

# GW-R4513-E/AU User Manual

File Version: V1.0.1





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## 1. Get Start

GW-R4513 is a 4G wireless router with powerful DTU function, which provides users with an integrated solution of 4G router and DTU.

## 1.1. Hardware Test



Figure 1 hardware connection

## 1.2. Net Connection

- Insert SIM card
- Install WIFI antenna, M2M antenna
- Connect PC to the LAN port of GW-R4513
- Set PC to get dynamic IP
- Power on GW-R4513
- Wait for about a minute, and the 2/3G indicator lights up, indicating that the router's 4G network is successful and can be connected to the Internet.

## 1.3. Router Initial Value

Parameter	Initial value		
Account	root		
Password	root		
IP address	192.168.1.1		

### Table 1 router initial value



Figure 2 webpage

## 2. Product Overview

## 2.1. Product Introduction

GW-R4513 is a 4G wireless router with powerful DTU functions, providing users with an industrial 4G router and DTU integration solution.

It adopts the high-performance embedded structure of the industry, and provides reliable data transmission network for the data transmission fields of smart home, smart grid, personal medical, industrial control and so on.

Support wired WAN ports, LAN ports, wireless WLAN network, 4G network interface, rich and diverse networking functions, easy for users to lay their own network.

## 2.2. Function

- Support 1 wired LAN ports, 1 wired WAN ports (WAN ports can be switched to LAN ports).
- Support 1 WIFI wireless LAN
- Support multiple LED communication indicators
- Support SSH, TELNET, Web multi platform management configuration mode.
- Support one button to restore factory settings.
- The wired net ports support 10/100Mbps rate.
- Support VPN Client (PPTP/L2TP/IPSEC/GRE/OPENVPN/SSTP) and supports VPN encryption and static IP functions.
- Support APN automatic checking network, 2/3/4G system switching, SIM information display, support APN/VPDN special network card.



- Support for wired wireless multi network simultaneous online and multi network intelligent switching backup function
- Support remote upgrade and remote monitoring.
- Support Dynamic Domain Name System (DDNS), Static Routing, PPPOE, DHCP, Static IP Function
- Support mandatory portal (WIFIDOG), this function needs to be customized accodeing to customer needs.
- Support the firewall, NAT, DMZ host, access control black-and-white list, IP speed limit, NTP, MAC speed limit.
- Support SMS AT command
- Support 4 network connections online, support TCP Server, TCP Client, UDP Server and UDP Client
- Every connection supports 20KB serial data cache. When connection is abnormal, cached data can 't be lost.
- Support for sending registration package / heartbeat data.
- Support network transmission mode, HTTPD mode, UDC mode and USR-Cloud.
- Support basic instruction set
- Support external hardware watchdog design to ensure system stability.

### 2.3. Basic Function

4G parameters				
Standard	TD-LTE			
	FDD-LTE			
	WCDMA			
	TD-SCDMA			
	GSM/GPRS/EDGE			
Frequency band of	TDD-LTE	Band 38/39/40/41		
GW-R4513-E	FDD-LTE	Band 1/3/5/7/8/20		
(European version)	WCDMA	Band 1/5/8		
	GSM/GPRS/EDGE	Band 3/8		
Frequency band of	TDD-LTE	Band 40		
GW-R4513-AU	FDD-LTE	Band 1/3/4/5/7/8/28		
(Australian version)	WCDMA	Band 1/2/5/8		
	GSM/GPRS/EDGE	Band 2/3/5/8		
Transmit power	FDD-LTE	+23dBm(Power class 3)		
	WCDMA	+23dBm(Power class 3)		
	TD-SCDMA	+24dBm(Power class 2)		
	GSM Band8	+33dBm(Power class 4)		
	GSM Band3	+30dBm(Power class 1)		
	TD-LTE	3GPP R9 CAT4 down 150 Mbp		
		up 50 Mbps		
	FDD-LTE	3GPP R9 CAT4 down 150 Mbp		
Technical		up 50 Mbps		
specifications	WCDMA	HSPA+ down 21 Mbps		
		up 5.76 Mbps		



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	TD-SCDMA	3GPP R9 down 2.8 Mbps
		up 2.2 Mbps
	CDMA2000	down 3.1 Mbps up 1.8 Mbps
	GSM/EDGE	MAX: down 384 kbps up 128 kbps
Function		
DDNS	Support	
APN	Support	
VPN	Support	
Port mapping	Support	
Firewall	Support	
Intelligent backup	Support	
RS485 to 4G Data	Support	
transmission		
Net /WIFI		
LAN Port	1	
WAN Port	1	
Ethernet port rate	10/100M	
RS485	Support	
Electromagnetic	1.5KV	
isolation protection		
Automatic switching	1	
between crossover		
and direct		
connection		
TBD	1	
Power		
VCC	9V-36V	
Working current	Average 270mA/max 400mA/12V	
Power interface	DC	
Power protection	Anti reverse connection	
Interface		
Antenna	WIFI Antenna x 1, 4G antenna x 1	
Status lamp	signal intensity/4G/WIFI/LAN/WAN/power	
Software		
V-COM	Windows 2000 (32 or 64 bit)	
Setting method Webpage, support SSH, telnet ,GW-R4513 setting software		13 setting software
Work environment		
Work temperature	-20~75c	
Storage temperature	-40C~125C	
Storage humidity	1%~95%RH (non condensation)	



## 2.4. Product Dimensions

Size: 112.0 \*84\*28mm (L\*W\*H)





Figure 3 size



# 3. Produce Function



Figure 4 product function



## 3.1. Configuration Process



Figure 5 Schematic diagram of interconnection



## 3.2. Interconnection of GW-R4513

## 3.2.1. WAN+4G



#### Figure 6 WAN+4G

This networking mode has two WAN ports (WAN ports of Ethernet port and 4G ports of M2M network) that can be connected to WAN simultaneously. The two channels form complementary and backup. At the same time, WAN ports of Ethernet port are preferred to ensure data fluency and save the traffic of 4G. When WAN ports are abnormal, they can't be connected to WAN. The router can also connect to the server through the 4G network port.

In this way, the router doesn't need any settings to connect to the network line, plug in 4G SIM card, and supply power to the router. The process of setting up customers is reduced to the greatest extent. Under this networking mode, the WIFI function of router can also work at the same time to maximize the number of LAN access.

This method is mainly used in the stably network, Such as factory buildings, intelligent buildings, smart cities and other related industries.



## 3.2.2. Double LAN+4G



Figure 7 double LAN+4G

Set the two Ethernet port work as LAN port, the webpage is as follow,



## 3.3. Basic Function

## 3.3.1. Network Diagnostic Function

🕖 颜问通讯	
Interfaces	
SIM Card	Diagnostics
IPSEC	Network Utilities
Wifi	IPv4 V Ping Traceroute Nslookup
AP Client	
DHCP and DNS	
Hostnames	
Static Routes	
Diagnostics	
QoS	
WAN/LAN Port	

### Figure9 the webpage of diagnostic

- Online diagnostic functions include Ping tools, routing parsing tools, and DNS View tools.
- Ping is a Ping tool, which can directly test Ping at a specific address on the router side.
- Traceroute is the routing parsing tool, which can get the routing path when accessing an address.
- Nslookup is a DNS view tool, which can resolve domain names to IP addresses.



## 3.3.2. Host Name and Time Zone

🚺 顾问通讯	
GW-R4513	System
Status	Here you can configure the basic aspects of your device like its hostname or the timezone.
Services	System Properties
Network	General Settings Logging Language and Style
WAN/LAN Port	Local Time Fri Jun 15 10:41:59 2018 Sync with browser
Firewall	Hostname GW-R4513
DTU	Timezone Asia/Beijing ~
System	
System	Time Synchronization
Administration	Enable NTP dient 🗹
Scheduled Tasks	Provide NTP server
Backup/Upgrade	NTP server candidates 0.openwrt.pool.ntp.org
Reboot	2.openwrt.pool.ntp.org     iii       3.openwrt.pool.ntp.org     iii

Figure10 hostname and time zone



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## 3.3.3. Password Setting

		Router Password			
Status		Changes the administrator p	assword for accessing the devic	.e	
Services		Password	•••••	21 12	
Network		Confirmation		23 12	
WAN/LAN Port					
Firewall				Save Apply	
DTU					
System					
System					
Administration					
Scheduled Tasks					
	•				

### Figure11 the webpage of setting password

## 3.3.4. Reset to Default

You can restore factory parameter settings through web pages.



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GW-R4513	Flash operations		
Status	Actions		
Services	Backup / Restore		
Network	Click "Generate archive" to	download a tar archive of the current	t configuration files. To reset the fi
WAN/LAN Port	Download backup: Reset to defaults:	Generate archive Perform	
Firewall	To restore configuration fi	es. vou can upload a previously gener	rated backup archive here.
DTU	Restore backup:	浏览 未选择文件。	Upload archive
System			
System	Flash new firmware im	age	
Administration	Upload a proper image he	re to replace the running firmware. Ch	neck "Keep settings" to retain the (
Scheduled Tasks	Keep settings: Check firmware:		
Backup/Upgrade	Image:	浏览 未选择文件。	Flash image

### Figure12 the webpage of reset to default

Click the button to restore the factory settings. This function is consistent with the Reload button function of the hardware.

The use of Reload keys

- Long press 5S above and then release, the router will restore the factory parameter settings automatically and restart automatically.
- When the reboot takes effect, all the lights will be flashing 1 times and then destroyed.

## 3.3.5. Indicator Light

Name	Intro
PWR	On when power on
WAN	On when use the WAN port, flicker when data transmission
LAN	On when use the LAN port, flicker when data transmission
WLAN	On when use WI-FI
2G indicator light	On when work on 2G
3G indicator light	On when work on 3G
Signal intensity (1-3)The more, the stronger the signal is.	

