

AT Command for USR-W610s

1.1. Command Details

NO.	Name	Function
1	AT	Test if AT commands can be used
3	AT+S	Restart the service to make the configuration take effect.
2	AT+E	Enable/disable AT command echo
3	AT+Z	Restart device to make the configuration take effect.
4	AT+R	Restart the device
5	AT+CLEAR	Restore factory Sets
6	AT+VER	Query device version number
7	AT+MAC	Query the MAC address of the WAN port of the current device
8	AT+SN	Query device SN
9	AT+WEBU	Query Web login username and password
10	AT+PLANG	Query Web login language
11	AT+UPTIME	Query system runtime
12	AT+WANINFO	Query WAN network card information
13	AT+LANINFO	Query LAN network card information
14	AT+WANN	Query WAN port configuration
15	AT+LANN	Query LAN port configuration

16	AT+LAN	Query/set LAN port configuration
17	AT+PING	Execute ping command
18	AT+NETSTATUS	Query the network card used for the default route
19	AT+UART1	Set/query RS485 port parameters
20	AT+UART2	Set/query RS232 port parameters
21	AT+UART1FT	Set/query RS485 packet interval
22	AT+UART1FL	Set/query RS485 packet length
23	AT+UART2FT	Set/query RS232 packet interval
24	AT+UART2FL	Set/query RS232 packet length
25	AT+CHLIST	Query communication channel list
26	AT+CHSET	Modify/add communication channels
27	AT+CHDEL	Delete communication channel
28	AT+CHCLR	Clear all communication channels
29	AT+CHCFG	Modify/query channel parameters
30	AT+CHCACHE	Query/set channel data caching function
31	AT+CHREG	Query/set registration packet function
32	AT+CHHEART	Query/set heartbeat packet function
33	AT+CHTLS	Query/set channel TLS configuration
34	AT+CHMODBUS	Query/set channel master polling configuration
35	AT+MQTTFAMILYVER	Query/set MQTT version information

36	AT+MQTTFAMILYAUTH	Query/set MQTT authentication enable
37	AT+MQTTFAMILYWILL	Query/set MQTT will message information
38	AT+MQTTFAMILYCLEAN	Query/set MQTT clean session function
39	AT+MQTTFAMILYRCTM	Query/set MQTT reconnection detection interval
40	AT+MQTTFAMILYHEART	Query/set MQTT heartbeat time
41	AT+TOPICPUBLIST	Query MQTT preset publish topic list
42	AT+TOPICPUBADD	Add a new topic to the preset publish topics
43	AT+TOPICPUBDEL	Delete a topic with the specified name from the preset publish topics of a channel
44	AT+TOPICPUBCLR	Clear preset publish topics of a specified channel
45	AT+TOPICSUBLIST	Query MQTT preset subscribe topic list
46	AT+TOPICSUBADD	Add a new topic to the preset subscribe topics
47	AT+TOPICSUBDEL	Delete a topic with the specified name from the preset subscribe topics of a channel
48	AT+TOPICSUBCLR	Clear preset subscribe topics of a specified channel
49	AT+NETAT	Query/set network AT
50	AT+HEARTEN	Set/query heartbeat packet enable
51	AT+HEARTBIND	Query/set serial port heartbeat packet binding port
52	AT+HEARTTM	Set/query heartbeat time
53	AT+HEARTDT	Query/set serial port heartbeat packet function

54	AT+HEARTDTHHEX	Query/set serial port heartbeat packet content (HEX)
55	AT+NETRSTIM	Set/query no-data restart time
56	AT+NETRCTIM	Set/query no-data reconnection time
57	AT+COMRSTIM	Set/query serial port no-data restart time

1.2. Device Management

1.2.1. AT

Name	AT
Function	Test AT commands
Query	AT OK
Set	None
Parameters	Return: OK
Description	This command takes effect immediately. Returning "OK" indicates the AT command is available.

1.2.2 AT+S

Name	AT+S
Function	Restart the service to make the configuration take effect.
Query	AT+S{CR}{LF} {CR}{LF}OK{CR}{LF}

1.2.3. AT+E

Name	AT+E
Function	Set/query AT command echo Sets
Query	AT+E{CR}{LF} E: ON or OFF
Set	AT+E= <ON/OFF>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	ON: Enable echo, display input commands; OFF: Disable echo in AT command mode.
Description	This command must be in uppercase and takes effect after restarting the DTU.

