USR-C215 AT Command Set

(Firmware V2.2.5)

File version: 1.0.0

Content

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.

2.1. How to enter AT command mode

Please read this FAQ about entering AT command mode.
http://www.usriot.com/enter-serial-command-mode/

3. AT command set

Command	Function
Basic Command	
E	Query/Set AT command echo enable/disable
WMODE	Query/Se mode of WIFI(AP/STA/AP+STA)
ENTM	Exit serial AT command mode and enter work mode
MID	Query module ID
RELD	Restore user default setting
Z	Reset the module
VER	Query firmware version
CFGTF	Save the current setting as the user default setting
Serial port Command	
UART	Query/Set serial port parameters
UARTTE	Query/Set serial port Free-Frame interval between two adjacent bytes
Socket A command	
NETP	Query/Set Network protocol parameters of socket A

TCPTO	Query/Set timeout re-connection function time of socket A
TCPLK	Query socket A TCP connection connect/disconnected
TCPDIS	Query/Set socket A establish TCP connection enable/disable
Socket B command	
SOCKB	Query/Set Network protocol parameters of socket B
TCPTOB	Query/Set timeout re-connection function time of socket B
TCPDISB	Query/Set socket B establish TCP connection enable/disable
TCPLKB	Query socket B TCP connection connect/disconnected
STA mode command	
WSTA	Query/Set SSID and password of connected AP
WSSSID	Query/Set SSID of connected AP
WSKEY	Query/Set encryption parameters
WANN	Query/Set network parameters in STA mode
WSMAC	Query STA MAC address
WSLK	Query the status in STA mode
WSLQ	Query RSSI in STA mode
WSCAN	Search surrounding AP
WSDNS	Query/Set DNS server address in STA mode
AP mode command	
LANN	Query/Set network parameters in AP mode
WAP	Query/Set AP mode parameters
WAKEY	Query/Set encryption parameters in AP mode
WALK	Query STA device MAC address which connected to module in AP mode
HTTPD Client command	
TMODE	Query/Set module work mode
HTPSV	Query/Set HTTP Server Address and Port
HTPTP	Query/Set HTTP requesting method
HTPHD	Query/Set HTTP header
HTPURL	Query/Set HTTP URL
HTPFT	Query/Set filtering HTTP header of response data enable/disable
HTPTO	Query/Set HTTP request timeout time
Web server command	
PLANG	Query/Set default language of web server
WEBU	Query/Set web server username and password
D2D function command	
DTDDIS	Query/Set sending D2D identity packet function enable/disable
DTDID	Query/Set D2D ID
USR cloud command	
CLOUDEN	Query/Set USR cloud enable/disable
CLOUDID	Query/Set USR cloud ID

CLOUDPW	Query/Set USR cloud password
Identity packet command	
REGDIS	Query/Set user editable identity packet enable/disable
REGUSR	Query/Set user editable identity packet data
REGENA	Query/Set status and sending method of identity packet
DTTY	Query/Set sending method of identity packet
Heartbeat packet command	
HEARTEN	Query/Set Heartbeat packet enable/disable
HEARTTP	Query/Set sending method of Heartbeat packet
HEARTDT	Query/Set Heartbeat packet data
HEARTTM	Query/Set interval of Heartbeat packet
Other command	
PING	Network PING function
WRMID	Set module ID
SEARCH	Query/Set search port of module
ASWD	Query/Set search keyword of module
SMTSL	Query/Set module smart connection mode
SMTLK	Enter smart connection mode
USERVER	Query user module version and generated time
RPTMAC	Query reporting MAC function enable/disable
WRRPTMAC	Set reporting MAC function enable/disable
NTPEN	Query/Set NTP Network Clock function enable/disable
NTPTM	Query time of Network Clock
NTPSER	Query/Set NTP server IP and timezone
NTPRF	Query/Set interval of proofing time
WAPM	Set displaying MAC suffix in SSID in AP mode enable/disable; Set MAC suffix length
MDCH	Query/Set WIFI exception handling status

4. AT command details

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

4.1. AT+E

Parameter	Description	Default Value	Range
<Status>	Status of AT command Echo	on	on/off
Format			
Query	AT+E<CR>		
Return	<CR><LF>+ok=<Status><CR><LF>		
Set	AT+E=<Status><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.2. AT+WMODE