#### .....

< Description >

- The 2/3/4G indicator lights up whether the GW-R4513 network is successful or not (the most important indicator).  $\geq$
- After WIFI starts successfully, the WLAN (or WIFI) indicator light on. ۶
- The working conditions of WAN and LAN are indicated by WAN and LAN indicators.  $\triangleright$



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- > The corresponding WAN/LAN indicator flashes when the network line is connected and the network device working.
- > The power lamp will always be bright.
- When the LTE module works at 4G, the 2G indicator and the 3G indicator light are all on.

## 3.3.6. Firmware Upgrade

Status	Actions
Services	Backup / Restore
Network	Click "Generate archive" to download a tar archive of the current configuration files. To reset the firmware to its initial state, clic
WAN/LAN Port	Download backup:     Generate archive       Reset to defaults:     Perform
Firewall	To restore configuration files, you can upload a previously constant backup archive back
DTU	Restore backup: 浏览 未选择文件。 Upload archive
System	
System	Flash new firmware image
Administration	Upload a proper image here to replace the running firmware. Check "Keep settings" to retain the current configuration.
Scheduled Tasks	Keep settings:  Check firmware:
Backup/Upgrade	Image: 浏览 未选择文件。 Flash image
Reboot	

#### Figure 13 the webpage of upgrade

< Description >

- > The firmware upgrade process will last about 3-4 minutes. Please login again after 4 minutes.
- You can choose whether to save configuration.

During the process of firmware burning, please do not power down or unplug the wire.



3.3.7. Reboot



### Figure14 the webpage of reboot

Click the button to restart the router.

The restart time is consistent with the router's power on startup time, which is about 40~60 seconds.

## 3.4. Advanced Function

## 3.4.1. Supported Services

The use of dynamic domain names can be divided into two situations. The first is that routers support DDNS.



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### Figure15 the webpage of setting DDNS

#### Table4 DDNS custom server parameter

Function	Intro	Note
Enable	Enable/disable DDNS function	Default disable
Event interface	Choose the WAN port	e.g. choose wan_wired
Service/URL	Fill in the service address of DDNS.	e.g.
		http://ouclihuibin123:ouclihui
		bin1231@ddns.oray.com/ph/
		update?hostname=1a516r16
		19.iask.in
Hostname	Fill in the domain name	e.g. 1a516r1619.iask.in
User name	Fill in account name	e.g. ouclihuibin123
Password	Fill in password	e.g. ouclihuibin1231
Source of IP address	Choose the interface	
Interface	Choose the interface name	e.g. choose eth0.2
Check for changed	The interval between detecting IP	e.g. 1 min
IP/check-time unit	address changes, domain name pointing	
	to the IP may change frequently, the	
	smaller the value, the more frequent	
	the detection.	
Force update time	Mandatory update interval	e.g. 72 h
/force-time unit		

### 3.4.2. WiFiDog

Forced Portal (WiFiDog) allows devices accessing the router network to login to an authentication page for the first time



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when browsing an extranet web page. Only when the authentication is successful can they access the extranet. The significance of mandatory portal function lies in the security of LAN network, recodeing illegal acts such as network attacks using public networks, in addition, it can also be used for advertising purposes, it collects customer information with the tacit consent of current broadband users, so as to facilitate manufacturers to promote marketing.



Enable WI-FI dog



	Wifidog-web	
Status	Wifidog not start and resta	rt the effective
Services	Configuration	
Oray Server	General Settings Whit	elist Advanced Settings
Dynamic DNS	Enable	Enable or Disable wifidog
Captive Portals	Daemon enable	🗹 🍘 Enable daemon for wifidog, ensure the thread always online
RemoteManager	Blacklist and whitelist daemon	Blacklist and whitelist daemon, monitor the ip changes
Base Station	AP ID	ecc57916f
Network	Wifidog server address	wifiauth.zhangkongbao.co
WAN/LAN Port		Ø Domain name or ip
Firewall		
DTU		Save



GW-R4513 User Manual Technical Support: h.usriot.com Configuration Whitelist Advanced Settings Status General Settings Services Encrypted transmission Image:  $\sim$ br-lan Internal Interface **Oray Server** ② Configure Internal interface, default br-lan Dynamic DNS External Interface eth0.2  $\sim$ ② Configure External interface **Captive Portals** Wifidog server port default 2060 RemoteManager HTTP Port 80 **Base Station** efault 80 Network /apps/wifiauth/ Wifidog server file path End with '/', for example:'/', '/api/' WAN/LAN Port Maximum access number 40 ② Determined by router ability, default 50 Firewall 60 Check interval DTU ② Check interval for client access, default 60 seconds 5 Timeout for client System

### Figure 17 the webpage 2 of wifidog Table 5 WI-FI dog parameter

Function	Intro	Note
Enable WI-FI dog	Enable	lf use
Daemon enable	Enable	If use
AP ID	nfuold700	
Wifi dog server address	www.XXX.cn	
Internal interface	Br-lan	
External interface	Eth0.2	If use 4G, please fill in eth1
Wifi dog server file path	/apps/WIFlguanjia/	

## 3.4.3. LAN Interface

The LAN port is a local area network, there is 1 wired LAN port (WAN port can also be set to LAN port).

② Timeout for client access authentication, default 5 minutes





#### Figure 18 LAN interface function

🚺 顾问通讯				
GW-R4513	A			
Status	On this page you can config network interfaces separate	jure the network interf d by spaces. You can a	aces. You can bridge several interfaces by ticking the "bridge interfaces" field and enter the names of several iso use <u>VLAN</u> notation INTERFACE. VLANIR (e.g.: eth0.1).	
Services	Common Configuration	1		
Network	General Setup Physical	Settings Firewal	Settings	
Interfaces	Status		Uptime: 0h 6m 16s MAC-Address: D8:80:4C:00:00:92	
SIM Card		ئ br-lan	RX: 627.71 KB (4657 Pdts.) TX: 2.39 MB (5092 Pdts.) IPw4: 192.168.11/24	
IPSEC			IPv6: FD0C:4E03:A9F0:0:0:0:1/60	
Wifi	Protocol	Static address 🗸		
AP Client	Really switch protocol?	Switch protocol		
DHCP and DNS	IPv4 address	192.168.1.1		
Hostnames	IPv4 netmask	255.255.255.0	v	
Static Routes	IPv4 gateway			
Diagnostics	IPv4 broadcast			が舌
QoS	Use custom DNS servers		<b>4</b> 转	到"认

#### Figure 19 webpage of LAN interface setting

< Description >

- > 1 LAN ports
- > The default static IP address 192.168.1.1 and the subnet mask 255.255.255.0. This parameter can be modified,



such as static IP modification to 192.168.2.1.

- > The WIFI interface (WLAN port) is bridged to the LAN port.
- By default, open the DHCP server function. All devices connected to the router's LAN port can automatically get the IP address.
- Simple state statistics function.

## 3.4.4. DHCP Function

The DHCP Server function of the LAN port is enabled by default (optionally turned off), and all network devices connected to the LAN port can automatically obtain IP addresses.

🎸 顾问通讯			
	IPv4 address	192.168.1.1	
	IPv4 netmask	255.255.255.0 ~	
Status	IPv4 gateway		
Services	IPv4 broadcast		
Network	Use custom DNS servers	G	
WAN/LAN Port			
Firewall	DHCP Server		
DTU	General Setup		
System	Ignore interface	Disable DHCP for this interface	Ð.
Logout	Start	100	
	Leasetime	Lowest leased address as offset fro     12h     Expiry time of leased addresses, m	m the network address. inimum is 2 minutes ( <mark>2m</mark> ), Must take a unit.
			Save Apply

#### Figure 20 webpage of DHCP setting

< Description >

- > You can adjust the initial address of DHCP pool and address renting time.
- ▶ The default allocation range of DHCP starts from 192.168.1.100.
- Default rental time is 12 hours.



## 3.4.5. WAN Interface

🕖 顾问通讯			
GW-R4513	Interfaces - WAN_WIR	ED	ces. You can bridge several interfaces by ticking the "bridge
Status	network interfaces separated	d by spaces. You can al	so use <u>VLAN</u> notation INTERFACE.VLANNR (e.g.: eth0.1).
Services	Common Configuration	1	
<u>Network</u>	General Setup Physical	Settings Firewall	Settings
WAN/LAN Port	Status	2-	Uptime: 0h 0m 0s MAC-Address: D8:80:4C:00:00:92
Firewall		eth0.2	RX: 0.00 B (0 Pkts.) TX: 29.60 KB (171 Pkts.)
DTU	Protocol	DHCP client v	
System	Hostname to send when	4GRouter	
Logout	requesting DHCP		
			Save Apply

Figure21 webpage of WAN interface setting

WAN port is WAN interface.

< Description >

- > 1 wired WAN ports
- Support DHCP client, static IP, PPPOE mode.
- Default DHCP client
- Note: The WAN interface can be set to LAN for the convenience of customers to communicate with multiple devices in the LAN. For specific settings, please refer to the Network Port Mode page.

### 3.4.6. Wi-Fi Wireless Interface

The functional diagram of WLAN is shown in the following figure:





### Figure22 WI-FI function

< Description >

- > The GW-R4513 router is an AP, and other wireless terminals can access its WLAN network.
- Supports up to 24 wireless STA connections.
- > WLAN, LAN and wired LAN port exchange each other.
- > The maximum coverage of WIFI is 150m in the open area.

