

SLK-R660 Series

Industrial Grade 4G Multifunctional Gateway User Manual



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Chapter 1 login

1.1 Prepare before logging in

After completing the hardware installation, you will need to ensure that the management computer has an Ethernet card installed before logging into the router's web setup page. Please set the management PC to "Obtain an IP address automatically" and "Obtain DNS server address automatically" (the default configuration of the computer system), and the device will automatically assign an IP address to the management PC.

Set the IP address of the management PC (for example: 192.168.2.59) and the IP address of the device's LAN port in the same network segment(The initial IP address of the LAN port of the device is: 192.168.2.1, and the subnet mask is 255.255.255.0) The method is as follows.

Take win10 as an example, the operation is as follows:

Step 1: Right-click the network logo in the lower right corner of the desktop (as shown in the figure), and choose to Open Network & Internet settings.



Step 2: First click on "Ethernet", then click on "Network and Sharing Center".



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Step 3: Click Enternet with the mouse, click Properties in the pop-up box (Ethernet status), select Internet Protocol version 4 (TCP/IPv4) in the pop-up box (Ethernet properties), and click Properties

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method 1: It can be used to configure the device and access the external network. It is recommended to use it (Note: If there are multiple routes with different network segments in the current environment, the IP obtained by the computer may not be able to connect to the device. In this case, method 2 can be used);

- method 2: It can be used to configure the device and access the external network. The IP address is set to the device IP (the device defaults to 192.168.2.1) and the same network segment IP: 192.168.2.X (X is any number between 2 and 254, such as 192.168.2.2), the default gateway is set to device IP: 192.168.2.1, DNS can be set to 8.8.8.8 and other general DNS;
- method 1: Only connect the device for configuration use, the computer cannot access the external network through the device network, and the IP address is set as in method 2;



Step 5: Click OK with the mouse, and then click Close to save the changes in Steps 3 and 4;

Alternate Configuration	
can get IP settings assigned automatically if your network supports	Connect using:
capability. Otherwise, you need to ask your network administrator the appropriate IP settings.	Realtek PCIe GbE Family Controller #2
) Obtain an IP address automatically	<u>Configure</u>
) Use the following IP address:	
Paddress:	✓ Microsoft 网络客户端
ubach madu	☑ ⁴ Microsoft 网络的文件和打印机共享
gonet mask:	V Packet Driver (NPCAP)
Default gateway:	☑ 🥌 QoS 数据包计划程序
	✓ Internet 协议版本 4 (TCP/IPv4)
Obtain DNS server address automatically	Li Li Microsoft 网络适配器多路传送器协议
) Use the following DNS server addresses:	
referred DNS server:	Install Uninstall Properties
lternate DNS server:	Description
	传输控制协议/Internet 协议。该协议是默认的广域网络
Validate settings upon exit	协议,用于往不归的相互连接的州维上通信。
Advanced	

1.2 Login configuration page

Open IE or other browsers, enter 192.168.2.1 in the address bar, after the connection is established, in the pop-up login interface, log in as the system administrator (admin), that is, enter the password in the login interface (the default password is set to admin).

マ フ し 山 本 不安主 192.100.2	T/cgl-bin/luci	
<i>#</i> Seriallink®		
	Authorization Required	
	Password	
	Login	

The default login password is admin. If the user needs to protect the configuration interface to avoid being modified by others, he can modify the login password, click "System" - "Modify Password" in turn, then fill in the password to be modified, and then "SAVE & APPLY", please refer to Chapter 5.3 for details.



Chapter 2 Network Setting

2.1 Change the login page address

The default address of the router is 192.168.2.1. You can modify the static IP address in the navigation bar "Network Setting" - "LAN Setting". After modification, the new IP address will be used to log in to the page.

A.IP Address: Modify the ip address of the device (default is 192.168.2.1).

B.Netmask: It is generally 255.255.255.0, which can be modified as needed.

C.IPv4 gateway、DNS server、Override MTU: No special cases do not need to be set.

D.After the configuration is complete, click "SAVE & APPLY" to make it take effect. After it takes effect,

you need to use a new IP address to access the configuration page of the device.

•	Routing Status	Network Configuration	n						
3	Network Setting								
	4G Modem	LAN Configuration							
	WAN Setting	Canaral Satura Advanced Sattin	an Dhunical Cattings						
	LAN Setting	General Setup Advanced Setun	gs Physical settings						
	DHCP Setting	Status	Device: br-lan Uptime: 0h 4m 51s						
	Hostnames		MAC: 7A:10:5D:C4:8E:E3 RX: 117.20 KB (1168 Pkts.)						
	Network Backup		TX: 174.78 KB (1041 Pkts.) IPv4: 192.168.2.1						
	Time Reboot		IPv6: fd55:d52e:8003::1						
	Watchcat	IP Address	192.168.11.1	C shap as in address					
	Diagnosis	Netmask	255 255 255 0						
w	Serial Utility		200.200.200.0						
<u> </u>	Routing Setting	Gateway							
\$	Switch Control	DNS		+					
(Th	DDNS/FRP								
	VPN Service	Global network options							
×	System	IDv6 III A Drofiv	fdEE-dE2a-0002 (40						
e	Logout	IF VO OLA-FIEIX	1055.0528.0005/46						
				SAVE & APPLY	SAVE & APPLY				
1	→ C C A 不安全 192.1	68.11.1/cgi-bin/luci		୍					

#Seriallink®

Language : English 🗸	
Authorization Required	
Password	
Login	
	Authorization Required



2.2 4G Modem

By default, the router uses the SIM card 2/3/4G to access the Internet. You can see the information of the SIM card in the "Routing Status" - "Status" in the navigation bar. You can check the network is 2/3/4G and the signal of the mobile phone card in the upper right corner.

# Seriallink®			4Gil
▲ Routing Status	Status		
Status			
Routes	General Info		
Log		21 K 2752	
Network Setting	Model	SLK-R660	
🖾 Serial Utility	Hardware Version	V1.1	
	Firmware Version	V1.4.5	
Routing Setting	Cellular Model	SLK_SIM7600CE-L1S	
🎄 Switch Control	Cellular Version	SIM7600M11_NA_V1.1	
M DDNS/FRP	Local Time	Sat Jul 23 16:48:30 2022	
VPN Service	Uptime	0h 20m 15s	

If you use an ordinary mobile phone data card, you don't need to care about the location of the APN setting, it can be empty by default. If you use an APN card, you need to set the APN in "Network Setting" - "4G Modem" - "General Settings".

4G Modem SIM S	_{ettings} 🔒 General	Setup		
WAN Setting 2 4G Modem	eneral Setup Advanced	Settings		
LAN Setting	Enable	Z		
DHCP Setting	Force Dial			
Network Backup	i orce blar (
Time Reboot	Auth Type	none	~	
Watchcat	ІР Туре	IPV4V6	~	A enter configuration
Diagnosis	APN			Center configuration
Serial Utility				
Routing Setting	Username			
Switch Control	Password		@	
Switch Control	PIN Code			
DDNS/FRP				
VPN Service				
t System Abnor	mal Restart			
Logout Netw abno	ork exception handling: check rmal number, restart and sear	the network connection in a ch the registered network ag	loop for 5 seconds. If the Pin ain.	g IP address is not successful, After the network exceeds the
	Enable (
	Ping IP address	114.114.114.114		



"Network Setting" - "4G Modem" - "Advanced Settings" can bind 2/3/4G. If 4G (LTE) Only is selected for the service type, it means that only the 4G network is used. If there is no 4G network nearby, there will be no network automatically. The default is 2/3/4G, the frequency band with good signal is given priority, and 4G is given priority under the same signal. Locking the frequency band is automatic, and you can also lock the frequency band according to your own needs. If the locked frequency band is unsuccessful, it means that the module does not support this frequency band temporarily. After setting, click "SAVE & APPLY".