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

4.3. AT+ENTM

Format	
Set	AT+ENTM<CR>
Return	<CR><LF>+ok<CR><LF>

4.4. AT+MID

Parameter	Description
<ID>	Module ID
Format	
Query	AT+MID<CR>
Return	<CR><LF>+ok=<ID><CR><LF>

4.5.AT+RELD

Format	
Set	AT+RELD<CR>
Return	<CR><LF>+ok=rebooting...<CR><LF>

4.6.AT+Z

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

4.7.AT+VER

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

4.8.AT+CFGTF

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

4.9.AT+UART

Parameter	Description	Default Value	Range
<Baud rate>	Baud rate	115200	1200,2400,4800,9600,14400,19200,38400, 57600,115200,128000,230400,460800
<Data bits>	Data bits	8	7,8
<Stop bits>	Stop bits	1	1,2
<Parity>	Parity	NONE	NONE, EVEN, ODD, MARK, SPACE
<Flow Control>	Flow Control	NFC	NFC: No flow control
			FC: Hardware flow control(RTS/CTS)

Format	
Query	AT+UART<CR>
Return	<CR><LF>+ok=<Baud rate>,<Data bits>,<Stop bits>,<Parity><Flow Control><CR><LF>
Set	AT+UART=<Baud rate>,<Data bits>,<Stop bits>,<Parity><Flow Control><CR>
Return	<CR><LF>+ok<CR><LF>

4.10. AT+UARTTE

Parameter	Description	Default Value	Range
<Interval>	Time interval of adjacent bytes in Free-Frame mode of serial port	20ms	20-250ms. And time interval will automatically change according to baud rate. (Baud rate<=1200, Interval=250ms; Baud rate>=20000, Interval=20ms; 1200<Baud rate<20000, Interval=265-Baudrate*0.01223, Interval is integer) So user should set Baud rate before set interval.
Format			
Query	AT+UARTTE<CR>		
Return	<CR><LF>+ok=<Interval><CR><LF>		
Set	AT+UARTTE=<Interval><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.11. AT+NETP

Parameter	Description	Default Value	Range
<Protocol>	Network protocol of Socket A	TCP	TCP
			UDP
<CS>	Network mode of Socket A	SERVER	SERVER/CLIENT
<Port>	Port number of Socket A	8899	Less than 65535
<IP address>	Remote Server IP address of Socket A in client mode	10.10.100.254	0.0.0.0~255.255.255.255
Format			
Query	AT+NETP<CR>		
Return	<CR><LF>+ok=<Protocol>,<CS>,<Port>,<IP address><CR><LF>		
Set	AT+NETP=<Protocol>,<CS>,<Port>,<IP address><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.12. AT+TCPTO

Parameter	Description	Default Value	Range
<Time>	Timeout re-connection time of socket A	0	60-600s
			0(Close function)
Format			
Query	AT+TCPTO<CR>		
Return	<CR><LF>+ok=<Time><CR><LF>		
Set	AT+TCPTO=<Time><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.13. AT+TCPLK

Parameter	Description	Range
<Status>	Status of TCP connection of Socket A	on: TCP connection connected
		off: TCP connection disconnected
Format		
Query	AT+TCPLK<CR>	
Return	<CR><LF>+ok=<Status><CR><LF>	

4.14. AT+TCPDIS

Parameter	Description	Default Value	Range
<Status>	Allowing socket A to establish TCP Client connection	off	on: Allow socket A to connect, after setting to on, starting to reconnecting to server immediately
			off: Disallow socket A to connect, after setting to off, socket A disconnect immediately and not to reconnect
Format			
Query	AT+TCPDIS<CR>		
Return	<CR><LF>+ok=<Status><CR><LF>		
Set	AT+TCPDIS=<Status><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.15. AT+SOCKB

Parameter	Description	Default Value	Range
<Protocol>	Network protocol of Socket B	NONE	TCP: TCP Client mode
			UDPS: UDP Server mode
			UDP: UDP Client mode
<Port>	Port number of Socket B		Less than 65535 Local port in Server mode Remote port in Client mode
<IP address>	Remote Server IP address of Socket B in client mode		0.0.0.0~255.255.255.255
Format			
Query	AT+SOCKB<CR>		
Return	<CR><LF>+ok=<Protocol>,<Port>,<IP address><CR><LF>		
Set	AT+SOCKB=<Protocol>,<Port>,<IP address><CR>		
Return	<CR><LF>+ok<CR><LF>		

Note: User can send AT+SOCKB=NONE to close the socket B.