### Table6 WIFI default parameter

Name	Parameter
SSID name	GW-R4513-XXXX (XXXX is the last 4 bit of MAC address)
Wi-Fi password	12345678
Channel	Auto
Bandwidth	40MHz
Encryption	WPA2-PSK

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<b>沙</b> 顾问通讯	^	
GW-R4513	Radio on/off	off 🗸
Status	Network Mode	802.11b/g/n v
Services	Channel	auto v
Network	Interface Configuratio	n
Interfaces	General Setup Wirele	ss Security
SIM Card	ESSID	GW-R4513-0092
IPSEC	Mode	Access Point 🗸
Wifi	Vetwork	
AP Client		wan_4g: 2
DHCP and DNS		② Choose the network(s) you want to attach to this wireless interface or fi
Hostnames	Hide <u>ESSID</u>	
Static Routes		
Diagnostics		Save
	Figure23 the setting p	page of SSID
IPSEC	Interface Configuration	
Wifi	General Setup Wireless Securit	y
AP Client	Encryption WPA2	2-PSK
	Cipher Force	CCMP (AES)
Static Routes	Key	••••
Diagnostics		Save Apply

Figure24 the setting page of WI-FI



Figure25 the setting page of radio on/off

## 3.4.7. 4G Interface

This router supports the interface of one 4G/3G/2G communication module to access external network. 4G interface function:





Webpage:



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🚺 🚺 顾问通讯	
	^
GW-K4513	Interfaces - WAN_4G
Status	On this page you can configure the network interfaces. You can bridge several interfaces by ticking the "bridge interfaces" field and enter the names of several network interfaces separated by spaces. You can also use <u>VLAN</u> notation INTERFACE.VLANNR (e.g.: eth0.1).
Services	Common Configuration
Network	General Setup Physical Settings Firewall Settings
Interfaces	Status Uptime: 0h 5m 17s
SIM Card	eth1 <b>RX</b> : 1.34 MB (2886 Pkts.) <b>TX</b> : 330.70 KB (2463 Pkts.) <b>IPV4</b> : 10.124.186.169/30
IPSEC	
Wifi	Protocol DHCP dient V
AP Client	Hostname to send when requesting DHCP
DHCP and DNS	
Hostnames	Save Apply
Static Routes	
Diagnostics	· 小业

Figure 27 webpage

If the run time is 0, the network card can't run successfully.

### Table7 status table

No	Name	Intro
1	Run time	The running time after power on
2	MAC address	The MAC address of interface
3	Receive/send	Statistics of receiving and sending data of this network card
4	IPv4	The IPv4 protocol of this network card

< Description >

- ➢ GW-R4513-AU(operating band): FDD-LTE(1/2/3/4/5/7/8/28),TDD-LTE(40),WCDMA(1/2/5/8),GPRS(2/3/5/8)
- ➢ GW-R4513-E(operating band): FDD-LTE(1/3/5/7/8/20),TDD-LTE(38/40/41),WCDMA(1/5/8),GPRS(3/8)
- > The protocol of 4G interface: do not modify, keep the default.
- > The router will give priority to the use of wired WAN ports, followed by the use of 4G networks.
- > If you use APN private network, please refer to the introduction of APN chapter.



## 3.4.8. APN Setting

	^			
	SI	IM card settings		
Status	S	ettings for APN address, us	ername and password, if you g	oning to use an APN card
Services	C	onfiguration		
Network	IA I	PN LTE Config S	IM Info	
Interfaces		APNAddress	AutoCheck	~
SIM Card		Username		
IPSEC		Password		
Wifi		AuthType	PAP	~
AP Client		Check Registered (Seconds)	30	
DHCP and DNS		WAN Priority	wanfirst 🗸	
Hostnames		Reference Mode	Custom 🗸	_
Static Routes	Re	eference Address(Can only enter the IP)	114.114.114	~

#### Figure 28 the webpage 2 of APN setting

If you use an APN card and have a special APN address, you need to set the APN address, username, and password.

#### Table8 APN parameter

Parameter name	Function
APN address	Fill in the APN address
Use name	The default is empty. If you use APN
	card, please fill in correctly.
Password	The default is empty. If you use APN
	card, please fill in correctly.
Type of PDP	Default
Auth type	Default
Others	Please keep default

### Note

- Normal 4G mobile phone card, without setting up, you can access the Internet.
- > If you use APN special network card, you must fill in the APN address, user name and password.



## 3.4.9. VPN Client(PPTP/LTTP/GRE/OPENVPN)

### 3.4.9.1. PPTP Client

We first create VPN Server on the server.

Open the network connection page on the server (remote server) and click File - > New incoming connection.

Then, select Add account, please enter user name, password and other information..

Click Next and check through Internet to connect to this computer.

Then, select "Internet Protocol Version 4" to set the properties of the incoming IP, IP address assignment select "Specify IP Address", then select "OK" and "Allow Access".

Now we create a VPN server.

Let's talk about the use of VPN Client. We are looking for a computer in the LAN to ensure that it can access the server above. Then create a new VPN connection.

In the connection box, click "Properties", the tab can set the target address (the address of the VPN server), security options to select "PPTP protocol", after the point is determined, enter the username, password.

Click the "Connect" button, after the connection is successful, you can see the VPN network card connection, from grey to bright color, representing the VPN connection has been successfully established.

Next we use the PPTP Client on the router to replace the way of computer dialing.

Assuming that the user has obtained the VPN server address, account and password, we create an interface, select the PPTP protocol, and write the other parameters in turn.



Figure 29 the webpage1 of VPN



Technical Support: h.usriot.com

	Create Interface		
> Status	Name of the new interface	test @ The allowed characters are: A-Z, a-z, 0-9 and	
<ul> <li>&gt; Services</li> <li>&gt; Network</li> <li>&gt; WAN/LAN Port</li> <li>&gt; Firewall</li> <li>&gt; DTU</li> </ul>	Protocol of the new interface Create a bridge over multiple interfaces Cover the following interface	Static address  Static address DHCP client Unmanaged DHCPv6 client PPP er: "apcli0" PPtP er: "apcli1" PPPoE PPPoE PPPoATM : "eth0" UNTS/REPS/EV_DO : "eth0.1" (Jap)	
> System > Logout		LZTP "eth0.2" (wan_wired) GRE er: "eth1" (wan_4g) TUN er: "ip6gre0" TAP er: "ip6tn10" Relay bridge er: "ra0" O Ethernet Adapter: "teq10" O Wireless Network: Master "GW-R4513-0092" ( O Custom Interface:	lan)

### Figure 30 the webpage 2 of VPN

Select WAN, because it is dialing at WAN port, then save and apply.



### Figure31 the webpage3 of VPN

Wait a minute or restart the router, when you see the "VPN" interface in the router page, there is a run time (not 0), indicating that the current VPN has been successfully started. Note:

Currently PPTP supports MPPE encryption and a variety of authentication methods. Specific settings can be viewed in advanced settings for authentication.



Technical Support: h.usriot.com

- Only MSChapV2 indicates that MPPE encryption is only supported.
- MSChapV2 EAP PAP CHAP supports MPPE encryption and multiple authentications.
- Other means do not handle, default status, only CHAP authentication by default.

### 3.4.9.2. L2TP Client

1. L2TP supports multiple authentication (MSCHAPV2, CHAP, EAP, PAP), MPPE encryption, L2TP OVER IPSEC encryption. 2. increased the way of tunnel password authentication.





CW 04512		
GVV-K4315	Interfaces - TEST	
> Status	On this page you can config network interfaces separate	gure the network interfaces. You can bridge several interfaces by tickin ed by spaces. You can also use <u>VLAN</u> notation INTERFACE.VLANNR (e.
<u>Services</u>	Common Configuration	n
> Network	General Setup Advanc	ed Settings Firewall Settings
> WAN/LAN Port	Auth Type	No Authby
> Firewall	Tunnel Auth Password Enable	
> DTU	Tunnel Auth Password	123456
> System		
	Set Static Ip	
> Logout	Enable IPv6 negotiation on the PPP link	
	Use default gateway	🗹 🥥 If unchecked, no default route is configured
	Use gateway metric	
	Custom Subnet Mask Enabled	🔲 🍘 If unchecked, default Subnet Mask is 255.255.255.255

### Figure34 tunnel auth password

Interfaces - TEST	
On this page you can config network interfaces separate	ure the network interfaces. You can bridge several in d by spaces. You can also use <u>VLAN</u> notation INTERE
Common Configuration	1
General Setup Advance	ed Settings Firewall Settings
Auth Type	L2TP OVER IPSEC
IPSEC CONNECT NAME	
IKE Algorithm	3DES-SHA1 V
SA Type	ESP Y
ESP Algorithm	3DES-SHA1 V
PSK	<u>a</u>
Tunnel Auth Password Enable	
Tunnel Auth Password	123456 (2) character: 1-16

# GW-R4513

- > Status
- > Services
- > Network
- > WAN/LAN Port

Firewall

- > DTU
- > System
- > Logout



#### Figure35 L2TP OVER IPSEC auth type

#### 3.4.9.3. IPSEC

	^	IPSEC Settings	
> Status		Please fill in below settings	correctly if you want to use IPSEC
> Services		Configuration	
✓ Network		General Setup Advance	ed Settings Connect Log
Interfaces		Connect Type	Net-to-Net Mode
SIM Card		Transport Type	Tunnel 🗸
IPSEC		Function Type	Client VPN 🗸
Wifi		Connect Name	
AP Client		Local Interface	lan 🗸
DHCP and DNS		Local Subnet	Subnet expressed as network/netmask, e.g. 10.10.10.0/24
Hostnames		Local ID	ID expressed as IPv4 address e.g. 10.10.10.10,
Static Routes			or as fully-qualified domain name preceded by @ e.g. @domain
Discostia		Remote Address	IPv4 Address. A.B.C.D

