type	Description
[+<CMD>:<MSG>]	Output result or error prompt
<RSP>	OK: success ERROR: failure

Note: The Chinese characters in the response format are only explanations of the command response and are not actually displayed.

2. List of AT commands

Table 2-1. AT commands

Command	Description
AT	Enter AT command mode
ATQ	Exit AT command mode
AT+HELP	Query all AT commands
AT+RST	Module reset
AT+GMR	Query version information
AT+TASK	Query all tasks of the current operating system
AT+HEAP	Query the free HEAP of the current operating system
AT+SYSRAM	Query the current free SRAM space
AT+UART	Set the LOG UART parameter or read the current parameter
AT+TRANSINTVL	Query or set the Data Transmission Interval in Passthrough Mode
AT+CWMODE_CUR	Query or set the current WiFi operating mode: SoftAP or STA
AT+CWJAP_CUR	Connect to AP
AT+CWLAP	Scan and display the AP list
AT+CWSTATUS	Query the current WiFi operating mode and status
AT+CWQAP	Disconnect from AP
AT+CWSAP_CUR	Start the SoftAP mode
AT+CWLIF	Query information about all STAs connected to SoftAP
AT+CWAUTOCONN	Set whether to automatically connect to the AP after power-on
AT+PING	Ping function
AT+CIPSTA	Query or set the IP address of the local STA
AT+CIPSTART	Create TCP connection or UDP transfer
AT+CIPSEND	Send data
AT+CIPSERVER	Start the TCP server
AT+CIPCLOSE	Close TCP connection or UDP transfer
AT+CIPSTATUS	Query network connection information
AT+CIFSR	Query local IP address information
AT+CIPMODE	Query or set the Transmission mode
AT+BLEENABLE	Enable BLE
AT+BLEDISABLE	Disable BLE
AT+BLENAME	Set the name
AT+BLEADVSTART	Start BLE advertising
AT+BLEADVSTOP	Stop BLE advertising
AT+BLEADVDATA	Set the advertising data
AT+BLEADVDATAEX	Set the advertising data
AT+BLESCANRSPDATA	Set the scan response data
AT+BLEPASSTH	Enable passthrough mode
AT+BLEPASSTHAUTO	Enable passthrough mode automatically

Command	Description
AT+BLESCANPARAM	Set scan parameters
AT+BLESCAN	Start scan
AT+BLESYNC	Start or cancel BLE synchronization
AT+BLESYNCSTOP	Stop BLE synchronization
AT+BLECONN	Initiate a BLE connection
AT+BLESCONNPARAM	Set or query the connection parameters
AT+BLEDISCONN	Disconnect the established BLE connection
AT+BLEMTU	Update or query the mtu
AT+BLEPHY	Update or query phy
AT+BLEDATALEN	Data length extension
AT+BLEADDR	Query or set the BLE bd address
AT+BLESETAUTH	Set the authentication
AT+BLEPAIR	Start pairing
AT+BLEENCRYPT	Start encrypting
AT+BLEPASSKEY	Enter the passkey
AT+BLECOMPARE	Enter the numeric comparison result
AT+BLELISTENCDEV	List the bond devices
AT+BLECLEARENCDEV	Clear the bond devices
AT+BLEGATTSSVC	List the devices registered locally
AT+BLEGATTSCHAR	List the characteristic of the service
AT+BLEGATTSDESC	List the descriptor of the characteristic
AT+BLEGATTSLISTALL	List the information of all local services
AT+BLEGATTSNTF	Send notification
AT+BLEGATTSIND	Send indication
AT+BLEGATTSSETATTRVAL	Set the value of the characteristic
AT+BLEGATTCDISCSVC	Discover the service
AT+BLEGATTCDISCCHAR	Discover the characteristic
AT+BLEGATTCDISCDESC	Discover the descriptor
AT+BLEGATTCRD	Read attribute value
AT+BLEGATTCWR	Write attribute value

3. AT basic command set

3.1. AT

Table 3-1. Entering AT command mode

Command	Parameters	Response
Execution command AT		Execution result
Example: AT Correct response: OK		

3.2. ATQ

Table 3-2. Exiting AT command mode

Command	Parameters	Response
Execution command ATQ		Execution result
Example: ATQ Correct response: OK		

3.3. AT+HELP

Table 3-3. Querying all AT commands

Command	Parameters	Response
Execution command AT+HELP		Display the list of all AT commands
Example: AT+HELP Correct response: AT COMMAND LIST: ========== ATQ AT+HELP …… OK		

3.4. AT+RST

Table 3-4. Module reset command

Command	Parameters	Response
Execution command AT+RST		Restart message
Example: AT+RST Correct response: OK ALW: MBL: First print. ALW: MBL: Boot from Image 0. ALW: MBL: Validate Image 0 OK. ALW: MBL: Jump to Main Image (0x0800a000). READY		

3.5. AT+GMR

Table 3-5. Querying version information

Command	Parameters	Response (similar format information)
Execution command AT+GMR		Related version information
Example: AT+GMR Correct response: ========== SDK revision: v1.0.0 SDK git revision: 0.1.0-487-gb2937736-b2937736b33393b3 SDK build date: 2023/07/03 15:23:20 OK		

3.6. AT+TASK

Table 3-6. Querying all tasks of the current operating system

Command	Parameters	Response (similar format information)
Execution command AT+TASK		Current task information list
Example: AT+TASK		

Command	Parameters	Response (similar format information)
Correct response: ATCMD X 20 402 2 0x2001a780 ... RX B 18 416 6 0x200203c8 OK		

3.7. AT+HEAP

Table 3-7. Querying the free HEAP of the current operating system

Command	Parameters	Response (similar format information)
Execution command AT+HEAP		HEAP usage
Example: AT+HEAP Correct response: ========== Total free heap size = 113784 Total min free heap size = 109480 OK		

3.8. AT+SYSRAM

Table 3-8. Querying the current free SRAM space

Command	Parameters	Response (similar format information)
Execution command AT+SYSRAM		Remaining SRAM space
Example: AT+SYSRAM Correct response: ========== Free SRAM size = 108472 OK		