4.16. AT+TCPTOB

Parameter	Description	Default Value	Range
<Time>	Timeout re-connection time of socket B	0	60-600s
			0 (Close function)
Format			
Query	AT+TCPTOB<CR>		
Return	<CR><LF>+ok=<Time><CR><LF>		
Set	AT+TCPTOB=<Time><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.17. AT+TCPDISB

Parameter	Description	Default Value	Range
<Status>	Allowing socket B to establish TCP connection	off	on: Allow socket B to connect, after setting to on, starting to reconnecting to server immediately
			off: Disallow socket B to connect, after setting to off, socket A disconnect immediately and not to reconnect

Format	
Query	AT+TCPDISB<CR>
Return	<CR><LF>+ok=<Status><CR><LF>
Set	AT+TCPDISB=<Status><CR>
Return	<CR><LF>+ok<CR><LF>

4.18. AT+TCPLKB

Parameter	Description	Range
<Status>	Status of TCP connection of Socket B	on: TCP connection connected
		off: TCP connection disconnected
Format		
Query	AT+TCPLKB<CR>	
Return	<CR><LF>+ok=<Status><CR><LF>	

4.19. AT+WSTA

Parameter	Description	Range
<SSID>	SSID of connected AP	Less than 32 bytes
<PASSWORD>	Password of connected AP	Less than 64 bytes (Set to 'NONE' mean no password)
Format		
Query	AT+WSTA<CR>	
Return	<CR><LF>+ok=<SSID>,<PASSWORD ><CR><LF>	
Set	AT+WSTA=<SSID>,<PASSWORD ><CR>	
Return	<CR><LF>+ok<CR><LF>	

4.20. AT+WSSSID

Parameter	Description	Range
<SSID>	SSID of connected AP	Less than 32 bytes
Format		
Query	AT+WSSSID<CR>	
Return	<CR><LF>+ok=<SSID><CR><LF>	
Set	AT+WSSSID=<SSID><CR>	
Return	<CR><LF>+ok<CR><LF>	

4.21. AT+WSKEY

Parameter	Description	Default Value	Range
<AUTH>	Authentication way	OPEN	OPEN
			WPAPSK
			WPA2PSK
			SHARED
<Encryption>	Encryption algorithm	NONE	NONE: Take effect in <AUTH>=OPEN
			TKIP/AES: Take effect in <AUTH>=WPAPSK or WPA2PSK
			WEP-A/WEP-H: Take effect in <AUTH>=SHARED
<Password>	Password	No default value	<AUTH> = OPEN: NONE
			<AUTH>= WPA/WPA2: ASCII format, 8~64 bytes
			<Encryption>=WEP-A: ASCII format, 5 or 13 bytes
			<Encryption>=WEP-H: HEX format, 10 or 26 bytes
Format			
Query	AT+WSKEY<CR>		
Return	<CR><LF>+ok=<AUTH>,<Encryption>,<Password><CR><LF>		
Set	AT+WSKEY=<AUTH>,<Encryption>,<Password><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.22. AT+WANN

Parameter	Description	Default Value	Range
<Mode>	How to get IP address in STA mode	DHCP	static/DHCP
<IP address>	IP address in STA mode	10.10.100.254	0.0.0.0~255.255.255.255
<Mask>	Subnet mask in STA mode	255.255.255.0	0.0.0.0~255.255.255.255
<Gateway>	Gateway address in STA mode	10.10.100.254	0.0.0.0~255.255.255.255
Format			
Query	AT+WANN<CR>		
Return	<CR><LF>+ok=<Mode>,<IP address>,<Mask>,<Gateway><CR><LF>		
Set	AT+WANN=<Mode>,<IP address>,<Mask>,<Gateway><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.23. AT+WSMAC

Parameter	Description
<MAC>	STA MAC address
Format	
Query	AT+WSMAC<CR>
Return	<CR><LF>+ok=<MAC><CR><LF>

