

# USR-M0 Series AT Command Set

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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 serial AT command mode

Please read this FAQ about entering serial AT command mode.

<https://www.pusr.com/support/faq/how-to-send-at-command.html>

## 4. AT command set

Command	Function
<b>E</b>	Enable/disable the echo function
<b>Z</b>	Restart module
<b>VER</b>	Query the version
<b>ENTM</b>	Exit AT command mode
<b>RELD</b>	Reset default settings
<b>MAC</b>	Query module MAC address
<b>WEBU</b>	Setting/ query username and password
<b>WANN</b>	Setting/ query WAN port parameters
<b>DNS</b>	Setting/ query DNS server address
<b>WEBPORT</b>	Setting/ query web server port
<b>UART</b>	Setting/ query serial parameters
<b>SOCK</b>	Setting/ query network protocol
<b>TCPSE</b>	Setting/ query whether kick off older connection
<b>SOCKLK</b>	Query TCP connection status
<b>SOCKPORT</b>	Setting/ query source port number
<b>RFCEN</b>	Setting/ query RFC2217 enable
<b>PDTIME</b>	Query the product time
<b>REGEN</b>	Setting/ query registration package mechanism
<b>REGTCP</b>	Setting/ query registration package perform mechanism
<b>REGCLOUD</b>	Setting/ query USR-Cloud username and password
<b>REGUSR</b>	Setting/ query the content of registration package that customized
<b>HTPTP</b>	Setting/ query in httpd client mode, HTTPD request

	mode
<b>HTPURL</b>	Setting/ query the URL in httpd client mode
<b>HTPHEAD</b>	Setting/ query the package head in httpd client
<b>HTPCHD</b>	Setting/ query HTP remove the package head
<b>HEARTEN</b>	Setting/ query heartbeat package enable
<b>HEARTTP</b>	Setting/ query method of the heartbeat package send
<b>HEARTTM</b>	Setting/ query the heartbeat package time
<b>HEARTDT</b>	Setting/ query customize heartbeat package
<b>SCSLINK</b>	Setting/ query the indicating function of the status of socket connection
<b>CLIENTRST</b>	Setting/ query the TCP client mode reset function enable/disable
<b>INDEXEN</b>	Setting/ query index function
<b>SOCKSL</b>	Setting/ query short connection function
<b>SHORTO</b>	Setting/ query short connection time
<b>UARTCLBUF</b>	Setting/ query clear serial port cache before module build connection function enable/disable
<b>RSTIM</b>	Setting/ query timeout reset time
<b>MAXSK</b>	Setting/ query maximum client connections in TCP server mode
<b>MID</b>	Setting/ query module name
<b>H</b>	Query help message

## 5. AT command details

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

### 5.1. AT+E

Format	
Query	AT+E<CR>
Return	<CR><LF>+OK=<on/off><CR><LF>
Set	AT+E=<on/off><CR>
Return	<CR><LF>+OK<CR><LF>

**Note:** Default setting of echo function is on, user can send above command to close, then send above command again to open.

### 5.2. AT+Z

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

### 5.3. AT+VER

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

### 5.4. AT+ENTM

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

### 5.5. AT+RELD

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

### 5.6. AT+MAC

Format	
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<b>Set</b>	<b>AT+MAC&lt;CR&gt;</b>
<b>Return</b>	<b>&lt;CR&gt;&lt;LF&gt;+ok=&lt;MAC&gt;&lt;CR&gt;&lt;LF&gt;</b>

## 5.7. 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			
<b>Query</b>	<b>AT+WEBU&lt;CR&gt;</b>		
<b>Return</b>	<b>&lt;CR&gt;&lt;LF&gt;+ok=&lt;Username&gt;,&lt;Password&gt;&lt;CR&gt;&lt;LF&gt;</b>		
<b>Set</b>	<b>AT+WEBU=&lt;Username&gt;,&lt;Password&gt;&lt;CR&gt;</b>		
<b>Return</b>	<b>&lt;CR&gt;&lt;LF&gt;+ok&lt;CR&gt;&lt;LF&gt;</b>		