1.2.3. AT+Z

Name	AT+Z
Function	Restart device to make the configuration take effect.
Set	AT+Z{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	None
Description	Restart device to make the configuration take effect

1.2.4. AT+R

Name	AT+R
Function	Restart the device
Set	AT+R{CR}{LF}

	{CR}{LF}OK{CR}{LF}
Parameters	None
Description	Upon correct execution, returns "OK" and the device restarts.

1.2.5. AT+CLEAR

Name	AT+CLEAR
Function	Restore factory Sets
Set	AT+CLEAR{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	None
Description	Upon correct execution, restores factory Sets and restarts the device.

1.2.6.

AT+VER

Name	AT+VER
Function	Query device firmware version
Query	AT+VER{CR}{LF} {CR}{LF}+VER:<ver>{CR}{LF}
Set	None
Parameters	ver: Current firmware version
Description	Upon correct execution, returns the current firmware version

1.2.7. AT+MAC

Name	AT+MAC
Function	Query WAN port MAC address
Query	AT+MAC{CR}{LF} {CR}{LF}+MAC:<MAC>{CR}{LF}
Set	None
Parameters	mac: WAN port MAC address
Description	MAC address for WAN Port

1.2.8. AT+SN

Name	AT+SN
Function	Query device SN information
Query	AT+SN{CR}{LF} {CR}{LF}+SN: <sn>{CR}{LF}
Set	None
Parameters	sn: 20-digit SN code

1.2.9. AT+WEBU

Name	AT+WEBU
Function	Query Web login username and password

Query	AT+WEBU{CR}{LF} {CR}{LF}+WEBU:<user>,<pw>{CR}{LF}
Parameters	user: Web login username; pw: Web login password

1.2.10. AT+PLANG

Name	AT+PLANG
Function	Query Web login language
Query	AT+PLANG{CR}{LF} {CR}{LF}+PLANG:<plang>{CR}{LF}
Set	{CR}{LF}AT+PLANG=<plang>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	plang: zh_cn (Chinese) en (English)

1.2.11. AT+UPTIME

Name	AT+UPTIME
Function	Query system runtime
Query	AT+UPTIME:<time>{CR}{LF}
Set	None
Parameters	time

1.2.12. AT+WANINFO

Name	AT+WANINFO
Function	Query WAN network card information
Query	AT+WANINFO:<mac> <ip> <mask> <rx_packets> <tr_packets> <rx_bytes> <tx_bytes>{CR}{LF}
Set	None
Parameters	mac: WAN MAC; ip: WAN IP mask: WAN subnet mask rx_packets: Received packets tx_packets: Sent packets rx_bytes: Received traffic tx_bytes: Sent traffic

1.2.13. AT+LANINFO

Name	AT+LANINFO
Function	Query LAN network card information
Query	AT+LANINFO {CR}{LF}
Set	None
Parameters	mac: LAN MAC Ip: LAN IP; mask: LAN subnet mask; rx_packets: Received packets; tx_packets: Sent packets; rx_bytes: Received traffic; tx_bytes: Sent traffic*Note: If VLAN is configured, this command returns LAN information.

1.2.14. AT+WANN

Name	AT+WANN
Function	Query WAN port configuration
Query	AT+WANN:<type>,<ip>,<mask>,<gateway>{CR}{LF}
Set	None
Parameters	type: WAN protocol type ip: WAN IP mask: WAN subnet mask gateway: WAN gateway

1.2.15. AT+LANN

Name	AT+LANN
Function	Query LAN port configuration
Query	AT+LANN{CR}{LF} {CR}{LF}+LANN:<ip>,<mask> {CR}{LF}
Set	None
Parameters	ip: LAN IP mask: LAN subnet mask Note: If VLAN is configured, this command returns LAN information.

1.2.16. AT+LAN

Name	AT+LAN
Function	Query/set LAN port configuration
Query	AT+LAN{CR}{LF} {CR}{LF}+LAN:<ip>,<mask>{CR}{LF}
Set	{CR}{LF}AT+LAN=<ip>,<mask>{CR}{LF}
Parameters	ip: LAN IP (standard IP format x.x.x.x, x can be set as 0~255 mask: LAN subnet mask (standard subnet mask format) *Note: If VLAN is configured, this command returns LAN information.
Description	-

1.2.18. AT+NETSTATUS

Name	AT+NETSTATUS
Function	Query the network card status used by the default route
Query	AT+NETSTATUS{CR}{LF} {CR}{LF}+NETSTATUS:<net>{CR}{LF}
Set	None
Parameter	net: Current network card status for internet access

1.3. Serial Port Sets

1.3.1. AT+UART1

Name	AT+UART1
Function	Set/query 485 port parameters
Query	AT+UART1? {CR}{LF} {CR}{LF}+UART1:<baudrate>,<data_bit>,<stop_bit>,<parity>{CR}{LF} {CR}{LF}OK {CR}{LF}
Set	AT+UART1=<baudrate>,<data_bit>,<stop_bit>,<parity>{CR}{LF} CR}{LF}OK{CR}{LF}
Parameters	<baudrate> Baud rate: 230400/115200 (default)/57600/38400/19200/9600/4800/2400/1200. <data_bit>: Data bits, 7/8 <stop_bit>: Stop bits, 1/2 <parity>: Parity, NONE/EVEN/ODD.