4.24. AT+WSLK

Parameter	Description	Range
<Status>	Connection status of module in STA mode	Disconnected: No connection with any AP
		SSID of connected AP if connected
		RF Off: Close WIFI
Format		
Query	AT+WSLK<CR>	
Return	<CR><LF>+ok=<Status><CR><LF>	

4.25. AT+WSLQ

Parameter	Description	Range
<RSSI>	RSSI in STA mode	Disconnected: No connection with any AP
		RSSI of connected AP if connected
Format		
Query	AT+WSLQ<CR>	
Return	<CR><LF>+ok=<RSSI><CR><LF>	

4.26. AT+WSCAN

Parameter	Description
<Ch>	WIFI network channel
<SSID>	AP's SSID that be searched by module
<BSSID>	MAC address of AP that be searched by module
<Security>	Encryption security mode of AP that searched by module
<Indicator>	RSSI of AP that be searched by module
Format	
Query	AT+WSCAN<CR>
Return	<CR><LF>+ok=<LF><CR>Ch,SSID,BSSID,Security,Indicator<LF><CR><Ch1>,<SSID1>,<BSSID1>,<Security1>,<Indicator1><LF><CR><Ch2>,<SSID2>,<BSSID2>,<Security2>,<Indicator2><LF><CR>.....<LF><CR><ChN>,<SSIDN>,<BSSIDN>,<SecurityN>,<IndicatorN><CR><LF>

4.27. AT+WSDNS

Parameter	Description	Default Value	Range
<Address>	DNS server address in STA mode	208.67.222.222	0.0.0.0~255.255.255.255
Format			
Query	AT+WSDNS<CR>		
Return	<CR><LF>+ok=<Address><CR><LF>		
Set	AT+WSDNS=<Address><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.28. AT+LANN

Parameter	Description	Default Value	Range
<IP address>	IP address of module in AP mode	10.10.100.254	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>		

4.29. AT+WAP

Parameter	Description	Default Value	Range
<Mode>	WIFI mode	11BGN	11B/11BG/11BGN
<SSID>	SSID in AP mode	USR-C215	Less than 32 bytes
<Channel>	WIFI channel	CH6	ATUO/CH1~CH11
Format			
Query	AT+WAP<CR>		
Return	<CR><LF>+ok=<Mode>,<SSID>,<Channel><CR><LF>		
Set	AT+WAP=<Mode>,<SSID>,<Channel><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.30. AT+WAKEY

Parameter	Description	Default Value	Range
<AUTH>	Authentication way	OPEN	OPEN
			WPA2PSK
<Encryption>	Encryption algorithm	NONE	NONE: Take effect in <AUTH>=OPEN
			AES: Take effect in <AUTH>= WPA2PSK
<Password>	Password	NONE	8~64 bytes, ASCII format
Format			
Query	AT+WAKEY<CR>		
Return	<CR><LF>+ok=<AUTH>,<Encryption>,<Password><CR><LF>		
Set	AT+WAKEY=<AUTH>,<Encryption>,<Password><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.31. AT+WALK

Parameter	Description	Range
<MAC>	STA device MAC address connect to module in AP mode	MAC address: STA device MAC address connect to module in AP mode
		No Connection: No STA device connect to module in AP mode
Format		
Query	AT+WALK<CR>	
Return	<CR><LF>+ok=<MAC><CR><LF>	

4.32. AT+TMODE

Parameter	Description	Default Value	Range
<Mode>	Work mode	throughput	throughput: Transparent Transmission mode
			htpc: HTTPD Client mode
Format			
Query	AT+TMODE<CR>		
Return	<CR><LF>+ok=<Mode><CR><LF>		
Set	AT+TMODE=<Mode><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.33. AT+HTPSV

Parameter	Description	Default Value	Range
<Address>	Server Address	test.usr.cn	IP address: 0.0.0.0~255.255.255.255
			Server address: 1-64 BYTES
<Port>	Server Port	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>		

4.34. AT+HTPTP

Parameter	Description	Default Value	Range
<Method>	HTTPD request method	GET	GET/POST
Format			
Query	AT+HTPTP<CR>		
Return	<CR><LF>+ok=<Method><CR><LF>		
Set	AT+HTPTP=<Method><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.35. AT+HTPHD

