

HT-HC02

AT Command User Manual

Release notes

Edition	Modification item	Modification time
V0.1	Alpha release	2025.2.1
V0.11	Fix	2025.7.9
V0.12	Add Protocol type	2025.10.01

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1 Serial port settings

- Baud rate: 115200
- Stop bit: 1
- Data bits: 8
- DTR, RTS requirement: None
- Ending characters: None

2 Related Pins

PINS	Type	Function	Description
GPIO10	DI	Mode Determination	"1" Configuration Mode, "0" Transparent Mode; The baud rate of configuration mode is fixed to 115200. When changing from 1 to 0, if there is a configuration change, the device will restart and reconnect to the HaLow AP.
GPIO11	DI	Wake-up Pin	"1" Wakes up, "0" AUTO-Sleep.
GPIO12	DO	Connection status	"1"Disconnected , "0" Connected
GPIO16	I/O	TX	
GPIO17	I/O	RX	

3 AT Commands

Note:

- The maximum length of a single packet is 512 bytes.
- AT command input does not require an end symbol.
- The return value includes a newline character.

3.1 Error Return

Return	Description
+ERROR:not supported	Unsupported Command
+ERROR:format	Format Error
+ERROR:length	Command Value Length Error
+ERROR:value	Command Value Error

3.2 Region

3.2.1 Setting Region

AT Command	Return
AT+Region=1	+OK +Region=1,AU
(0-7 respectively corresponding to `US`, `AU`, `EU`, `IN`, `JP`, `KR`, `NZ`, `SG`)	

3.2.2 Query Region

AT Command	Return
AT+Region=?	+OK +Region=1,AU
(0-7 respectively corresponding to `US`, `AU`, `EU`, `IN`, `JP`, `KR`, `NZ`, `SG`)	

3.3 HaLow SSID

3.3.1 Setting SSID

AT Command	Return
AT+SSID=HC02-1234	+OK +SSID=HC02-1234
Set HaLow SSID as "HC02-1234"	

3.3.2 Query SSID

Return	Return
AT+SSID=?	+OK +SSID=HC02-1234
HaLow SSID is "HC02-1234"	

3.4 Password

3.4.1 Setting HaLow Password

AT Command	Return
AT+Password=12345678	+OK +Password=12345678
Setting HaLow Password as "12345678"	

3.4.2 Query HaLow Password

AT Command	Return
AT+Password=?	+OK +Password=12345678
HaLow Password is "12345678"	

3.5 Target Server Address

3.5.1 Setting Target Server Address

AT Command	Return
AT+Server=192.168.0.108	+OK +Server=192.168.0.108
Set target server address as "192.168.0.108"	

3.5.2 Query Target Server Address

AT Command	Return
AT+Server=?	+OK +Server=192.168.0.108
Target server address is "192.168.0.108"	

3.6 Target Server Port

3.6.1 Setting Target Server Port

AT Command	Return
AT+ServerPort=1008	+OK +ServerPort=1008
Set target server port as 1008	

3.6.2 Query Target Server Port

AT Command	Return
AT+ServerPort=?	+OK +ServerPort=1008
Server port is 1008	

3.7 Local Port

3.7.1 Setting Local Port

AT Command	Return
AT+LocalPort=1002	+OK +LocalPort=1002
Set the local port as 1002	

3.7.2 Query Local Port

AT Command	Return
AT+LocalPort=?	+OK +LocalPort=1002
Local port is 1002	

3.8 Local IP Mode

3.8.1 Setting Local IP Mode

AT Command	Return
AT+DHCP=1	+OK +DHCP=1
1:DHCP; 0: static IP	

3.8.2 Query Local IP Mode

AT Command	Return
AT+DHCP=?	+OK +DHCP=1
1:DHCP; 0: static IP	

3.9 Local IP

3.9.1 Setting Local IP

Effect when DHCP=0

AT Command	Return
AT+LocalIP=192.168.1.118	+OK +LocalIP=192.168.1.118
Set Local IP as 192.168.1.118	

3.9.2 Query Local IP

AT Command	Return
AT+LocalIP=?	+OK +LocalIP=192.168.1.118
Local IP is 192.168.1.118	

3.10 Subnet Mask

3.10.1 Setting Subnet Mask

AT Command	Return
AT+SubNet=255.255.255.0	+OK +SubNet=255.255.255.0
Set local subnet mask as 255.255.255.0	

3.10.2 Query Subnet Mask

AT Command	Return
AT+SubNet=?	+OK +SubNet=255.255.255.0
Local subnet mask is 255.255.255.0	

3.11 Gateway IP

3.11.1 Setting Gateway IP

AT Command	Return
AT+GateWay=192.168.1.1	+OK +GateWay= 192.168.1.1
Set gateway IP as 192.168.1.1	

3.11.2 Query Gateway IP

AT Command	Return
AT+SubNet=?	+OK +SubNet=255.255.255.0
Gateway IP is 192.168.1.1	

3.12 Baud Rate

3.12.1 Setting Baud Rate

AT Command	Return
AT+Baud=8	+OK +Baud=8,115200
(0-9 corresponds to 1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600, 115200, 921600)	

3.12.2 Query Board Rate

AT Command	Return
AT+Baud=?	+OK +Baud=8,115200
(0-9 corresponds to 1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600, 115200, 921600)	

3.13 Query Firmware Version

AT Command	Return
AT+Version=?	+OK +Version=1.00
Firmware Version 1.00	

3.14 HaLow OTA

AT Command	Return
AT+OTA=http://192.168.0.2/halow-udp-104.bin	
"http://192.168.0.2/halow-udp-104.bin" is the address where the firmware is stored.	

3.15 Protocol Type

3.15.1 Set Protocol Type

AT Command	Return
AT+Mode=0	+OK +Mode=0
Set the protocol type to UDP, "0" and "1" corresponds to "UDP" and "TCP" respectively.	

3.15.2 Query Protocol Type

AT Command	Return
AT+Mode=?	+OK +Mode=0
The protocol type is UDP, "0" and "1" corresponds to "UDP" and "TCP" respectively.	

4 Related Links

- Usage Guide : https://docs.heltec.org/en/wifi_halow/ht-hc02/index.html
- HT-HC02 Resource : <https://resource.heltec.cn/download/HT-HC02>

5 Contact Information

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