1.3.2. AT+UART2

Name	AT+UART2
Function	Set/query RS232 port parameters
Query	AT+UART2? {CR}{LF} {CR}{LF}+UART2:<baudrate>,<data_bit>,<stop_bit>,<parity>{CR}{LF} {CR}{LF}OK{CR}{LF}
Set	AT+UART2=<baudrate>,<data_bit>,<stop_bit>,<parity> {CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<baudrate> Baud rate 115200 (default)/57600/38400/19200/9600/4800/2400/1200.

	<data_bit>: Data bits, 7/8 <stop_bit>: Stop bits, 1/2 <parity>: Parity, NONE/EVEN/ODD.
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1.3.3. AT+UART1FT

Name	AT+UART1FT
Function	Set/query 485 packet interval
Query	AT+UART1FT? {CR}{LF} {CR}{LF}+UART1FT:<time>{CR}{LF} {CR}{LF}OK{CR}{LF}
Set	AT+UART1FT=<time> {CR}{LF} {CR}{LF}OK{CR}{LF}
Parameter	<time>:Packaging time, Packet interval range 0~3000 ms, default is 10ms

1.3.4. AT+UART1FL

Name	AT+UART1FL
Function	Set/query RS485 packet length
Query	AT+UART1FL?{CR}{LF} {CR}{LF}+UART1FL:<length>{CR}{LF} {CR}{LF}OK{CR}{LF}
Set	AT+UART1FL= <length> {CR}{LF} {CR}{LF}OK{CR}{LF}
Parameter	<length>: Packet length, range 5~1500 bytes, default is 1000

1.3.5. AT+UART2FT

Name	AT+UART2FT
Function	Set/query RS232 packet interval time
Query	AT+UART2FT? {CR}{LF} {CR}{LF}+UART2FT:<time>{CR}{LF} {CR}{LF}OK{CR}{LF}
Set	AT+UART2FT=<time> {CR}{LF} {CR}{LF}OK{CR}{LF}
Parameter	<time>:Packaging time, Packet interval time range 1~3000 ms (Default time is 10ms)

1.3.6. AT+UART2FL

Name	AT+UART2FL
Function	Set/query RS232 packet length
Query	AT+UART2FL?{CR}{LF} {CR}{LF}+UART2FL:<length>{CR}{LF} {CR}{LF}OK{CR}{LF}
Set	AT+UART2FL= <length> {CR}{LF} {CR}{LF}OK{CR}{LF}
Parameter	<length>: Packet length, range 5~1500, default is 1000

1.3.7. AT+P485CLT

Name	AT+P485CLT
Function	Set/Query 485 Anti-Collision
Query	AT+P485CLT?{CR}{LF} {CR}{LF}+P485CLT:<enable> <time>{CR}{LF} {CR}{LF}OK{CR}{LF}
Set	AT+P485CLT:<enable> <time>{CR}{LF} {CR}{LF}OK{CR}{LF}

Parameter	<enable>: ON/OFF(default) <time>: 0-255ms (Default value: 10ms)
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1.3.8. AT+F232CLT

Name	AT+F232CLT
Function	Set/Query RS232 follow control
Query	AT+F232CLT?{CR}{LF} {CR}{LF}+F232CLT:<enable>{CR}{LF} {CR}{LF}OK{CR}{LF}
Set	AT+F232CLT:<enable>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameter	<enable>: ON/OFF(default)

1.4. Channel Configuration

1.4.1. AT+CHLIST

Name	AT+CHLIST
Function	Query communication channel list
Query	{CR}{LF} AT+CHLIST?{CR}{LF} {CR}{LF}+CHLIST:{CR}{LF}<CH>,<Protocol>,<Enable>,<Description>{CR}{LF} {CR}{LF}OK{CR}{LF}
Set	None
Parameter	<CH>: Channel name <Protocol>: Channel protocol TCPC/TCPS/UDPC/UDPS/MQTT/HTTPD/AWS <Enable>: Enable Channel ON (Default) / OFF <Description>: Channel Description

