

Robustel GoRugged R3000

Dual SIM Industrial Cellular VPN Router

For GPRS/EDGE/UMTS/HSPA/LTE Networks

Frequently Asked Questions

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About This Document

This document describes Frequently Asked Question about the *Robustel R3000 Dual SIM Industrial Cellular VPN Router*.

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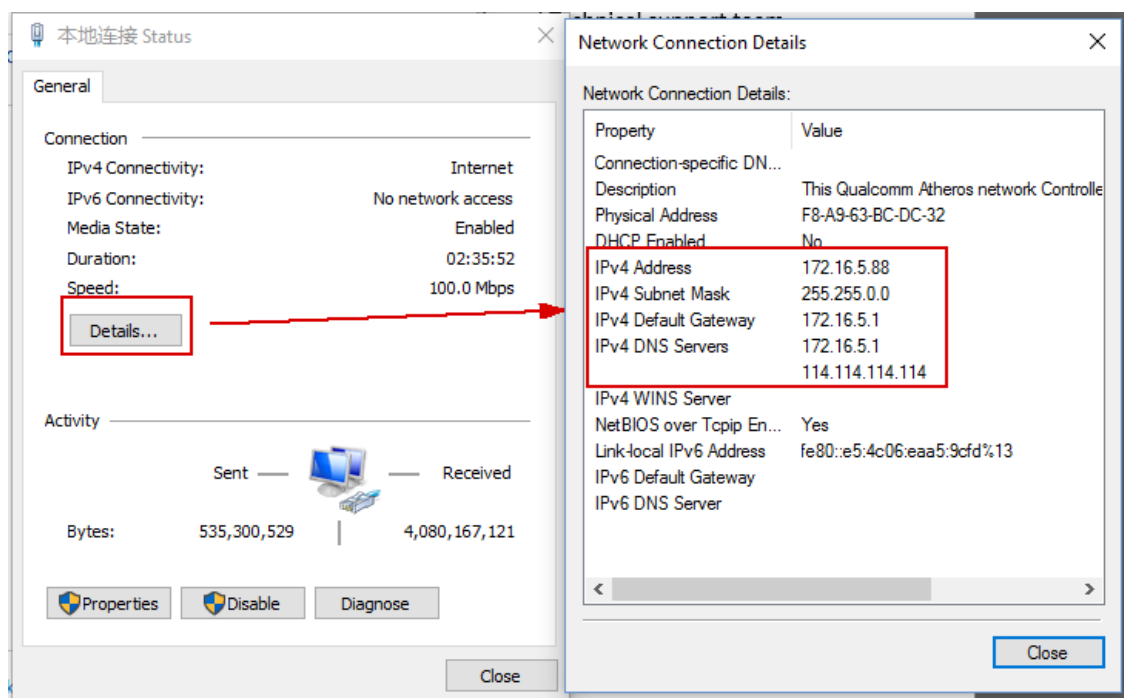
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1. Even connects to R3000's LAN port directly, the web GUI of R3000 still inaccessible?

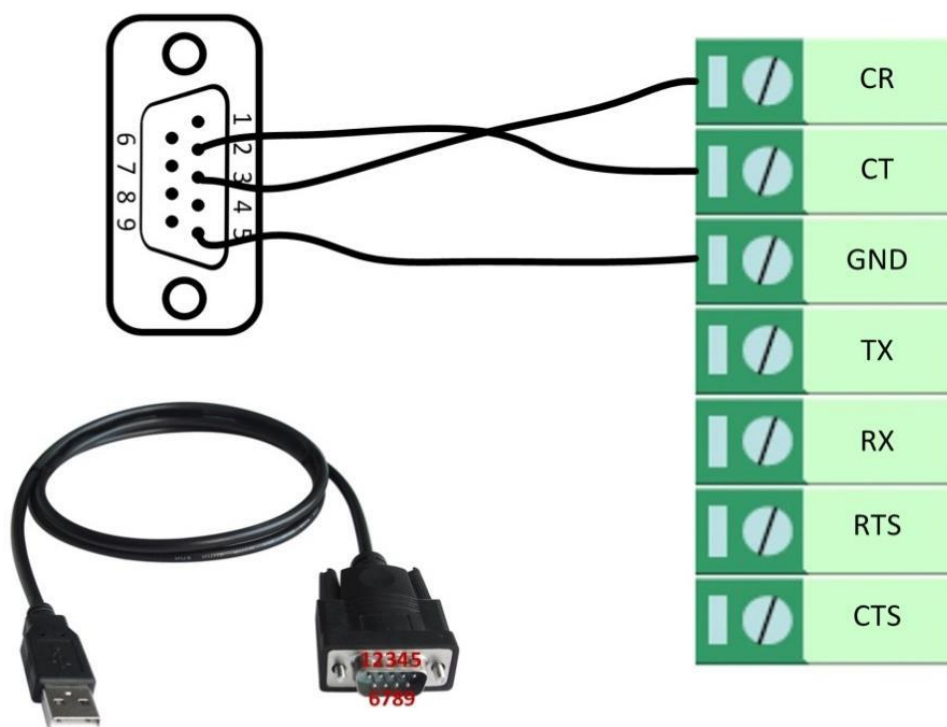
A:

- 1) Check if the power supply has been plugged in.
- 2) Check if the Ethernet cable connects tightly.
- 3) Check if the status of the LAN port's link indicator (yellow) is normal: bright or blinking.
- 4) Try another Ethernet cable in case of the Ethernet cable broken.
- 5) Try another R3000 Ethernet port (Except R3000Lite).
- 6) Please enable DHCP client on the PC. Check if PC has been assigned an IP address from R3000. Then access to R3000 via the gateway IP. See below:

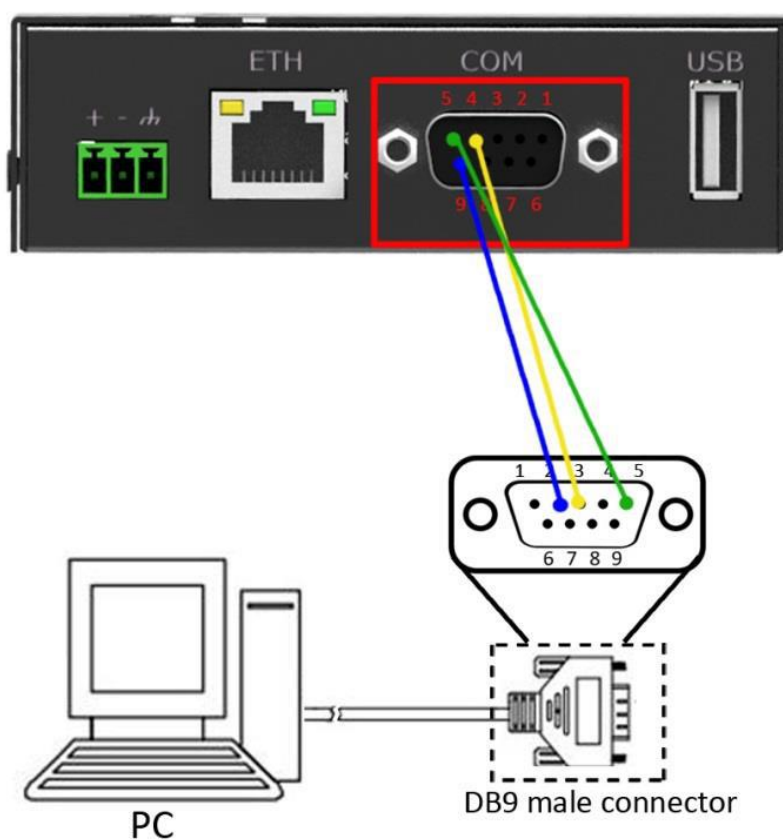


- 7) If this unit of R3000 is not used at the first time, the DHCP server function might be disabled. In this situation, please configure PC's IP address manually in order to connect R3000. Or please restore the router back to factory default by press the RST button for 60s.
- 8) Access to the CLI interface of R3000 via console port in order to check the IP address. Below is the console cable wiring diagram.

