

# USR-C322 AT Command Set

(Firmware 2.18)

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## 1. What is the AT command.

AT command is used for controlling module. You can use AT command to configure and query the settings.

## 2. How to use the AT command

For USR device is in transparent mode normally, you must enter AT command mode at first. Then you can send AT command to configure or query the settings. After you configure the USR device, you should restart the USR device to make the settings take effect. Every time module restart will work in work mode rather AT command mode.

Every AT command must add character carriage return <CR> and line feed <LF>. In Hex, <CR> is 0x0D <LF> is 0x0A.

## 3. How to enter AT command mode

Please read this FAQ about entering AT command mode.

<http://www.usriot.com/enter-serial-command-mode/>

## 4. AT command set

Command	Function
Basic Command	
ENTM	Exit serial AT command mode and enter work mode
E	Query/Set AT command echo
Z	Restart the USR device
CFGTF	Save the current setting as the factory setting
RELD	Restore factory settings
MAC	Query MAC address
SEARCH	Query/Set search port and keyword in LAN
MID	Query/Set module name
PLANG	Query/Set default language of settings webpage
WEBU	Query/Set settings webpage username and password
VER	Query firmware version
PING	Query the station of PING
WSCAN	Search surrounding AP
SLPTYPE	Query/Set sleep mode
MSLP	Enter sleep mode that SLPTYPE set immediately

WIFI Settings command	
WMODE	Query/Set work mode of WIFI
WSTA	Query/Set SSID and password of connected AP
WANN	Query/Set module DHCP or Static IP, IP address, Mask, gateway address and DNS
WSLK	Query the status and RSSI in STA work mode
WAP	Query/Set AP parameter(SSID and key)
CHANNEL	Query/Set the channel of module in AP work mode
LANN	Query/Set IP address and MASK of module in AP work mode
UART0 command	
UART	Query/Set UART0 parameters
UARTTE	Query/Set interval of UART0 Free-Frame
WKMOD	Query/Set Socket work mode of UART0
SOCKA	Query/Set Networking protocol parameter of SOCKA of UART0
SOCKLKA	Query SOCKA of UART0 TCP connection connected /disconnected
SOCKDISA	Query/Set TCP Reconnection mechanism in TCP Client of SOCKA of UART0
SOCKB	Query/Set Networking protocol parameter of SOCKB of UART0
SOCKLKB	Query SOCKB of UART0 TCP connection connected /disconnected
SOCKDISB	Query/Set TCP Reconnection mechanism in TCP Client of SOCKB of UART0
RFCENA	Query/Set similar RFC2217 function of UART0 ON/OFF
REGENA	Query/Set status and method of identity header of UART0
REGID	Query/Set ID of identity header of UART0
REGUSR	Query/Set Customer's Self-defined identity header data of UART0
REGCLOUD	Query/Set USR Cloud name and password of UART0
TRENC	Query/Set station and encryption data of Transparent Transmission Encryption of UART0
HTPTP	Query/Set HTTP method of UART0
HTPSV	Query/Set HTTP Server Address and Port of UART0
HTPHEAD	Query/Set HTTP header of UART0
HTPURL	Query/Set URL of UART0
HTPCHD	Query/Set filtering HTTP header of response data

	enabled/disabled
UART1 command	
UART1	Query/Set UART1 parameters
UARTTE1	Query/Set interval of UART1 Free-Frame
WKMOD1	Query/Set Socket work mode of UART1
SOCKA1	Query/Set Networking protocol parameter of SOCKA of UART1
SOCKLKA1	Query SOCKA of UART1 TCP connection connected /disconnected
SOCKDISA1	Query/Set TCP Reconnection mechanism in TCP Client of SOCKA of UART1
RFCENA1	Query/Set similar RFC2217 function of UART1 ON/OFF
REGENA1	Query/Set status and method of identity header of UART1
REGID1	Query/Set ID of identity header of UART1
REGUSR1	Query/Set Customer's Self-defined identity header data of UART1
REGCLOUD1	Query/Set USR Cloud name and password of UART1
TRENC1	Query/Set station and encryption data of Transparent Transmission Encryption of UART1
HTPTP1	Query/Set HTTP method of UART1
HTPSV1	Query/Set HTTP Server Address and Port of UART1
HTPHEAD1	Query/Set HTTP header of UART1
HTPURL1	Query/Set URL of UART1
HTPCHD1	Query/Set filtering HTTP header of response data of UART1 enabled/disabled
SSLSECM	Query/Set SSL Encryption type
SSLMASK	Query/Set SSL Encryption Algorithm
SSLCA	Query/Set SSL Certificate Title
SSLIPP	Query/Set SSL Server Address and Port