1.4.2. AT+CHSET

Name	AT+CHSET
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Function	Set communication channel
Query	None
Set	AT+CHSET=<CH>,<Protocol>,<Enable>,<Description> {CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<CH>: Channel name, (1-32 bytes) <Protocol>:Channel protocol (TCPC/TCPS/UDPC/UDPS/MQTT/HTTPD/AWS) <Enable>:Channel enable status : ON (default)/OFF <Description>: Channel description (1~32 bytes)

1.4.3. AT+CHDEL

Name	AT+CHDEL
Function	Delete communication channel
Query	None
Set	AT+CHDEL=<CH> {CR}{LF} {CR}{LF}OK{CR}{LF}
Parameter	<CH>: Channel name, range:1~32 bytes

1.4.4. AT+CHCLR

Name	AT+CHCLR
Function	Clear all communication channels
Query	None
Set	AT+CHCLR?{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameter	None
Description	Delete all added channels

1.4.5. AT+CHCFG

Name	AT+CHCFG
Function	Modify/query channel parameters
Query	AT+CHCFG=<CH>? {CR}{LF} {CR}{LF}+OK=<CH>,<Protocol>,<variable parameters according to 'Protocol'...>{CR}{LF}
Set	AT+CHCFG=CH>,<Protocol>,<variable parameters according to 'Protocol'...>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<CH>: Channel name <Protocol>:Protocol (TCPC/TCPS/UDPC/UDPS/HTTPD/MQTT/AWS) <Variable parameter section>: TCPC: <Server>,<Re-Port>,<Lo-Port>,<Trans>,<BindCOM> <Server>: Remote server address, (0-63 bytes) <Re-Port>: Server port, Range: [1-65535] <Lo-Port>: Local port, Range: [0-65535] (0 means random) <Trans>: Transmission mode TRANS - Transparent transmission (default) MODBUS - ModBUSRTU <BindCOM>: Channel binding (ALL not supported in MODBUS mode) 485 - COM1-485 (Default) 232 - COM2-232 ALL - COM1&COM2 TCPS: <Lo-Port>,<MxCon>,<Mode>,<Trans>,<BindCOM> <Lo-Port>: Local port, [1-65535] <MxCon>: Max Connections, range: 1-16, default qty: 8 <Mode>:Measures for Exceeding Connection Limit KEEP- Keep connection KICK- Kick out (Default) Trans>: Transmission mode TRANS - Transparent transmission (default) MODBUS - ModBUSRTU <BindCOM>: Channel binding (ALL not supported in MODBUS mode) 485 - COM1-485 (Default) 232 - COM2-232 ALL - COM1&COM2

	UDPC: <Server>,<Re-Port>,<Lo-Port>,<checkPort>,<BindCOM> <Server>: Remote server address, (0-63 bytes) The default value: test.cn <Re-Port>: Server port, Range: [1-65535] <Lo-Port>: Local port, Range: [0-65535] (0 means random) <checkPort>: Port verification ON (Default)/OFF <BindCOM>: Channel binding 485 - COM1-485 (Default) 232 - COM2-232 ALL - COM1&COM2 UDPS: <Lo-Port>,<BindCOM> <Lo-Port> : Local port, [1-65535] <BindCOM>: Channel binding 485 - COM1-485 (Default) 232 - COM2-232 ALL - COM1&COM2 MQTT: <Server>,<Re-Port>,<ID>, <Server>: Remote server address, (1-128 bytes) Default: cloudmqtt.usr.cn <Re-Port>: Server port, Range: [1-65535] Default:1883 <ID>: The client ID, (1-128 bytes) Default: SN
Description	Returns an error if the protocol does not match the existing channel protocol.Serial port binding parameter 'ALL' is not allowed during MODBUS polling.