-----R3000(Standard/Quad/Null) -----



-----R3000(Lite) -----



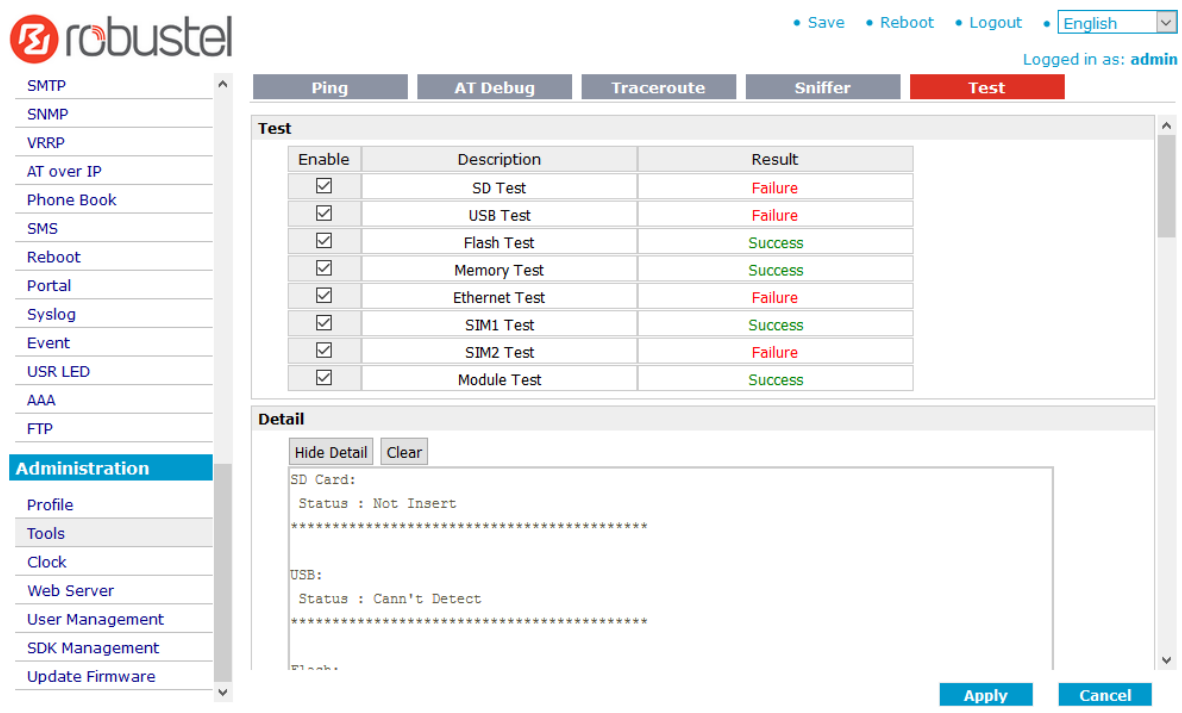
-----Command-----

```
Cellular Router> enable
Password: *****
Cellular Router# show eth0

*****
Ethernet interface type   : LAN
NAT                       : no
bridge with eth1         : no
IP address                : 172.16.99.25
Netmask                   : 255.255.0.0
mtu value                 : 1500

list of eth0 IP is null.
*****
Cellular Router#
```

- 9) Test the hardware interface status on web page in path “Administration-> Tools-> Test”. If display failure, please copy the detail message and send to Robustel Technical support team.
(In default situation, if nothing inserts to USB, SD, SIM1&2, it will display failure.)



The screenshot shows the Robustel web interface. On the left is a navigation menu with options like SMTP, SNMP, VRRP, AT over IP, Phone Book, SMS, Reboot, Portal, Syslog, Event, USR LED, AAA, FTP, Administration, Profile, Tools, Clock, Web Server, User Management, SDK Management, and Update Firmware. The 'Tools' option is selected. The main content area has tabs for Ping, AT Debug, Traceroute, Sniffer, and Test. The 'Test' tab is active, showing a table of tests:

Enable	Description	Result
<input checked="" type="checkbox"/>	SD Test	Failure
<input checked="" type="checkbox"/>	USB Test	Failure
<input checked="" type="checkbox"/>	Flash Test	Success
<input checked="" type="checkbox"/>	Memory Test	Success
<input checked="" type="checkbox"/>	Ethernet Test	Failure
<input checked="" type="checkbox"/>	SIM1 Test	Success
<input checked="" type="checkbox"/>	SIM2 Test	Failure
<input checked="" type="checkbox"/>	Module Test	Success

Below the table is a 'Detail' section with 'Hide Detail' and 'Clear' buttons. It shows the status of the SD Card and USB:

```
SD Card:
Status : Not Insert
*****

USB:
Status : Cann't Detect
*****
```

At the bottom right are 'Apply' and 'Cancel' buttons.

Note: If the problem still not able to fix, please feel free to contact Robustel Technical support team.

2. How can I get the router's IP address in case of lost?

A:

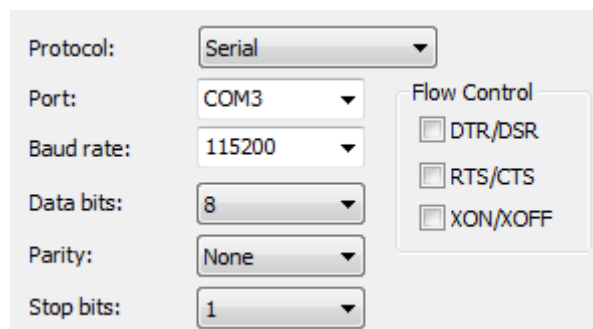
- 1) Please login R3000's CLI management via the console port. Then enter the show interface to read the Ethernet interfaces' information. Please refer to question [1. 8](#)).

- 2) Press the “RST” button for one minute to restore the router to factory default configuration, then login the IP: “192.168.0.1”.
- 3) If above advises still can't solve your problems, Robustel technical support team will serve you wholeheartedly.

3. What is the default settings of console port?

A:

The default settings are 115200bps, 8, N, 1. Please refer to the below picture.



The screenshot shows a configuration window for a serial port. The settings are as follows:

Parameter	Value
Protocol	Serial
Port	COM3
Baud rate	115200
Data bits	8
Parity	None
Stop bits	1

Flow Control options (all unchecked):

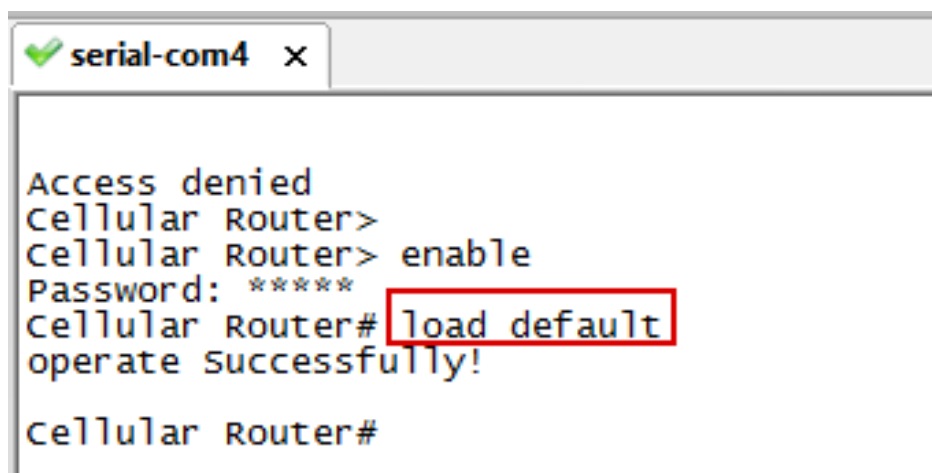
- ☐ DTR/DSR
- ☐ RTS/CTS
- ☐ XON/XOFF

4. How to restore the router back to factory default?

A:

There are 3 ways to restore the router to factory default configuration:

- 1) Login router's web management, turn to page Administration->Profile, then click “Restore to Factory Default Settings”.
- 2) Login router's CLI management via Console /SSH/Telnet, and then enter **load default** to restore. See below.



```
serial-com4 x
Access denied
Cellular Router>
Cellular Router> enable
Password: *****
Cellular Router# load default
operate Successfully!
Cellular Router#
```

- 3) Pressing the “RST” button for 60 seconds once you power on the router until all the three LEDs at the left side (RUN, PPP, USR) blink at the same time for 5 times.

5. How to handle PPP connection always failure?

A:

- 1) Check if router can detect SIM card correctly. (**Path in Web: Administration-> Tools-> Test**)

Ping	AT Debug	Traceroute	Sniffer	Test
Test				
Enable	Description	Result		
<input checked="" type="checkbox"/>	SD Test	Failure		
<input checked="" type="checkbox"/>	USB Test	Failure		
<input checked="" type="checkbox"/>	Flash Test	Success		
<input checked="" type="checkbox"/>	Memory Test	Success		
<input checked="" type="checkbox"/>	Ethernet Test	Failure		
<input checked="" type="checkbox"/>	SIM1 Test	Success		
<input checked="" type="checkbox"/>	SIM2 Test	Failure		
<input checked="" type="checkbox"/>	Module Test	Success		

- 2) Check if the SIM card's data service has been activated, or deactivated because of arrear.
- 3) Check if the antenna has been installed properly. Normally the antenna should be installed on MAIN connector. (MAIN connector is using to receive and send data via cellular network. AUX connector is using to enhance the reception of Cellular data.)
- 4) Check if the RSSI is less than or equal to 15db (-87dbm). If yes, please exchange other high-gain antenna or attach one more antenna on AUX connector.
- 5) Try other ISP SIM card. If it can dialup successful, it means the previous SIM card may get some problem.
- 6) If this is a private APN SIM card, and only could be used in private network, in order to prevent PPP connection failures caused by the ICMP detection default settings, we should change the settings (**The path in web: Configuration-> Link-management**)
 - a) Please set the primary & secondary DNS server with the IP which is accessible for this SIM.

Link Management

Link Management Settings	
Primary Interface:	Cellular ▾
Backup Interface:	None ▾
ICMP Detection Primary Server:	8.8.8.8
ICMP Detection Secondary Server:	8.8.4.4
ICMP Detection Interval (s):	30
ICMP Detection Timeout (s):	3
ICMP Detection Retries:	3
<input checked="" type="checkbox"/> Reset The Interface	
*It is recommended to use an ICMP detection server to keep router always online.	
*The ICMP detection increases the reliability and also cost data traffic.	
*DNS example: Google DNS Server 8.8.8.8 and 8.8.4.4	

- b) Please disable the Reset the interface function. In order to keep the device running even though the ICMP detection fail. If the solution a has done, please keep the reset the Interface.

Link Management

Link Management Settings	
Primary Interface:	Cellular ▾
Backup Interface:	None ▾
ICMP Detection Primary Server:	8.8.8.8
ICMP Detection Secondary Server:	8.8.4.4
ICMP Detection Interval (s):	30
ICMP Detection Timeout (s):	3
ICMP Detection Retries:	3
<input checked="" type="checkbox"/> Reset The Interface	

**It is recommended to use an ICMP detection server to keep router always online.*

**The ICMP detection increases the reliability and also cost data traffic.*

**DNS example: Google DNS Server 8.8.8.8 and 8.8.4.4*

- 7) Check if this SIM card should dialup with APN setting. Also please confirm that the APN settings are correct or not. **(The Path In Web: Configuration-> Cellular WAN-> Basic-> Cellular Settings)**

	Basic	Advanced	ISP Profile
Cellular Settings			
	SIM1	SIM2	
Status:	Inserted	Not inserted	
Network Provider Type:	Custom ▾	Auto ▾	
APN:	ChinaUnicom		
Username:			
Password:			
Dialup No.:			
PIN Type:	None ▾	None ▾	

- 8) Check if the connection mode is Always Online. If it is in Connect On Demand mode, R3000 will not dialup automatically until some conditions triggered.

(The Path In Web: Configuration-> Cellular WAN-> Basic-> Connection Mode)

Basic	Advanced	ISP Profile
Username:	<input type="text"/>	<input type="text"/>
Password:	<input type="password"/>	<input type="password"/>
Dialup No.:	<input type="text"/>	<input type="text"/>
PIN Type:	None ▾	None ▾
PPPoE Bridge Setting		
<input type="checkbox"/> Enable PPPoE Bridge		
Connection Mode		
Connection Mode:	Always Online ▾	
Redial Interval (s):	30	
Max Retries:	3	

- 9) Check if the router information is complete. If the serial number and module type are lost. Please feel free to contact technical support team to solve it.

(The Path In Web: Status-> system-> Router Information)

Router Information	
Device Model:	R3000
Serial Number:	00970714120002
Device Name:	Cellular Router
Firmware Version:	1.3.12
Hardware Version:	1.02.00
Kernel Version:	2.6.39-30
Radio Module Type:	MC7304
Radio Firmware Version:	SWI9X15C_05.05.58.00 r27038 carm d-fwbuild1 2015/03/04 21:30:23
Uptime:	0 day 01:36:24
CPU Load:	07.62%
RAM Total/Free:	122.82MB/56.96MB(46.37%)
System Time:	2016-08-18 09:53:37

6. What kinds of WAN connection modes does R3000 support?

A:

R3000 supports 3 kinds of WAN connection modes: Ethernet0, Cellular and Wi-Fi. Each of them can be the backup connection of another.

7. Why my router always reboot automatically?

A:

- 1) Check if the router's power input voltage is in the normal range.
For R3000 series, it must be higher than 9 VDC. If lower, the router might reboot.

Note:

R3000 Standard/Quad/Null input voltage is 9 to 60 VDC.

R3000 Lite input voltage is 9 to 26VDC.

- 2) Due to the R3000 will always reset if ICMP detection fail. So please check if you have enabled "Reset the interface" in the ICMP detection". If yes, please make sure the WAN connection is available and the ICMP detection server is reachable. Or you can disable the "ICMP Detection" function (leave ICMP Detection Server null).

(The Path in Web: Configuration-> Link Management)

Link Management

Link Management Settings

Primary Interface:	Eth0 ▾
Backup Interface:	None ▾
ICMP Detection Primary Server:	8.8.8.8
ICMP Detection Secondary Server:	8.8.4.4
ICMP Detection Interval (s):	30
ICMP Detection Timeout (s):	3
ICMP Detection Retries:	3
<input checked="" type="checkbox"/> Reset The Interface	

**It is recommended to use an ICMP detection server to keep router always online.*

**The ICMP detection increases the reliability and also cost data traffic.*

**DNS example: Google DNS Server 8.8.8.8 and 8.8.4.4*

- 3) Check if the RST button has been pressed or not. Please open the R3000's housing, then check again.
- 4) If above advises can't solve your problems, Robustel technical support team will serve you wholeheartedly.