## 5.8. AT+WANN

Parameter	Description	Default Value	Range
<Mode>	IP address of module WAN port (DHCP/STATIC)	STATIC	static/DHCP
<IP address>	IP address of WAN	0.0.0.0	0.0.0.0~255.255.255.255
<Mask>	Mask of WAN	0.0.0.0	0.0.0.0~255.255.255.255
<Gateway>	Gateway address	0.0.0.0	0.0.0.0~255.255.255.255
Format			
<b>Query</b>	<b>AT+WANN&lt;CR&gt;</b>		
<b>Return</b>	<b>&lt;CR&gt;&lt;LF&gt;+ok=&lt;Mode&gt;,&lt;IP address&gt;,&lt;Mask&gt;,&lt;Gateway&gt;&lt;CR&gt;&lt;LF&gt;</b>		
<b>Set</b>	<b>AT+WANN=&lt;Mode&gt;,&lt;IP address&gt;,&lt;Mask&gt;,&lt;Gateway&gt;&lt;CR&gt;</b>		
<b>Return</b>	<b>&lt;CR&gt;&lt;LF&gt;+ok&lt;CR&gt;&lt;LF&gt;</b>		

## 5.9. AT+DNS

Format	
<b>Query</b>	<b>AT+DNS&lt;CR&gt;</b>
<b>Return</b>	<b>&lt;CR&gt;&lt;LF&gt;+ok=&lt;address&gt;&lt;CR&gt;&lt;LF&gt;</b>
<b>Set</b>	<b>AT+DNS=&lt;address&gt;&lt;CR&gt;</b>
<b>Return</b>	<b>&lt;CR&gt;&lt;LF&gt;+ok&lt;CR&gt;&lt;LF&gt;</b>

## 5.10. AT+WEBPORT

Format	
<b>Query</b>	<b>AT+WEBPORT&lt;CR&gt;</b>
<b>Return</b>	<b>&lt;CR&gt;&lt;LF&gt;+ok=&lt;port&gt;&lt;CR&gt;&lt;LF&gt;</b>
<b>Set</b>	<b>AT+DNS=&lt;port&gt;&lt;CR&gt;</b>
<b>Return</b>	<b>&lt;CR&gt;&lt;LF&gt;+ok&lt;CR&gt;&lt;LF&gt;</b>

**Note:** Web server port default is 80.

## 5.11. AT+UART

Parameter	Description	Default Value	Range
<Baud rate>	Baud rate	115200	600~460800bps
<Data bit>	Data bit	8	5, 6, 7, 8
<Stop bit>	Stop bit	1	1, 2
<Parity>	Parity	NONE	NONE, EVEN, ODD, MASK, SPACE
<Flow Control>	Flow Control	NFC	NFC: No flow control
Format			
Query	AT+UART<CR>		
Return	<CR><LF>+ok=<Baud rate>,<Data bit>,<Stop bit>,<Parity>,<Flow Control><CR><LF>		
Set	AT+UART=<Baud rate>,<Data bit>,<Stop bit>,<Parity>,<Flow Control><CR>		
Return	<CR><LF>+ok<CR><LF>		

## 5.12. AT+SOCK

Parameter	Description	Default Value	Range
<Protocol>	Network protocol	TCPC	TCPC/TCPS/UDPC/UDPS/HTPC
<IP>	Remote Server address in client mode	192.168.0.201	0.0.0.0~255.255.255.255
<Port>	Destination port	8234	Less than 65535
Format			
Query	AT+SOCK<CR>		
Return	<CR><LF>+ok=<Protocol>,<IP>,<Port><CR><LF>		
Set	AT+NETP=<Protocol>,<IP>,<Port><CR>		
Return	<CR><LF>+ok<CR><LF>		