1.4.6. AT+CHCACHE

Name	AT+CHCACHE
Function	Query/set channel data caching function
Query	AT+ CHCACHE=<CH>{CR}{LF} {CR}{LF}+CHCACHE:<CH>,<Enable>,<Cure>,<Mode>{CR}{LF} {CR}{LF}OK{CR}{LF}

Set	AT+CHCACHE=<CH>,<Enable>[,<Cure><Mode>]{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	Data overflow handling (DISOLD - discard old data/DISNEW - discard new data): Caching mode (PCKLEN - cache length limit/PCKCNT - cache packet count limit) <CH> : Channel Name <Enable> : Authentication enable status when connecting to server ON / OFF (Default) <Cure>: Data overflow handling DISOLD - Discard old data DISNEW - Discard new data <Mode>: Caching mode PCKLEN - Cache length limit PCKCNT - Cache packet quantity limit
Description	No need to enter other parameters when closed.Supported channel protocols: TCPC/TCPS/MQTT/AWS/Cloud

1.4.7. AT+CHREG

Name	AT+CHREG
Function	Query/set channel registration packet function
Query	AT+CHREG=<CH>{CR}{LF} {CR}{LF}+CHREG:<CH>,<Mode>,<Type>[,<DataType>][,<Data>]{CR}{LF} {CR}{LF}OK{CR}{LF}
Set	AT+CHREG=<CH>,<Mode>,<Type>[,<DataType>][,<Data>]{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<CH> : Channel name (HTTPD and MQTT not supported) <Mode> : Registration packet mode NONE - Off USER - user-defined SN MAC <Type>: Sending Mode FIRST - Send a data packet when connecting to the server EVERY - Add the registration packet to the front of each transmitted data packet When registration packet mode is USER: <DataType>: User-defined Registration Packet Data Type (only when

	USER mode is selected) HEX - Custom registration packet data type is hexadecimal string, range [2-64] ASCII - User-defined registration packet data type is ASCII string, range [1-32] <Data>:User-defined registration packet data content
Description	Supported channel protocols: TCPC/UDPC. No need to enter other parameters when registration packet is closed.

1.4.8. AT+CHHEART

Name	AT+CHHEART
Function	Query/set heartbeat packet function
Query	AT+CHHEART=<CH>{CR}{LF} {CR}{LF}+CHHEART:<CH>,<Enable>,<Time>,<DataType>,<Data>{CR}{LF} {CR}{LF}OK{CR}{LF}
Set	AT+CHHEART=<CH>,<Enable>[,<Time>,<DataType>,<Data>]{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<CH>: Channel name <Enable>: Activate the heartbeat packet function OFF (Default) /ON <Time> : Heartbeat Package Time, range:[1-6000 seconds] Default value: 60seconds <DataType> User-defined heartbeat Packet Data Type (only when USER mode is selected) HEX - Custom packet data type is hexadecimal string, range [2-64] ASCII - User-defined packet data type is ASCII string, range [1-32] <Data>: Heartbeat data type
Description	Supported channel protocols: TCPC/UDPC. No need to enter other parameters when heartbeat packet is closed.

1.4.9. AT+CHTLS

Name	AT+CHTLS
Function	Query/set TLS function for channel
Query	AT+CHTLS=<CH>{CR}{LF} {CR}{LF}+CHTLS:<CH>,<Enable>,<Method>{CR}{LF} {CR}{LF}OK{CR}{LF}

Set	AT+CHTLS=<CH>,<Enable>,<Method>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<CH> : Channel Name <Enable>: Authentication enable status when connecting to the server OFF - Close (Default) TLS10 - TLS1.0 TLS12 - TLS1.2 <Method>: Certificate authentication method NONE - Do not verify the certificate (default) SERVER - Verify the server certificate BOTH - Two-way verification
Description	No other parameters need to be input when shutting down. Supported channel protocols: MQTT, TCPC, HTTPD [Note: AWS supports TLS, default configuration, and does not support AT command for configuration query]

1.5.0 AT+CHMODBUS

Name	AT+CHMODBUS
Function	Query/set Channel Host Polling Configuration
Query	AT+CHMODBUS=<CH>{CR}{LF} {CR}{LF}+CHMODBUS:<CH>,<Enable>,<Ack>,<Time>{CR}{LF} {CR}{LF}OK{CR}{LF}
Set	AT+CHMODBUS=<CH>,<Enable>,<Ack>,<Time>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<CH>: Channel Name <Enable>: Host Polling Enable Status OFF - Disable (Default) ON - Enable <Ack>:Timeout Response OFF - Disable (Default) ON - Enable <Time>: Timeout duration range, (10-6000ms) Default value: 200ms
Description	When closing, other parameters do not need to be input. Supported channel protocols: TCPC, TCPS An error is returned if the protocol transmission mode is not MODBUS.