3.9. AT+UART

Table 3-9. Querying or setting serial port parameters

Command	Parameters	Response
Help command AT+UART=?		+UART=<baudrate>,<databits>,<stopbits>,<parity>,<flow control>
Query command AT+UART?		Current serial port parameter
Execution command AT+UART=<baudrate>,<databits>,<stopbits>,<parity>,<flow control>	<baudrate>: UART baud rate <databits>: Data bit 8: 8 bit <stopbits>: Stop bit 1: 1 bit 2: 1.5 bit 3: 2 bit <parity>: parity bit 0: None 1: Odd 2: Even <flow control>: Flow control 0: Disable flow control 1: Enable RTS 2: Enable CTS 3: Enable both RTS and CTS	Execution result
Example: AT+UART=115200,8,1,0,0 Correct response: OK		

3.10. AT+TRANSINTVL

Table 3-10. Querying or setting the Data Transmission Interval in Passthrough Mode

Command	Parameters	Response
Help command AT+TRANSINTVL=?		+TRANSINTVL=<interval>
Query command AT+TRANSINTVL?		Current Transmission Interval +TRANSINTVL:<interval>
Execution command AT+TRANSINTVL=<interval>	<interval>：Data transmission interval. Unit: milliseconds. Default value: 20.	Execution result
Example: AT+TRANSINTVL=800		

Command	Parameters	Response
Correct Resonse: OK		

4. AT WiFi command set

4.1. AT+CWMODE_CUR

Table 4-1. Querying or setting the current WiFi operating mode

Command	Parameters	Response
Help command AT+CWMODE_CUR=?		+CWMODE_CUR: <mode:0-2>
Query command AT+CWMODE_CUR?		Current operating mode +CWMODE_CUR: <mode>
Execution command AT+CWMODE_CUR=<mode>	<mode>: 0: MONITOR mode 1: STA mode 2: Soft AP mode	Execution result
Example: AT+CWMODE_CUR=2 Correct response: OK		

4.2. AT+CWJAP_CUR

Table 4-2. Querying the information of connected AP or connecting to AP

Command	Parameters	Response
Help command AT+CWJAP_CUR=?		+CWJAP_CUR=<ssid>,<pwd>
Query command AT+CWJAP_CUR?		+CWJAP_CUR: <ssid>,<mac>,<channel>,<rssi>
Execution command AT+CWJAP_CUR=<ssid>, <pwd>	<ssid>: String parameter <pwd>: String parameter	Execution result
Example 1: AT+CWJAP_CUR="totolink","12345678" Correct response 1: WIFI CONNECTED OK Example 2: AT+CWJAP_CUR="tplink","" Correct response 2: WIFI CONNECTED		

Command	Parameters	Response
OK		

4.3. AT+CWLAP

Table 4-3. Scanning and listing surrounding AP information

Command	Parameters	Response
Help command AT+CWLAP=?		+CWLAP: [ssid]
Execution command AT+ CWLAP[=<ssid>]	<ssid>: String parameter	Scan results +CWLAP: <ssid>,<rssi>,<mac>,<channel>,<encrypt>
Example 1: AT+CWLAP Correct response 1: +CWLAP: iQOO Neo5, -44, d6:4f:86:cb:c8:d0, 1, WPA2 CCMP; +CWLAP: GD-guest, -43, 08:3a:38:cc:2f:d1, 1, OPEN ; +CWLAP: OpenWrt, -33, c4:70:ab:d9:bd:11, 1, OPEN ; +CWLAP: GD-internet, -44, 08:3a:38:cc:2f:d0, 1, OPEN ; +CWLAP: Redmi K40, -56, ba:fa:07:50:63:f6, 1, WPA2 CCMP; +CWLAP: D-Link_DIR-822, -30, 1c:5f:2b:fd:be:60, 1, WPA2 CCMP; +CWLAP: iPhone 24 Pro Max Ultr, -48, fa:da:47:72:f0:b3, 2, WPA2 CCMP; +CWLAP: TP-LINK_8659, -20, 68:77:24:bd:86:59, 4, WPA2/WPA3 CCMP; OK Example 2: AT+CWLAP= “xiaomi_4a” Correct response 2: +CWLAP: xiaomi_4a, -55, 88:c3:97:0d:c3:70, 1, OPEN OK		

Note: If the parameter ssid is provided, only the corresponding AP information is displayed.

4.4. AT+CWSTATUS

Table 4-4. Querying WiFi status, STA, SoftAP, or MONITOR

Command	Parameters	Response
Execution command AT+CWSTATUS		+CWSTATUS: STA, connected, <ssid>,<channel>,<mac>, Or

Command	Parameters	Response
		+CWSTATUS: MONITOR, <channel>, <mac> Or +CWSTATUS: STA, disconnected Or +CWSTATUS: SoftAP, <ssid>, <password>, <channel>
Example: AT+CWSTATUS Correct response: +CWSTATUS: STA, connected, xiaomi_4a, 1, 76:ba:ed:20:22:a2 OK		

4.5. AT+CWQAP

Table 4-5. Disconnecting from AP

Command	Parameters	Response
Execution command AT+CWQAP		Disconnection message
Example: AT+CWQAP Correct response: OK		

4.6. AT+CWSAP_CUR

Table 4-6. Starting SoftAP

Command	Parameters	Response
Help command AT+CWSAP_CUR=?		+CWSAP_CUR: <ssid>,<pwd>,<chl:1-13>,<hidden:0-1>
Execution command AT+CWSAP_CUR=<ssid>,<pwd>,<chl>,<hidden>	<ssid>: String parameter <pwd>: String parameter <chl>: 1, 13 <hidden>: 0: SSID Broadcast 1: Hidden SSID	Execution result
Example: AT+CWSAP_CUR="test_ap","12345678",6,0 Correct response: OK		

4.7. AT+CWLIF

Table 4-7. Viewing clients connected to SoftAP

Command	Parameters	Response
Execution command AT+CWLIF		+CWLIF: [0] <mac1> +CWLIF: [1] <mac2> ……
Example: AT+CWLIF Correct response: +CWLIF: [0] e0:2b:e9:8a:46:ac OK		

4.8. AT+CWAUTOCONN

Table 4-8. Setting whether to automatically connect to the AP after power-on

Command	Parameters	Response
Help command AT+CWAUTOCONN=?		+CWAUTOCONN:(0-1)
Query command AT+CWAUTOCONN?		+CWAUTOCONN: <enable>
Execution command AT+CWAUTOCONN=<enable>	<enable>: 0-1 0: disable auto connect 1: enable auto connect	Execution result
Example: AT+CWAUTOCONN=1 Correct response: OK		
Additional description: After +CWAUTOCONN is set to 1, if the AP is successfully connected, the AP information will be saved in FLASH. After restarting, the AP will be automatically connected according to the AP information stored in FLASH.		