8. The installation location of R3000 has 3G/4G coverage, but why my router always register to 2G network?

A:

- 1) Check if the SIM's 3G/4G data service have been activated.
- 2) If 3G/4G signal level is much lower than 2G, router will register to 2G network automatically.
- 3) Please confirm the antenna supports 3G/4G frequencies or change another high gain antenna.
- 4) Lock the router works under in certain network and even in specific band.

(The Path In Web: Configuration-> Cellular WAN-> Advanced-> Network Type)

Network Type:

Cellular Advanced Settings		
	SIM1	SIM2
Phone No.:	<input type="text"/>	<input type="text"/>
Network Type:	Auto	Auto
Band Mode:	Auto	ALL
Authentication:	Auto	Auto
MTU:	1500	1500
MRU:	1500	1500
Asyncmap Value:	ffffffff	ffffffff

Band Mode:

Cellular Advanced Settings		
	SIM1	SIM2
Phone No.:	<input type="text"/>	<input type="text"/>
Network Type:	Auto	Auto
Band Mode:	ALL	ALL
Authentication:	Auto	Auto
MTU:	1500	1500
MRU:	1500	1500
Asyncmap Value:	ffffffff	ffffffff
Use Peer DNS:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

9. Does R3000 support multiple IP address?

A:

Yes, users can add multiple IP addresses for LAN port. The max count is 5.

(The Path In Web: Configuration-> Ethernet-> Eth0/1-> Multiple IP address)

Multiple IP Address	
IP Address	NetMask
123.1.1.1	255.255.255.0
<div style="text-align: right;"> ✖ ✖ </div>	
<input type="button" value="Add"/>	

10. DynDNS service is enabled, but the domain name still unreachable?

A:

- 1) Confirm the IP address router obtained is public IP and reachable.
- 2) Login the relevant DDNS server, and check if the IP address has been updated.
- 3) Sometimes DDNS service don't available in some area, so please confirm that in your site.
- 4) In some free DDNS, even it shows update successful, it still takes some time to register the IP.

11. SMS/Call Reboot function has been enabled, but still cannot trigger router to reboot via SMS/Call?

A:

- 1) Check if this R3000 router supports SMS/Call control. R3000-Wireline cannot support this function.
- 2) Confirm if SIM card supports SMS/Call service.
- 3) Check if the phone number in Phone Book is correct.

Phone Book
Phone Group

Phone Book Configuration

Description	Phone No.
test	+861234567890
✖	
<input type="button" value="Add"/>	

Phone Book
Phone Group

Phone Group Configuration

Group Name	Phone List
1	+861234567890;
✖	
<input type="button" value="Add"/>	

- 4) Check if the SMS content completely comply the SMS Reboot password preset.

SMS

SMS Notification

☐ Send SMS on power up

☐ Send SMS on PPP connect

☐ Send SMS on PPP disconnect

Phone Group: test

SMS Control

☒ Enable

Password Content: 123

Phone Group: test

- 5) Check if the trigger commands are correct or not.
- a) If the R3000 is in the Connect On Demand mode, please check if the SMS commands are correct and phone group has been set.

Phone group: **(The Path In Web: Configuration-> Phone Group)**

Phone Book

Phone Group

Phone Book Configuration

Description	Phone No.
1	123456789

X

Add

**1. Make sure you enter mobile destination number in the international format, for instance for SMS to US mobile phone: +12342342342 (+1 is the international code for US, use this and then your normal number without the first zero).*

**2. In some countries, only can send/receive SMS without international code for the number.*

Phone Book

Phone Group

Phone Group Configuration

Group Name	Phone List
test	123456789;

X

Add

Connect On Demand: *(The path In Web: Configuration-> Cellular WAN-> Basic-> Connection Mode)*

Basic	Advanced	ISP Profile
Connection Mode		
Connection Mode:		Connect On Demand ▾
Redial Interval (s):		30
Max Retries:		3
Inactivity Time (s):		0
Serial Output Content (Hex):		
<input checked="" type="checkbox"/> Triggered By Serial Data		
<input type="checkbox"/> Triggered By Tel		
<input checked="" type="checkbox"/> Triggered By SMS		
SMS Connect Command:		ON
SMS Disconnect Command:		OFF
SMS Connect Reply:		Connected
SMS Disconnect Reply:		Disconnected
Phone Group:		test ▾

b) Check if the SMS control is enabled. After enable the SMS control, then users can use the SMS code to control the R3000. The users have input the password, please input the SMS code with password.

SMS	
SMS Notification	
<input type="checkbox"/> Send SMS on power up	
<input type="checkbox"/> Send SMS on PPP connect	
<input type="checkbox"/> Send SMS on PPP disconnect	
Phone Group:	test ▾
SMS Control	
<input checked="" type="checkbox"/> Enable	
Password Content:	123
Phone Group:	test ▾

For example, refer to above settings, the SMS command format should be **123:0001 (Password:Code)**.

6) Check if you have saved the configuration successfully and rebooted the device to take effect.

12. About R3000's Firewall setting, what is the priorities for the rules of "Default Filter Policy", "Filter List" and "MAC-Binding"?

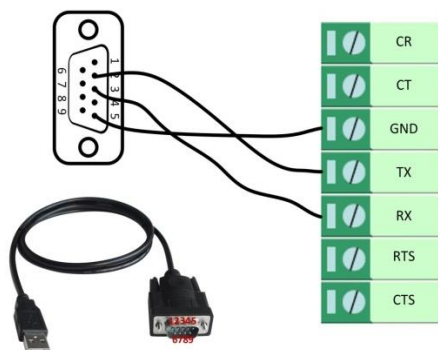
A:

The order of priority of these 3 rules ---- Filter List > MAC-Binding > Default Filter Policy.

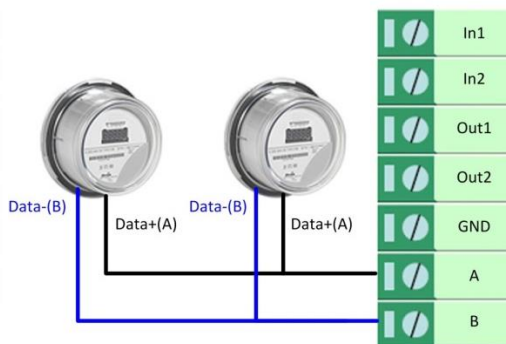
13. After enable the TCP protocol and confirm the status of TCP is connected, why the data transmission is still abnormal and would get the messy code?

A:

- 1) Check if the Band rate is correct. Our device band rate is 11500.
- 2) Confirm that the parameters of Serial port are consistent with the connecting serial devices.
- 3) Confirm whether the connection line you used is correct. The following wiring diagrams are shown for the RS232 and RS485.



RS232 Diagram

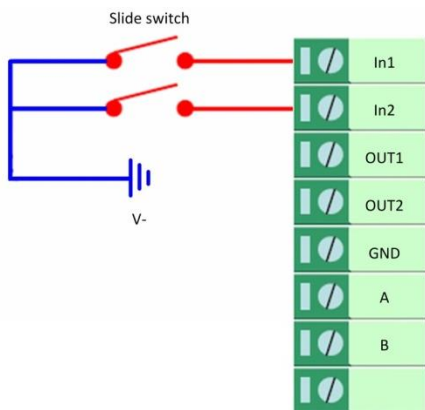


RS485 Diagram

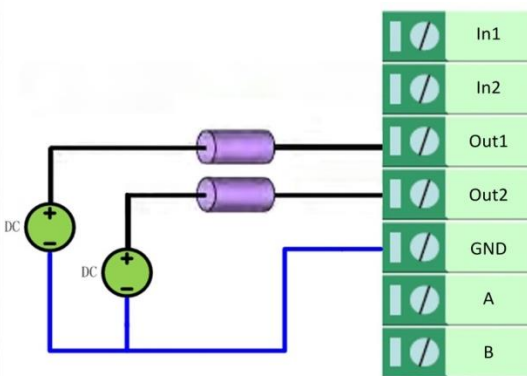
14. What is the limitation of Digital Input and Digital Output?