n	Routing Status	Mobile Network				
۲	Network Setting	work Setting				
	4G Modem	SIM Settings				
	WAN Setting 2 4G Mod	lem _{Seneral Setup} Advanced Settings				
	LAN Setting	Server Type Automatically				
	DHCP Setting	Automatically				
	Hostnames	Override MTU WCDMA Only				
	Network Backup	WCDMA And LTE				
	Time Reboot	GSM Only GSM And WCDMA				
	Watchcat	Abnormal Restart GSM And LTE				
	Diagnosis	Network exception handling: check the network connection in a loop for 5 seconds. If the Ping IP address is not successful, After the network exceeds the abnorma				
	Serial Utility	number, restart and search the registered network again.				
۵	Routing Setting	Enable 🗍				
44	Switch Control	Ping IP address 114.114.114				
(A)	DDNS/FRP	Abnormal number 10 🗸				
=	VPN Service					
*	System	SAVE & APPLY				

Abnormal Restart: It is to deal with network exceptions, ping the set ip address (114.114.114.114) every 5s, and still can't ping after the abnormal number of pings, it will be set according to the selection (Reboot on internet connection lost, Set airplane mode) (default), Switch SIM card). Network diagnostics can be set in "General Settings", "Advanced Settings", and "Physical Settings". You can also not enable network diagnostics, just leave it unchecked.

work exception handling: check ber, restart and search the regi	the network connection in a loop for 5 s istered network again.	econds. If	he Ping IP address is not successful, After the network exceeds the abno
Enable	2		
Ping IP address	114.114.114.114		
Operating mode	Set airplane mode	~	
Abnormal number	10	~	

note:

- > Ordinary 4G mobile phone card can access the Internet without worrying about APN settings.
- If an APN dedicated network card is used, be sure to fill in the APN address, username and password.
- Different operators have different specifications of APN dedicated network cards. Please consult the local operator for the APN address, user name and password.

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2.3 WAN Setting

2.3.1 DHCP address

Navigation bar "Network Setting" - "WAN Setting", the default protocol of WAN port is dynamic address (ie DHCP client), the upper-level device needs to be able to assign ip to the wan port, Without special cases, the value of MTU does not need to be changed (default: 1500).

n	Routing Status	letwork Confi	guratio	n	
٩	Network Setting 1 Netwo	ork Setting	5		
	4G Modem	WAN Configuration			
-	WAN Setting	General Setup	Advanced	Settings	
	LAN Setting 2 WAN Set	ting	Status	M Device: eth0 2	
	DHCP Setting		otatuo	Uptime: Oh Om Os	
	Hostnames			RX: 0 B (0 Pkts.)	
	Network Backup			TX: 214.19 KB (631 PKts.)	
	Time Reboot		Protocol	DHCP address	
	Watchcat				
Sie.	Diagnosis				
	Serial Utility			SAV	E & APPLY

2.3.2 PPPoE

If the wan port needs to dial up to access the Internet, you need to select PPPoE, fill in the user name and password according to the actual situation, no special circumstances, the value of MTU does not need to be changed (default value: 1500).

♠ Routing Status	etwork Conf	iguratio	n		
🕄 Network Setting 🚺 Netw	ork Setting				
4G Modem	WAN Configuration				
WAN Setting	General Setup	Advanced	Settings		
LAN Setting DHCP Setting Hostnames Network Backup	ing	Status	 Device: eth0.2 Uptime: 0h 0m 0s MAC: 7A:10:5D:C4:8E:E3 RX: 0 B (0 Pkts.) TX: 310.64 KB (913 Pkts.) 		
Time Reboot		Protocol	PPPoE	~	
Watchcat Diagnosis		Username			Select PPPoE and enter Username and password
🐵 Serial Utility		Password		8	
🛱 Routing Setting	Access C	concentrator	auto		
ta Switch Control			eave empty to autodetect		
M DDNS/FRP	S	ervice Name	auto		
■ VPN Service		1	leave empty to autobelect		
☆ System					SAVE & APPLY

2.3.3 Static address

You can also choose to manually set the IP address for the wan port. You need to set the same IP address as the upper-level network segment, subnet mask, and gateway to fill in the IP address of the upper-level device. DNS can be the same as the gateway.Generally, there are common DNS such as 8.8.8.8. There is no special case, and the value of MTU does not need to be changed (default value: 1500).



n	Routing Status	etwork Configuratio	n			
0	Network Setting 🚺 Netwo	rk Setting				
	4G Modem	WAN Configuration				
1	WAN Setting	General Setup Advance	d Settings			
	LAN Setting DHCP Setting Hostnames Network Backup	ng Status	 Device: eth0.2 Uptime: 0h 0m 0s MAC: 7A:10:5D:C4:8E:E3 RX: 0 B (0 Pkts.) TX: 336.29 KB (988 Pkts.) 			
	Time Reboot	Protocol	Static address	~		
	Watchcat Diagnosis	IP Address	192.168.1.100		3 select static address and wirte configuration	
	Serial Utility	Netmask	255.255.255.0	~		
۵	Routing Setting	Gateway				
43	Switch Control	DNS		+		
a	DDNS/FRP					
=	VPN Service				SAVE & APPLY	

2.3.4 As lan (convert WAN port to LAN port)

If you want to convert the WAN port into a LAN port, change the protocol of "WAN Setting" to "As lan", click "SAVE & APPLY", you can convert the wan port to a lan port(In the case of associated LAN, please be careful not to connect the WAN port and LAN port to the switch or the same computer), no special circumstances, the value of MTU does not need to be changed (default value: 1500).

Routing Status	etwork Configuratio	n	
Network Setting 1 Network S	etting		
4G Modem	WAN Configuration		
WAN Setting	General Setun		
LAN Setting 2 WAN Setting			
DHCP Setting	Status	Uptime: 0h 0m 0s	
Hostnames		MAC: 12:7C:7B:A1:E7:16 RX: 0 B (0 Pkts.)	
Network Backup		TX : 570.09 KB (1671 Pkts.)	
Time Reboot	Protocol	As lan	 select AS lan
Watchcat			
Diagnosis			
🐷 Serial Utility			

2.4 DHCP server

2.4.1 enable DHCP

DHCP adopts the client/server communication mode, the client submits a configuration application to the server, and the server returns the corresponding configuration information such as the IP address assigned to the client, so as to realize the dynamic configuration of the IP address and other information.

DHCP client configuration (enabled by default), select "Network Setting" - "DHCP Settings", "SAVE & APPLY".

A.Ignore interface: Checking this will turn off the DHCP server.

B.Start: The starting address of the allocated dhcp server, such as 100, means that the allocation starts from 192.168.2.100.

C. Limit: Maximum number of leased addresses.

D.Leasetime: Expiry time of leased addresses.

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	DHCP Se	erver Setting	S		
ork Setting	Configurable DH	ICP Server.			
em	Network Settin	g			
tting	General	Setup Advanced	Settings IPv6 Settings		
etting Setting		Ignore interface	Disable DHCP for this interface		
ames	2 DHCP Setting	Start	100		
Drk Backup			Lowest leased address as offset from	the network address.	
cat		Limit	150		
osis			Maximum number of leased addresses	i	
rial Utility		Leasetime	12h		
ting Cotting			Expiry time of leased addresses, minin	num is 2 minutes (2m).	
tch Control	Static Lease Static lease	s are used to assign fit	ed IP addresses and symbolic hostnar	nes to DHCP clients. They are also re	quired for non-dynamic interface configurations where
n Service stem	Use the Add assigned as	with a corresponding le d Button to add a new l s symbolic name to the	ase are served. ease entry. The MAC-Address indentifie requesting host.	es the host, the IPv4-Address specifie	es to the fixed address to use and the Hostname is
jout	н	ostname	MAC-Address	IPv4-Address	IPv6-Suffix (hex)

2.4.2 Disable DHCP

Disable the DHCP server function of the SLK-R660. In this way, the SLK-R660 no longer assigns IP addresses to the connected devices, and all devices connected to the local area network are assigned IP addresses by the main wireless to realize communication on the same network segment.