1.5. MQTT Protocol Configuration

1.5.1. AT+MQTTFAMILYVER

Name	AT+MQTTFAMILYVER
Function	Query/Setting MQTT Version
Query	AT+ MQTTFAMILYVER=<CH>{CR}{LF} {CR}{LF}+MQTTFAMILYVER:<CH>,<Ver>{CR}{LF} {CR}{LF}OK{CR}{LF}
Setting	AT+ MQTTFAMILYVER =<CH>,<Ver>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<CH>: Channel name <Ver>: MQTT version Default version - V3.1.1
Description	Supported channel protocol: MQTT

1.5.2. AT+MQTTFAMILYAUTH

Name	AT+MQTTFAMILYAUTH
Function	Query/set MQTT version
Query	AT+ MQTTFAMILYAUTH=<CH>{CR}{LF} {CR}{LF}+MQTTFAMILYAUTH:<CH>,<Enable>,<Username>,<Password>{CR}{LF} {CR}{LF}OK{CR}{LF}
Setting	AT+MQTTFAMILYAUTH=<CH>,<Enable>,<Username>,<Password>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<CH>: Channel name <Enable>: Authentication enable status when connecting to the server ON (Default value) / OFF <Username>: Username required for authentication when connecting to the server [1-128 bytes] <Password>: Password required for authentication when connecting to the server [1-128 bytes]

Description	When disabled, other subsequent parameters do not need to be entered Supported channel protocol: MQTT
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1.5.3. AT+MQTTFAMILYWILL

Name	AT+MQTTFAMILYWILL
Function	Query/set MQTT will message
Query	AT+ MQTTFAMILYWILL=<CH>{CR}{LF} {CR}{LF}+MQTTFAMILYWILL:<CH>,<Enable>,<Topic>,<Qos>,<Payload>{CR}{LF} {CR}{LF}OK{CR}{LF}
Setting	AT+MQTTFAMILYWILL =<CH>,<Enable>,<Topic>,<Qos>,<Payload>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<CH>: Channel name <Enable>: Switch status ON / OFF (default value) <Topic>: Will topic name (1-128 bytes) <Qos>: Quality of Service for the will message 0 - At most once 1 - At least once 2 - Exactly once
Description	When disabled, other subsequent parameters do not need to be entered Supported channel protocol: MQTT

1.5.4. AT+MQTTFAMILYCLEAN

Name	AT+MQTTFAMILYCLEAN
Function	Query/set MQTT clean session function
Query	AT+ MQTTFAMILYCLEAN=<CH>{CR}{LF} {CR}{LF}+MQTTFAMILYCLEAN:<CH>,<Enable>{CR}{LF} {CR}{LF}OK{CR}{LF}
Setting	AT+ MQTTFAMILYRCTM =<CH>,<Enable>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<CH>: Channel name <Enable>: Switch status

	ON / OFF (default value)
Description	Supported channel protocols: MQTT/AWS

1.5.5. AT+MQTTFAMILYRCTM

Name	AT+MQTTFAMILYRCTM
Function	Query/set MQTT reconnection detection interval
Query	AT+ MQTTFAMILYRCTM=<CH>{CR}{LF} {CR}{LF}+MQTTFAMILYRCTM:<CH>,<RCTim>{CR}{LF} {CR}{LF}OK{CR}{LF}
Setting	AT+ MQTTFAMILYRCTM =<CH>,<RCTim>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<CH>: Channel name <RCTim>: Reconnection detection interval (1-3600 seconds, default interval time: 5 seconds
Description	Supported channel protocols: MQTT/AWS

1.5.6. AT+MQTTFAMILYHEART

Name	AT+MQTTFAMILYHEART
Function	Query/set MQTT heartbeat time
Query	AT+ MQTTFAMILYHEART=<CH>{CR}{LF} {CR}{LF}+MQTTFAMILYHEART:<CH>,<Heart>{CR}{LF} CR}{LF}OK{CR}{LF}
Setting	AT+ MQTTFAMILYHEART =<CH>,<Heart>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<CH>: Channel name <Heart>: Heartbeat packet time MQTT/AWS: 30 (default) (0-6000 seconds)

Description	Supported channel protocols: MQTT/AWS
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1.6. MQTT Topic Configuration

1.6.1. AT+TOPICPUBLIST

Name	AT+TOPICPUBLIST
Function	Query MQTT preset publish topic list
Query	{CR}{LF}+TOPICPUBLIST:<CH>,<name>,<Topic>,<Qos>,<Retained>,<BindCOM>,<description>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<CH> : Channel name <name>: name <Topic> : Publishing Topic Name <Qos> : Quality of Service Level 0 - At Most Once 1 - At Least Once 2 - Exactly Once <Retained> : Is the message to be retained? ON (Default) / OFF <BindCOM> : Bound Channel 485 - COM1-485 232 - COM2-232 ALL - COM1&COM2 <description> : Description
Description	Supported channel protocols: MQTT/AWS