Parameter	Description	Default Value	Range
<Header>	HTTPD Header data	Connection: Keep-Alive[0D][0A]([0D][0A] mean Carriage Return and Line Feed,[ ] used to transfer meaning by HEX.And this parameter must be end with [0D][0A])	Length: 0~200 bytes
Format			
Query	AT+HTPHD<CR>		
Return	<CR><LF>+ok=<Header><CR><LF>		
Set	AT+HTPHD=<Header><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.36. AT+HTPURL

Parameter	Description	Default Value	Range
<URL>	HTTPD URL	/1.php[3F]([3F] means ?)	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>		

4.37. AT+HTPFT

Parameter	Description	Default Value	Range
<Status>	Status of filtering HTTP header of response data function	off	on/off
Format			
Query	AT+HTPFT<CR>		
Return	<CR><LF>+ok=<Status><CR><LF>		
Set	AT+HTPFT=<Status><CR>		
Return:	<CR><LF>+ok<CR><LF>		

4.38. AT+HTPTO

Parameter	Description	Default Value	Range
<Time>	HTTP Request Timeout time	10s	1-30s
Format			
Query	AT+HTPTO<CR>		
Return	<CR><LF>+ok=<Time><CR><LF>		
Set	AT+HTPTO=<Time><CR>		
Return:	<CR><LF>+ok<CR><LF>		

4.39. AT+PLANG

Parameter	Description	Default Value	Range
<Language>	Language of web server	CN	EN: English
			CN: Chinese
Format			
Query	AT+PLANG<CR>		
Return	<CR><LF>+ok=<Language><CR><LF>		
Set	AT+PLANG=<Language><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.40. AT+WEBU

Parameter	Description	Default Value	Range
<Username>	Username of web server	admin	Less than 16 bytes
<Password>	Password of web server	admin	Less than 16 bytes
Format			
Query	AT+WEBU<CR>		
Return	<CR><LF>+ok=<Username>,<Password><CR><LF>		
Set	AT+WEBU=<Username>,<Password><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.41. AT+DTDDIS

Parameter	Description	Default Value	Range
<Status>	Status of D2D identity packet function	off	on/off
Format			
Query	AT+DTDDIS<CR>		
Return	<CR><LF>+ok=<Status><CR><LF>		
Set	AT+DTDDIS=<Status><CR>		
Return:	<CR><LF>+ok<CR><LF>		

4.42. AT+DTDID

Parameter	Description	Default Value	Range
<ID>	D2D ID	1	1-65535
Format			
Query	AT+DTDID<CR>		
Return	<CR><LF>+ok=<ID><CR><LF>		
Set	AT+DTDID=<ID><CR>		
Return:	<CR><LF>+ok<CR><LF>		

4.43. AT+CLOUDEN

Parameter	Description	Default Value	Range
<Status>	Status of USR cloud function	off	on/off
Format			
Query	AT+CLOUDEN<CR>		
Return	<CR><LF>+ok=<Status><CR><LF>		
Set	AT+CLOUDEN=<Status><CR>		
Return:	<CR><LF>+ok<CR><LF>		

4.44. AT+CLOUDID

Parameter	Description	Default Value	Range
<ID>	USR cloud ID	00000000000000000000	20 bytes
Format			
Query	AT+CLOUDID<CR>		
Return	<CR><LF>+ok=<ID><CR><LF>		
Set	AT+CLOUDID=<ID><CR>		
Return:	<CR><LF>+ok<CR><LF>		

4.45. AT+CLOUDPW

Parameter	Description	Default Value	Range
<PW>	USR cloud password	password	8 bytes
Format			
Query	AT+CLOUDPW<CR>		
Return	<CR><LF>+ok=<PW><CR><LF>		
Set	AT+CLOUDPW=<PW><CR>		
Return:	<CR><LF>+ok<CR><LF>		

4.46. AT+REGDIS

Parameter	Description	Default Value	Range
<Status>	Status of user editable identity packet function	off	on/off
Format			
Query	AT+REGDIS<CR>		
Return	<CR><LF>+ok=<Status><CR><LF>		
Set	AT+REGDIS=<Status><CR>		
Return:	<CR><LF>+ok<CR><LF>		