A:

- 1) Confirm the input voltage is not higher than $V_{\text{power in max}} + 5V$.
- 2) Confirm the external relay is not higher than current 300mA, the voltage is not higher than 30V.
- 3) The following connection diagram is shown for Digital Input and Digital Output.



Digital Input



Digital Output

15. After enable the GPS positioning, the position is not accurate.

A:

- 1) Please put the GPS antenna to open ground, because buildings, trees will weaken the signal.
- 2) GPS positioning error within 50m is in normal range.

16. Enable the NAT (port forwarding) in R3000, redirect to one host in LAN side. The external hosts could reach the WAN port of R3000, but could not access the host on LAN side with specified port.

A:

- 1) Confirm the host in LAN side has static IP address.
- 2) Confirm the R3000 is reachable from the host on LAN side. "Administration->Tools->Ping" the host IP address.
- 3) Confirm the host behind R3000 has set the default gateway to R3000's LAN IP.
- 4) Check if the host behind R3000 firewalls are turn off in order to access.
- 5) Check if it is port conflict caused by port occupation.
- 6) Check if the configuration page of NAT is configured correctly.

17. How many kinds of VPN do R3000 support, and how many tunnels of each VPN.

A: R3000 support 5 kinds VPN, the max VPN tunnels supported as below

Type	Number
IPsec VPN	6
Open VPN	Client: 3 / Server:5
GRE Tunnel	3
L2TP VPN	Client: 3 / Server:5
PPTP VPN	Client: 3 / Server:5
L2TP over IPsec	3
GRE over IPsec	3
DMVPN	1

18. After enable IPsec VPN ,then save and reboot the Router, but still failed to establish VPN tunnel.

A:

- 1) Confirm the remote server address is reachable. Ping server address on R3000.

(The Path in Web: Administration-> Tools-> Ping)

The screenshot shows the 'Ping' utility interface. At the top, there are five tabs: 'Ping' (highlighted in red), 'AT Debug', 'Traceroute', 'Sniffer', and 'Test'. Below the tabs, the 'Ping' section is active. It contains the following fields and controls:

- 'Ping IP address:' followed by an empty text input box.
- 'Number of requests:' followed by a text input box containing the value '5'.
- 'Timeout (s):' followed by a text input box containing the value '1'.
- 'Local IP:' followed by an empty text input box.
- Below the input fields are two buttons: 'Start' and 'Stop'.
- Below the buttons is a large, empty rectangular area for displaying the ping results.

- 2) If your R3000 works behind the router of a network area, please confirm you have already ticked the NAT-Traversal.

The screenshot shows the 'IPsec Basic' configuration interface. At the top, there are three tabs: 'IPsec Basic' (highlighted in red), 'IPsec Tunnel', and 'X.509'. Below the tabs, the 'IPsec Basic' section is active. It contains the following controls:

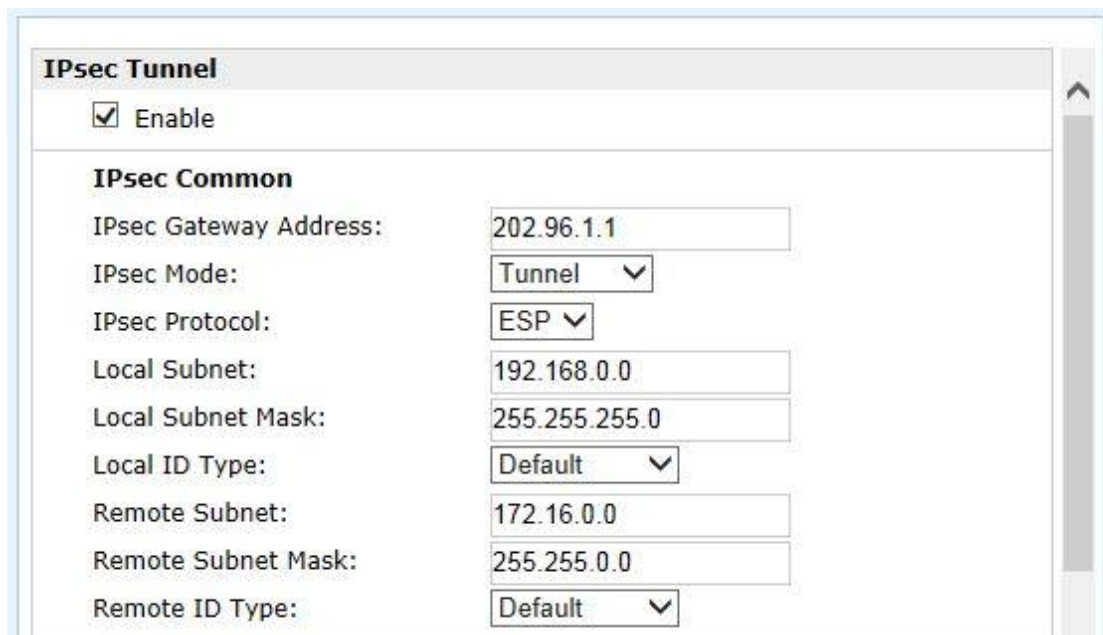
- A checkbox labeled 'Enable NAT Traversal' which is checked.
- 'Keepalive Interval(s):' followed by a text input box containing the value '30'.

- 3) Ensure the VPN parameters between R3000 and remote server are matched.
- 4) Check if port UDP 4500 or UDP 500 were blocked by the network/firewall. These two ports are used for IKE Phase I negotiation.
- 5) Check if the R3000's clock is synchronized with server

19. The status indicates IPsec VPN is established, but still unable to communicate with the hosts behind Router.

A:

- 1) IPsec VPN could solve the LAN to LAN communication. After established IPsec VPN, please confirm both ends matched VPN interested flow. (Remote Subnet)



The screenshot shows the 'IPsec Tunnel' configuration window. At the top, there is a checkbox labeled 'Enable' which is checked. Below this is the 'IPsec Common' section. It contains several fields: 'IPsec Gateway Address' with the value '202.96.1.1', 'IPsec Mode' set to 'Tunnel' (dropdown), 'IPsec Protocol' set to 'ESP' (dropdown), 'Local Subnet' with '192.168.0.0', 'Local Subnet Mask' with '255.255.255.0', 'Local ID Type' set to 'Default' (dropdown), 'Remote Subnet' with '172.16.0.0', 'Remote Subnet Mask' with '255.255.0.0', and 'Remote ID Type' set to 'Default' (dropdown). A vertical scrollbar is visible on the right side of the configuration area.

- 2) Confirm the ends in LAN side have the default gateway to each Router's LAN IP address.

Note:

Interested flow is that we define in Local Subnet and remote Subnet option. Only IP packets with matched Source IP address and destination IP address would go through VPN tunnel. E.g source IP address of 192.168.0.0/24 To 172.16.0.0/16 would forward to VPN tunnel.

20. Having enabled GRE tunnel, but still fail to communicate between two LAN side.

A:

- 1) Confirm the two Routers have the public IP address (or special VPN address). Because GRE need to use the public IP address to encapsulate the packet.
- 2) Confirm the virtual GRE IP address of R3000 is in the same subnet with remote Router's.