## 5. AT command details

Special Characters		
Character	Note	Hex
<CR>	Carriage Return	0x0D
<LF>	Line Feed	0x0A

### 5.1. AT+ENTM

Format	
Query	AT+ENTM<CR>
Return	<CR><LF>+OK<CR><LF>

### 5.2. AT+E

Parameter	Description	Default Value	Range
<Status>	Echo of AT command	ON	ON: Enable the echo
			OFF: Disable the echo
Format			
Query	AT+E<CR>		
Return	<CR><LF>+OK=<Status><CR><LF>		
Set	AT+E=<Status><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.3. AT+Z

Format	
Set	AT+Z<CR>
Return	<CR><LF>+OK<CR><LF>

## 5.4. AT+CFGTF

Parameter	Description	Range
<Status>	Results of saving the current setting as the factory setting	SAVED: Saving successfully
		NON-MAVED: Saving unsuccessfully
Format		
Set	AT+CFGTF<CR>	
Return	<CR><LF>+OK=<Status><CR><LF>	

## 5.5. AT+RELD

Format	
Set	AT+RELD<CR>
Return	<CR><LF>+OK=REBOOTING...<CR><LF>

## 5.6. AT+MAC

Parameter	Description
<MAC>	MAC address of the module.
Format	
Query	AT+MAC<CR>
Return	<CR><LF>+OK=<MAC><CR><LF>

## 5.7. AT+SEARCH

Parameter	Description	Default Value	Range
<Port>	UDP Port for searching	48899	1~65535
<Keyword>	Search keyword	WWW.USR.CN	1~20 bytes
Format			
Query	AT+SEARCH<CR>		
Return	<CR><LF>+OK=<Port>,<Keyword><CR><LF>		
Set	AT+SEARCH=<Port>,<Keyword><CR>		
Return	<CR><LF>+OK<CR><LF>		



## 5.8. AT+MID

Parameter	Description	Default Value	Range
<MID>	Module name	USR-C322	1~20 Bytes
<b>Format</b>			
Query	AT+MID<CR>		
Return	<CR><LF>+OK=<MID><CR><LF>		
Set	AT+MID=<MID><CR>		
Return	<CR><LF>+OK<CR><LF>		

## 5.9. AT+PLAND

Parameter	Description	Default Value	Range
<Language>	language of webpage	EN	EN: English
			CH: Chinese
Format			
Query	AT+PLANG<CR>		
Return	<CR><LF>+OK=<Language><CR><LF>		
Set	AT+PLANG=<Language><CR>		
Return	<CR><LF>+OK<CR><LF>		

## 5.10. AT+WEBU

Parameter	Description	Default Value	Range
<Username>	Username of module	admin	Must be 5 bytes, can't be NUL
<Password>	Password of module	admin	Must be 5 bytes
<b>Format</b>			
Query	AT+WEBU<CR>		
Return	<CR><LF>+OK=<Username>,<Password><CR><LF>		
Set	AT+WEBU=<Username>,<Password><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.11. AT+VER

Parameter	Description
<VER>	Firmware version of the module
Format	
Query	AT+VER<CR>
Return	<CR><LF>+OK=<VER><CR><LF>

### 5.12. AT+PING

Parameter	Description	Range
<Address>	Default IP address or Domain Name of module	Can be IP address 192.168.1.1 or Domain Name www.usr.cn
<Station>	Station of ping	SUCCESS:PING successful
		TIMEOUT:PING overtime or disconnected
Format		
Query	AT+PING=<Address><CR>	
Return	<CR><LF>+OK=<Station><CR><LF>	