 Routing Status 	DHCP Server Setting	IS		
Network Setting	Configurable DHCP Server.			
4G Modem 1 Netv WAN Setting	vork Setting General Setup IPv6 Set	ttings		
DHCP Setting Hostnames (2) DHC	Ignore interface	Select Ignore in	nterface	
Time Reboot	Static Leases			
Diagnosis	Static leases are used to assign t only hosts with a corresponding Use the Add Button to add a new assigned as symbolic name to th	ixed IP addresses and symbolic hostna lease are served. lease entry. The MAC-Address indentif re requesting host.	mes to DHCP clients. They are also requi es the host, the IPv4-Address specifies t	red for non-dynamic interface configurations where o the fixed address to use and the Hostname is
🗂 Routing Setting	Hostname	MAC-Address	IPv4-Address	IPv6-Suffix (hex)
🚓 Switch Control		This se	ction contains no values yet	
M DDNS/FRP	400			
VPN Service	ADD			
🛠 System				SAVE & APPLY
E Logout				



2.5 Hostnames

Navigation bar "Network Settings" - "Host Name", click Add, enter the host name and IP address, save and apply; in the network test, you can use the host name instead of the IP address (see 2.9 for the specific network test steps).

 Routing Status Network Setting Modem 	Hostnames etwork Setting		
WAN Setting	Host entries	IP address	
DHCP Setting	ADD	Fill in the hostname and IP address	→ DELETE
Network Backup 2 Host Time Reboot	names		
Watchcat		S	

2.6 Network Backup

This part is a new function. It is mainly used to use wired (i.e. wan port) or wifi client first when accessing the Internet. The network of the main link is used first, and the network of the backup route is used when the main link has no network.

Network backup is disabled by default, check it to enable it when using it, and then configure it according to the actual situation.

▲ Routing Status	letwork Backup		
Network Setting 👔 Netw	ork Setting		
4G Modem	General Settings		
WAN Setting	Enable	10 Check to en	able
LAN Setting	LINUT		
DHCP Setting	Ping IP address	114.114.114.114	4 Set PING IP address
Hostnames		Note: Used to detect network st	atus, If the Ping IP address is not successful, switch the network link.
Network Backup 🙆 Netw	ork Backup Main Chain	WAN	Select the main chain
Time Reboot	1	Note: the WiFi link is only availa	ble when the client mode of WiFi is turned on
Watchcat	Backup Link	None	6 select the backup link
Diagnosis		None:the backup link is not set,	Note: the WiFi link is only available when the client mode of WiFi is turned on
Serial Utility	Backup Mode	Cold Backup	v 🕖 select backup mode
🗂 Routing Setting		Note: hot backup is not applical	ole to dual sim card backup
Switch Control	Recovery Interval	1	8 set recovery interval
		Specify how many minutes to w	ait to switch back to the main link to check whether the main link is back to normal. 0 means no
M DDNS/FRP		Contractive switchback. Note: This for	
VPN Service	Abnormal Restart	O OFF Set u	p abhormai startup
🛠 System		Note: when enabled, the whole s	ystem will restart when no link is available
🕒 Logout			SAVE & APPLY



General Settings@Link Management							
project	illustrate	default					
PING address	Address for testing network connectivity performance	114.114.114.114					
	"WAN" or "WIFI" can be selected.	WAN					
Main Chain	WAN: use wan as the primary wired link						
	WIFI: use the wifi client as the main wireless link						
	Note: The wifi link is only available when the wifi client mode is						
	turned on. For details, please refer to "2.5						
Backup Link	"WAN", "WIFI" or "None" can be selected.	None					
	WAN: Wired link using wan as backup						
	WIFI: Use the wifi client as a backup wireless link						
	None: means do not use this backup link						
	Note: The wifi link is only available when the wifi client mode is						
	turned on. For details, please refer to "2.5"						
Backup Mode	"Cold Backup" or "Hot Backup" can be selected	Cold Backup					
	Hot backup: the backup link is always online						
	Cold backup: supports automatic recovery of the main link						
Recovery Interval	When the backup link is used in cold backup mode, specify the	1					
	number of minutes to wait to switch back to the primary link to						
	detect whether the primary link is back to normal. 0 means no active						
	switchback.						
	NOTE: This feature is only displayed when cold backup mode is						
	selected.						
Abnormal Restart	Click the button to enable/disable the abnormal restart function	OFF					
	When enabled, the device will reboot when no link is available.						

2.7 Time Reboot

Navigation bar "Network Setting" - "Time Reboot", users can check to enable and set the time to restart every day, pay attention to check whether the device time is correct, modify the correct time: "System" - "Date Time", see chapter 5.1 for details .

•	Routing Status	Time Reboot				
Q	Network Setting	Configure a timed reboot				
	4G Modem 🚺	Network Setting				
	WAN Setting			🚽 🚳 select E	nable	
	LAN Setting		Enable	Enable the device to re	start during the configure	d time each day (the recommended time is between
	DHCP Setting		-	23:00 and 6:00 PM).		
	Hostnames		hour	06	~	
	Network Backup		minute	00	~	select time
	Time Reboot	2 Time Reboot		5		
	Watchcat					
ų.	Diagnosis					



2.8 Watchcat

In the navigation bar "Network Setting" - "Watchcat", the network self-check function is disabled by default, and the network self-check allows setting periodic restarts or restarts when the network is abnormal.

If you need to activate this function, click Add, enter the configuration and click "SAVE & APPLY".

n	Routing Status	Watchcat			
۲	Network Setting	Watchcat allows configuring a periodic reboot when the Internet connection has been lost for a certain period of time.			
	4G Modem 1 Network Se	etting			
	WAN Setting	This section contains no values yet			
	LAN Setting				
	DHCP Setting				
	Hostnames				
	Network Backup		SAVE	E & APPLY	
	Wateboot				
	Watchca				

- A.Forced reboot delay: When rebooting the system the watchcat will trigger a soft reboot, Entering a non zero value here, will trigger a delayed hard reboot if the soft reboot fails. Enter a number of seconds to enable, use 0 to disable
- B.Period: In periodic mode, it defines the reboot period. In internet mode, it defines the longest period of time without internet access before a reboot is engaged.Default unit is seconds, you can use the suffix 'm' for minutes, 'h' for hours or 'd' for days
- C.Ping host: Host address to ping

1.Reboot on internet connection lost

Operating mode	Reboot on internet connection lost 🗸
Forced reboot delay	30
	When rebooting the system, the watchcat will trigger a soft reboot. Entering a non zero value here wil trigger a delayed hard reboot if the soft reboot fails. Enter a number of seconds to enable, use 0 to disable
Period	5m
	In periodic mode, it defines the reboot period. In internet mode, it defines the longest period of time without internet access before a reboot is engaged.Default unit is seconds, you can use the suffix 'm' for minutes, 'h' for hours or 'd' for days
Ping host	8.8.8.8
	Host address to pind



2.Periodic reboot

	DELETE
Operating mode	Periodic reboot 🗸
Forced reboot delay	30
	When rebooting the system, the watchcat will trigger a soft reboot. Entering a non zero value here will trigger a delayed hard reboot if the soft reboot fails. Enter a number of seconds to enable, use 0 to disable
Period	5m
	In periodic mode, it defines the reboot period. In internet mode, it defines the longest period of time without internet access before a reboot is engaged.Default unit is seconds, you can use the suffix 'm' for minutes, 'h' for hours or 'd' for days

After adding and configuring, click "SAVE & APPLY" to take effect. To delete the configuration, just click the "DELETE" button in the upper right corner, and then "SAVE & APPLY".