GRE

☒ Enable

Remote IP Address: 202.96.1.1

Local Virtual IP: 123.1.1.1

Remote Virtual IP: 123.1.1.2

Remote Subnet:

Remote Subnet Mask:

☐ All traffic via this interface

☐ Enable NAT

Apply Close

- 3) Confirm that R3000 has a route to remote subnet. Check the routing table on "Status->Route".

Route				
Route Table				
Destination	NetMask	Gateway	Interface	Metric
0.0.0.0	0.0.0.0	202.96.1.100	eth0	0
10.1.1.0	255.255.255.0	0.0.0.0	tun0	0
123.1.1.2	255.255.255.255	0.0.0.0	tun0	0
192.168.10.0	255.255.255.0	0.0.0.0	eth1	0
202.96.1.0	255.255.255.0	0.0.0.0	eth0	0

21. Having enabled PPTP server in R3000, but the client still fail to connect with R3000.

A:

- 1) Confirm the IP address of R3000 WAN port is reachable. By ping.
- 2) Check if you have ticked "Enable MPPE" option in PPTP server. If yes, please select MS-CHAP-1/2 in Authentication mode.

PPTP Client **PPTP Server**

Enable PPTP Server

☒ Enable PPTP Server

PPTP Common Settings

Username:

Password:

Authentication:

Local IP:

IP Pool Start:

IP Pool End:

☒ Enable MPPE

22. Why the R3000 fail to connect RobustLink?

A:

- 1) Check if the server-side program is running correctly.
- 2) Check if the RobustLink settings in R3000 are consistent with RobustLink server, including IP address, Port and Password.

(The Path In Web: Configuration-> Portal)

Portal

Portal Settings

☒ Enable Portal

Server Type:

Server Address:

Port:

Password:

23. Why fail to establish OpenVPN?

A:

- 1) Check the network connectivity between client and server via ping. (Administration-> Tools-> Ping)
- 2) Check if the OpenVPN settings are correct.
- 3) Check if the R3000's clock is Synchronous. **(The Path In Web: Administration-> Clock)**

Clock

Real Time Clock Settings

Real Time Clock: 2016-07-08 17:16:39

PC Time: 2016-07-08 17:16:39 **Synchronize**

Timezone Setting

Timezone: UTC+08:00 China, HK, Western Australia, Singapore, Taiwan, Russia

NTP Settings

☒ Enable NTP Client

Primary NTP Server: pool.ntp.org

Secondary NTP Server:

Update Interval (h): 1

☐ Enable NTP Server

****Synchronize the time manually, or Set the local time zone and enable the NTP client in order to synchronize the clock automatically.***

- 4) Check if the certificates of X.509 had been imported to the respective correct positions.

For Server:

Robustel

• Save • Reboot • Logout • English

Logged in as: adm

Status

- System
- Network
- Route
- VPN
- Services
- Event/Log

Configuration

- Link Management
- Ethernet
- WiFi
- Serial
- DI/DO
- USB
- NAT/DMZ
- Firewall
- QoS

Client Server X.509

Authentication Manage

Select Cert Type: Server

CA: 选择文件 ca.crt Import Export Delete

Public Key: 选择文件 Server01.crt Import Export Delete

Private Key: 选择文件 Server01.key Import Export Delete

DH: 选择文件 dh1024.pem Import Export Delete

TA: 选择文件 未选择文件 Import Export Delete

CRL: 选择文件 未选择文件 Import Export Delete

Pre-Share Static Key: 选择文件 未选择文件 Import Export Delete

Authentication Status

Cert Type	CA	Public Key	Private Key	DH	TA	CRL	PKCS12	Pre-Share
Server	OK	OK	OK	OK				
Client_1								
Client_2								
Client_3								

For Client:

Robustel• Save • Reboot • Logout • [English](#)Logged in as: **ar**

Route	Client	Server	X.509
VPN	Authentication Manage Select Cert Type: Client_1 ▾		
Services	CA:	选择文件	ca.crt
Event/Log	Public Key:	选择文件	Client01.crt
Configuration	Private Key:	选择文件	Client01.key
Link Management	TA:	选择文件	未选择文件
Ethernet	PKCS12:	选择文件	未选择文件
WiFi	Pre-Share Static Key:	选择文件	未选择文件
Serial			
DI/DO			
USB			
NAT/DMZ			
Firewall			
QoS			
IP Routing			
DynDNS			

Authentication Status								
Cert Type	CA	Public Key	Private Key	DH	TA	CRL	PKCS12	Pre-Share
Server								
Client_1	OK	OK	OK					
Client_2								
Client_3								

24. Why R3000 fail to connect with RobustVPN?

- A:
- 1) Check the network connection between R3000 and RobustVPN by ping.
 - 2) Check if the parameters are correct. (*The Path In Web: Configuration->RobustVPN*)

RobustVPN	
RobustVPN Connection Settings	
<input checked="" type="checkbox"/> Enable RobustVPN	
Server Address:	www.robustel.net
HTTPS Port:	443
Username:	admin
Password:	•••••
RobustVPN Status	
Status:	Disconnected
Local IP:	
Remote IP:	
Connect Time:	

- 3) Check if the R3000's clock is synchronized with server..

The screenshot displays the 'Clock' configuration page. It is divided into three sections: 'Real Time Clock Settings', 'Timezone Setting', and 'NTP Settings'. In the 'Real Time Clock Settings' section, the 'Real Time Clock' and 'PC Time' fields both show '2016-07-08 17:16:39', and a 'Synchronize' button is present. The 'Timezone Setting' section shows the 'Timezone' dropdown set to 'UTC+08:00 China, HK, Western Australia, Singapore, Taiwan, Russia'. The 'NTP Settings' section has the 'Enable NTP Client' checkbox checked, with the 'Primary NTP Server' set to 'pool.ntp.org' and the 'Update Interval (h)' set to '1'. The 'Enable NTP Server' checkbox is unchecked.

****Synchronize the time manually, or Set the local time zone and enable the NTP client in order to synchronize the clock automatically.***

- 4) Check whether the firewall has been closed or not.

25. How to download diagnose file Which is necessary before ask Robustel support team for assistance?

A:

Please refer to the below picture. ***(The Path In Web: Status->Event/Log-> Download diagnosing system data)***

The screenshot shows the Robustel R3000 web interface. On the left is a navigation menu with 'Event/Log' highlighted. The main content area is titled 'Event/Log' and contains 'Event/Log Messages' and a 'Download System Diagnosing Data' section. The 'Event/Log Messages' section has a 'Download' dropdown set to '--Please Select--' and a 'Log Level' dropdown set to 'DEBUG'. Below these is a list of log messages, all indicating 'router: ICMP(ping) detect fail!'. The 'Download System Diagnosing Data' section has a button labeled 'Download System Diagnosing Data' highlighted with a red box. At the bottom right, there are buttons for 'Manual Refresh', 'Refresh', and 'Clear'.

26. How do I upgrade/down upgrade the firmware?

A:

- 1) To update firmware via web page. Please refer to the screenshot below.

(The Path In Web: Administration-> Update-> Update Firmware)

- 2) Using USB flash disk to update firmware. Please refer to application note: **Upgrade firmware and configuration file via USB**

27. How to add user to configuration Web?

A:

Logging the web configuration page of R3000, then add user in the path: **(Administration—>User Management—>Common)** . Please refer to the screenshot below.

28. How to export and import XML configuration file?

A:

Import: Please import XML configuration file via web page, USB flash or RobustLink

Export: Please export XML configuration file via web page.