#### Figure36 IPSEC setting

Selection of application modes: Net-to-Net mode (site-to-site or gateway-to-gateway), Road Warrior mode (end-to-site or PC-to-gateway)

- Transmission mode selection: tunnel mode and transmission mode. It can be selected in the transport type.
- Functional types: VPN client and VPN server.
- Connection name: indicate the name of the connection, must be unique.
- Local interface: wan\_wried, wan\_4g.
- Remote address: IP/ domain name.
- Local Subnet: IPSEC Local Protected Subnet and Subnet Mask. If you choose the Road Warrior client, you do not need to fill in.
- For terminal network: IPSEC end protection subnet and subnet mask.
- Local terminal identifier: the channel local identifier can be IP or domain name. Note that when the domain name is customized, add @
- End terminal identifier: the channel end identifier, it can be IP or domain name. Note that when domain name is customized, add @



Be Honest, Do Best !	GW-R4513 User Manual	Technical Support: h.usriot.com
GW-R4513	General Setup Advanc	ed Settings Connect Log
> Status	DPD Enable IKE Algorithm	3DES-SHA1
> Services	IKE Life Time	28800
✓ Network	SA Type	<ul> <li>Whit second, Range: 1-86400, Defalut: 28800</li> <li>ESP </li> </ul>
Interfaces	ESP Algorithm	3DES-SHA1 V
SIM Card	ESP Life Time	3600
IPSEC	Mode	Main
AP Client	Session key forward encryption(PFS)	
DHCP and DNS	Auth By	Secret 🗸
Hostnames	PSK	8

### Figure37 IPSEC advance setting

Start DPD detection: whether to enable this function, hook is indicated to enable.

DPD interval: set the time interval of connection detection (DPD).

DPD timeout time: set up the timeout time of connection detection (DPD).

DPD operation: sets the operation of connection detection.

IKE encryption: the first phase includes encryption, integrity and DH switching in the IKE stage.

IKE life cycle: set the life cycle of IKE, in seconds, default: 28800.

SA type: ESP and AH can be selected in the second stage.

ESP encryption: select the corresponding encryption mode and integrity scheme.

ESP life cycle: set ESP life cycle, unit: s, default: 3600

Mode: negotiation mode default main mode, aggrmode can be selected.

Session secret key forward encryption (PFS): if hook is activated, PFS will enable.

Authentication method: currently supports the pre shared key authentication method.

### Note

After the configuration, the ISAKMP SA established flag in the connection log indicates that the IPSEC VPN was created successfully.

### 3.4.9.4. OPENVPN

Add one interface, choose TUN or TAP mode:



Technical Support: h.usriot.com

> Status
> Services
✓ Network Interfaces
SIM Card IPSEC
Wifi AP Client
DHCP and DNS
Hostnames
Static Routes
Diagnostics

Figure38 add new interface

GW-R4513	Create Interface		
> Status	Name of the new interface	test The allowed character	ers are: A-Z , a-z , 0-9 and _
> Services	Protocol of the new interface	Static address	▼
> Network	Create a bridge over multiple interfaces	DHCP dient Unmanaged DHCPv6 dient	
> Firewall	Cover the following interface	PPP PPtP	er: "apcli0" er: "apcli1"
> DTU		PPPoE PPPoATM UMTS/GPRS/EV-DO	n: "eth0" "eth0.1" (lan)
> System		L2TP GRE TUN	"eth0.2" (wan_wired) er: "eth1" (wan_4g)
> Logout		TAP SSTP	er: "ip6gre0" er: "ip6tnl0" "
		Relay bridge	apter: "teql0"
		O J Custom Inte	erface:

Figure39 add OPENVPN interface



Technical Support: h.usriot.com



### Figure40 general setting

Protocol: TUN (routing mode) or TAP (bridge mode).

Channel protocol: UDP or TCP

Port: the listening port of the OPENVPN client.

Interface of this terminal: it can be wan\_wired and wan\_4g.

Remote address: the IP/ domain name of the server.

Local tunnel address: set the local tunnel address, such as 192.168.10.1, otherwise the default server automatically allocates.

Remote Tunnel Address: set the tunnel address on the opposite side, such as 192.168.10.1, otherwise the default server automatically allocates.



Be Honest, Do Best !	GW-R4513 User Manual	Technical Support: h.usriot.com
GW-R4513	Common Configuration	n
> Status	General Setup Advanc	ed Settings Firewall Settings
> Services	Encryption Standard	Blowfish CBC 🗸
> Network	Use LZO Compression	
> WAN/LAN Port	Keepalive Set	
> Firewall	Tun MTU Set	1500
> DTU	TCP MSS	1450
> System	ILS AUTH Key	
> Logout		
	Public Server CA Certificate	
	Public Client Certificate	

### Figure41 advance setting

Encryption Standard: Blowfish CBC, AES-128 CBC, AES-192 CBC, AES-256 CBC, AES-512 CBC

LZO compression: enable or disable transmission data using LZO compression.

Keep-alive settings: default is 10120.

TUN MTU settings: set the MTU value of the channel.

TCP MSS : maximum segment size of TCP data

TLS authentication key: authentication key of secure transport layer

Public service CA certificate: CA certificate of server and client public

Public client certificate: client certificate

Client private key: client key

#### Note

1. Before the client connects to the server, the Ca certificate, the client certificate, the client key, the TLS authentication key, these need to be provided by the server.

2. After obtaining the certificate file, copy the different certificate contents into the edit box corresponding to the configuration interface.



#### 3.4.9.5. GRE



Figure42 add new interface

	Create Interface		
> Status	Name of the new interface	test The allowed character	s are: A-Z, a-z, 0-9 and _
> Services	Protocol of the new interface	Static address	-
> Network	Create a bridge over	DHCP dient	
> WAN/LAN Port	multiple interfaces	DHCPv6 client PPP	er: "andi0"
> Firewall	interface	PPtP PPPoE	er: "apcli1"
> DTU		PPPoATM UMTS/GPRS/EV-DO	"eth0.1" (lan)
> System		GRE	er: "eth1" (wan_4g)
> Logout		TAP SSTP	er: "ip6gre0" er: "ip6tnl0"
		Relay bridge       O     Image: Ethernet Adaption       O     Image: Wireless Network       O     Image: Custom Interference	er: "ra0" oter: "teql0" vork: Master "GW-R4513-0092" ( <b>lan</b> ) face:

Figure 43 add GRE interface



Be Honest, Do Best !	GW-R4513 User Manual	Technical Support	h.usriot.com
GW-R4513			
	Interfaces - TEST		
> Status	On this page you can configure the network interfaces separated by sp	network interfaces. You can bridg aces. You can also use <u>VLAN</u> notat	e several interfaces by tic ion INTERFACE.VLANNR (
> Services	Common Configuration		
✓ Network	General Setup Advanced Setti	ngs Firewall Settings	
Interfaces	Status	gre-test	<b>RX</b> : 0.00 B (0 Pkts.) <b>TX</b> : 0.00 B (0 Pkts.)
SIM Card			
IPSEC	Protocol GRE	~	
	Remote Address		
Wifi	Local Address		
AP Client			
	Remote Tunnel Address		
DHCP and DNS	Local Tunnel Address		
Hostnames			
Static Doutos			Save Apply

#### Figure44 GRE general setting

Remote address: IP address for WAN port of terminal GRE

Local address: the local address of wan\_wried and wan\_4g, users need fill in one of them accodeing to need.

Remote Tunnel Address: the opposite GRE tunnel IP address , and the setting of subnet masks can be expressed as follows:

255.0.0.0 can be written as IP/8, 255.255.0.0 can be written as IP/16, 255.255.255.0 can be written as IP/24, 255.255.255.255 can be written as IP/32

#### For example, 172.16.10.1/24

Local tunnel IP: local GRE tunnel IP address

GW-R4513	Interfaces - TEST
> Status	On this page you can configure the network interfaces. You can bridge several interfaces by ticking the " network interfaces separated by spaces. You can also use <u>VLAN</u> notation INTERFACE.VLANNR (e.g.: eth0
> Services	Common Configuration
✓ Network	General Setup Advanced Settings Firewall Settings
Interfaces	TTL Set 255
SIM Card	Override MTU 1400
IPSEC	
Wifi	Save Apply
AP Client	
DHCP and DNS	



Technical Support: h.usriot.com

### Figure45 GRE advance setting

TTL settings: set the TTL of the GRE channel, by default 255 Set MTU: set the MTU of the GRE channel, by default 1400

Common Configuration

### 3.4.9.6. SSTP Client

GW-R4513	Create Interface	
> Status	Name of the new interface	SSTP (a) The allowed characters are: A-Z, a-Z, 0-9 and _
> Services	Protocol of the new interface	SSTP V
> Network		DHCP dient Unmanaged
> WAN/LAN Port	S Back to Overview	DHCPv6 dient ppp Submit
> Firewall		PPtP PPPoE
> DTU		UMTS/GPRS/EV-DO
> System		GRE
> Logout		TAP SSTP
		Relay bridge

### Figure46 add new interface

General Setup	Advance	ed Settings	Firewall Settings	5	
	Status		sstp-SSTP		<b>RX:</b> 0.00 B (0 Pkts.) <b>TX:</b> 0.00 B (0 Pkts.)
	Protocol	SSTP	~		
SST	TP Server			]	
PAP/CHAP u	sername			]	
PAP/CHAP p	assword			2	



### Figure47 SSTP general setting

SSTP server: the IP or domain name of the SSTP server.

PAP/CHAP Username: user name of SSTP

PAP/CHAP password: the password of SSTP

#### Note

Advanced settings can refer to advanced settings of PPTP.