2.9 Diagnosis

Through network diagnosis, you can determine whether the router and the connected device can communicate with each other, whether the device can access the Internet, and whether the device is successfully connected to the VPN. It can also be used to test other aspects, and you can test it according to your own needs.

Navigation bar "Network Setting" - "Diagnosis".

Baidu, seriallink, 8.8.8.8: It is generally used to test whether the device can access the Internet. If it can ping, it means the device can access the Internet. If it cannot ping, it means that the device cannot access the Internet.





Custom input box: generally used to test whether the connected device can be pinged.

•	Routing Status	Diagnostics			
۲	Network Setting 1 Networ	k Setting			
	4G Modem	Network Utilities 👩 enter th	ne IP of the Connected		
	WAN Setting				
	LAN Setting	192.168.2.101	www.seriallink.cn	www.seriallink.cn	
	DHCP Setting	seriallink 🗸 IPv4 🖌 PING	seriallink 🗸 IPv4 🖌 TRACEROUTE	seriallink 🗸 NSLOOKUP	
	Hostnames	4	lick PING		
	Network Backup				
	Time Reboot				
	Watchcat	PING 192.168.2.101 (192.168.2.101); 64 bytes from 192.168.2.101: seq=0 ·	56 data bytes ttl=128 time=0.864 ms		
¥	Diagnosis 2 Diagno	Osis 6 4 bytes from 192.168.2.101: seq=1	tt1=128 time=0.709 ms		
	Serial Utility	64 bytes from 192.108.2.101: seq=2 64 bytes from 192.168.2.101: seq=3 64 bytes from 192.168.2.101: seq=4	ttl=128 time=0.008 ms ttl=128 time=0.741 ms ttl=128 time=0.554 ms	or results	
6	Routing Setting	192.168.2.101 ping statistics	-		
43	switch Control	5 packets transmitted, 5 packets re- round-trip min/avs/max = 0.554/0.70	ceived, 0% packet loss 7/0.864 ms		
a	DDNS/FRP				



Chapter 3 Serial port configuration

3.1 Use Tools And Preparation

Select Serisl Utility>>>PROT 2 in turn to configure a port according to your needs. Here is an example of PORT 2. Connect the computer serial port, check the serial port as shown in the figure below, right click on the desktop This PC>>>Manage>>>System Tools>>>Device Manage>>>Ports(COM &LPT). Use tools UartAssist.exe and NetAssist.exe for TCP Server, TCP Client, UDP Server, and UDP Client simulation, and ModSim32.exe and ModScan32.exe for Modbus TCP simulation. You can use your familiar serial port and network debugging software. The difference between UDP Client and UDP Server is whether it needs to communicate with only a specific IP address. UDP Client only communicates with a specific server IP address.



The settings of UartAssist.exe are as follows. The baud rate and stop bit can be changed as required. After the setting is completed, click Open.



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3.2 TCP Server

<u> Seriallink</u>

Select Serisl Utility>>>PORT2 in turn,select TCP Server as the network protocol, and choose the data type according to your needs. Generally, the choice is "Raw date". You need to remember the local port after setting. When establishing a TCP connection, you need to use the IP address and port number of the serial server.Configure the baud rate, data bit, stop bit and parity bit of the serial port through the serial port configuration bar according to your needs. After the configuration is complete, click SAVA & APPLY.

Routing Status	Configuration		
Network Setting			
🖾 Serial Utility	Network Settings		
PORT 1	Enable	✓	
PORT 2	Number of Party		
🛗 Routing Setting	Network Proto	TCP Server	•
🄹 Switch Control	Transport Proto	Raw data	~
M DDNS/FRP	Local Port	4002	
VPN Service	Maximum number	6	•
🛠 System	Time Out(s)	300	
🕒 Logout			
	Serial Settings		
	Baud Rate	9600	v
	Data bits	8	v
	Stop bits	1	·
	Parity	None	v
			SAVE & APPLY

Maximum number: The default is 6, which means that up to 6 TCP Clients are supported to connect to the same serial port.

Time Out (s): The default is 300, which means that after the TCP Server establishes a connection, if there is no data, the connection will be disconnected after 300 seconds. If you need a permanent online connection, you can set the value to 0.



Open the software, select TCP Client, IP is the server address, the port is the same as the server port, and click Connect.



TCP Server and TCP Client send and receive data diagram.

	CommUart Assistant	- □ ×		TCP/UDP Net Assistant	₩ - □ ×
COM Settings PortNum COM3 BaudR 3600 DPaty NONE DataB StopB 1 Receive to file Auto linefeed Show timestamp Receive as hex Pause receive	Data receive [2022-07-28 10:14:22:739] This is test [2022-07-28 10:14:32:680] This is test [2022-07-28 10:14:36:87] This is test [2022-07-28 10:14:36:348] This is test	SAVAGE V4.2.3	Settings (1) Protocol TCP Client (2) Remote host addr [192.163.3.1 (3) Remote host port 4002 (b) Disconnect Rev Options (c) ASCII (c) HEX (c) Log display mode (c) Rev save to file AutoSirroll Clear	Data log [2022-07-28 10:14:22.615]# SEND ASCII> This is test [2022-07-28 10:14:32.749]# SEND ASCII> This is test [2022-07-28 10:14:34.029]# RECV ASCII> This is test [2022-07-28 10:14:34.719]# RECV ASCII> This is test [2022-07-28 10:14:34.719]# RECV ASCII> This is test [2022-07-28 10:14:36.775]# SEND ASCII> This is test [2022-07-28 10:14:36.231]# SEND ASCII>	JetAssist V4.3.26
SaveClear -Send Options Data from file Auto checksum Auto checksum Send as her Period 1000 ms Load Clear	1.DCD ● 2.FXD ● 3.TXD ● 4.DTF ● 5.GND This is test	● 6.DSR ● <u>7.RTS</u> ● 8.CTS ● 9.RI ● Send	Send Options • ASCII • HEX Use escape chars • AT CMD auto CR+LI Append checkcode • Send from file • Period 1000 ms <u>Shortcut</u> History	Data Send Data Send Data Send	€ Clear L Clear Send



3.3 TCP Client

Protocol select TCP Server, Local host addr select the IP address set by the computer, which is in the same network segment as the device's LAN port IP. The Local host port is the default, and the client settings need to use Local host addr and Local host port, click Open.

	TCP/UDP Net Assistant	× <u> </u>
Settings (1) Protocol	Data log	NetAssist V4. 3. 26
(2) Local host addr		
(3) Local host port 10001		
Open		

Select Serisl Utility>>>PORT2 in turn, select TCP Client as the network protocol, and the server IP and port number should be consistent with the software settings. Configure the baud rate, data bit, stop bit and parity bit of the serial port according to your needs through the serial port configuration bar. After the configuration is complete, click SAVA & APPLY.

	a second second by he had a second seco			
AT 1	Enable	2		
RT 2	Network Proto	TCP Client	U.	
iting Setting		TO DICIL		
tch Control	Server IP Address	192.168.3.101		
NS/FRP	Server Port	10001		
N Service	Heart-Beat			
tom				
stem				
gout	Serial Settings			
out	Serial Settings Baud Rate	9600	~	
out	Serial Settings Baud Rate Data bits	9600	~	
out	Serial Settings Baud Rate Data bits Stop bits	9600 8 1	~	



After saving and applying, the software will print "[2021-12-02 17:36:44.743]# Client 192.168.0.233:44380 gets online.", indicating that the connection is successful.

	TCP/UDP Net As	sistant	- 🗆 ×
Settings (1) Protocol	Data log	<u>Net</u>	tAssist V4.3.26
TCP Server 💌			~
(2) Local host addr 192.168.3.101	[2022-07-28 10:29:56.986]# Clier	nt 192.168.3.1:39798 gets onl	ine.
(3) Local host port			
· Close			

TCP Client and TCP Server send and receive data diagram.