Please refer to the below screenshots to import or export XML configuration file on web page.

Import:

The screenshot shows the Robustel web interface. On the left is a navigation menu with categories: IPsec, OpenVPN, GRE, L2TP, PPTP, SNMP, VRRP, Reboot, Portal, Syslog, Event, USR LED, RobustVPN, Administration, Profile (highlighted), Tools, Clock, Web Server, User Management, SDK Management, and Update Firmware. The main content area is titled 'Profile' and contains several sections: 'Change Profile' with a 'Profile' dropdown set to 'Standard' and a 'Change' button; 'All Parameters XML Configuration' with an 'XML File' field, a '浏览...' (Browse) button, and 'Import' and 'Export' buttons; 'IPsec XML Configuration' with an 'IPsec XML File' field, a '浏览...' button, and 'Import' and 'Export' buttons; 'OpenVPN XML Configuration' with an 'OpenVPN XML File' field, a '浏览...' button, and 'Import' and 'Export' buttons; and 'Restore to Factory Default Settings' with a 'Restore to Factory Default Settings' button. A red arrow points from the '浏览...' button in the 'All Parameters XML Configuration' section to the 'Import' button. The top right of the interface shows links for 'Save', 'Reboot', 'Logout', and a language dropdown set to 'English', along with the text 'Logged in as: admin'. The footer contains the copyright notice: 'Copyright © 2014 Robustel Technologies. All rights reserved.'

Export:

This screenshot is identical to the one above, showing the Robustel web interface's 'Profile' configuration page. The navigation menu and main content sections are the same. However, in this view, a red arrow points from the '浏览...' (Browse) button in the 'All Parameters XML Configuration' section to the 'Export' button. The top right shows 'Save', 'Reboot', 'Logout', and a language dropdown set to 'English', with 'Logged in as: admin'. The footer contains the copyright notice: 'Copyright © 2014 Robustel Technologies. All rights reserved.'

29. What are the correct steps to upgrade the firmware version to latest?

A:

- 1) Please check the current firmware version via web page or console first.
- 2) If the firmware version is older than 1.01.18, please update firmware to version 1.01.18 first, and then update firmware from v1.01.18 to the latest version.
- 3) If the firmware version is newer than 1.01.18, please update firmware to the latest version directly.
- 4) Regarding the firmware, please ask for the download link from Robustel Technical support team.

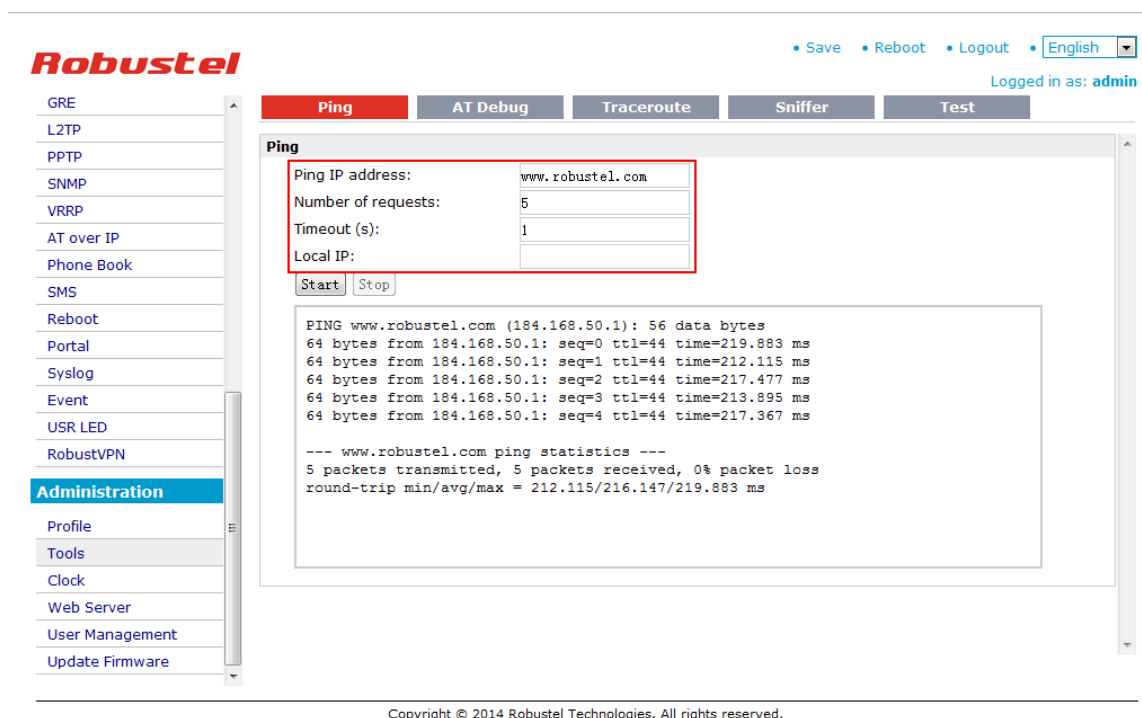
Note:

If the firmware version is too old, such as Version 1.01.00-sub-20131016, please update the firmware to Version R3000-1.01.01 first, then to Version R3000-1.01.18, finally to the latest version.

30. How to check the network connectivity of R3000?

A:

Please refer to the below picture to check the network connectivity via the Ping tool.

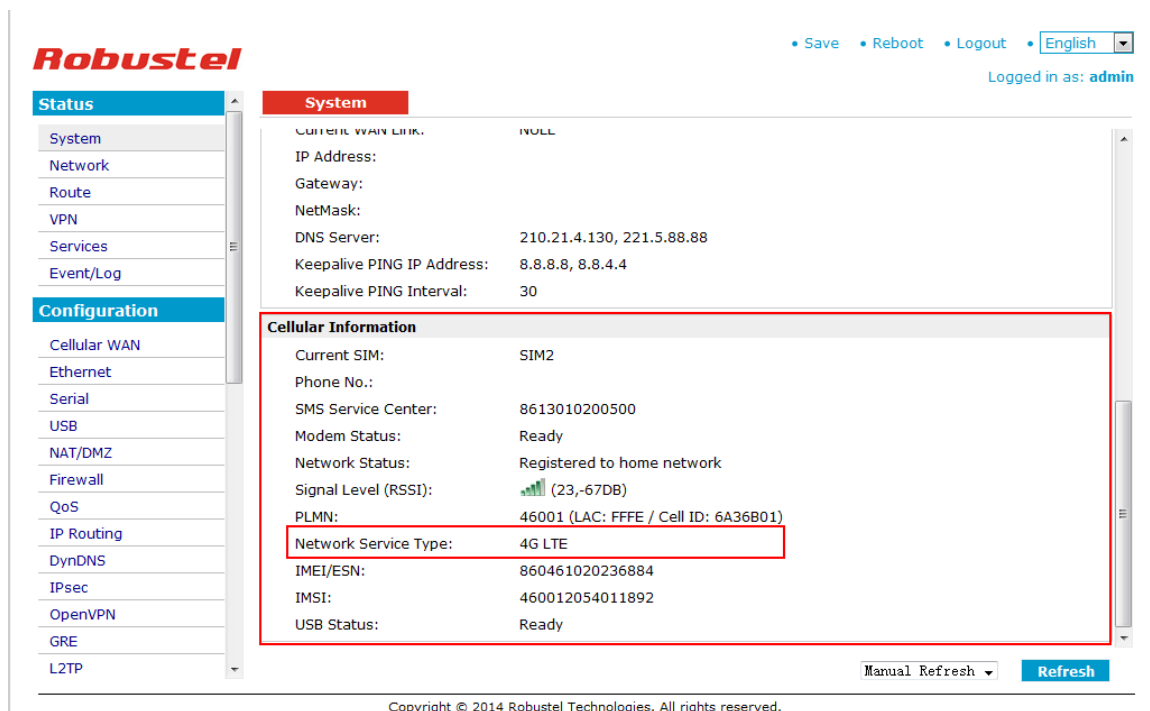


31. How to confirm whether the device has been registered to the 4G network?

A:

Please check the “Network Service Type” as the below picture.