### 3.4.10. Static Router

#### Table9 static router parameter

Name	Info	Note
Interface	Port for executing rules	eth0.2
Remote IP	Remote IP or address	192.168.1.0
Subnet	The remote subnet	255.255.255.0
Gateway	Address to be forwarded to	192.168.0.202
Metric		0
MTU	Maximum transmission unit	1500

Static routing describes the routing rules of Ethernet packets.

### 3.4.11. NAT Function

### 3.4.11.1. MASQ

MASQ, MASQUREADE, address masking, will leave the packet source IP into a router interface IP address, such as check IP dynamic masking, the system will flow out of the router packet source IP address changed to WAN port IP address.



#### 3.4.11.2. SNAT

Source NAT changes the source address of the packet leaving the router, closing the IP dynamic camouflage of the WAN port first when used.



Be Honest, Do Best !	GW-R4513 User Manual		r	Technical	l Support: h	nusriot.com	n
Network	rumaru rejecc						
> WAN/LAN Port	Zones						
V Firewall	Zone ⇒ Forwardings	Input	Output	Forward	Masquerading	MSS clamping	
General Settings							C Edit
Port Forwards	lan: lan: ﷺ ⇒ wan	accept 🗸	accept ~	accept 🗸			Delete
Traffic Rules							C Edit
Custom Rules	wan: wan_wired:  wan_4g: ﷺ ⇒ REJECT	accept 🗸	accept ~	reject 🗸			Delete
Access Restrictions							
Rate Limiting	La Add						
> DTU		Save	Apply				

### Figure49 close MASQ

#### Then setup SourceNAT.



#### Figure51NAT setting2

Keep the source IP, port, the remote IP, port by default, then save.



GW-R4513 User Manual Technical Support: h.usriot.com Source NAT is a specific form of masquerading which allows fine grained control over the source IP used for outgoing traffic, for example to map multiple WAN addresses to internal subnets. > WAN/LAN Port Match Action Enable Sort Name Firewall Any traffic From *any host* in *lan* General Settings 🗹 Edit test Rewrite to source IP 192.168.9.1  $\checkmark$ • 💼 Delete To any host in wan Port Forwards Traffic Rules New source NAT: Custom Rules To source port Name Source zone Destination zone To source IP lan 🗸 wan 🗸 -- Please choose -- 🗸 Do not re Add and edit... Restric

#### Figure52 NAT setting3

### 3.4.11.3. DNAT

DNA T is the replacement of destination addresses, replacing the destination IP address of packets that enter the router with the destination IP address of the WAN port IP with the user-set IP address

## 3.4.11.3.1. Port Forward



### 3.4.11.3.1.1. Introduce



Then save the settings.

192.168.1.1:80 is the web server of routers. If we want to access a device in the LAN from the outside network, we need to set the mapping from the outside network to the inside network, such as setting the outside network port to 81, the inside network IP 192.168.1.1, and the inside network port to 80.

When we access the 81 port from the WAN port, the access request will be transferred to 192.168.1.1:80.

### 3.4.11.3.1.2. Port Forward on 4G Interface

#### Table9 port forward parameter

Use environment	Content	Info
Router	4G router	
	SIM card	APN card (IP: 10.201.20.47)
PC	IP of PC in LAN	192.168.1.247
	Listing port of PC	12129

First, fill in the APN address on router.

GW-R4513	SIM card settings
<u>Status</u>	Settings for APN address, username and password, if you goning to use an APN card, ple
> Services	Configuration
✓ Network	APN LTE Config SIM Info
Interfaces	APNAddress AutoCheck ~
SIM Card	Username
IPSEC	Password
Wifi	PIN Enable
AP Client	AuthType PAP
DHCP and DNS	(Seconds)
Hostnames	WAN Priority wanfirst 🗸
Static Routes	Reference Mode Custom V
Diagnostics	Reference Address(Can only enter the IP)

#### Figure 55 4G port forward setting1

Then, add the port forward.



Be Honest, Do Best !	GW-R4513 User Manual			Techn	Technical Support: h.usriot.com		
> Network	Name	Match	Forward	to Enable	Sort		
WAN/LAN Port	-	IPv4-TCP, UDP From <i>any host</i> in <i>wan</i> Via any router IP	any host in	n lan 🗹	•	💼 Delete	
✓ Firewall		via any roater in					
General Settings			New p	ort forward:			
Port Forwards		Name	Protocol External zone	External Internal port zone	Internal IP Internal address port		
Traffic Rules		forwardtest	TCP v wanv	80 lan v 19	2.168.56 80	🖬 Add	
Custom Rules						1	
Access Restrictions			Save	Apply		/	
Rate Limiting							

Figure 56 4G port forward setting 2

After setup all parameters, restart the router.

## 3.4.11.3.2. NAT DMZ

Port mapping is to map a specified port of WAN port address to a host in the intranet. DMZ function maps all ports of WAN port address to a host. Setting interface and port forwarding are in the same interface. When setting up, the external port is not filled in.

> WAN/LAN Port	- From any host in wan Via any router IP		any host in Ian			• •	📋 Delete		
General Settings	IPv4-TCP forwardtest From <i>any host</i> in <i>wan</i> Via <i>any router IP</i> at port <i>80</i>		IP <i>192.168</i>	3.56.1, port 80	) in <i>Ian</i>		•	💼 Delete	
Port Forwards				New por	t forward:				
Traffic Rules				New por	t forward.				
Custom Rules		Name	Protocol	External zone	External Int port z	ernal one	Internal IP address	Internal port	
Access Restrictions		DMZ	TCP+UDP 🗸	wan~	lar	n 🗸	192.168.1.1 ~		🔂 Add
					empty				
Rate Limiting				Save	Apply				
		_, _,							

Figure 57 DMZ setting 1

### Then add and save.



### Figure58 DMZ setting2

As shown, all ports of the WAN address are mapped to the host 192.168.1.10 of the intranet.



Note

Port mapping and DMZ functions can't be used at the same time.

### 3.4.12. Access Restrictions

Access restriction implements the access restriction to the specified domain name, supports the blacklist and whitelist settings of domain name addresses. When a blacklist is selected, the device connecting the router can't access the domain name of the blacklist, and other domain name addresses can be accessed normally. When a whitelist is selected, the device connecting the router can access the domain name of the whitelist only. This function is turned off by default

#### 3.4.12.1. Domain Blacklist

> Services				
> Network	mode	olack list 🗸		
> WAN/LAN Port				
✓ Firewall				
General Settings	name	domain name	Enable	
Port Forwards	test	www.baidu.com		💼 Delete
Traffic Rules				
Custom Rules			New firewall rule	
		name	domain name	
Access Restrictions				🔂 Add
Rate Limiting				
> DTU			Save Apply	

Figure59 blacklist



#### 3.4.12.2. Whitelist

Status	Input domain l	revword. for example:baidu.com	
> Services			
> Network		mode white list 🗸	
> WAN/LAN Port			
🗸 Firewall			
General Settings	name	domain name	Enable
Port Forwards	test	www.usr.cn	
Traffic Rules			
Custom Rules			New firewall rule
		name	domain name
Access Restrictions			
Rate Limiting			
N DTU			
			Save Apply
		Figure60 whitelist	t

## 3.4.13. Rate Limiting

Network speed control can limit the speed of devices connecting to routers, support IP segment address speed limit and MAC address speed limit, and rules can be added at the same time.

^	Descending rate is greater than the downward rate							
GW-R4513	Restrict access to the Internet speed of ip							
> Status	start ip	end ip	downstream (KB/S)	upstream (KB/S)				
> Services								
Network			This section contains no values ye	t				
> WAN/LAN Port			New firewall rule					
√ Firewall	start ip	end ip	downstream (KB/S) upstream (KB/S)					
General Settings				🖪 Add				
Port Forwards	Restrict access	to the Internet speed o	of mac					
Traffic Rules	MAC		downstream (KB/S)	upstream (KB/S)				
Custom Rules								
Access Restrictions			This section contains no values ye	t				
Rate Limiting			New firewall rule					
> DTU	mar	downstream	(KR/S) unstream (KR/S)	·····································				

#### Figure61 rate limiting



# 4. DTU Function



Figure62 DTU function



## 4.1. Work Mode



Figure63 mode select



### 4.1.1. Net Transparent Transmission Mode

### 4.1.1.1. Mode Declaration



### Figure64 net transparent transmission mode

GW-R4513 support 4 socket connection: socket A, socket B, socket C, socket D, they are independent of each other. Socket A support: TCP Server、TCP Client、UDP Server、UDP Client Socket B/C/D support TCP Client、UDP Server、UDP Client

The AT commands of setting:

- 1. Set the work mode :net transparent AT+WKMOD=NET
- 2. Enable socket A AT+SOCKAEN=ON
- Setting socket A work at TCP Client mode AT+SOCKA=TCPC, test.usr.cn,2317
- 4. Restart the module

AT+Z



Be Honest, Do Best !	GW-R4513	3 User Manual	Technical Support: h.u	isriot.com
🔮 GW-R4513 V1.0.5				- 🗆 X
[PC Serial Parameters] ComName COM7	BaudRate 115200 V Parity/Data/Stop NC	DNE 🗸 8 🗸 1 🗸 🖨 Close PC Seri	ial	
Choose Work Mode		Operation and Hints		
Transparent Mode     O UDC Mode	○ HTTPD Client Mode	Query all paramet	ers 🛛 🗍 Save curr	rent parameters
	P/UDP Serial	Enter Serial AT command	d mode Exit Serial AT	command mode
PC NetWork	M2M device Serial device	Help message Softw	vare Restart Hardware Restart	eset to factory settin
Transparent Mode parameters		Query RSSI Query	network info Query version	
Socket A IP&Po Link Typ Enable Socket B Enable Socket C Enable Socket D	rt [test.usr.cn ] 2317 re TCPC ~	OK AT+UARTFT=10 AT+UARTFT=10 OK AT+UARTFL=1000 AT+UARTFL=1000 OK Operation complete AT+Z		^
		ок	•	~
Modem Parameters		Router params	$\checkmark$	
Serial Serial BaudRate 1 Parity/Data/Stop N	1520( ~ ONE ~ 8 ~ 1 ~			
More kage Time Interval(ms) 10	Package Length(Bytes) 1000	Send via Serial Port 👻		❷ send → 激活 V