· · ·	串口调试助手	×		TCP/UDP Net Assistant	×
串口设置 串口号 COM3 ▼	串口教撰接版 【2022-07-28 10:31:12:385】This is test 【2022-07-28 10:31:18:828】This is test	<u>@野人 ₩4.2.3</u>	Settings (1) Protocol TCP Server	Data log Ke	tAssist V4.3.26
校验位 NONE ▼ 数据位 8 ▼ 停止位 1 ▼			(2) Local host addr 192.168.3.101	[2022-07-28 10:29:56.986]# Client 192.168.3.1:39798 gets onl [2022-07-28 10:31:12.251]# SEND ASCII TO ALL> This is test [2022-07-28 10:31:18.698]# SEND ASCII TO ALL>	line.
 接收区设置 接收区设置 播收转向文件 目前指行置示 豆素撥收时间 十六进制显示 暂停接收显示 			Recv Options ASCII C HEX ALC Inefeed Recv save to file AutoScroll Clear	This is test [2022-07-28 10:31:20.478]# RECV ASCII FROM 192.168.3.1 :3976 This is test { [2022-07-28 10:31:21.698]# RECV ASCII FROM 192.168.3.1 :3976 This is test	88>
<u>保存数据</u> 清除接收 宏送区设置 「自用文件数据源… 「自动交送附加位 「发送完自动青空 「找十六进制发送 「发送周期 1000 ≈5	1.DCD ● 2.RXD ● 3.TXD ● <u>4.DTR</u> ● 5.GND ● 6.DSR ● This is test	ZRIS SCIS SRI	Send Options C ASCII C HEX Use escape chars AT CMD auto CR+LI Append checkcode Send from file Period 1000 ms	Data Send Clients: All Connections (1) + Discon	√ Clear ≜ Clear
<u>文件载入</u> 済除輸入 ぼ 就绪!	• TX:120	发送 RX:84 复位计数	Shortcut History	6/39 RX:112 TX:524	Reset

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3.4 UDP Server

<u> Ser</u>iallink®

Select Serisl Utility>>>PORT2 in turn,select UDP Server as the network protocol, choose the data type according to your needs. Generally, the choice is Raw date. You need to remember the local port after setting. When establishing a UDP connection, you need to use the IP address and port number of the serial server. The baud rate, data bit, stop bit and parity bit of the serial port are configured according to your needs. After the configuration is complete, click SAVA & APPLY.

▲ Routing Status	opfiguration		
Network Setting	onnguration		
📼 Serial Utility	Network Settings		
PORT 1	Enable	2	
PORT 2	Network Proto	UDP Server	~
Routing Setting	Transport Proto	Raw data	~
🏡 Switch Control			
M DDNS/FRP	Local Port	4002	
■ VPN Service	Maximum number	6	~
🛠 System	Time Out(s)	300	
🕒 Logout			
	Serial Settings		
	Baud Rate	9600	×
	Data bits	8	~
	Stop bits	1	v
	Parity	None	~
			SAVE & APPL

Maximum number: The default is 6, which means that up to 6 UDP Clients are supported to connect to the same serial port.

Time Out (s): The default is 300, which means that after the UDP Server establishes a connection, if there is no data, the connection will be disconnected after 300 seconds. If you need a permanent online connection, you can set the value to 0.



The software settings are as follows, Protocol selects UDP, Local host addr selects the same network segment IP set by the computer and the device, and the Local host port defaults to it. Click Open after setting.

		TCP/UDP Net	Assistant	7	₩ - □ ×
Settings (1) Protocol UDP (2) Local host addr 192.168.3.101 (3) Local host port (3) Local host port (3) Local host port 10001 Open Recv Options ASCII O HEX Log display mode Auto linefeed Recv save to file AutoScroll Clear	Data log			<u>WetAss</u>	<u>ist ¥4.3.26</u>
Send Options ASCII C HEX Vise escape chars AT CMD auto CR+Li Append checkcode Send from file Period 1000 ms <u>Shortcut History</u>	Data Send This is tes	t		f c	lear L Clear Send
🕼 Readv!		7/44	RX:124	TX:584	Reset

After opening, fill in "192.168.0.233:4002", the server's IP address and port number, separated by ':'.

Append checkcode Send from file	Data Send Re	mote: 192.	168.3.1 :4002	👻 🔶 Clea	n 🗸 Clear 🛧 Clear
☐ Period 1000 ms <u>Shortcut</u> <u>History</u>	This is test				Send
🕼 Readv!		7/44	RX:124	. т.	X:584 Reset



UDP Server and UDP Client send and receive data diagram.

••	串口调试助手	→ - □ ×		TCP/UDP Net Assistant	→ ×
	串口數撥撥收 【2022-07-28 10:41:39:449】This is test [2022-07-28 10:41:40:528] This is test 1.DCD● 2.RXD● 3.TXD● 4.DIR● 5.GND● 6.DSR● 7.1 This is test	@打人 V4.2.3 RTS◆ 8.CTS◆ 9.RI◆ 发送	Settings (1) Protocol UDP (2) Local host addr (3) Local host addr (3) Local host port 10001 (3) Local host port (3) Local host port (4) Local host port (5) Local host	Data log Let [2022-07-28 10:41:39.320]# SEND ASCII TO 192.168.3.1 :4002> This is test [2022-07-28 10:41:40.402]# SEND ASCII TO 192.168.3.1 :4002> This is test [2022-07-28 10:41:44.662]# RECV ASCII TO 192.168.3.1 :4002> This is test [2022-07-28 10:41:44.662]# RECV ASCII FROM 192.168.3.1 :4002> This is test [2022-07-28 10:41:44.6603]# RECV ASCII FROM 192.168.3.1 :4002> This is test [2022-07-28 10:41:47.102]# RECV ASCII FROM 192.168.3.1 :4002> This is test [2022-07-28 10:41:47.102]# RECV ASCII FROM 192.168.3.1 :4002> This is test [2022-07-28 10:41:47.102]# RECV ASCII FROM 192.168.3.1 :4002> This is test [2022-07-28 10:41:47.102]# RECV ASCII FROM 192.168.3.1 :4002> This is test [2022-07-28 10:41:47.102]# RECV ASCII FROM 192.168.3.1 :4002> This is test	Axsist V4.3.26
」 就绪!	TX:168 R	X:132复位计数 //	🕼 Readv!	10/46 RX:160 TX:608	Reset

3.5 UDP Client

Protocol select UDP, Local host addr select the IP address set by the computer, which is in the same network segment as the device's LAN port IP. The Local host port is the default, and the client settings need to use Local host addr and Local host port, click Open.

	TCP/UDP Net Assistant	₩ - □ ×
Settings (1) Protocol	Data log	NetAssist V4.3.26
		^
(2) Local host addr 192.168.3.101		
(3) Local host port 10001		
Open		

Select Serisl Utility>>>PORT2 in turn,choose UDP Client as the network protocol, and choose the data type according to your needs. Generally, the choice is Raw date. You need to remember the local port after setting. The IP address and port number of the serial port server are used when establishing a UDP connection. Compared with UDP Server, UDP Client has an additional server IP address and server port number. The purpose of this addition is to ensure the security of UDP data transmission. Network data only receives data from the server IP and server port number. The rest of the data are denied access. Configure the baud rate, data bit, stop bit and parity bit of the serial port through the serial port configuration bar according to your needs. After the configuration is complete, click SAVA & APPLY.