### 5.13. AT+WSCAN

Parameter	Description
<SSID>	SSID that be searched by module
<BSSID>	MAC address of SSID that be searched by module
<Security>	Encryption security mode of SSID that searched by module
<Indicator>	RSSI of SSID that be searched by module
Format	
Query	AT+WSCAN<CR>
Return	<CR><LF>+OK=<CR><LF>SSID,BSSID,SECURITY,INDICATOR<CR><LF>><SSID1>,<BSSID1>,<Security1>,<Indicator1><CR><LF>><SSID2>,<BSSID2>,<Security2>,<Indicator2><CR><LF>.....<CR><LF>><SSIDN><BSSIDN>><SecurityN><IndicatorN><CR><LF>

### 5.14. AT+SLPTYPE

Parameter	Description	Default Value	Range
<Mode>	Sleep Mode	0(Active Mode)	0:Active mode
			1:Sleep mode
			2:Deepsleep mode
			3:LPDS mode
			4:Hibernate mode
<Time>	Module without communication last time. When last time no data transmission, enter sleep mode	No Default Value	2-240 seconds
Format			
Query	AT+SLPTYPE<CR>		
Return	<CR><LF>+OK=<Mode>,<Time><CR><LF>		
Set	AT+SLPTYPE=<Mode>,<Time><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.15. AT+MSLP

Format	
Set	AT+MSLP<CR>
Return	<CR><LF>+OK<CR><LF>

### 5.16. AT+WMODE

Parameter	Description	Default Value	Range
<Status>	WIFI work mode of module	AP	AP:AP mode
			STA:STA mode
Format			
Query	AT+WMODE<CR>		
Return	<CR><LF>+OK=<Status><CR><LF>		
Set	AT+WMODE=<Status><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.17. AT+WSTA

Parameter	Description	Range
<SSID>	SSID of connected AP	1~32 bytes and can't be “ , ”
<PASSWORD>	PASSWORD of connected AP	Can't be “ , ”
<b>Format</b>		
Query	AT+WSTA<CR>	
Return	<CR><LF>+OK=<SSID>,<PASSWORD> <CR><LF>	
Set	AT+WSTA=<SSID>,<PASSWORD> <CR>	
Return	<CR><LF>+OK<CR><LF>	

### 5.18. AT+WANN

Parameter	Description	Default Value	Range
<Mode>	Method of how to get IP address	DHCP	STATIC: Get the IP address manually
			DHCP: Get the IP address automatically
<IP address>	IP address	192.168.1.1	0.0.0.0~255.255.255.255
<Mask>	Subnet mask	255.255.255.0	0.0.0.0~255.255.255.255
<Gateway>	Gateway address	192.168.1.1	0.0.0.0~255.255.255.255
<DNS>	DNS address	0.0.0.0	0.0.0.0~255.255.255.255
<b>Format</b>			
Query	AT+WANN<CR>		
Return	<CR><LF>+OK=<Mode>,<IP address>,<Mask>,<Gateway>,<DNS><CR><LF>		
Set	AT+WANN=<Mode>,<IP address>,<Mask>,<Gateway>,<DNS><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.19. AT+WSLK

Parameter	Description	Range
<Status>	Status of module in STA mode	DISCONNECTED:no connection with any AP
		SSID of connected AP
<RSSI>	RSSI	0-100
Format		
Query	AT+WSLK<CR>	
Return	<CR><LF>+OK=<Status>,<RSSI><CR><LF>	

### 5.20. AT+WAP

Parameter	Description	Default Value	Range
<SSID>	SSID of module in AP MODE	USR-C322	Can't have “, ”
<PASSWORD>	Password of module in AP MODE	NONE	>=8 bytes and can't have “, ”
			NONE:no password
Format			
Query	AT+WAP<CR>		
Return	<CR><LF>+OK=<SSID>,<PASSWORD><CR><LF>		
Set	AT+WAP=<SSID>,<PASSWORD><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.21. AT+CHANNEL