Figure65 setup software



## 4.1.2. HTTPD Mode

### 4.1.2.1. Mode Declaration



#### Figure66 HTTPD Mode

The AT commands of setting:

- 1. Set the work mode : HTTPD AT+WKMOD=HTTPD
- 2. Set the type of request: AT+HTPTP=GET
- 3. Set the URL AT+HTPURL=/1.php[3F]
- 4. Set the server AT+HTPSV=test.usr.cn,80
- Set the head of HTTP AT+HTPHD=Connection: close[0D][0A]
- 6. Set the overtime of request



Technical Support: h.usriot.com

AT+HTPTO=10

- Set whether to filter information back to head AT+HTPFLT=ON
- 8. Restart the module

AT+Z

The Language Help   [PC Seriel Parameters]   Constance CoN7   BaudRate 115200   Parts/Data/Stop NONE   Charges work Mode   Charges work Mode<	🛞 GW-R4513 V1.0.5							– 🗆 ×
IPC Setial Parameters       Contrame COM7 BaudRate 115200 Parkty/Data/Stop MONE 8 1 Chose PC Setial         Choose Work Mode       Operation and Hirls         Impresent Mode       UDC Mode         HTTP server       HTTP Jecket Mode         HTTP server       Mode         HTTP server       Mode         HTTP server address       Est Serial AT command mode         Exter Serial AT command mode       Ext Serial AT command mode         Help message       Software Restart         Hardware Restart       Bet to factory settin         Usery network info       Query network info         HTTP server address       test.usc.cn         HTTP server port 80       THTPTO?         ATHENDO?       ATHENDO?         ATHENDO?	File Language Help							
Choose Work Mode Operation and Hirls Operation and Hirls HTTP server HTTP server HTTP server NetWork M2M device Serial device HTTP device Serial Serial Sauddate IS20 Ver Time (s) ID HTTP request type GET VITP Server address test.usr.cn HTTP Server address NetWork Header NetWork Header NetWork IS20 Ver Time (s) ID HTTP request theader NetWork Inter Prove address Serial Serial Bauddate Serial Serial Bauddate IS20 Ver Time (s) Serial Serial Serial Bauddate IS20 Ver Time (s) Serial Serial Serial Bauddate IS20 Ver Time (s) Serial Serial Bauddate Serial Bauddate Serial Bauddate Serial Port Ver Time (s) Serial Serial Bauddate Serial Bauddate Serial Port Ver Time (s) Serial Serial Bauddate Serial Port Ver Time (s) Serial Serial Bauddate Serial Bauddate Serial Port Ver Time (s) Serial Serial Port Ver Time (s) Serial Serial Port Ver Time (s) Serial Serial Bauddate Serial Port Ver Time (s) Serial Serial Bauddate Serial Bauddate Serial Port Ver Time (s) Serial Ser	[PC Serial Parameters] : (	ComName COM7 🛛 🗸 BaudF	Rate 115200 🗸 Parity/I	Data/Stop NONE 🗸	8 ~ 1 ~ 🗰 Clo	ose PC Serial		
Intransparent Mode       UDC Mode       ImtTPD Clent Mode         ImtTP server       HTTP       ImtTP       ImtTP <th>Choose Work Mode</th> <th></th> <th></th> <th></th> <th>Operation and Hints</th> <th></th> <th></th> <th></th>	Choose Work Mode				Operation and Hints			
HTTP       HTTP       Serial         HTTP server       NetWork       M2M device       Serial device         HTTP clent. Mode parameters       Query Restart       Hardware Restart       Set Serial AT command mode         HTTP request type       GET       Urry Restart       Heb message       Software Restart       Hardware Restart       Set of factory settin         HTTP server address       Uery RSSI       Query Network info       Query version       AT+HTPHD?         HTTP server pott       B0       AT+HTPHD?       AT+HTPHD?       AT+HTPHD?         HTTP request Header       Connection:close[0D][0A]       AT+HTPTO?       AT+HTPTO?         HTTP request Header       Connection:close[0D][0A]       AT+HTPTO?       AT+HTPTO?         HTTP request Header       Connection:close[0D][0A]       AT+HTPTO?       AT+HTPTO?         ATHTPTO?       AT+HTPTO?       AT+HTPTO?       AT+HTPTO?       AT+HTPTO?         ATHTPTO?       AT+HTPTC?       AT+HTPTC?       AT+HTPTC?       AT+HTPTC?         ATHTPTC?       AT+HTPTL??       AT+HTPTL??       AT+HTPTL??       AT+HTPTL??         More       Serial BaudRate       HSOL       Note       Serial BaudRate       Serial BaudRate       Serial BaudRate       Serial Port *       Serid * <th>○ Transparent Mode</th> <th>○ UDC Mode</th> <th>HTTPD Client</th> <th>Mode</th> <th>Query</th> <th>all parameters</th> <th>🔚 Save curre</th> <th>ent parameters</th>	○ Transparent Mode	○ UDC Mode	HTTPD Client	Mode	Query	all parameters	🔚 Save curre	ent parameters
HTTP server NetWork M2M device Serial device     HTTP Clent Mode parameters     Query RSSI     Query NSSI     Query None     Parking Dinternationalogi<	НТР	HTTP	Serial		Enter Serial A	T command mode	Exit Serial AT (	command mode
ATTPD Clent Mode parameters       Query RSSI       Query version         Work       MTTP request type       GET       Image: Compact on the comp	HTTP server	NetWork	M2M device	Serial device	Help message	Software Restart	Hardware Restart	eset to factory settin
HTTP request type       GET       \         HTTP vRL       1./php[3F]       AT+HTPHD?         HTTP server address       test.usr.cn       AT+HTPHD?         HTTP server address       test.usr.cn       AT+HTPHD?         HTTP server port       80       AT+HTPHD?         Over Time (s)       10       AT+HTPTO?         HTTP request Header       Connection:close[0D][0A]       AT+HTPTO?         HTTP request Header       Connection:close[0D][0A]       AT+HTPTO?         HTTP Trequest Header       Connection:close[0D][0A]       AT+HTPTO?         More       Filter HTTP Header       More       Router parameters         Nore       Serial BaudRate       11520(~)       8 ~ 1 ~       Serial Port ~       Serial Port ~	HTTPD Client Mode param	neters			Query RSSI	Query network info	Query version	
Modem Parameters   Serial Serial BaudRate   Parity/Data/Stop NONE   Nore 8   Serial Port + Send via Serial Port +   Send via Serial Port +	HTTP S HTTP S HTT C HTTP rec	request type GET HTTP URL 1./php[3F] erver address test.usr.cn P server port 80 Over Time (s) 10 quest Header Connection:clos V Filter HTTP H	<pre></pre>		AT+HTPHD? AT+HTPHD:Connection:close AT+HTPTO? AT+HTPTO? HTPTO:10 AT+HTPFLT? AT+HTPFLT? HTPFLT?ON Operation complete	[OD][OA]		
Modem Parameters     Router params       Serial     Serial BaudRate     11520C \rightarrow       Parity/Data/Stop     NONE \rightarrow     8 \rightarrow       More     None     1 \rightarrow       More     Send via Serial Port \rightarrow     Send via Serial Port \rightarrow							······································	¥.
Serial BaudRate         11520 <           Parity/Data/Stop         NONE          8          1             More         kage Time Interval(ms)         10         Package Length(Bytes)         1000         Send via Serial Port          Send via Serial Port          Send via Serial Port	Modem Parameters				Router params	~		
More Send Via Serial Port •	Serial	Serial BaudRate 11520( ~ Parity/Data/Stop NONE ~ Time Interval(ms) 10	Backage Length(Bytec)	~				A first
	More Kage				Send via Serial Port 👻			🧐 Send 👻

Figure67 setting software



## 4.1.3. UDC Mode

### 4.1.3.1. Mode Declaration



Figure68 UDC Mode



Be	Honest, Do Best !	GW-R4513 Us	er Manual	Technical Support: h.	usriot.com
🎡 GW-R4513 V1 File Language	.0.5 Help			_	- 🗆 X
[PC Serial Paramet	ers : ComName COM7 🛛 BaudRate 115	200 V Parity/Data/Stop NONE V	8 v 1 v Close PC Seri	al	
Choose Work Mod	e		Operation and Hints		
○ Transparent Mo	ode 💿 UDC Mode	O HTTPD Client Mode	Query all paramet	ers 🔋 🔚 Save cu	irrent parameters
		Serial	Enter Serial AT command	l mode Exit Serial A	T command mode
PC	NetWork M2M det	vice Serial device	Help message Softw	vare Restart Hardware Restart	eset to factory settin
JDC Mode paramet	ers		Query RSSI Query	network info	1
✓ Enable Socket A	IP&Port test.usr.cn Link Type TCPC	2317	AT+HTPFLT? +HTPFLT:ON		^
Enable Socket B			Operation complete +++ AT+ENTM		
Enable Socket C			AT+ENTM AT+ENTM +OK		
Enable Socket D			a a +OK		•
		``		▼=	
Modem Parameters Serial	s Serial BaudRate 11520( ~ Parity/Data/Stop NONE ~	8 ~ 1 ~	Kouter params	~	
More	kage Time Interval(ms) 10 Packag	e Length(Bytes) 1000	Send via Serial Port 👻		🕘 Send 👻
				泡於壬 \M/ir	i dowe