(Status->System->Cellular Information)



32. PC is connected to the LAN port of R3000, and R3000 can ping the PC, but not vice versa. How to solve the problem?

A:

- 1) Please check the firewall basic of R3000. *(The Path In Web: Configuration->Firewall->Basic)*
- 2) Please check if there is a firewall in between block the ping.

33. Which firmware version is compatible with RobustLink 2.0 and RobustVPN?

A:

RobustLink2.0: V1.02.00 or above.

RobustVPN: V1.2.2 or above

34. There is a certain function missed on the web GUI?

A:

It might be the Browser's cache or the unsupported browser blocked the options. Please try below advices:

- 1) Clear your browser cache .
- 2) Change another browser (Firefox, Chrome are suggested.)

35. Why the signal level is still low after mounting an external antenna on R3000?

A:

This issue possible caused by the Cellular coverage and Antenna.

- 1) Check if the local Cellular signal strength is strong enough.
- 2) Check whether the qualified antennas are mounted to the MAIN and AUX Connectors correctly.

36. The timer on the web page keeps counting without a prompt to restart when upgrading the firmware.

A:

The Browsers' cache may cause this issue. Please refer to below advices.

- 1) Please upgrade the firmware again.
- 2) Use another browser.
- 3) Clear the cache and cookies of your browsers (Firefox and Chrome are suggested.)

37. What is the usage of USB interface on R3000?

A:

- 1) To upgrade the firmware of R3000.
- 2) To import the configuration file (.xml) to R3000.

38. Why can R3000 be accessed using HTTP, but cannot be accessed using telnet?

A:

- 1) Please check the configuration of firewall. Whether the item that remote access using telnet is enabled.
(*The Path In Web: Configuration-> Firewall-> Basic*)
- 2) Please check whether the port numbered 23 is available in the PC.

39. Does R3000 support SDK? What is the specification about the ROM for programming?

A:

Yes, only the latest ROS based R3000 products support SDK. The old operation system's SDK is no longer in maintain.

40. What is the CPU, Flash, RAM of each R3000 model?

A:

Please see below table:

Device Model	CPU	Flash	RAM
R3000 Standard	ATMEL AT91SAM9X25-CU, ARM926: 400MHz	256MB(2Gbit)	128MB(1Gbit)
R3000 Quad	ATMEL AT91SAM9X25-CU, ARM926: 400MHz	256MB(2Gbit)	128MB(1Gbit)
R3000 Lite	ATMEL AT91SAM9X25-CU, ARM926: 400MHz	256MB(2Gbit)	128MB(1Gbit)

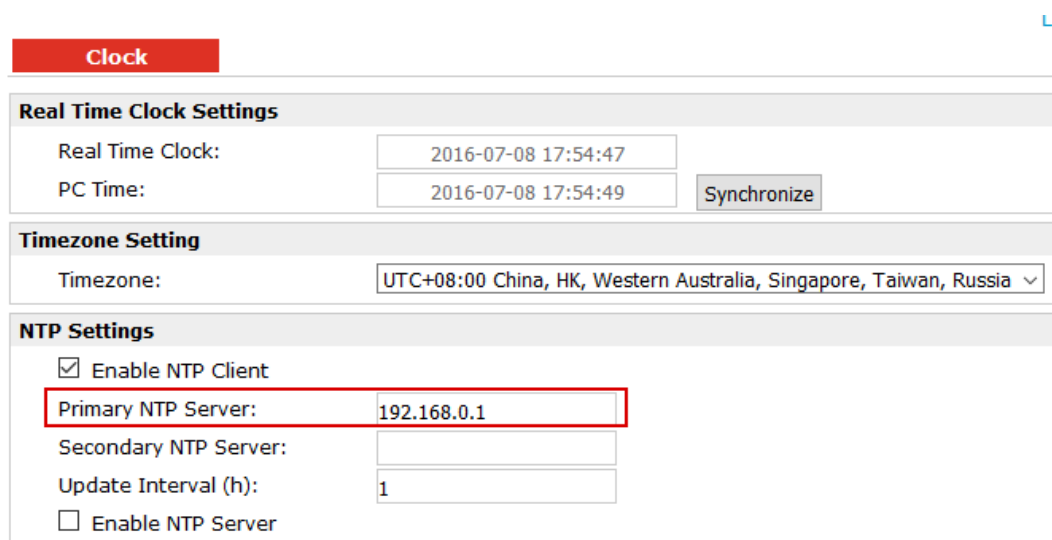
41. Does R3000's SNTP could synchronize the time of LAN device?

A:

Yes, R3000 supports both NTP server and client.

(The Path In Web: Administration-> Clock-> NTP Settings)

- 1) NTP server should be enabled so that LAN device (NTP Client) could synchronize the time with R3000.



Clock

Real Time Clock Settings

Real Time Clock: 2016-07-08 17:54:47

PC Time: 2016-07-08 17:54:49 Synchronize

Timezone Setting

Timezone: UTC+08:00 China, HK, Western Australia, Singapore, Taiwan, Russia

NTP Settings

☒ Enable NTP Client

Primary NTP Server: 192.168.0.1

Secondary NTP Server:

Update Interval (h): 1

☐ Enable NTP Server

42. What is the power consumption of R3000? (Max and Min)

A:

Idle: 100mA@12V

Data Link: 400mA (peak)@12V

43. Which cloud platform does R3000 support?

A:

Currently, R3000 can support **RobustLink**, **RobustVPN**, **Tingco(Info24)**, **Cumulocity** and **Exosite**.

44. Does R3000 support to upgrade firmware/import configuration remotely?

A:

Yes, the R3000 can support to upgrade firmware via CLI/Web/RobustLink.

1) Via CLI. (Access to R3000 CLI via SSH/Telnet/Console) Please refer to application notes: **Import XML via CLI & Upgrade firmware via CLI**

2) Web

Update Firmware: (The Path In Web: Administration-> Update Firmware-> Update)

Update	
Firmware Version	
Firmware Version:	1.02.00
Firmware old Version	
Firmware old Version	1.3.11
Fall back to old version	<input type="button" value="Apply"/>
Update Firmware	
Warning: Do not turn off or operate the Router while updating.	
New Firmware:	<input type="button" value="浏览..."/> 未选择文件。 <input type="button" value="Update"/>

Import Firmware: (The Path In Web: Administration-> Profile)

3) RobustLink

Device Group	Device ID	Model	Version	Status
<input type="checkbox"/>	00307415061119	R3000	R3000 Standard	1.2.18 Normal
<input type="checkbox"/>	30030531411111	R3000 Standard	R3000 Standard	1.3.0 Upgrade failed
<input type="checkbox"/>	00110011001100	R3000S	R3000 Standard	1.02.00 Normal

45. What is the WIFI transmission rate on R3000? What is the max transmission distance?

A:

DL/UL: 5Mbps/10Mbps

Max transmission distance: 20m in open area

46. What is the max throughput of R3000 on LAN side.

A:

35Mbps.

47. What would happen if power supply connectors' + and – was exchanged by mistake?

A:

R3000 still able be powered up due to it has protection from this kind of wrong operation.
But do not suggest to do that. It will generate loss to the circuit board.