Parameter	Description	Default Value	Range
<NUM>	Channel of module in AP mode	6	1-13
Format			
Query	AT+CHANNEL<CR>		
Return	<CR><LF>+OK=<NUM><CR><LF>		
Set	AT+CHANNEL=<NUM><CR>		
Return	<CR><LF>+OK<CR><LF>		

## 5.22. AT+LANN

Parameter	Description	Default Value	Range
<IP address>	IP address of module in AP mode	192.168.1.1	0.0.0.0~255.255.255.255
<Mask>	Subnet mask of module in AP mode	255.255.255.0	0.0.0.0~255.255.255.255
Format			
Query	AT+LANN<CR>		
Return	<CR><LF>+OK=<IP address>,<Mask><CR><LF>		
Set	AT+LANN=<IP address>,<Mask><CR>		
Return	<CR><LF>+OK<CR><LF>		

## 5.23. AT+UART

Parameter	Description	Default Value	Range
<Baudrate>	Baudrate	115200	300-3M
<Data bits>	Data bits	8	5,6,7,8
<Stop bits>	Stop bits	1	1,2
<Parity>	Parity	NONE	NONE,EVEN,ODD,MASK,SPACE
<Flow Control>	Flow Control	NFC	NFC: No flow control
			FC: Hardware flow control(RTS/CTS)
			485:UART_RTS used to 485 communication
Format			
Query	AT+UART<CR>		
Return	<CR><LF>+OK=<Baudrate>,<Data bits>,<Stop bits>,<Parity><Flow Control><CR><LF>		
Set	AT+UART=<Baudrate>,<Data bits>,<Stop bits>,<Parity><Flow Control><CR>		
Return	<CR><LF>+OK<CR><LF>		

## 5.24. AT+UARTTE

Parameter	Description	Default Value	Range
<Interval>	Time interval of adjacent bytes in Free-Frame of UART0	5ms	5-250ms
<b>Format</b>			
Query	AT+UARTTE<CR>		
Return	<CR><LF>+OK=<Interval><CR><LF>		
Set	AT+UARTTE=<Interval><CR>		
Return	<CR><LF>+OK<CR><LF>		

## 5.25. AT+WKMOD

Parameter	Description	Default Value	Range
<Mode>	Work mode of Socket of UART0	TRANS	TRANS:Transparent Transmission mode
			HTPC:HTTPD Client Transmission mode
			WEBSOCK:WEB Socket Transmission mode
Format			
Query	AT+WKMOD<CR>		
Return	<CR><LF>+OK=<Mode><CR><LF>		
Set	AT+WKMOD=<Mode><CR>		
Return	<CR><LF>+OK<CR><LF>		

## 5.26. AT+SOCKA

Parameter	Description	Default Value	Range
<Protocol>	Network protocol of Socketa of UART0	TCPS	TCPS: TCP Server mode
			TCPC: TCP Client mode
			UDPS: UDP Server mode
			UDPC: UDP Client mode
<IP address>	Remote Server IP address (in client mode) of Socketa of UART0	192.168.1.1	0.0.0.0~255.255.255.255
<Port>	Port number of Socketa of UART0	8899	1~65535 Local port in Server mode Remote port in Client mode
Format			
Query	AT+SOCKA<CR>		
Return	<CR><LF>+OK=<Protocol>,<IP address>,<Port><CR><LF>		
Set	AT+SOCKA=<Protocol>,<IP address>,<Port><CR>		
Return	<CR><LF>+OK<CR><LF>		

## 5.27. AT+SOCKLKA

Parameter	Description	Range
<Station>	Station of TCP connection of Socketa of UART0	CONNECT
		DISCONNECTED
Format		
Query	AT+SOCKLKA<CR>	
Return	<CR><LF>+OK=<Station><CR><LF>	



## 5.28. AT+SOCKDISA

Parameter	Description	Default Value	Range
<Station>	Station of reconnection mechanism in TCP Client mode (Socketa of UART0)	ON	ON:Allow reconnection mechanism
			OFF:Disconnect current connection and forbid reconnection mechanism
Format			
Query	AT+SOCKDISA<CR>		
Return	<CR><LF>+OK=<Station><CR><LF>		
Set	AT+SOCKDISA=<Station><CR>		
Return	<CR><LF>+OK<CR><LF>		