5. AT TCPIP command set

5.1. AT+PING

Table 5-1. Ping function

Command	Parameters	Response
Help command AT+PING=?		+PING: <ip or domain name>
Execution command AT+PING=<ip or domain>	<ip>: string, which can be an IP address or domain name	+<delay_time> +<delay_time> ……
Example 1: AT+PING="192.168.0.1" Correct response 1: +80 +47 +49 +55 +53 OK Example 2 Note: When using the URL, the Internet must be connected; otherwise, it will fail. AT+PING="www.baidu.com" Correct response 2: +149 +47 +51 +47 +112 OK		

5.2. AT+CIPSTA

Table 5-2. Querying or setting the IP address of the local STA

Command	Parameters	Response
Help command AT+CIPSTA=?		+CIPSTA: <ip>,<netmask>,<gw>
Query command AT+CIPSTA?		+CIPSTA:<ip> +CIPSTA:<netmask> +CIPSTA:<gw>
Execution command AT+CIPSTA=<ip>,<netmas	<ip>: String parameter <netmask>: String parameter	Execution result

Command	Parameters	Response
k>,<gw >	<gw >: String parameter	
Example 1: AT+CIPSTA? Correct response 1: +CIPSTA: 192.168.185.1 +CIPSTA: 255.255.255.0 +CIPSTA: 192.168.185.43 OK Example 2: AT+CIPSTA="192.168.185.45","255.255.255.0","192.168.185.1" Correct response 2: OK		

5.3. AT+CIPSTART

Table 5-3. Creating TCP connection or UDP transfer

Command	Parameters	Response
Help command AT+CIPSTART=?		+CIPSTART=<type:TCP or UDP>,<remote ip>,<remote port>,[udp local port],[tcp keep alive:0-1]
Execution command AT+CIPSTART=<type>,<remote ip>,<remote port>,[udp local port], [tcp keep alive]	<type>: "TCP" or "UDP", string parameter <remote ip>: Server IP, string parameter <remote port>: Server Port, integer [udp local port]: The UDP local port number [tcp keep alive]: 0 or 1, integer	Execution result
Example 1: AT+CIPSTART="TCP","192.168.0.2",2001,1 Correct response 1: 0,OK Example 2: AT+CIPSTART="UDP", "192.168.0.2",5001,0 Correct response 2: 1,OK Example 3: UDP with local port number 8888 specified AT+CIPSTART="UDP", "192.168.0.2",5001,8888		

Correct response 3: 3,OK Note: In this test, the tester needs to run the sokit or other network tool on the test machine.

5.4. AT+CIPSEND

Table 5-4. Sending data

Command	Parameters	Response
Help command AT+CIPSEND=?		Usage: Normal Mode Usage: +CIPSEND=<fd:0-4>,<len>,[<remote ip>,<remote port>] PassThrough Mode Usage: +CIPSEND
Execution command in Normal transmission mode AT+CIPSEND=<fd>,<len>,[<remote ip>, <remote port>]	<fd>: 0-4, network connection ID, integer <len>: < =2048, length of sent data, integer [remote ip]: Remote IP address, string parameter [remote port]: Remote port, integer	><input from keyboard> SEND OK
Execution command in WiFi passthrough transmission mode AT+CIPSEND		OK ><input from keyboard>
Example 1: AT+CIPSEND=0,10 Correct response 1: >SEND OK OK Example 2: AT+CIPSEND=1,20,"192.168.0.2",5001 Correct response 2: >SEND OK OK Example 3: UART WiFi passthrough transmission when the GD32VW553 works as a TCP client in		

single connection

Connect to the router.
AT+CWJAP=”test_ap”,”1234567890”

Query the device’s IP address, take 192.168.1.27 for example.
AT+CIPSTA?

Connect the PC to the same router which GD32VW553 is connected to. Use a network tool on the PC to create a TCP Server. For Example, the TCP Server on PC is 192.168.1.2, and the port is 5678.
Connect the GD32VW553 to the TCP server as a TCP client over TCP.
AT+CIPSTART="TCP","192.168.1.2",5678,0

Enable the UART WiFi Passthrough Receiving Mode.
AT+CIPMODE=1

Enter the UART WiFi Passthrough mode and send data.
AT+CIPSEND
OK
>

Stop Sending data. When receiving a packet that contains only +++, the UART WiFi PassThrough transmission process will be stopped. Then please wait at least 1 second before sending the next AT command.
+++

Exit the UART WiFi PassThrough Receiving Mode.
AT+CIPMODE=0

Close TCP connection.
AT+CIPCLOSE

Note:
Enter the WiFi Passthrough Mode, the GD32VW553 can receive 8129 bytes and send 2920 bytes at most each time. If the data received by GD32VW553 reaches or exceeds 2920 bytes, the data will be immediately sent in chunks of 2910 bytes. Otherwise, it will wait for 20 milliseconds (You can configure this interval using AT+TRANSINTVL command) before being sent. When a single packet containing +++ is received, the GD32VW553 will exit the data sending mode under the WiFi Passthrough Mode. Please wait at least on second before sending the next AT command.
WiFi Passthrough Mode can only be used for single connection in the WiFi Passthrough Mode. For UDP WiFi passthrough, the UDP’s remote server, remote port and local port must be specified.
In the Example 3, the tester needs to run the sokit or other network tool on the test machine.

5.5. AT+CIPSERVER

Table 5-5. Starting the TCP server

Command	Parameters	Response
Help command AT+CIPSERVER=?		+CIPSERVER:<mode:0-1>,[port]
Execution command AT+CIPSERVER=<mode>,	<mode>: 0: Close the server	Execution result

[port]	1: Create a server [port]: Optional parameters, integer	
Example: AT+CIPSERVER=1,3001 Correct response: OK		

5.6. AT+CIPCLOSE

Table 5-6. Closing TCP connection or UDP transfer

Command	Parameters	Response
Help command AT+CIPCLOSE=?		+CIPCLOSE: <fd>
Execution command AT+CIPCLOSE=<fd>	<fd>: 0-7, network connection ID, integer	close <fd>
Example: AT+CIPCLOSE=0 Correct response: close 0 OK		

5.7. AT+CIPSTATUS

Table 5-7. Querying network connection information

Command	Parameters	Response
Execution command AT+CIPSTATUS		STATUS: 5
Example: AT+CIPSTATUS Correct response: STATUS: 2 OK		
Additional description: STATUS 2: STA has been connected to the AP and obtained an IP address. 3: STA has been connected to the AP and created TCP connection or UDP transfer clients. 4: The dhcp process is ongoing. 5: Other connection status.		