### 5.13. AT+TCPSE

Parameter	Description	Range
<Status>	Processing mechanism after the maximum number of connections	Keep/kick
<b>Format</b>		
Query	AT+TCPSE<CR>	
Return	<CR><LF>+ok=<Status><CR><LF>	
Set	AT+TCPSE=<Status><CR>	
Return	<CR><LF>+ok<CR><LF>	

### 5.14. AT+SOCKLK

Parameter	Description	Range
<Sta>	Whether the TCP has connected	Connect/disconnect
<b>Format</b>		
Query	AT+SOCKLK<CR>	
Return	<CR><LF>+ok=<Sta><CR><LF>	

### 5.15. AT+SOCKPORT

Parameter	Description	Range
<Sta>	Source socket port	0: random port 1~65535: source port
<b>Format</b>		
Query	AT+SOCKPORT<CR>	
Return	<CR><LF>+ok=<Sta><CR><LF>	
Set	AT+SOCKPORT=<Time><CR>	
Return	<CR><LF>+ok<CR><LF>	

### 5.16. AT+RFCEN

Parameter	Description	Range
<Status>	Enable/ disable RFC2217function	On/off



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

### 5.17. AT+PDTIME

Parameter	Description
<Time>	Produce time
Format	
Query	AT+PDTIME<CR>
Return	<CR><LF>+ok=<time><CR><LF>

### 5.18. AT+REGEN

Parameter	Description	Default Value	Range
<Status>	Status of identity packet	off	mac: Use 6 bytes MAC address as identity packet
			usr: Use user editable identity packet
			off: Disable the identity packet function
Format			
Query	AT+REGEN<CR>		
Return	<CR><LF>+ok=<Status><CR><LF>		
Set	AT+REGEN=<Status><CR>		
Return	<CR><LF>+ok<CR><LF>		

### 5.19. AT+REGTCP

Parameter	Description	Default Value	Range
<Status>	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+REGTCP<CR>		
Return	<CR><LF>+ok=<Status><CR><LF>		
Set	AT+REGTCP=<Status><CR>		
Return	<CR><LF>+ok<CR><LF>		

### 5.20. AT+REGCLOUD

Parameter	Description	Range
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<ID>	USR Cloud ID	Length: 20 bytes
<Password>	USR Cloud password	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>	

### 5.21. AT+REGUSR

Parameter	Description	Default Value	Range
<Data>	User custom identity packet data	7777772E7573722E636E	Length: Less than 40 bytes, HEX format
<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>		

### 5.22. AT+HTPTP

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

### 5.23. AT+HTPURL

Parameter	Description	Default Value	Range
<URL>	HTTP URL	/2.php?	Start with “/” , less than 30 bytes
<b>Format</b>			
Query	AT+HTPURL<CR>		
Return	<CR><LF>+ok=<URL><CR><LF>		
Set	AT+HTPURL=<URL><CR>		
Return	<CR><LF>+ok<CR><LF>		

### 5.24. AT+HTPHEAD

Parameter	Description	Default Value	Range
<Header>	HTTP header data	User_Agent: Mozilla/4.0 Connection: close	Length: 0~200 bytes, <<CRLF>> instead of “\r\n”

Format	
Query	AT+HTPHEAD<CR>
Return	<CR><LF>+ok=<Header><CR><LF>
Set	AT+HTPHEAD=<Header><CR>
Return	<CR><LF>+ok<CR><LF>

## 5.25. AT+HTPCHD

Parameter	Description	Default Value	Range
<Sta>	Filter the header of the returned data	Off	On/off
Format			
Query	AT+HTPCHD<CR>		
Return	<CR><LF>+ok=<Sta><CR><LF>		
Set	AT+HTPCHD=<Sta><CR>		
Return	<CR><LF>+ok<CR><LF>		

## 5.26. 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>		

## 5.27. 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>		

## 5.28. AT+HEARTTM

Parameter	Description	Default Value	Range
<Interval>	Heartbeat package sending interval	30s	Can be set between 1-65535s.
Format			
Query	AT+HEARTTM<CR>		
Return	<CR><LF>+ok=<Interval><CR><LF>		