### Figure69 setting software

The AT commands for setting GW-R4513:

- Set the work mode: UDC AT+WKMOD=UDC
- 2. Enable socket A
  - AT+SOCKAEN=ON
- 3. Set device work as TCP server, the server address is test.usr.cn, the port is 2317 AT+SOCKA=TCPC,test.usr.cn,2317
- 4. Enable heartbeat package AT+HEARTEN=ON
- 5. Set the time interval
  - AT+HEARTTM=30
- 6. Enable registration package AT+REGEN=ON
- 7. Set the registration mode: UDC AT+WKMOD=UDC
- Set the ID of UDC device AT+UDCID=30303030303030303030303
   The ID parameter here is hex form.
- 9. Send save command AT+S



## 4.2. Serial Port

## 4.2.1. Basic Parameters

>	Status	^		
<i>.</i>	C 1		Seral setup	
>	Services		The basic setting of the seri	al
>	Network		Configuration	
>	WAN/LAN Port		Comparation	
	Firewall		Baud Rate	115200 ~
	DTU		Data Bits	8 ~
~			Stop Bits	1 ~
	General Settings		Pairty	NONE ~
	SERIAL		Package Interval	10
	SOCKET A			1000
	SOCKET B		Package Length	1000
	60 0VET 0			
	SOCKET C			
	SOCKET D			

# Figure 70 serial port setting

rabiero serial por charameter					
	Parameter				
Baud rate	2400, 4800, 9600, 19200, 38400, 57600, 115200,				
	230400				
Data bit	8				
Stop bit	1,2				
Check bit	NONE				
	EVEN				
	ODD				
	MARK				
485	NFC				
	485 communication				

## 4.2.2. Frame Forming Mechanism

### 4.2.2.1. Time Triggered Mode

When receiving data from UART, GW-R4513 continuously checks the interval between 2 adjacent bytes. If the interval



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time is greater than or equal to a certain "time threshold", a frame is considered to end, otherwise data is received until it is greater than or equal to the packing length (default is 1000 bytes). The range can be set to be 10ms~60000ms. The default time is 10ms.

This parameter can be set accodeing to the AT command, AT+UARTFT=10.



Figure71 time triggered mode

### 4.2.2.2. Length Triggered Mode

When receiving data from UART, GW-R4513 will check the number of bytes received continuously. If the number of bytes received reaches a certain "length threshold", it is considered that the end of a frame. The range of settings is 1~4096. Factory default 1000.

This parameter can be set accodeing to the AT command, AT+UARTFL=<length>



Figure72 length triggered mode



### 4.3. Characteristic Functions

### 4.3.1. Registration Package

	<ul> <li>■</li> <li>■</li></ul>	TCP Server
	Figure73 registratio	n package function
> Services	DTU setup The basic setting of the DTU	
> Network	Configuration	
WAN/LAN Port		
> Firewall	mode select heart	register
V DTU	Enable	OFF ~
General Settings	Туре	user defined 🗸
SERIAL	register data	0123456789 Ochoose custom is effective The allowed characters are: A-F, a-f, 0-9
SOCKET A	register typ	With the server connection to the server to send one more time $\checkmark$
SOCKET B		
SOCKET C		Save Apply

#### Figure74 registration package setting

When work at the net transparent transmission mode, the user can choose to send register package from device to server. The registration package is designed to enable the server to identify the data source device, or as a password to obtain authorization for the functions. Registered packets can be sent when a connection between the device and the server is established, or they can be spliced together at the front of each packet as a data package. The data of the registration package can be ICCID code, IMEI code, or custom registration data.

#### Table11 AT commands

Command	Function	Default parameter
AT+ REGEN	Query/set enable register function	OFF



AT+ REGTPQuery/set the type of register contentUSERAT+ REGDTQuery/set the info of custom register0123456789AT+ REGSNDQuery/set register packet sending modeDATA

 ${\sf AT}\ commands$ 

1. Enable register package

AT+REGEN=ON

- Set the register type is custom define AT+REGTP=USER
- 3. Set the data of register package AT+REGDT=123456789
- 4. Setting up the registration package is to send registered data as the head of each packet data AT+REGSND=DATA
- 5. Restart

AT+Z				
🔮 GW-R4513 V1.0.5				- 🗆 ×
File Language Help				
[PC Serial Parameters] :	ComName COM7 🗸 BaudRate 115200 🗸 P	arity/Data/Stop NONE <	8 🗸 1 🗸 🖨 Close PC Seria	
Choose Work Mode			Operation and Hints	
Transparent Mode	○ UDC Mode ○ HTTPD	Client Mode	Query all parameters	Save current parameters
	P TCP/UDP Seri		Enter Serial AT command mode	Exit Serial AT command mode
PC	NetWork M2M device	Serial device		^
Transparent Mode parame	eters	ochar de rice	AT+HTPURL? +HTPURL:/1.pbp[3E]	
Socket C		,	AT+HTPSV?	
Enable Socket D			AT+HTPSV? +HTPSV:test.cn,80 AT+HTPHD?	
Enable Heartbeat Package			AT+HTPHD? +HTPHD:Connection: close[0D][0A] AT+HTPTO?	
			AT+HTPTO? +HTPTO:10	
Identity Package	Reg Package Send Type Send register data when	✓	AT+HTPFLT?	
	User-defined data 0123456789	Hex	AT+HTPFLT? +HTPFLT:OFF	
No	data auto restart time(s) 1800		Operation complete	
Show Source Socke	t			¥
Modem Parameters			Router params	
Serial	Serial BaudRate 11520( v Parity/Data/Stop NONE 8 v	1 ~		激活 Windows
More kage	e Time Interval(ms) 10 Package Length(Byt	es) 1000	Send via Serial Port 👻	转到"设置的Senta Wind

Figure 75 setting software



## 4.3.2. Heartbeat Package



#### Figure 76 heartbeat package setting

When work at net transparent transmission mode, the user can choose to send heartbeat packets to DTU. Heartbeat packets can be sent to the server side of the network, or to the device port of the serial port.

The main purpose of sending to the network side is to maintain the connection with the server.

In order to reduce communication flow, users can choose to send heartbeat packets (query instructions) to serial device instead of sending query instructions from server.

#### Table12 AT commands

Command	Function	Default parameter
AT+ HEARTEN	Query/set enable heartbeat package	OFF
AT+ HEARTDT	Query/set data of heartbeat package	0123456789
AT+ HEARSND	Query/set heartbeat sending type	NET
AT+ HEARTTM	Query/set transmission interval	30

AT commands

1. Enable heartbeat package:

AT+HEARTEN=ON

- 2. Set the heartbeat data AT+HEARTDT=123456789
- Set the heartbeat send to net port AT+HEARTTP=NET
- Set the transmission interval AT+HEARTTM=30
- 5. Restart

AT+Z



Bel	Honest, Do Best !	GW-R4513 Use	r Manual	Technical Support: h	usriot.com
🙀 GW-R4513 V1.	0.5				– 🗆 X
File Language	Help				
[PC Serial Paramet	ers: : ComName COM7 🔍 BaudRate 115200 🗸	Parity/Data/Stop NONE $\scriptstyle{\smallsetminus}$	8 🗸 1 🗸 🗰 Close PC Serial		
Choose Work Mode			Operation and Hints		
Transparent Mo	ode 🔿 UDC Mode 🔷 HTT	PD Client Mode	C Query all parameters	🔚 Save c	urrent parameters
		Serial	Enter Serial AT command m	ode Exit Serial A	T command mode
Po	NetWork M2M device	Serial device	AT+HTPURI 2		^
Transparent Mode p	parameters		+HTPURL:/1.php[3F]		
Socket C		^	AT+HTPSV?		
Enable Socket D			AT+HTPSV? +HTPSV:test.cn,80 AT+HTPHD?		
✓ Enable Heartbeat Package	Heartbeat Time(s) 3 Heartbeat Data 0123456789 Heartbeat Send Type Send data to network	☐ Hex	AT+HTPHD? +HTPHD:Connection: close[0D][0A] AT+HTPTO? AT+HTPTO?		
Enable Identity Package			AT+HTPFLT?		
			AT+HTPFLT? +HTPFLT:OFF		
	No data auto restart time(s) 1800		Operation complete		
Show Source	Socket	~			~
Modem Parameters	;		Router params	~	
Serial	Serial BaudRate 11520( ~ Parity/Data/Stop NONE ~ 8 ~ kage Time Interval(mc) 10 Parkage Length/	1 V			激活 Windows
More		2,000, 2000	Seriu Via Serial Port 🔻		Senda VIIIC

Figure77 setting software

## 4.3.3. USR-Cloud

>	Status	^
>	Services	DTU setup
	Natwork	The basic setting of the DTU
,	Network	Configuration
>	WAN/LAN Port	
>	Firewall	mode select heart register
~	DTU	Enable ON Y
	o 10 m	Type CLOUD 🗸
	General Settings	register typ With the server connection to the server to send one more time v
	SERIAL	Cloud id Cloud id
	SOCKET A	Cloud new
	SOCKET B	
	COCVET C	
	SOCKETC	Save Apply
	COCKET D	



### Figure78 USR-Cloud

Note: this function work only when socket A work at TCP Client mode.