5.8. AT+CIFSR

Table 5-8. Querying local IP address information

Command	Parameters	Response
Execution command AT+CIFSR		+CIFSR:APIP,<ip> +CIFSR:APMAC,<mac> Or +CIFSR:STAIP,<ip> +CIFSR:STAMAC,<mac>
Example: AT+CIFSR Correct response: +CIFSR:STAIP,192.168.2.3 +CIFSR:STAMAC,76:ba:ed:20:22:a2 OK		

5.9. AT+CIPMODE

Table 5-9. Querying or Setting the Transmission Mode

Command	Parameters	Response
Help command AT+CIPMODE=?		+CIPMODE=<mode:0-1>
Query command AT+CIPMODE?		Current Transmission Mode +CIPMODE:<mode>
Execution command AT+CIPMODE =<mode>	<mode>:Transmission Mode 0: Normal Transmission Mode 1: WiFi Passthrough Receiving Mode	Execution result OK or Error
Example: AT+CIPMODE=1 Correct response: OK Note: WiFi Passthrough Receiving Mode can only be enabled in TCP single connection mode, UDP mode when the remote host, remote port and local port are specified. The maximum receive length is 2920 Bytes each time in WiFi Passthrough Receiving Mode.		

6. AT BLE command set

6.1. AT+BLEENABLE

Table 6-1. Enabling BLE

Command	Parameters	Response
Execution command AT+BLEENABLE		Execution result
Example 1: AT+BLEENABLE Correct response 1: OK		

6.2. AT+BLEDISABLE

Table 6-2. Disabling BLE

Command	Parameters	Response
Execution command AT+BLEDISABLE		Execution result
Example 1: AT+BLEDISABLE Correct response 1: OK		

6.3. AT+BLENAME

Table 6-3. Setting the name

Command	Parameters	Response
Help command AT+BLENAME=?		+BLENAME=<name>
Query command AT+BLENAME?		+BLENAME:<name>
Execution command AT+BLENAME=<name>	<name>: device name	Execution result
Example 1: AT+BLENAME? Correct response 1: +BLENAME:GD-BLE-01:23:45:67:89:ab OK		

Command	Parameters	Response
Example 2: AT+BLENAME=test Correct response 2: OK Note: 1.The name will also change synchronously in the advertising after setting.		

6.4. AT+BLEADVSTART

Table 6-4. Starting BLE advertising

Command	Parameters	Response
Help command AT+BLEADVSTART=?		+BLEADVSTART=<type>,[intv],[ch_map],[prop],[pri_phy],[sec_phy],[wl_enable],[own_addr_type],[disc_mode],[addr_type],[addr]
Execution command AT+BLEADVSTART=<type>,[intv],[ch_map],[prop],[pri_phy],[sec_phy],[wl_enable],[own_addr_type],[disc_mode],[addr_type],[addr]	<type>: advertising type [intv]: advertising interval [ch_map]: channel map [property]: property configuration [pri_phy]: primary channel phy [sec_phy]: secondary channel phy [wl_enable]: whether to enable white list [own_addr_type]: own address type [disc_mode]: discovery mode [addr_type]: target device address type [addr]: target device address	Execution result
Example 1: AT+BLEADVSTART=0 Correct response 1: OK		

6.5. AT+BLEADVSTOP

Table 6-5. Stopping BLE advertising

Command	Parameters	Response
Help command		+BLEADVSTOP=<adv_idx>

Command	Parameters	Response
AT+BLEADVSTOP=?		
Execution command AT+BLEADVSTOP= adv_idx >	<adv_idx>: advertising index	Execution result
Example 1: AT+BLEADVSTOP=0 Correct response 1: OK		

6.6. AT+BLEADVDATA

Table 6-6. Setting the advertising data

Command	Parameters	Response
Help command AT+BLEADVDATA=?		+BLEADVDATA=<data>
Execution command AT+BLEADVDATA=<data>	<data>: advertising data, Hex string. For example, AT+BLEADVDATA="020106020941" represents setting the advertising data to "0x02 0x01 0x06 0x02 0x09 0x41".	Execution result
Example 1: AT+BLEADVDATA="020106020941" Correct response 1: OK		

6.7. AT+BLEADVDATAEX

Table 6-7. Setting the advertising data

Command	Parameters	Response
Help command AT+BLEADVDATAEX=?		+BLEADVDATAEX =<dev_name>,<uuid>,<manufacturer_data>,<include_power>
Execution command AT+BLEADVDATAEX =<dev_name>,<uuid>,<manufacturer_data>,<include_power>	<dev_name>: device name <uuid>: service uuid <manufacturer_data>: manufacturer data <include_power>: whether to include power	Execution result
Example 1: AT+BLEADVDATAEX="test","a002","2b0c112233",1		

Command	Parameters	Response
Correct response 1: OK		

6.8. AT+BLESCANRSPDATA

Table 6-8. Setting the scan response data

Command	Parameters	Response
Help command AT+BLESCANRSPDATA=?		+BLESCANRSPDATA=<data>
Execution command AT+BLESCANRSPDATA=<data>	<data>: advertising data, Hex string. For example, AT+BLESCANRSPDATA =”020941”represents setting the advertising data to "0x02 0x09 0x41".	Execution result
Example 1: AT+BLESCANRSPDATA="020941" Correct response 1: OK		

6.9. AT+BLEPASSTH

Table 6-9. Enabling passthrough mode

Command	Parameters	Response
Execution command AT+BLEPASSTH		Execution result
Example 1: Start BLE advertising, AT+BLEADVSTART=0, then the target device connects to local device. Enable passthrough mode. AT+BLEPASSTH Stop Sending data. +++ No response.		