## 5.29. AT+SOCKB

Parameter	Description	Default Value	Range
<Protocol>	Network protocol of Socketb of UART0	OFF	TCPC: TCP Client mode
			UDPS: UDP Server mode
			UDPC: UDP Client mode
			OFF:Close the socketb
<IP address>	Remote Server IP address (in client mode) of Socketb of UART0	No Default Value	0.0.0.0~255.255.255.255
<Port>	Port number of Socketb of UART0	No Default Value	1~65535 Local port in Server mode Remote port in Client mode
Format			
Query	AT+SOCKB<CR>		
Return	<CR><LF>+OK=<Protocol>,<IP address>,<Port><CR><LF>		
Set	AT+SOCKB=<Protocol>,<IP address>,<Port><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.30. AT+SOCKLKB

Parameter	Description	Range
<Station>	Station of TCP connection of Socketb of UART0	CONNECT
		DISCONNECTED
Format		
Query	AT+SOCKLKB<CR>	
Return	<CR><LF>+OK=<Station><CR><LF>	

### 5.31. AT+SOCKDISB

Parameter	Description	Default Value	Range
<Station>	Station of reconnection mechanism in TCP Client mode (Socketb of UART0)	ON	ON:Allow reconnection mechanism
			OFF:Disconnect current connection and forbid reconnection mechanism
Format			
Query	AT+SOCKDISB<CR>		
Return	<CR><LF>+OK=<Station><CR><LF>		
Set	AT+SOCKDISB=<Station><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.32. AT+RFCENA

Parameter	Description	Default Value	Range
<Station>	Station of similar RFC2217 function of UART0	OFF	ON/OFF
Format			
Query	AT+RFCENA<CR>		
Return	<CR><LF>+OK=<Station><CR><LF>		
Set	AT+RFCENA=<Station><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.33. AT+REGENA

Parameter	Description	Default Value	Range
<Status>	Status of identity header of UART0	OFF	ID: Use 2 bytes ID as identity header
			MAC: Use 6 bytes MAC address as identity heade
			USR:Use the Customer's Self-defined identity header
			CLOUD: Using USR Cloud ID as Identity header
			OFF: Disable the identity header
<Method>	Method of Sending identity header of UART0	No Default Value	First: Send Identity header before first packet after the connected
			Every: Send Identity header in every packet.
Format			
Query	AT+REGENA<CR>		
Return	<CR><LF>+OK=<Status>,<Method><CR><LF>		
Set	AT+REGENA=<Status>,<Method><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.34. AT+REGID

Parameter	Description	Default Value	Range
<NUM>	2 bytes ID identity header of UART0	0	0-65535
Format			
Query	AT+REGID<CR>		
Return	<CR><LF>+OK=<NUM><CR><LF>		
Set	AT+REGID=<NUM><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.35. AT+REGUSR

Parameter	Description	Default Value	Range
<Data>	Customer's Self-defined identity header data of UART0	usr	Length: 1~32 bytes
<b>Format</b>			
Query	AT+REGUSR<CR>		
Return	<CR><LF>+OK=<Data><CR><LF>		
Set	AT+REGUSR=<Data><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.36. AT+REGCLOUD

Parameter	Description	Default Value	Range
<ID>	ID of USR Cloud of UART0	0000415500000 0000001	Length: 20 bytes
<Password>	password of USR Cloud of UART0	0000test	Length: Less than 8 bytes
<b>Format</b>			
Query	AT+REGCLOUD<CR>		
Return	<C+R><LF>+OK=<ID>,<Password><CR><LF>		
Set	AT+REGCLOUD=<ID>,<Password><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.37. AT+TREN

Parameter	Description	Default Value	Range
<Station>	Station of Transparent Transmission Encryption of UART0	OFF	ON/OFF
<Data>	Encryption data of Transparent Transmission Encryption of UART0	No Default Value	32 bytes
Format			
Query	AT+TREN<CR>		
Return	<C+R><LF>+OK=<Station>,<Data><CR><LF>		
Set	AT+TREN=<Station>,<Data><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.38. AT+HTPT