4.47. AT+REGUSR

Parameter	Description	Range
<Data>	User editable identity packet data	Less than 32 bytes
Format		
Query	AT+REGUSR<CR>	
Return	<CR><LF>+ok=<Data><CR><LF>	
Set	AT+REGUSR=<Data><CR>	
Return	<CR><LF>+ok<CR><LF>	

4.48. AT+REGENA

Parameter	Description	Default Value	Range
<Status>	Status of identity packet	OFF	ID: Use 2 bytes ID code and 2 bytes ID inverse code as identity packet
			MAC: Use 6 bytes MAC address as identity packet
			USR: Use user editable identity packet, less than 32 bytes
			CLOUD: Use USR Cloud ID as Identity packet(only support FIRST method)
			OFF: Disable the identity packet function
<Method>	Identity packet sending method	No Default Value	FIRST: Only sending Identity packet before first packet after firstly connecting to server
			EVERY: Sending Identity packet 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>		

Note: User can disable identity packet function by sending AT+REGENA=OFF

4.49. AT+DTTY

Parameter	Description	Default Value	Range
<Method>	Identity packet sending method	FIRST	FIRST: Only sending Identity packet before first packet after firstly connecting to server
			EVERY: Sending Identity packet in every packet.
Format			
Query	AT+DTTY<CR>		
Return	<CR><LF>+ok=<Method><CR><LF>		
Set	AT+DTTY=<Method><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.50. AT+HEARTEN

Parameter	Description	Default Value	Range
<Status>	Status of Heartbeat packet function	off	on/off
Format			
Query	AT+HEARTEN<CR>		
Return	<CR><LF>+ok=<Status><CR><LF>		
Set	AT+HEARTEN=<Status><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.51. AT+HEARTTP

Parameter	Description	Default Value	Range
<Type>	Sending method of Heartbeat packet	NET	NET: Sending to Network Server
			COM: Sending to serial port
Format			
Query	AT+HEARTTP<CR>		
Return	<CR><LF>+ok=<Type><CR><LF>		
Set	AT+HEARTTP=<Type><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.52. AT+HEARTDT

Parameter	Description	Default Value	Range
<Data>	Heartbeat packet data	7777772E7573 722E636E	Less than 80 bytes
Format			
Query	AT+HEARTDT<CR>		
Return	<CR><LF>+ok=<Data><CR><LF>		
Set	AT+HEARTDT=<Data><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.53. AT+HEARTTM

Parameter	Description	Default Value	Range
<Interval>	Heartbeat packet sending interval	30s	Can be set between 1-6000s. But keep-alive time is 60s, so Heartbeat packet sending interval can only take effect between 1-60s.

Format	
Query	AT+HEARTTM<CR>
Return	<CR><LF>+ok=<Interval><CR><LF>
Set	AT+HEARTTM=<Interval><CR>
Return	<CR><LF>+ok<CR><LF>

4.54. AT+PING

Parameter	Description	Range
<Address>	Default IP address or Domain name of module	Can be IP address 10.10.100.254 or Domain name www.usr.cn
<Status>	Status of ping	Success/Timeout/Unknown host
Format		
Query	AT+PING=<Address><CR>	
Return	<CR><LF>+ok=<Status><CR><LF>	

4.55. AT+WRMID

Parameter	Description	Range
<ID>	Module ID	Less than 20 bytes
Format		
Set	AT+WRMID=<ID><CR>	
Return	<CR><LF>+ok<CR><LF>	

4.56. AT+SEARCH

Parameter	Description	Default Value	Range
<Port>	UDP Port for searching	48899	1~65535
Format			
Query	AT+SEARCH<CR>		
Return	<CR><LF>+ok=<Port><CR><LF>		
Set	AT+SEARCH=<Port><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.57. AT+ASWD

Parameter	Description	Default Value	Range
<Keyword>	Search keyword	www.usr.cn	Less than 20 bytes
Format			
Query	AT+ASWD<CR>		
Return	<CR><LF>+ok=<Keyword><CR><LF>		

Set	AT+ASWD=<Keyword><CR>
Return	<CR><LF>+ok<CR><LF>

4.58. AT+SMTSL

Parameter	Description	Default Value	Range
<Mode>	Smart connection mode	sim	sim: Simple Config mode
			air: Airkiss mode
Format			
Query	AT+SMTSL<CR>		
Return	<CR><LF>+ok=<Mode><CR><LF>		
Set	AT+SMTSL=<Mode><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.59. AT+SMTLK