6.10. AT+BLEPASSTHAUTO

Table 6-10. Enabling passthrough mode automatically

Command	Parameters	Response
Help command AT+BLEPASSTHAUTO=?		+BLEPASSTHAUTO=<enable>
Execution command AT+BLEPASSTHAUTO=<enable>	<enable>: whether to enter passthrough mode automatically	Execution result
NOTE: Master and slave automatically enter pass-through mode via the same command. Example 1: Enable passthrough mode automatically. AT+BLEPASSTHAUTO=1 Start BLE advertising, AT+BLEADVSTART=0, then the target device connects to local device. Passthrough mode is enabled automatically. Stop Sending data. +++ Correct response 1: OK		

6.11. AT+BLEPASSTHCLI

Table 6-11. Enabling passthrough mode

Command	Parameters	Response
Execution command AT+BLEPASSTHCLI		Execution result
Example 1: Start BLE advertising, AT+BLEADVSTART=0 or Initiate a BLE connection, AT+BLECONN=0,<addr> then the target device connects to local device. Enable passthrough mode. AT+BLEPASSTHCLI Stop Sending data. +++ No response.		

6.12. AT+BLESCANPARAM

Table 6-12. Setting scan parameters

Command	Parameters	Response
Help command AT+BLESCANPARAM=?		+BLESCANPARAM=<type>,<own_addr_type>,<dup_filt_pol>,<scan_intv_1m>,<scan_win_1m>
Query command AT+BLESCANPARAM?		+BLESCANPARAM:<type>,<own_addr_type>,<dup_filt_pol>,<scan_intv_1m>,<scan_win_1m>
Execution command AT+BLESCANPARAM:<type>,<own_addr_type>,<dup_filt_pol>,<scan_intv_1m>,<scan_win_1m>	<type>: scan type <own_addr_type>: local address type <dup_filt_pol>: duplicate packet filtering policy <scan_intv_1m >: scan interval in unit of 625us for 1M PHY <scan_win_1m>: scan window in unit of 625us for 1M PHY	Execution result
Example 1: AT+BLESCANPARAM? Correct response 1: +BLESCANPARAM:0,0,1,160,32 OK Example 2: AT+BLESCANPARAM=0,0,1,160,48 Correct response 2: OK		

6.13. AT+BLESCAN

Table 6-13. Starting scan

Command	Parameters	Response
Help command AT+BLESCAN=?		+BLESCAN=<enable>
Execution command AT+BLESCAN=<enable>	<enable> ：whether to start scan	Execution result
Example 1:		

Command	Parameters	Response
AT+BLESCAN=1 Correct response 1: OK		

6.14. AT+BLESYNC

Table 6-14. Starting or cancelling BLE synchronization

Command	Parameters	Response
Help command AT+BLESYNC=?		+BLESYNC=<enable>,<addr_type>, <addr>
Execution command AT+BLESYNC=<enable>,<addr_type>,<addr>	<enable>: whether to start synchronization <addr_type>: address type <addr>: target device address	Execution result
Example 1: Start BLE synchronization. AT+BLESYNC=1,0,AB:89:67:45:23:01 Correct response 1: OK Example 2: Cancel BLE synchronization. AT+BLESYNC=0 Correct response 2: OK		

6.15. AT+BLESYNCSTOP

Table 6-15. Stopping BLE synchronization

Command	Parameters	Response
Execution command AT+BLESYNCSTOP		Execution result
Example 1: AT+BLESYNCSTOP Correct response 1: OK		

6.16. AT+BLECONN

Table 6-16. Initiating a BLE connection

Command	Parameters	Response
Help command AT+BLECONN=?		+BLECONN=<addr_type>,<addr>
Execution command AT+BLECONN=<type>,<addr>	<addr_type>: address type <addr>: target device address	Execution result
Example 1: Peer device start advertising AT+BLECONN=0, AB:89:67:45:23:01(peer addr) Correct response 1: OK		

6.17. AT+BLESCONNPARAM

Table 6-17. Setting or querying the connection parameters

Command	Parameters	Response
Help command AT+BLECONNPARAM=?		+BLECONNPARM=<conn_idx>,<interval>,<latancy>,<supv_to>
Query command AT+BLECONNPARAM?		+BLECONNPARAM:<conn_idx>,<interval>,<latancy>,<supv_to>
Execution command AT+BLECONNPARAM=<conn_idx>,<interval>,<latancy>,<supv_to>	<conn_idx>: connection index < interval >: connection interval < latancy >: slave latency < supv_to >: supervision timeout	Execution result
Example 1: Query the connection parameters. Initiate a BLE connection, AT+BLECONN=0,<addr>, or start BLE advertising, AT+BLEADVSTART=0, then the target device connects to local device. Query the connection parameters. AT+BLECONNPARAM? Correct response 1: +BLECONNPARAM:0,40,0,500 OK		

Command	Parameters	Response
Example 2: Set the connection parameters. Initiate a BLE connection, AT+BLECONN=0,<addr>, or start BLE advertising, AT+BLEADVSTART=0, then the target device connects to local device. Set the connection parameters. AT+BLECONNPARAM=0,50,20,500 Correct response 2: OK		

6.18. AT+BLEDISCONN

Table 6-18. Disconnecting the established BLE connection

Command	Parameters	Response
Help command AT+BLEDISCONN=?		+BLEDISCONN=<conn_idx>
Execution command AT+BLEDISCONN=<conn_idx>	<conn_idx>: connection index	Execution result
Example 1: Initiate a BLE connection, AT+BLECONN=0,<addr>, or start BLE advertising, AT+BLEADVSTART=0, then the target device connects to local device. Disconnect the established BLE connection. AT+BLEDISCONN=0 Correct response 1: OK		

6.19. AT+BLEMTU

Table 6-19. Updating or querying the mtu

Command	Parameters	Response
Help command AT+BLEMTU=?		+BLEMTU=<conn_idx>,<pref_mtu>
Query command AT+BLEMTU?		+BLEMTU:<conn_idx>,<mtu_size>
Execution command	<conn_idx>: connection index	Execution result

Command	Parameters	Response
AT+BLEMTU=<conn_idx>,<pref_mtu>	<pref_mtu>:prefer mtu	
Example 1: Query the mtu. Initiate a BLE connection, AT+BLECONN=0,<addr>, or start BLE advertising, AT+BLEADVSTART=0, then the target device connects to local device. Query the mtu. AT+BLEMTU? Correct response 1: +BLEMTU:0,23 OK Example 2: Update the mtu. Initiate a BLE connection. AT+BLECONN=0,<addr> Update the mtu. AT+BLEMTU=0,1000 Correct response 2: OK		