Parameter	Description	Default Value	Range
<Method>	HTTP method of UART0	GET	GET: HTTP GET
			POST: HTTP POST
Format			
Query	AT+HTPTP<CR>		
Return	<CR><LF>+OK=<Method><CR><LF>		
Set	AT+HTPTP=<Method><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.39. AT+HTPSV

Parameter	Description	Default Value	Range
<Address>	Server Address of UART0 in HTTPD Client mode	test.usr.cn	IP address:0.0.0.0~255.255.255.255
			URL:1-64 BYTES
<Port>	Server Port of UART0 in HTTPD Client mode	80	0-65535
Format			
Query	AT+HTPSV<CR>		
Return	<C+R><LF>+OK=<Address>,<Port><CR><LF>		
Set	AT+HTPSV=<Address>,<Port><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.40. AT+HTPHEAD

Parameter	Description	Default Value	Range
<Header>	HTTP Header of UART0	NONE	Length: 0~200 bytes
Format			
Query	AT+HTPHEAD<CR>		
Return	<CR><LF>+OK=<Header><CR><LF>		
Set	AT+HTPHEAD=<Header><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.41. AT+HTPURL

Parameter	Description	Default Value	Range
<URL>	HTTP URL of UART0	/2.php?data=	Length:1~64 bytes
Format			
Query	AT+HTPURL<CR>		
Return	<CR><LF>+OK=<URL><CR><LF>		
Set	AT+HTPURL=<URL><CR>		
Return	<CR><LF>+OK<CR><LF>		

## 5.42. AT+HTPCHD

Parameter	Description	Default Value	Range
<Status>	Status of filtering HTTP header of response data	OFF	ON: Enable the filter of HTTP header
			OFF: Disable the filter of HTTP header
Format			
Query	AT+HTPCHD<CR>		
Return	<CR><LF>+OK=<Status><CR><LF>		
Set	AT+HTPCHD=<Status><CR>		
Return:	<CR><LF>+OK<CR><LF>		

## 5.43. AT+UART1

Parameter	Description	Default Value	Range
<Baudrate>	Baudrate	115200	300-3M
<Data bits>	Data bits	8	5,6,7,8
<Stop bits>	Stop bits	1	1,2
<Parity>	Parity	NONE	NONE,EVEN,ODD,MASK,SPACE
Format			
Query	AT+UART1<CR>		
Return	<CR><LF>+OK=<Baudrate>,<Data bits>,<Stop bits>,<Parity><CR><LF>		
Set	AT+UART1=<Baudrate>,<Data bits>,<Stop bits>,<Parity><CR>		
Return	<CR><LF>+OK<CR><LF>		

#### 5.44. AT+UARTTE1

Parameter	Description	Default Value	Range
<Interval>	Time interval of adjacent bytes in Free-Frame of UART1	5ms	5-250ms
<b>Format</b>			
Query	AT+UARTTE1<CR>		
Return	<CR><LF>+OK=<Interval><CR><LF>		
Set	AT+UARTTE1=<Interval><CR>		
Return	<CR><LF>+OK<CR><LF>		

#### 5.45. AT+WKMOD1

Parameter	Description	Default Value	Range
<Mode>	Work mode of Socket of UART1	OFF	TRANS:Transparent Transmission mode
			HTPC:HTTPD Client Transmission mode
			SSL:SSL Transmission mode
			OFF:Close the transmission of socket of UART1
Format			
Query	AT+WKMOD1<CR>		
Return	<CR><LF>+OK=<Mode><CR><LF>		
Set	AT+WKMOD1=<Mode><CR>		
Return	<CR><LF>+OK<CR><LF>		