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

### 5.29. AT+HEARTDT

Parameter	Description	Default Value	Range
<Data>	Heartbeat packet data	7777772E7573 722E636E	Less than 40 bytes, ASCII
<b>Format</b>			
Query	AT+HEARTDT<CR>		
Return	<CR><LF>+ok=<Data><CR><LF>		
Set	AT+HEARTDT=<Data><CR>		
Return	<CR><LF>+ok<CR><LF>		

### 5.30. AT+SCSLINK

Parameter	Description	Range
<Sta>	Connection status indication function	On/off
<b>Format</b>		
Query	AT+SCSLINK<CR>	
Return	<CR><LF>+ok=<Sta><CR><LF>	
Set	AT+SCSLINK=<Sta><CR>	
Return	<CR><LF>+ok<CR><LF>	

### 5.31. AT+CLIENTRST

Parameter	Description	Range
<Sta>	TCP Client mode filed to connect several time and reset	Repeat 30 times connection failed, module restart
<b>Format</b>		
Query	AT+CLIENTRST<CR>	
Return	<CR><LF>+ok=<Sta><CR><LF>	
Set	AT+CLIENTRST=<Sta><CR>	
Return	<CR><LF>+ok<CR><LF>	

### 5.32. AT+INDEXEN

Parameter	Description	Range
<Sta>	Index function	On/off
<b>Format</b>		
Query	AT+INDEXEN<CR>	
Return	<CR><LF>+ok=<Sta><CR><LF>	
Set	AT+INDEXEN=<Sta><CR>	
Return	<CR><LF>+ok<CR><LF>	

### 5.33. AT+SOCKSL

Parameter	Description	Range
<Sta>	Non-persistence connection	On/off
<b>Format</b>		
Query	AT+SOCKSL<CR>	
Return	<CR><LF>+ok=<Sta><CR><LF>	
Set	AT+SOCKSL=<Sta><CR>	
Return	<CR><LF>+ok<CR><LF>	

### 5.34. AT+SHORTO

Parameter	Description	Range
<Time>	Non-persistence connection time	2-255s
<b>Format</b>		
Query	AT+SHORTO<CR>	
Return	<CR><LF>+ok=<Time><CR><LF>	
Set	AT+SHORTO=<Time><CR>	
Return	<CR><LF>+ok<CR><LF>	

### 5.35. AT+UARTCLBUF

Parameter	Description	Range
<Sta>	Clear the serial port cache	On/off
<b>Format</b>		
Query	AT+UARTCLBUF<CR>	
Return	<CR><LF>+ok=<Sta><CR><LF>	
Set	AT+UARTCLBUF=<Sta><CR>	
Return	<CR><LF>+ok<CR><LF>	

### 5.36. AT+RSTIM

Parameter	Description	Range
<Time>	Timeout restart time	0, 60-65535s
Format		
Query	AT+RSTIM<CR>	
Return	<CR><LF>+ok=<Time><CR><LF>	
Set	AT+RSTIM=<Time><CR>	
Return	<CR><LF>+ok<CR><LF>	

### 5.37. AT+MAXSK

Parameter	Description	Range
<Num>	Maximum number of the client	1~8
Format		
Query	AT+MAXSK<CR>	
Return	<CR><LF>+ok=<Num><CR><LF>	
Set	AT+MAXSK=<Num><CR>	
Return	<CR><LF>+ok<CR><LF>	

### 5.38. AT+MID

Parameter	Description	Range
<name>	Module name	Less than 15 bytes and can not be none
Format		
Query	AT+MID<CR>	
Return	<CR><LF>+ok=<name><CR><LF>	
Set	AT+MID=<name><CR>	
Return	<CR><LF>+ok<CR><LF>	

### 5.39. AT+H

Parameter	Description
<Help>	Command help information
Format	
Query	AT+H<CR>
Return	<CR><LF>+ok=<Help><CR><LF>

## 6. Contact

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## 8. Update History