6.20. AT+BLEPHY

Table 6-20. Updating or querying phy

Command	Parameters	Response
Help command AT+BLEPHY=?		+BLEPHY=<conn_idx>,<tx_phy>,<rx_phy>,<phy_opt>
Query command AT+BLEPHY?		+BLEPHY:<conn_idx>,<tx_phy>,<rx_phy>
Execution command AT+BLEPHY=<conn_idx>,<tx_phy>,<rx_phy>,<phy_opt>	<conn_idx>: connection index <tx_phy>: tx phy <rx_phy>: rx phy <phy_opt>: coded phy option	Execution result
Example 1: Query phy. Initiate a BLE connection, AT+BLECONN=0,<addr>, or start BLE advertising, AT+BLEADVSTART=0, then the target device connects to local device. Query phy. AT+BLEPHY?		

Command	Parameters	Response
Correct response 1: +BLEPHY:0,0,0 OK Example 2: Update phy. Initiate a BLE connection, AT+BLECONN=0,<addr>, or start BLE advertising, AT+BLEADVSTART=0, then the target device connects to local device. Update phy. AT+BLEPHY=0,1,1,0 Correct response 2: OK		

6.21. AT+BLEDATALEN

Table 6-21. Data length extension

Command	Parameters	Response
Help command AT+BLEDATALEN=?		+BLEDATALEN=<conn_idx>,<tx_oct>
Execution command AT+BLEDATALEN=<conn_idx>,<tx_oct>	<conn_idx>: connection index <tx_oct>: tx payload octets	Execution result
Example 1: Initiate a BLE connection, AT+BLECONN=0,<addr>, or start BLE advertising, AT+BLEADVSTART=0, then the target device connects to local device. Data length extension. AT+BLEDATALEN=0,200 Correct response 1: OK		

6.22. AT+BLEADDR

Table 6-22. Querying or setting the BLE bd address

Command	Parameters	Response
Help command AT+BLEADDR=?		+BLEADDR=<bd_addr>

Command	Parameters	Response
Query command AT+BLEADDR?		+BLEADDR:<bd_addr>
Execution command AT+BLEADDR=<bd_addr>	< bd_addr >: ble bd address	Execution result
Example 1: Query the ble bd address AT+BLEADDR? Correct response 1: +BLEBDADDR:77:66:55:44:33:22 OK Example 2: Set the ble bd address AT+BLEADDR=22:33:44:55:66:77 Correct response 2: OK		

6.23. AT+BLESETAUTH

Table 6-23. Setting the authentication

Command	Parameters	Response
Help command AT+BLESETAUTH=?		+BLESETAUTH=<bond>,<mitm>,<sc>,<iocap>,<oob>,<key_size>

Command	Parameters	Response
Execution command AT+BLESETAUTH=<bond>,<mitm>,<sc>,<iocap>,<oob>,<key_size>	< bond > : bonding flag 0x00: no bonding 0x01: bonding <mitm>: mitm flag 0x00: mitm protection not required 0x01: mitm protection required < sc >: secure connections flag 0x00: secure connections pairing is not supported 0x01: secure connections pairing is supported < iocap>: io capability to set 0x00: display only 0x01: display yes no 0x02: keyboard only 0x03: no input no output 0x04: keyboard display <oob>: oob flag for authention [key size]: encryption key size requirement, default is 16 if not set	Execution result
Example 1: AT+BLESETAUTH=1,0,0,3,0,16 Correct response 1: OK		

6.24. AT+BLEPAIR

Table 6-24. Starting pairing

Command	Parameters	Response
Help command AT+BLEPAIR=?		+BLEPAIR=<conidx>
Execution command AT+BLEPAIR=<conidx>	<conidx>: connection index	Execution result
Example 1: Initiate a BLE connection, AT+BLECONN=0,<addr>, or start BLE advertising, AT+BLEADVSTART=0, then the target device connects to local device. Start pairing. AT+BLEPAIR=0		

Command	Parameters	Response
Correct response 1: OK		

6.25. AT+BLEENCRYPT

Table 6-25. Starting encrypting

Command	Parameters	Response
Help command AT+BLEENCRYPT=?		+BLEENCRYPT=<conidx >
Execution command AT+BLEENCRYPT=<conidx >	< conidx >: connection index	Execution result
Example 1: Start encrypting(devices have been paired before). Initiate a BLE connection, AT+BLECONN=0,<addr>, or start BLE advertising, AT+BLEADVSTART=0, then the target device connects to local device. Start encrypting. AT+BLEENCRYPT=0 Correct response 1: OK		

6.26. AT+BLEPASSKEY

Table 6-26. Entering the passkey

Command	Parameters	Response
Help command AT+BLEPASSKEY=?		+BLEPASSKEY=<conidx>,<passkey>
Execution command AT+BLEPASSKEY=<conidx>,<passkey>	< conidx >: connection index <passkey>: passkey	Execution result
Example 1: Set the authentication. AT+BLESETAUTH=1,1,0,2,0,16		

Command	Parameters	Response
Initiate a BLE connection, AT+BLECONN=0,<addr>, or start BLE advertising, AT+BLEADVSTART=0, then the target device connects to local device. Enter the passkey. AT+BLEPASSKEY=0,123456(enter the value displayed) Correct response 1: OK		

6.27. AT+BLECOMPARE

Table 6-27. Entering the numeric comparison result

Command	Parameters	Response
Help command AT+BLECOMPARE=?		+BLECOMPARE=<conidx>,<value>
Execution command AT+BLECOMPARE=<conidx>,<value>	<conidx >: connection index <value>: numeric value	Execution result
Example 1: Set the authentication. AT+BLESETAUTH=1,1,1,4,0,16 Initiate a BLE connection, AT+BLECONN=0,<addr>, or start BLE advertising, AT+BLEADVSTART=0, then the target device connects to local device. Enter the numeric comparison result. AT+BLECOMPARE=0,1 Correct response 1: OK		

6.28. AT+BLELISTENCDEV

Table 6-28. Listing the bond devices

Command	Parameters	Response
Query command AT+BLELISTENCDEV?		+BLEADDR:<dev_idx><addr>