## 5.46. AT+SOCKA1

Parameter	Description	Default Value	Range
<Protocol>	Network protocol of Socket of UART1	TCPC	TCPC: TCP Client mode
			UDPS: UDP Server mode
			UDPC: UDP Client mode
<IP address>	Remote Server IP address (in client mode) of Socket of UART1	192.168.1.1	0.0.0.0~255.255.255.255
<Port>	Port number of Socket of UART1	9999	1~65535 Local port in Server mode Remote port in Client mode
Format			
Query	AT+SOCKA1<CR>		
Return	<CR><LF>+OK=<Protocol>,<IP address>,<Port><CR><LF>		
Set	AT+SOCKA1=<Protocol>,<IP address>,<Port><CR>		
Return	<CR><LF>+OK<CR><LF>		

## 5.47. AT+SOCKLKA1

Parameter	Description	Range
<Station>	Station of TCP connection of Socket of UART1	CONNECT
		DISCONNECTED
Format		
Query	AT+SOCKLKA1<CR>	
Return	<CR><LF>+OK=<Station><CR><LF>	

## 5.48. AT+SOCKDISA1

Parameter	Description	Default Value	Range
<Station>	Station of reconnection mechanism in TCP Client mode (Socket of UART1)	ON	ON:Allow reconnection mechanism
			OFF:Disconnect current connection and forbid reconnection mechanism
Format			
Query	AT+SOCKDISA1<CR>		
Return	<CR><LF>+OK=<Station><CR><LF>		
Set	AT+SOCKDISA1=<Station><CR>		
Return	<CR><LF>+OK<CR><LF>		

## 5.49. AT+RFCENA1

Parameter	Description	Default Value	Range
<Station>	Station of similar RFC2217 function of UART1	OFF	ON/OFF
Format			
Query	AT+RFCENA1<CR>		
Return	<CR><LF>+OK=<Station><CR><LF>		
Set	AT+RFCENA1=<Station><CR>		
Return	<CR><LF>+OK<CR><LF>		

## 5.50. AT+REGENA1

Parameter	Description	Default Value	Range
<Status>	Status of identity header of UART1	OFF	ID: Use 2 bytes ID as identity header
			MAC: Use 6 bytes MAC address as identity heade
			USR:Use the Customer's Self-defined identity header
			CLOUD: Using USR Cloud ID as Identity header
			OFF: Disable the identity header
<Method>	Method of Sending identity header of UART1	No Default Value	First: Send Identity header before first packet after the connected
			Every: Send Identity header in every packet.
Format			
Query	AT+REGENA1<CR>		
Return	<CR><LF>+OK=<Status>,<Method><CR><LF>		
Set	AT+REGENA1=<Status>,<Method><CR>		
Return	<CR><LF>+OK<CR><LF>		

## 5.51. AT+REGID1

Parameter	Description	Default Value	Range
<NUM>	2 bytes ID identity header of UART1	0	0-65535
Format			
Query	AT+REGID1<CR>		
Return	<CR><LF>+OK=<NUM><CR><LF>		
Set	AT+REGID1=<NUM><CR>		
Return	<CR><LF>+OK<CR><LF>		

## 5.52. AT+REGUSR1

Parameter	Description	Default Value	Range
<Data>	Customer's Self-defined identity header data of UART1	usr	Length: 1~32 bytes
<b>Format</b>			
Query	AT+REGUSR1<CR>		
Return	<CR><LF>+OK=<Data><CR><LF>		
Set	AT+REGUSR1=<Data><CR>		
Return	<CR><LF>+OK<CR><LF>		

## 5.53. AT+REGCLOUD1

Parameter	Description	Default Value	Range
<ID>	ID of USR Cloud of UART1	0000415500000 0000001	Length: 20 bytes
<Password>	Password of USR Cloud of UART1	0000test	Length: Less than 8 bytes
<b>Format</b>			
Query	AT+REGCLOUD1<CR>		
Return	<C+R><LF>+OK=<ID>,<Password><CR><LF>		
Set	AT+REGCLOUD1=<ID>,<Password><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.54. AT+TRENC1

Parameter	Description	Default Value	Range
<Station>	Station of Transparent Transmission Encryption of UART1	OFF	ON/OFF
<Data>	Encryption data of Transparent Transmission Encryption of UART1	No Default Value	32 bytes
Format			
Query	AT+TRENC1<CR>		
Return	<C+R><LF>+OK=<Station>,<Data><CR><LF>		
Set	AT+TRENC1=<Station>,<Data><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.55. AT+HTPTP1