1.6.2. AT+TOPICPUBADD

Name	AT+TOPICPUBADD
Function	Add a new topic to the preset publish topics
Setting	AT+TOPICPUBADD =<CH>,<name>,<Topic>,<Qos>,<Retained>,<BindCOM>,<description>{CR}{LF}

	{CR}{LF}OK{CR}{LF}
Parameters	<CH> : Channel name <name>: name <Topic>: Add new topic name <Qos>: Quality of Service Level 0 - At Most Once 1 - At Least Once 2 - Exactly Once <Retained>: Is the message to be retained? ON (Default) / OFF <BindCOM>: Bound Channel 485 - COM1-485 232 - COM2-232 ALL - COM1&COM2 <description> : Description
Description	Supported channel protocols: MQTT/AWS

1.6.3. AT+TOPICPUBDEL

Name	AT+TOPICPUBDEL
Function	Delete the topic with this name from the preset publish topics in the specified channel
Setting	AT+ TOPICPUBDEL = <CH>,<name>{CR}{LF} {CR}{LF}OK {CR}{LF}
Parameters	<CH> : Channel name <name>: The Publish topics name to be deleted in this channel name (1-128 bytes)
Description	Supported channel protocols: MQTTAWS

1.6.4. AT+TOPICPUBCLR

Name	AT+TOPICPUBCLR
Function	Clear the preset publish topics of the specified channel
Setting	AT+TOPICPUBCLR= <CH> {CR}{LF} {CR}{LF} OK{CR}{LF}
Parameters	<CH>:Channel name

Description	Supported channel protocols: MQTT/AWS
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1.6.5. AT+TOPICSUBLIST

Name	AT+TOPICSUBLIST
Function	Query MQTT preset subscription topic list
Query	AT+TOPICSUBLIST=<CH> {CR}{LF} {CR}{LF}+TOPICSUBLIST:<CH>,<name>,<Topic>,<Qos>,<BindCOM>,<description> {CR}{LF} {CR}{LF} OK{CR}{LF}
Parameters	<CH> : Channel name <name>: name <Topic>: Subscription topic name <Qos>: Quality of Service QoS Level 0 - At Most Once 1 - At Least Once 2 - Exactly Once <Retained>: Is the message to be retained? ON (Default) / OFF <BindCOM>: Bound Channel 485 - COM1-485 232 - COM2-232 ALL - COM1&COM2 <description> : Description
Description	Supported channel protocols: MQTT/AWS

1.6.6. AT+TOPICSUBADD

Name	AT+TOPICSUBADD
Function	Add a new topic to the preset subscription topics
Setting	AT+TOPICSUBADD =<CH>,<name>,<Topic>,<Qos>,<BindCOM>,<description> {CR}{LF} {CR}{LF} OK{CR}{LF}

Parameters	<CH> : Channel name <name>: name <Topic> : Add a new subscription topic <Qos> : Quality of Service (QoS) Level 0 - At Most Once 1 - At Least Once 2 - Exactly Once <Retained> : Is the message to be retained? ON (Default) / OFF <BindCOM> : Bound Channel 485 - COM1-485 232 - COM2-232 ALL - COM1&COM2 <description> : Description
Description	Supported channel protocols: MQTT/AWS

1.6.7. AT+TOPICSUBDEL

Name	AT+TOPICSUBDEL
Function	Delete the topic with this name from the preset subscription topics of the specified channel
Setting	AT+TOPICSUBDEL= <CH>,<name>{CR}{LF} {CR}{LF} OK{CR}{LF}
Parameters	<CH>: Channel name <name> : Topic name to be deleted
Description	Supported channel protocols: MQTT/AWS

1.6.8. AT+TOPICSUBCLR

Name	AT+TOPICSUBCLR
Function	Clear the preset subscription topics of the specified channel
Setting	AT+TOPICSUBCLR= <CH> {CR}{LF} {CR}{LF} OK{CR}{LF}

Parameters	<CH>: Channel name
Description	Supported channel protocols: MQTT/AWS

1.7. Advanced Settings

1.7.1. AT+NETAT

Name	AT+NETAT
Function	Query/set network AT
Query	AT+NETAT? {CR}{LF} {CR}{LF} +NETAT:<Enable>,<Password> {CR}{LF} {CR}{LF} OK{CR}{LF}
Setting	AT+ NETAT= <Enable>[,<Password>] {CR}{LF} {CR}{LF} OK{CR}{LF}
Parameters	<Enable>: Enable ON / OFF (Default:ON) <Password>: Network AT password Default password: atnetcmd#
Description	Supported channel protocols: MQTT/AWS