Command	Parameters	Response
Example 1: Devices have been paired before. AT+BLELISTENCDEV? Correct response 1: +BLELISTENCDEV=0,AB:89:67:45:23:01 +BLELISTENCDEV=1,D0:20:DD:EE:5C:3C OK		

6.29. AT+BLECLEARENCDEV

Table 6-29. Clearing the bond devices

Command	Parameters	Response
Help command AT+BLECLEARENCDEV=?		+BLECLEARENCDEV=<dev_idx>
Execution command AT+BLECLEARENCDEV=<dev_idx>	<dev_idx>: device index	Execution result
Example 1: Devices have been paired before. AT+BLECLEARENCDEV=0 Correct response 1: OK		

6.30. AT+BLEGATTSSVC

Table 6-30. Listing the devices registered locally

Command	Parameters	Response
Query command AT+BLEGATTSSVC?		+BLEGATTSSVC:<svc_id><uuid>
Example 1: AT+BLEGATTSSVC? Correct response 1: +BLEGATTSSVC:0,00000000000000000000000000180A,1 +BLEGATTSSVC:1,00001111000000000123456789ABCDEF,1 +BLEGATTSSVC:2,00000000000000000000000000000101,1 OK		

6.31. AT+BLEGATTSCHAR

Table 6-31. Listing the characteristic of the service

Command	Parameters	Response
Help command AT+BLEGATTSCHAR=?		+BLEGATTSCHAR=<svc_idx>
Execution command AT+BLEGATTSCHAR=<svc_idx>	< svc_idx >: service index	Execution result +BLEGATTSCHAR:<uuid ><value_index>
Example 1: AT+BLEGATTSCHAR=1 Correct response 1: +BLEGATTSCHAR:0000222200000000123456789ABCDEF,2 +BLEGATTSCHAR:0000333300000000123456789ABCDEF,4 +BLEGATTSCHAR:0000444400000000123456789ABCDEF,6 OK		

6.32. AT+BLEGATTSDESC

Table 6-32. Listing the descriptor of the characteristic

Command	Parameters	Response
Help command AT+BLEGATTSDESC=?		+BLEGATTSDESC=<svc_idx>,<char_idx>
Execution command AT+BLEGATTSDESC=<svc_idx>,<char_idx>	< svc_idx >: service index <char_idx>: characteristic index	Execution result +BLEGATTSDESC:<uuid ><desc_idx>
Example 1: AT+BLEGATTSDESC=1,6 Correct response 1: +BLEGATTSDESC:00000000000000000000000000002902,7 OK		

6.33. AT+BLEGATTSLISTALL

Table 6-33. Listing the information of all local services

Command	Parameters	Response
Query command AT+BLEGATTSLISTALL?		+BLEGATTSSVC:<svc_id><uuid> +BLEGATTSCHAR:<uuid ><value_index> +BLEGATTSDESC:<uuid ><desc_idx>
Example 1: AT+BLEGATTSLISTALL? Correct response 1: +BLEGATTSCHAR:00000000000000000000000000002A29,2 +BLEGATTSCHAR:00000000000000000000000000002A24,4 +BLEGATTSCHAR:00000000000000000000000000002A25,6 +BLEGATTSCHAR:00000000000000000000000000002A27,8 +BLEGATTSCHAR:00000000000000000000000000002A26,10 +BLEGATTSCHAR:00000000000000000000000000002A28,12 +BLEGATTSCHAR:00000000000000000000000000002A23,14 +BLEGATTSCHAR:00000000000000000000000000002A2A,16 +BLEGATTSCHAR:00000000000000000000000000002A50,18 +BLEGATTSSVC:1,00001111000000000123456789ABCDEF,1 +BLEGATTSCHAR:00002222000000000123456789ABCDEF,2 +BLEGATTSCHAR:00003333000000000123456789ABCDEF,4 +BLEGATTSCHAR:00004444000000000123456789ABCDEF,6 +BLEGATTSDESC:00000000000000000000000000002902,7 +BLEGATTSSVC:2,00000000000000000000000000000101,1 +BLEGATTSCHAR:00000000000000000000000000000102,2 +BLEGATTSCHAR:00000000000000000000000000000103,4 +BLEGATTSDESC:00000000000000000000000000002902,5 OK		

6.34. AT+BLEGATTSNTF

Table 6-34. Sending notification

Command	Parameters	Response
Help command AT+BLEGATTSNTF=?		+BLEGATTSNTF=<conn_idx>,<svc_id>,<char_idx>,<tx_len>
Execution command AT+BLEGATTSNTF=<conn_idx>,<svc_id>,<char_idx>,<tx_len>	<conn_idx>: connection index <svc_id>: service id <char_idx>: characteristic index <tx_len>: data length	Execution result

Command	Parameters	Response
Example 1: Start BLE advertising, AT+BLEADVSTART=0, then the target device connects to local device. Send notification. AT+BLEGATTSNTF=0,1,6,5 > Enter AAAAA(the target device will receive the data). Correct response 1: OK		

6.35. AT+BLEGATTSIND

Table 6-35. Sending indication

Command	Parameters	Response
Help command AT+BLEGATTSIND=?		+BLEGATTSIND=<conn_idx>,<svc_id>,<char_idx>,<tx_len>
Execution command AT+BLEGATTSIND=<conn_idx>,<svc_id>,<char_idx>,<tx_len>	<conn_idx>: connection index <svc_id>: service id <char_idx>: characteristic index <tx_len>: data length	Execution result
Example 1: Start BLE advertising, AT+BLEADVSTART=0, then the target device connects to local device. Send indication. AT+BLEGATTSIND=0,1,6,5 > Enter AAAAA(the target device will receive the data). Correct response 1: OK		

6.36. AT+BLEGATTSSETATTRVAL

Table 6-36. Setting the value of the characteristic

Command	Parameters	Response
Help command AT+BLEGATTSSETATTRVAL=?		+BLEGATTSSETATTRVAL=<conn_idx>,<svc_id>,<char_idx>,<tx_len>
Execution command AT+BLEGATTSSETATTRVAL=<conn_idx>,<svc_id>,<char_idx>,<tx_len>	<conn_idx>: connection index <svc_id>: service id <char_idx>: characteristic index <tx_len>: data length	Execution result
Example 1: Start BLE advertising, AT+BLEADVSTART=0, then the target device connects to local device. Set the value of the characteristic AT+BLEGATTSSETATTRVAL=0,1,4,5 > Enter AAAAA(local data changed). Correct response 1: OK		