Routing Status	Configuration			
Network Setting	5			
📼 Serial Utility	Network Settings			
PORT 1	Enable	2		
L PORT 2	Network Proto	UDP Client	~	
Bouting Setting	Transport Proto	Davu data		
Switch Control		Raw Data		
7 DDNS/FRP	Local Port	4002		
■ VPN Service	Maximum number	6	~	
🛠 System	Time Out(s)	300		
→ Logout	Server IP Address	192.168.3.101		
	Server Port	10000		
	Carial Cattings			
	Baud Rate	9600	v	
	Data bits	8	~	
	Stop bits	1	~	
	Parity	None	*	
				SAVE & APPLY

In the next step, the following information needs to be filled in the software.

Append checkcode Send from file Period 1000 ms Shortcut History	Data Send Remote:	192.168.3.1 :4002	✓ Clean	√ Clear Ł Clear Send
₩ Readv!	1	3/48 RX:1	196 TX:6	32 Reset

UDP Client and UDP Server send and receive data diagram,

••	串口调试助手	₩ - □ ×		TCP/UDP Net Assistant	₩ - □ ×
串口设置 串口号 COM3 → 波特率 9600 → 枝验位 NONE → 数据位 8 → 停止位 1 →	単口数据接收 【2022-07-28 10:48:47:307】This is test 【2022-07-28 10:48:48:130】This is test	@野人 V4.2.3	Settings (1) Protocol UDP (2) Local host addr 192.168.3.101 (3) Local host port 10001 (6) Close	Data log [2022-07-28 10:48:47,190]# SEND ASCII TO 192,168.3.1 : This is test [2022-07-28 10:48:48,012]# SEND ASCII TO 192,168.3.1 : This is test [2022-07-28 10:48:48,012]# SEND ASCII TO 192,168.3.1 : This is test [2022-07-28 10:48:49,975]# RECV ASCII FROM 192,168.3.1 :	HetAssist V4.3.26 4002> 4002> :4002>
 接收区设置 接收转向文件 一 自动操行显示 · 显示接收时间 · 十六进制显示 · 暂停接收显示 · 保存数据、表示按此 			Recv Options ASCII C HEX Log display mode Auto linefeed Recv save to file AutoSoroll Clear	<pre>[2022-07-28 10:48:50.795]# RECV ASCII FROM 192.168.3.1 This is test { [2022-07-28 10:49:00.085]# RECV ASCII FROM 192.168.3.1 This is test</pre>	:4002> :4002>
发送区设置 「 启用文件数据源… 「 自动发送附加位 「 发送完自动清空 「 按十六进制发送 「 发送周期 1000 mm 文件载入 直踪输入	1.DCD ● 2.FXD ◎ 3.TXD ◎ <u>4.DTR</u> ● 5.GND ● 6.DSR • This is test	▶ <u>ZRIS</u> ● 8.CTS● 9.RI● 发送	Send Options ASCII ← HEX Use escape chars AT CMD auto CR+LI Append checkcode Send from file Period 1000 ms Shortent History	Data Send Remote: 192.168.3.1.:4002 - Cle This is test	an F Clear L Clear Send
(就绪!	• TX:240	RX:180 复位计数 //	🕼 Readv!	16/50 RX:232 1	X:656 Reset



If the data is not sent from the server IP and port, it will be rejected.



3.6 Modbus TCP

Select Serisl Utility>>>PORT2 in turn,Select Modbus TCP as the network protocol. After setting the local port, remember to configure the baud rate, data bit, stop bit and parity bit of the serial port through the serial port configuration bar according to your needs. After the configuration is complete, click SAVA & APPLY.

201 - 10 C. 10 C.				
Serial Utility	Network Settings			
PORT 1	Enable	2		
- PORT 2	Network Proto	Modbus TCP	~	
Routing Setting	Local Port	4002		
Switch Control	Locarron	4002		
DDNS/FRP	Maximum number	6	~	
VPN Service	Time Out(s)	300		
🕻 System				
	Serial Settings			
	Baud Rate	9600	*	
	Data bits	8	v	
	Stop bits	1	×	
		1000		



Here you need to use ModSim32.exe and ModScan32.exe to simulate the use, first open the software ModSim32, File>>>New to create a new file, Connection>>>Connect>>>Port 3 (the choice here is the connection between your computer and the device port).

an ModSim32 - ModSim1						32-	×	
<u>File</u> <u>Connection</u> <u>Display</u> <u>W</u> i	ndow <u>H</u> elp							
Connect >	Port 1							
Disconnect >	Port 2							
Status	Port 3							
A6	Port 4							
Length: 10	Port 5							
	Port 6							
	Port 7		 					
00001: <0>	Port 8							
00002: <0>	Port 9							
	Modbus/TCP Svr							
00005: <0>		_						
00006: <0>								
00007: <0>								
00009: <0>								
00010: <0>								
<u></u>								

The pop-up dialog box is as follows, the baud rate, data bit, stop bit and parity bit are changed according to the values set on the web page.

	Setup Comm Port 3	×
	Protocol	:
	Baud 9600 - Data 8 -	
	Stop 1 - Parity ODD -	
R	Hardware Flow Control Wait for DTR from Master Delay 0 ms after RTS before transmitting first Wait for CTS from Mas	
	Delay o ms after last character before	
	OK Cancel	



Open the software ModScan32, Connection>>>Connect.

-	ModScan32 - ModSca1			- 🗆 X	
File	Connection Setup	View	Window Help		
	Connect		1 2 3 12		
011	Disconnect				
_	Auto-Start				
=	QuickConnect				
A	ddress: 0001	1	Device Id: 1 Number of Polls: 0		
	10		MUDBUS Point Type Valid Slave Responses: 0		
Le	ength:		Reset Ctrs		
**	Device NOT CON 001: <0>	NECT	Di **		
00	002: <0>				
00	004: <0>				
00	005: <0> 006: <0>				
00	007: <0> 008: <0>				
00	009: <0> 010: <0>				

The pop-up dialog box is as follows, select Remote modbusTCP Server, fill in the IP Address and Service Port, and then click OK.

	Bemote modbusTCP Se	rver
	IP Address: Service Port:	192.168.3.1 4002
Baud Rate: Word Length: Parity: Stop Bits:	19200 - 8 - NONE - 1 -	Hardware Flow Control Wait for DSR from slave Wait for CTS from slave DTR Control: Disable RTS Control: Disable Delay 0 ms after RTS before transmitting first character Delay 0 ms after last character before releasing RTS



The selected settings in ModSim32 and ModScan32 software need to be consistent.

ModScan32 - ModSca1 File Connection Setup View Window Help	äti ModSim32-ModSim1 Ele ⊆onnection Display <u>W</u> indow <u>H</u> elp	
Address: 0001 Device Id: 1 Address: 0001 MODBUS Point Type Length: 10 01: COIL STATUS V Reset Ctrs	Image: ModSim1 Device Id: 1 Address: 001 01: Coll STATUS	

Double-click 00001: <0> area, a dialog box pops up, select On, and then click Update.

00002: <0>	Write Coil	×
00003: <0> 00004: <0>	Address: 1	
00005: <0> 00006: <0>	Value	
00007: <0>	C Off	On
00009: <0>	<u>U</u> pdate Ca	ncel
00010: <0>	Auto Simulat	ion

The effect is as follows

ModScan32 - ModSca1 - 🗆 🗙	alii ModSim32 - ModSim1	-	
Eile Connection Setup View Window Help	File Connection Display Window Help		
D 📽 🖬 🖷 🕼 🖓 🖓 🖓			
ModSca1	-		
Address: 0001 Number of Polls: 358			
MODBOS Point Type Valid Slave Responses: 0			
Length: 10 01: COIL STATUS Reset Ctrs	ModSim1		
	Device Id: 1		
	Address: 0001 MODBUS Point Type		
	01: COIL STATUS		
	Length: 10		
	00001: <1>		
00003: (0) 00004 (0)	00002: (0)		
00005: <0>	00004: <0>		
00007: <0>	00006: <0>		
00009: <0>	00007: <0>		
00010. (0)	00009: <0>		
	00010. (02		

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3.7 Transport Proto

When selecting TCP Server, the data type also has the option of Telnet (RFC2217), and a software putty.exe is used here.Select Serisl Utility>>>PORT2 in turn,Select TCP Server or UDP Server as the Network Proto, and Telnet (RFC2217) as the Transport Proto. After the configuration is complete, click SAVE & APPLY.

the state of the s				
ILY IN	etwork Settings			
_	Enable	2		
	Network Proto	TCP Server	~	
ting	Transport Proto	Baw data	~	
rol		nur uu		
	Local Port	4002		
e	Maximum number	6	~	
	Time Out(s)	300		
Se	erial Settings			
	Baud Rate	9600	~	
	Data bits	8	~	
	Stan hite	1	~	
			1. The second	
	5100 0113			

Open the putty.exe software, fill in the server IP address and port number, select Telent for Connection type, set as follows, click Open after the configuration is complete.