Table13 AT commands

		Command	Function		Default parameter	
AT+ CLOUD Set 1		Set the cloud ID and password				
AT+ REGEN Query/set enable reg			Query/set enable reg	ister package	OFF	
		AT+ REGTP	Query/set data of reg	ister package	USER	
		AT+ REGSND	Query/set register ser	nding type	DATA	
1.	Enable	register function				
	AT+REG	EN=ON				
2.	Set the	type is USR-Cloud				
	AT+REG	TP=CLOUD				
3.	Set the	parameter of socket				
	AT+SOC	KA=TCPC, clouddata.usric	ot.com,15000			
4.	Set the	sending type				
	AT+REG	SND=LINK				
5.	Set the	cloud ID and password				
	AT+CLO	UD=xxxxxxxxxxxxx,xxxxx	Х			
6.	Restart					
	AT+Z					
<b>\</b>	GW-R4513 V1.0	.5				– 🗆 X
File	Language H	elp				
[PC Cho	Serial Paramete	rs] : ComName COM7 V BaudRate 115	200 V Parity/Data/Stop NONE V 8	3 ∨ 1 ∨ Close PC Se Operation and Hints	erial	
۲	Transparent Mod	le 🔿 UDC Mode	O HTTPD Client Mode	Query all param	eters 🔋 Save current	parameters
1	TCF	P/UDP TCP/UDP	Serial	Enter Serial AT comma	nd mode Exit Serial AT com	mand mode
			┝┿┕╧		•	
Trees	PC	NetWork M2M de	vice Serial device	AT+HTPURL?		^
	Enable	rameters		+HTPURL:/1.php[3F]		
	Socket A	IP&Port clouddata.usr Link Type TCPC	iot.com 15000	AT+HTPSV?		
				+HTPSV:test.cn,80		
	Enable Socket B			AT+HTPHD?		
				AT+HTPHD? +HTPHD:Connection: close[0D][0A	1	
	Enable Socket C			AT+HTPTO?		
SULVEL C			ΑΤ+ΗΤΡΤΟ?			



Be H	Honest, Do Best !	GV	W-R4513 Use	er Manual T	Cechnical Support: h.usriot.com
🔮 GW-R4513 V1.0	0.5				- 🗆 X
File Language H	lelp				
[PC Serial Paramete	ers] ComName COM7 🗸 Bau	idRate 115200 🗸 Parity/E	Data/Stop NONE $\sim$	8 🗸 1 🗸 🖬 Close PC Serial	
Choose Work Mode	_			Operation and Hints	
Transparent Mod	de 🔿 UDC Mode	○ HTTPD Client	Mode	Query all parameters	Save current parameters
		Serial		Enter Serial AT command mod	e Exit Serial AT command mode
PC	NetWork	M2M device	Serial device		^
Transparent Mode p	arameters			AT+HTPURL? +HTPURL:/1.php[3F]	
Socket C			,	AT+HTPSV? AT+HTPSV? +HTPSV:test.cn,80 AT+HTPHD? AT+HTPHD? +HTPHD:Connection: close[0D][0A]	
Package Package Identity Package	Reg Package Send Type S Reg Package Data Type C Device id & code 12	end register data when v oud v 345678001122334455 0(	000test	AT+HTPTO? AT+HTPTO? +HTPTO:10 AT+HTPFLT? AT+HTPFLT? +HTPFLT:OFF	
Show Source S	No data auto restart time(s) 18	00		Operation complete GW-R4513	~
Modem Parameters				Router params	,
Mouern Parameters					
Serial	Serial BaudRate 115200 Parity/Data/Stop NONE kage Time Interval(ms) 10	<ul> <li>✓</li> <li>✓</li> <li>8</li> <li>✓</li> <li>Package Length(Bytes)</li> </ul>	~ 000	Send via Serial Port 👻	激活 Windo 转动设置以激

Figure 79 setting software

# 5. Webpage Sitting

Connect PC and GW-R4513 with LAN port, or connect WLAN wireless, then login the webpage of setting.

Table14 GW-R4513 default parameter

Parameter	Default setting
SSID	GW-R4513-XXXX
IP of LAN port	192.168.1.1
User name	root
Password	root
WIFI key	12345678

Make PC join the WIFI GW-R4513-XXXX, enter 192.168.1.1, the user name and password both are root.



Be Honest, Do Best !	GW-R4513 User	Technical Support: h.usriot.com		
	oot			
	₽			
	Please enter your username	and password.		
	Login	Reset		
فليرجأ المريكي والقنع بمكان	وكارق والالتار بسبح القريد لمراجع المراجع والمسر			

### Figure80 login webpage

## 5.1. Web Function

Status	
System	
Hostname	GW-R4513
Firmware Version	V1.0.6(EN)
Local Time	Thu Nov 1 01:55:01 2018
Uptime	4h 51m 32s
Load Average	3.58, 3.74, 4.03

### Figure81 status



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#### Interfaces

ork	Status	Actions
TEST pptp-test	<b>RX:</b> 0.00 B (0 Pkts.) <b>TX:</b> 0.00 B (0 Pkts.)	<ul><li>Connect</li><li>Stop</li><li>Edit</li><li>Delete</li></ul>
LAN (250 (250 m) br-lan	Uptime: 4h 53m 1s MAC-Address: D8:B0:4C:00:00:92 RX: 3.23 MB (35219 Pkts.) TX: 6.24 MB (16053 Pkts.) IPv4: 192.168.1.1/24 IPv6: FDEB:24A3:B5B:0:0:0:0:1/60	<ul><li>Connect</li><li>Stop</li><li>Edit</li><li>Delete</li></ul>
WAN_4G eth1	Uptime: 4h 52m 46s MAC-Address: 2E:6F:B5:39:F8:B3 RX: 4.64 MB (10022 Pkts.) TX: 2.48 MB (28322 Pkts.) IPv4: 10.59.58.25/30	Connect  Stop  C Edit  Delete
WAN_WIRED	<b>RX:</b> 0.00 B (0 Pkts.) <b>TX:</b> 0.00 B (0 Pkts.)	<ul><li>Connect</li><li>Stop</li><li>Edit</li><li>Delete</li></ul>

### Figure82 interface overview



### Figure83 mode of Ethernet port



Be Honest, Do Best !	GW-R4513 User Manual	Technical Support: h.usriot.com
	System	
Status	Here you can configure the	e basic aspects of your device like its hostname or the timezone.
Services	System Properties	
Network	General Settings Logg	ing Language and Style
WAN/LAN Port	Local Time	Thu Nov 1 02:10:54 2018 Sync with browser
Firewall	Hostname	GW-R4513
DTU	Timezone	America/New York
y System		
System	Time Synchronization	
Administration	Enable NTP client	
Task scheduler	Provide NTP server	
Backup/Upgrade Reboot	NTP server candidates	0.openwrt.pool.ntp.orgim1.openwrt.pool.ntp.orgim2.openwrt.pool.ntp.orgim3.openwrt.pool.ntp.orgG

Figure84 system properties

# 6. AT Commands

Table 15 AT commands			
NO.	Command	Function	
Version			
1	VER	Query version information	
2	MAC	Query the MAC	
3	ICCID	Query ICCID code	
4	IMEI	Query IMEI code	
4G			
5	AT+SYSINFO	Query the net info of device	
6	AT+APN	APN address	
7	AT+CSQ	Signal quality	
8	AT+TRAFFIC	Query traffic information	
9	AT+NETMODE	Query current network mode	
	System		
10	AT+UPTIME	Query running time	



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11	AT+WWAN	Query the IP of device	
12	AT+LANN	Query/set the LAN of IP	
13	AT+WEBU	Query/set the webpage account and passw	vord
14	AT+PLANG	Query/set the default language	
15	AT+CLEAR	Recover to factory setting	
16	AT+Z	Restart	
17	AT+DHCPEN	Open/close DHCP Server	
		Remote monitor and upgrade	
18	AT+UPDATE	Query/set parameter of remote upgrade	
19	AT+MONITOR	Query/set parameter of remote monitor	
20	AT+HEARTPKT	Query/set parameter of remote heartbeat	
	T	System shell command	
21	AT+LINUXCMP	Execute system shell command	
	T	Serial command	
22	UART	Query/set parameter of serial port	
23	UARTFT	Query/set serial port packing interval	
24	UARTFL	Query/set the package length of serial port	
		Net command	
25	SOCKA	Query / setup socket A parameter	
26	SOCKB	Query / setup socket B parameter	
27	SOCKC	Query / setup socket C parameter	
28	SOCKD	Query / setup socket D parameter	
29	SOCKAEN	Query / setup whether to enable socket	Α
30	SOCKBEN	Query / setup whether to enable socket I	В
31	SOCKCEN	Query / setup whether to enable socket (	C
32	SOCKDEN	Query / setup whether to enable socket I	D
33	SOCKALK	Query socket A connection state	
34	SOCKBLK	Query socket B connection state	
35	SOCKCLK	Query socket C connection state	
36	SOCKDLK	Query socket D connection state	
37	SOCKIND	Query / setting enable or unable the sour	rce of data
		Register command	
38	REGEN	Query / set enable registration package	
39	REGTP	Query / set register package content type	
40	REGDT	Query / set custom registration information	1
41	REGSND	Query / set register packet sending mode	
42	CLOUD	Query/set the parameter of USR-Cloud	
		Heartbeat command	
43	HEARTEN	Query / settings enable heartbeat package	
44	HEARTDT	Query / settings heartbeat data	
45	HEARTTP	Query / settings heartbeat packet delivery	mode
46	HEARTTM	Query / settings heartbeat packet interval	



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	HTTPD command		
47	НТРТР	Query / setup HTTP operate mode	
48	HTPURL	Query/setup URL	
49	HTPSV	Query/setup remote IP and port	
50	HTPHD	Query/setup head info of HTTP protocol	
51	НТРТО	Query/setup the overtime time	
52	HTPFLT	Query/setup enable or unable filter head	



## 7. Contact Us

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## 9. Update History

Edition	Describe
V1.0.1	2019-4 establish