6.37. AT+BLEGATTCDISCSVC

Table 6-37. Discovering the service

Command	Parameters	Response
Help command AT+BLEGATTCDISCSVC=?		+BLEGATTCDISCSVC=<conn_idx>,<start_hdl>,<end_hdl>
Execution command AT+BLEGATTCDISCSVC=<conn_idx>,<start_hdl>,<end_hdl>	<conn_idx>: connection index < start_hdl >: start attribute handle < end_hdl >: end attribute handle	Execution result +BLEGATTCDISCSVC:<start_hdl >,<end_hdl >,<uuid>
Example 1: Initiate a BLE connection. AT+BLECONN=0,<addr> Discover the service. AT+BLEGATTCDISCSVC=0,1,ffff		

Command	Parameters	Response
Correct response 1: +BLEGATTCDISCSVC:1,8,00001111000000000123456789ABCDEF +BLEGATTCDISCSVC:9,14,00000000000000000000000000000101 +BLEGATTCDISCSVC:16,25,00000000000000000000000000001801 +BLEGATTCDISCSVC:32,40,00000000000000000000000000001800 +BLEGATTCDISCSVC:43,61,00000000000000000000000000000180A OK		

6.38. AT+BLEGATTCDISCCHAR

Table 6-38. Discovering the characteristic

Command	Parameters	Response
Help command AT+BLEGATTCDISCCHAR=?		+BLEGATTCDISCCHAR=<conn_idx>,<start_hdl>,<end_hdl>
Execution command AT+BLEGATTCDISCCHAR=<conn_idx>,<start_hdl>,<end_hdl>	<conn_idx>: connection index < start_hdl >: start attribute handle < end_hdl >: end attribute handle	Execution result +BLEGATTCDISCCHAR:<char_hdl >,<val_hdl >,<prop >,<uuid>
Example 1: Initiate a BLE connection. AT+BLECONN=0,<addr> Discover the characteristic. AT+BLEGATTCDISCCHAR=0,1,ffff Correct response 1: +BLEGATTCDISCCHAR:2,3,2,00002222000000000123456789ABCDEF +BLEGATTCDISCCHAR:4,5,12,00003333000000000123456789ABCDEF +BLEGATTCDISCCHAR:6,7,16,00004444000000000123456789ABCDEF +BLEGATTCDISCCHAR:10,11,12,00000000000000000000000000000102 +BLEGATTCDISCCHAR:12,13,16,00000000000000000000000000000103 +BLEGATTCDISCCHAR:17,18,32,00000000000000000000000000002A05 +BLEGATTCDISCCHAR:20,21,10,00000000000000000000000000002B29 +BLEGATTCDISCCHAR:22,23,2,00000000000000000000000000002B2A +BLEGATTCDISCCHAR:24,25,2,00000000000000000000000000002B3A +BLEGATTCDISCCHAR:33,34,10,00000000000000000000000000002A00 +BLEGATTCDISCCHAR:35,36,10,00000000000000000000000000002A01 +BLEGATTCDISCCHAR:37,38,2,00000000000000000000000000002A04 +BLEGATTCDISCCHAR:39,40,2,00000000000000000000000000002AA6 +BLEGATTCDISCCHAR:44,45,2,00000000000000000000000000002A29 +BLEGATTCDISCCHAR:46,47,2,00000000000000000000000000002A24 OK		

6.39. AT+BLEGATTCDISCDESC

Table 6-39. Discovering the descriptor

Command	Parameters	Response
Help command AT+BLEGATTCDISCDESC=?		+BLEGATTCDISCDESC=<conn_idx>,<start_hdl>,<end_hdl>
Execution command AT+BLEGATTCDISCDESC=<conn_idx>,<start_hdl>,<end_hdl>	<conn_idx>: connection index < start_hdl >: start attribute handle < end_hdl >: end attribute handle	Execution result +BLEGATTCDISCDESC:<desc_hdl >,<uuid>
Example 1: Initiate a BLE connection. AT+BLECONN=0,<addr> Discover the descriptor. AT+BLEGATTCDISCDESC=0,1,ffff Correct response 1: +BLEGATTCDISCDESC:8,00000000000000000000000000002902 +BLEGATTCDISCDESC:14,00000000000000000000000000002902 +BLEGATTCDISCDESC:19,00000000000000000000000000002902 OK		

6.40. AT+BLEGATTCRD

Table 6-40. Reading attribute value

Command	Parameters	Response
Help command AT+BLEGATTCRD=?		+BLEGATTCRD=<conn_idx>,<handle>,<max_len>
Execution command AT+BLEGATTCRD=<conn_idx>,<handle>,<max_len>	<conn_idx>: connection index < handle >: attribute handle < max_len >: max length	Execution result +BLEGATTCRD:<conn_idx >,<length>,<data>
Example 1: Initiate a BLE connection. AT+BLECONN=0,<addr> Read attribute value AT+BLEGATTCRD=0,3,100 Correct response 1:		

Command	Parameters	Response
+BLEGATTCRD:0,2,2222 OK		

6.41. AT+BLEGATTCWR

Table 6-41. Writing attribute value

Command	Parameters	Response
Help command AT+BLEGATTCWR=?		+BLEGATTCWR=<conn_idx>,<handle>,<write_type>,<len>
Execution command AT+BLEGATTCWR=<conn_idx>,<handle>,<write_type>,<len>	<conn_idx>: connection index < handle >: attribute handle < write_type >: write type <len>: write length	Execution result
Example 1: Initiate a BLE connection. AT+BLECONN=0,<addr> Write attribute value. AT+BLEGATTCWR=0,5,0,5 > Enter AAAAA(the target device will receive the data). Correct response 1: OK		

7. Revision history

Table 7-1. Revision history

Revision No.	Description	Date
1.0	Initial release.	Nov.24.2023
1.1	Add new Command: AT+TRANSINTVL and AT+CIPMODE, and extend AT+CIPSEND command to support passthrough transmission mode.	Jul.16.2024
1.2	Add new AT Command about BLE.	Oct.8.2024
1.3	Add new AT Command about BLE.	Mar.19.2025

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