1.8. Serial Port Heartbeat Packet

1.8.1. AT+HEARTEN

Name	AT+HEARTEN
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Function	Set/query heartbeat packet enable
Query	AT+HEARTEN?{CR}{LF} {CR}{LF}+HEARTEN:<Enable>{CR}{LF} {CR}{LF}OK{CR}{LF}
Setting	AT+HEARTEN=<Enable>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<Enable>: Heartbeat packet enable status ON / OFF (Default)
Description	Supported channel protocols: MQTT/AWS

1.8.2. AT+HEARTBIND

Name	AT+HEARTBIND
Function	Query/set serial port heartbeat packet bound port
Query	AT+HEARTBIND?{CR}{LF} {CR}{LF}+HEARTBIND:<BindCOM>{CR}{LF} {CR}{LF}OK{CR}{LF}
Setting	AT+ HEARTBIND= <BindCOM>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<BindCOM>: Bound serial port 485 - COM1-485 232 - COM2-232 ALL - COM1&COM2

1.8.3. AT+HEARTTM

Name	AT+HEARTTM
Function	Set/query heartbeat time
Query	AT+HEARTTM?{CR}{LF} {CR}{LF}+HEARTTM:<heart_times>{CR}{LF} {CR}{LF}OK{CR}{LF}

Setting	AT+HEARTTM= <heart_times>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<heart_times>:Heartbeat time, range: 1~6000seconds

1.8.4. AT+HEARTDT

Name	AT+HEARTDT
Function	Set/query Serial port heartbeat packet function
Query	AT+HEARTDT?{CR}{LF} {CR}{LF}+HEARTDT:<heartbeat>{CR}{LF} {CR}{LF}OK{CR}{LF}
Setting	AT+ HEARTDT= <heartbeat>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<heartbeat>:Custom heartbeat packet content, range [1, 32] bytes

1.8.5. AT+HEARTDTHEX

Name	AT+HEARTDTHEX
Function	Set/query Serial port heartbeat packet content
Query	AT+HEARTDTHEX?{CR}{LF} {CR}{LF}+HEARTDTHEX:<heartbeat>{CR}{LF} {CR}{LF}OK{CR}{LF}
Setting	AT+ HEARTDTHEX = <heartbeat>{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<heartbeat>:Custom heartbeat packet content with HEX, range [1, 32] bytes

1.9. Timeout Restart

1.9.1. AT+NETRSTIM

Name	AT+NETRSTIM
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Function	Set/query no-data restart time
Query	AT+NETRSTIM?{CR}{LF} {CR}{LF}+NETRSTIM:<Enable>,<timeout_restart>{CR}{LF} {CR}{LF}OK{CR}{LF}
Setting	AT+NETRSTIM= <Enable>[,<timeout_restart>]{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<Enable> : Enable this function ON / OFF (Default) <timeout_restart>: No-data restart time, range:60-36000 seconds Default value: 36000
Description	No need to input other parameters when disabling this function

1.9.2. AT+NETRCTIM

Name	AT+NETRCTIM
Function	Set/query no-data re-connection time
Query	AT+NETRCTIM?{CR}{LF} {CR}{LF}+NETRCTIM:<Enable>,<timeout_restart>{CR}{LF} {CR}{LF}OK{CR}{LF}
Setting	AT+NETRCTIM= <Enable>[,<timeout_restart>]{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<Enable> : Enable this function ON / OFF (Default) <timeout_restart>: No-data re-connection time, range:60-3600s Default value: 3600s
Description	No need to input other parameters when disabling this function

1.9.3. AT+COMRSTIM

Name	AT+COMRSTIM
Function	Set / Query the time for serial port to restart without data transmission

Query	AT+COMRSTIM?{CR}{LF} {CR}{LF}+COMRSTIM:<Enable>,<BindCOM>,<timeout_restart>{CR}{LF} {CR}{LF}OK{CR}{LF}
Setting	AT+COMRSTIM= <Enable>[,<BindCOM>,<timeout_restart>]{CR}{LF} {CR}{LF}OK{CR}{LF}
Parameters	<Enable> : Enable ON (default) / OFF <BindCOM> : Bound serial port 485 - COM1-485 232 - COM2-232 ALL - COM1&COM2 <timeout_restart> : No-data restart time, range: 60~3600 seconds default value: 3600 seconds
Description	No need to enter other subsequent parameters when disabling this function