- Session	Basic options for your PuT	TY session		
Logging	Specify the destination you want to o	connect to		
E. Teminal	Host <u>N</u> ame (or IP address)	Port		
Bell	192.168.3.1	4002		
Window Appearance Behaviour Translation Colours Connection	Load, save or delete a stored session Saved Sessions Default Settings WinSCP temporary session			
Proxy Telnet Rlogin	Sa De			
⊞- SSH Serial	Close window on exit:			



If no error is prompted after opening, a pure black dialog box will be displayed, as shown below.



Click the putty dialog box, enter any character, and the result is as follows.

•	CommUart Assista	@ 192.168.3.1 - PuTTY —	
COM Settings	Data receive		~
	L2021 12 03 14:01:00.440 1		
	[2021-12-03 14:08:00:563] s		
BaudR 9600 🗾	[2021-12-03 14:08:02:453]1		
NONE T	[2021-12-03 14:08:03:610] q		
DParty Mone	[2021-12-03 14:08:03:829] w		
DataB 8 🗾	[2021-12-03 14:08:04:073] e		
	[2021-12-03 14:08:04:323] r		
StopB /	[2021-12-03 14:08:04:576] t		
1	[2021-12-03 14:08:04:861] y		
Close	[2021-12-03 14:08:05:140] u		
	[2021-12-03 14:08:05:440] i		
Recv Options	[2021-12-03 14:08:05:736] o		
E President de fille	[2021-12-03 14:08:05:998] p		
T Receive to file	[2021-12-03 14:08:06:420]		
I✓ Auto lineteed	[2021-12-03 14:08:06:707]]		
🔽 Show timestamp	[2021-12-03 14:08:07:042] \		
🗖 Receive as hex	[2021-12-03 14:08:07:743] a		
E Pausa receiva	[2021-12-03 14:08:07:992] s		
i ruse receive	[2021-12-03 14:08:08:293] d		
Save Clear	【2021-12-03 14:08:08:563】f		
	[2021-12-03 14:08:08:839] g		
Send Options	[2021-12-03 14:08:09:143] h		
🗖 Data from file	[2021-12-03 14:08:09:412] j		
- Auto checksum	2021-12-03 14:08:15:525 1		
	2021-12-03 14:08:15:760 2		
Auto clear input	1 DCD + 2 DVD + 2 TVD + 4 DTD +		
Send as hex			
Period 1000 ms			
Load Clear			
💣 Ready!	• 🕤 🖂		0

X



3.8 Switch quantity control

Click on the switch controller >>> switch DI/DO, select the network transmission protocol as required, set the local port number and click save and apply.

▲ Routing Status	Switch Configuration			
👀 Network Setting	owneen oonliguration			
📼 Serial Utility	Configuration			
Routing Setting	Transport Protocol	Modbus RTU	Select network transport protocol	
a Switch Control 💶 Switch	ch Control	502	4 set local port	
Switch DI/DO 2 Switch	ch DI/DO			
M DDNS/FRP			SAVE & APPLY 3 SAVE & APPLY	1
VPN Service				

Open the ModScan32.exe software, click Connection Settings >>> Connection in the menu bar, fill in the IP Address in the pop-up window as the IP address of the LAN port, the service port is the local port in the switch setting, and then click OK, the settings are as follows:

5.V			
	IP Address:	192.168.2.1	
	Service Port:	502	
– Configuration ——			
Baud Rate: 1	9200 🚽	Hardware Flov	w Control DSR from slave
Word Length: 8	-	Wait for	CTS from slave
Parity: N	ONE 🚽	RTS Control:	Disable -
Stop Bits: 1	*	Delay 🚺	ms after RTS before transmitting first charact
		Delay 0	ms after last character before releasing RTS



3.8.1 Switch quantity DI

As shown in the figure below, the set value of Address in the red box is 0001, the set value of Length: 4, and the MODBUS Point Type is 02: INPUT STATUS.

ModScan32 - ModSca1	_		×	
Eile <u>C</u> onnection <u>S</u> etup <u>V</u> iew <u>W</u> indow <u>H</u> elp				
			~	
He ModSca1			×	
Address: 0001 Device Id: 1 Address: 0001 MODBUS Point Type Valid Slave Responses: 0 Length: 4 02: INPUT STATUS Reset Ctrs				
10001: <0> 10002: <0> 10002: <0>				
10004: <0>				
ModScan32 - (192.168.0.233) Polls: 0	Resps:	0		

This is mainly for demonstration, using shorting method, A is connected to DCOM, B is connected to DIN1, the interface is corresponding to the value in the software, DIN1 corresponds to 10001, DIN2 corresponds to 10002, DIN3 corresponds to 10003, and DIN4 corresponds to 10004. The value in the angle brackets will change according to the wiring method, (see the interface definition diagram for the interface) as shown in the figure.



If B is connected to DIN2, the value of 10002 becomes 1.



3.8.2 Switch quantity DO

As shown in the figure below, the set value of Address in the red box is 0001, the set value of Length: 4, and the MODBUS Point Type is 01:COIL STATUS.

■ ModScan32 - ModSca1 File Connection Setup View Window Help D I I I I I I I I I I I I I I I I I I I	×	
Image: State of Poils in the state		
ModScan32 - (192.168.3.1)	Resps: 49	

Double-click the value in the angle brackets, select On or Off, click Update, and the device emits a sound, the switch DO value is changed successfully, DO1 corresponds to 10001, DO2 corresponds to 10002, as shown in the figure

ModScan32 - ModSca1	- 🗆 X
Eile Connection Setup View Window Help	
ModSca1	
Address: 0001 Device Id: 1 MODBUS Point Type Valid Slave Responses: 115	
Length: 4 01: COIL STATUS	
Node: 1	
Address: 1	
Value C Off C On	
Update Cancel	
00003: <0> 00004: <0>	
ModScan32 - (192.168.3.1) Polls: 1	12 Resps: 112



see the interface definition diagram for the interface





Chapter 4 Firewall and Application

4.1 Firewall on and off

The firewall is enabled by default. When doing DMZ and Port Forwards, you need to disable the firewall. Steps to disable the firewall, go to the navigation bar "Routing Setting" - "Firewall", select disable the firewall, and then click "SAVE & APPLY".

Routing Status	Firewall	
Network Setting		
📼 Serial Utility	Firewall Enable	3 select Disable
🗂 Routing Setting 🕕 Routing S	etting	
Static Routes		
Firewall 2 Firewall		SAVE & APPLY

4.2 DMZ

The DMZ function can map the WAN port address to a certain host on the LAN side; all packets to the WAN address will be forwarded to the specified LAN side host to achieve bidirectional communication. In fact, it is to completely expose a host in the intranet to the Internet and open all ports, which is equivalent to all port mapping. It is equivalent to using the public IP directly.