Format	
Set	AT+SMTLK<CR>
Return	<CR><LF>+ok<CR><LF>

4.60. AT+USERVER

Parameter	Description
<Version>	User version
<Time>	Generated time
Format	
Query	AT+USERVER<CR>
Return	<CR><LF>+ok=<Version>,<Time><CR><LF>

4.61. AT+RPTMAC

Parameter	Description	Default Value	Range
<Status>	Status of reporting MAC function	off	on/off
Format			
Query	AT+RPTMAC<CR>		
Return	<CR><LF>+ok=<Status><CR><LF>		

4.62. AT+WRRPTMAC

Parameter	Description	Range
<Status>	Status of reporting MAC function	on/off

Format	
Set	AT+WRRPTMAC=<Status><CR>
Return	<CR><LF>+ok<CR><LF>

4.63. AT+NTPEN

Parameter	Description	Default Value	Range
<Status>	Status of NTP Network Clock function	off	on/off
Format			
Query	AT+NTPEN<CR>		
Return	<CR><LF>+ok=<Status><CR><LF>		
Set	AT+NTPEN=<Status><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.64. AT+NTPTM

Parameter	Description	Default Value	Range
<Time>	Network Clock time	Not Available	Clock time, format: such as 2017-07-06 15:50:00 Mon
			Not Available
Format			
Query	AT+NTPTM<CR>		
Return	<CR><LF>+ok=<Time><CR><LF>		

4.65. AT+NTPSER

Parameter	Description	Default Value	Range
<Address>	NTP Server address	cn.ntp.org.cn	
<Time Zone>	Time zone	8	Western time zone need add '-' such as: -8
Format			
Query	AT+NTPSER<CR>		
Return	<CR><LF>+ok=<Address>,<Time Zone><CR><LF>		
Set	AT+NTPSER=<Address>,<Time Zone><CR>		
Return	<CR><LF>+ok<CR><LF>		

4.66. AT+NTPRF

Parameter	Description	Default Value	Range
<Interval>	Interval of proofing time	30 minutes	10-720 minutes, 0 means close function

Format	
Query	AT+NTPRF<CR>
Return	<CR><LF>+ok=<Interval><CR><LF>
Set	AT+NTPRF=<Interval><CR>
Return	<CR><LF>+ok<CR><LF>

4.67. AT+WAPM

Parameter	Description	Range
<SSID>	SSID in AP mode	Total length of <SSID> and <LEN> less than 32 bytes
<LEN>	Length of MAC suffix of SSID	0 means no MAC suffix, 6 means MAC last 6 bytes, 12 means 12 bytes MAC
Format		
Set	AT+WAPM=<SSID>,<LEN><CR>	
Return	<CR><LF>+ok<CR><LF>	

4.68. AT+MDCH

Parameter	Description	Default Value	Range
<status>	Status of WIFI exception handling	10 minutes	OFF: Close WIFI exception handling
			ON: Open WIFI mode switching function. Switching to APSTA mode automatically when connecting unsuccessfully in STA mode
			2-240 minutes: WIFI exception detection interval
Format			
Query	AT+MDCH<CR>		
Return	<CR><LF>+ok=<status><CR><LF>		
Set	AT+MDCH=<status><CR>		
Return	<CR><LF>+ok<CR><LF>		

5. Contact

Company: Jinan USR IOT Technology Limited
Address: Floor 11, Building No.1, No.1166, Xinluo Street, Gaoxin District, Jinan city, Shandong province, 250101 China
Tel: 86-531-88826739
Web: **www.usriot.com**
Support: **h.usriot.com**
Email: **sales@usr.cn**

6. Disclaimer

This document provide the information of USR-C215 products, it hasn't been granted any intellectual property license by forbidding speak or other ways either explicitly or implicitly. Except the duty declared in sales terms and conditions, we don't take any other responsibilities. We don't warrant the products sales and use explicitly or implicitly, including particular purpose merchant-ability and marketability, the tort liability of any other patent right, copyright, intellectual property right. We may modify specification and description at any time without prior notice.

7. Update History

2017-09-25 V1.0.0 created based on firmware version V2.2.5.