Parameter	Description	Default Value	Range
<Method>	HTTP method of UART1	GET	GET: HTTP GET
			POST: HTTP POST
Format			
Query	AT+HTPTP1<CR>		
Return	<CR><LF>+OK=<Method><CR><LF>		
Set	AT+HTPTP1=<Method><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.56. AT+HTPSV1

Parameter	Description	Default Value	Range
<Address>	Server Address of UART1 in HTTPD Client mode	test.usr.cn	IP address:0.0.0.0~255.255.255.255
			URL:1-64 BYTES
<Port>	Server Port of UART1 in HTTPD Client mode	80	0-65535
Format			
Query	AT+HTPSV1<CR>		
Return	<C+R><LF>+OK=<Address>,<Port><CR><LF>		
Set	AT+HTPSV1=<Address>,<Port><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.57. AT+HTPHEAD1

Parameter	Description	Default Value	Range
<Header>	HTTP Header of UART1	NONE	Length: 0~200 bytes
Format			
Query	AT+HTPHEAD1<CR>		
Return	<CR><LF>+OK=<Header><CR><LF>		
Set	AT+HTPHEAD1=<Header><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.58. AT+HTPURL1

Parameter	Description	Default Value	Range
<URL>	HTTP URL of UART1	/2.php?data=	Length:1~64 bytes
Format			
Query	AT+HTPURL1<CR>		
Return	<CR><LF>+OK=<URL><CR><LF>		
Set	AT+HTPURL1=<URL><CR>		
Return	<CR><LF>+OK<CR><LF>		

### 5.59. AT+HTPCHD1

Parameter	Description	Default Value	Range
<Status>	Status of filtering HTTP header of response data	OFF	ON: Enable the filter of HTTP header
			OFF: Disable the filter of HTTP header
Format			
Query	AT+HTPCHD1<CR>		
Return	<CR><LF>+OK=<Status><CR><LF>		
Set	AT+HTPCHD1=<Status><CR>		
Return:	<CR><LF>+OK<CR><LF>		

### 5.60. AT+SSLSECM

Parameter	Description	Default Value	Range
<Status>	SSL Socket Encryption type	SSLV3	SSLV3/TLSV1/TLSV1_1/TLSV1_2/SSL_TLS/DLSV
Format			
Query	AT+SSLSECM<CR>		
Return	<CR><LF>+OK=<Status><CR><LF>		
Set	AT+SSLSECM=<Status><CR>		
Return:	<CR><LF>+OK<CR><LF>		

### 5.61. AT+SSLMASK

Parameter	Description	Default Value	Range
<Status>	SSL Socket encryption algorithm type	SSL_SHA	SSL_SHA/SSL_MD5/TLS/TLS_DHE/TLS_256/TLS_128/DEFAULT
Format			
Query	AT+SSLMASK<CR>		
Return	<CR><LF>+OK=<Status><CR><LF>		
Set	AT+SSLMASK=<Status><CR>		
Return:	<CR><LF>+OK<CR><LF>		

## 5.62. AT+SSLCA

Parameter	Description	Default Value	Range
<Data>	SSL Socket authentication certificate	NONE	1-32 bytes
Format			
Query	AT+SSLCA<CR>		
Return	<CR><LF>+OK=<Data><CR><LF>		
Set	AT+SSLCA=<Data><CR>		
Return:	<CR><LF>+OK<CR><LF>		

## 5.63. AT+SSLIPP

Parameter	Description	Default Value	Range
<Address>	Server Address of SSL Socket	192.168.1.1	0.0.0.0~255.255.255.255
<Port>	Server Port of SSL Socket	443	1-65535
Format			
Query	AT+SSLIPP<CR>		
Return	<C+R><LF>+OK=<Address>,<Port><CR><LF>		
Set	AT+SSLIPP=<Address>,<Port><CR>		
Return	<CR><LF>+OK<CR><LF>		



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## 8. Update History

2017-06-16 V1.0.0 created based on firmware version 2.18