First, you need to disable the firewall, click "Routing Setting" - "DMZ" in the navigation bar, click Enable, set the IP address assigned by the lan port to the connected device, and forward all the ports of the connected device, It can be accessed directly through the IP address of the wan port.

Enable: Tick Enable.

Internal IP address: The ip address of the local device or the ip assigned to the connected device through dhcp.

DMZ actually forwards all ports of the device. After the configuration is complete, click "SAVE & APPLY" to make it take effect.





Check the IP of the wan port, you can directly access the connected device through the IP of the wan port. If you can't access it, the possible reason is that the firewall of the connected device is opened, and you need to turn off the firewall of the connected device.

A	Routing Status	letwork Configuratio	n			
3	Network Setting 🌒 Network S	Setting				
	4G Modem	WAN Configuration				
	WAN Setting	General Setup Advanced Settin	an			
	LAN Setting 2 WAN Setting					
	DHCP Setting	Status	Device: eth0.2 Uptime: 0h 14m 45s			
	Hostnames		MAC: 12:7C:7B:A1:E7:16 RX: 46.34 KB (306 Pkts.)			
	Network Backup		TX: 683.52 KB (2159 Pkts.) IPv4: 192.168.20.117			
	Time Reboot	Diretagel	DUOD - Harris			
	Watchcat	PIOLOCOL	DHCP address	·		
	Diagnosis					
	Serial Utility				SAVE & APPLY	

You can access the connected device directly through the IP of the wan port.(Note: The computer needs to be in the same local area network as the IP of the wan port before it can be accessed) $\leftrightarrow \rightarrow \mathbb{C} \bigtriangleup \Delta \mathbb{A}$ (192.168.20.117) cgi-bin/luci

Language : English 🗸	
Authorization Required	
Password	
Login	

4.3 Prot Forwards

Compared with the DMZ, port forwarding is a more refined control, which can forward the data packets sent to a certain port to a certain host on the LAN side, and can realize the transfer of different ports to different hosts.

First you need to disable the firewall.

Navigation bar "Routing Setting" - "Port Forwards" setting menu, enter the "Port Forwards" interface to configure.

A.Name: Specify the name of this rule, which can be a meaningful name.

B.Protocol: Specifies the protocol to be forwarded, which can be TCP, UDP, or TCP/UDP.

C.Internal IP address: Select the IP address that needs to be forwarded to the external network.

D.Internall port: The port to be forwarded by the connected device or the machine.

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E.External port: Add this external port through the wan port ip to access the connected device. D.After configuration, click the "ADD" button to add a forwarding rule. Click the "SAVE & APPLY" button to make the rule take effect.

Routing Status	Port Forwards	S			
Network Setting	Completely forward the c	communication sent to a port of the e	external network to a d	lesignated port of a	n address of the internal network.
Serial Utility ● Routing S	Setting				
Routing Setting	Port Forwards				
Static Routes	Name	Protocol Externa	al	Forward to interna	al Enable
Firewall		This s	section contains no va	alues yet	
Port Forwards 2 Port For	rwards				
DMZ			New port forward		
		Name	New port forward		
Switch Control			New port for ward		Cill in the part forwarding
		Protocol	TCP+UDP	~	configuration
		Internal IP address		~	
E VPN Service					
🛠 System		Internal port			
→ Logout		External port			
					SAVE & APPLY

After the addition is successful, a port forwarding rule will be added. Click "SAVE & APPLY" to make the rule take effect. Multiple rules can be added.

Port Forwards

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Name	Protocol	External	F	orward to internal	Enable		
HTTP	IPv4-tcp	port <i>500</i>	IP I	1 <i>92.168.2.1</i> , port <i>80</i>		^	
				New port forward			
		Na	ame	New port forward			
		Proto	ocol	TCP+UDP	~		
		Internal IP addr	ess		~		
		Internal p	port				
		External p	port				



View the wan port ip, and access the internal port of the connected device or the local device through the wan port ip and external port number.

•	Routing Status	etwork Co	onfiguratio	n			
۲	Network Setting 1 Network S	etting	3				
	4G Modem	WAN Configu	iration				
-	WAN Setting	General Setup	Advanced Setting	js			
	LAN Setting 2 WAN Setting		Status	Pevice: eth0.2			
	UHCP Setting		otatao	Uptime: 0h 28m 54s MAC: 12:7C:7B:A1:E7:16			
	Network Backup			RX: 120.28 KB (967 Pkts.) TX: 1.20 MB (2700 Pkts.)			
	Time Reboot			192:106:20:117			
	Watchcat		Protocol	DHCP address	~		
	Diagnosis						
	Serial Utility					SAVE & APPLY	

#Seriallink®		
	Language: English v Authorization Required	
	Password	
	Login	

4.4 Black/White List

4.4.1 White List

Restrict all non-whitelisted hosts from accessing the external network through the local device. For example, all devices cannot access the Internet, and only a certain computer can be allowed, then this computer can be added to the whitelist.

A.Name: Customize the name.

B.Protocol: All protocols are selected by default, choose according to your needs.

C.Match ICMP type: All types are selected by default, choose according to your needs.

- D.Local IP address: The IP address of the device added to the whitelist, the IP address change caused by man-made or other reasons, will change the device that can access the Internet.
- E.Local MAC address: The MAC address of the device added to the whitelist will not be invalid even if the device IP address is changed.

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F.Destination IP address: If not selected, it means all networks. You can also enter an IP address, such as the public network server IP.G.Action: Whitelist mode select ACCEPT.

<u>Seri</u>allink®

Routing Status Network Setting Serial Utility Routing Setting Static Routes Firewall Port Forwards	Black & White List By filtering IP addresses and MAC Mode Configuration etting Ena	addresses, black and white lists can ble ble ble White List White List White List:	 help manage the network connection status of access devices. Select white List the following list to connect to the Internet. 	
Black/White List 2 Black/	White List	New list	ing list are provided from connecting to the internet.	
	Protocol	All	✓	
	Match ICMP type	All	Oustomize the name, choose one of the local IP address and	
	Local IP address	192.168.2.59 (40:8d:5c:7a:f3:f	the local MAC address, here the target address is the server's	
	Local MAC address		 public network address, and the action is ACCEPT 	
	Destination IP address	2023 F #		1
	Action	ACCEPT	·	

After clicking Add, a rule will be automatically refreshed in the page list, click "SAVE & APPLY".

- DE
~



After adding the whitelist, you can only access the public network address of the server, but cannot access the Internet. At the same time, other computers can neither access the public network address nor the Internet.



If the target address is empty, it means that the devices in the whitelist can access all networks, but other devices cannot. If you want to disable the blacklist and whitelist functions, you just need to uncheck the "SAVE & APPLY" option.

4.4.2 Black List

Restrict the host in the blacklist from accessing the external network through the local device. For example, if a computer is prohibited from accessing the Internet, the computer can be added to the blacklist.

A.Name: Customize the name.

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- B.Protocol: All protocols are selected by default, choose according to your needs.
- C.Match ICMP type: All types are selected by default, choose according to your needs.
- D.Local IP address: The IP address of the device added to the blacklist, the IP address change caused by man-made or other reasons, will change the device that refuses to access the Internet.
- E.Local MAC address: The MAC address of the device added to the blacklist will not be invalid even if the device IP address is changed.
- F.Destination IP address: If not selected, it means all networks. You can also enter an IP address, such as the public network server IP.

G.Action: Blacklist mode select REJECT.



 Routing Status Network Setting 	Black & White List By filtering IP addresses a	and MAC addresses, bla	ck and white lists can help ma	nage the network connection status of	access de	evices.		
Routing Setting Static Routes Port Forwards DMZ Black/White List 2 Firewall	Routing Setting Black/White List	Enable 2 3 Mode Black List o White List Black List Do	Check to enabl	e Select Blac wing list to connect to the Internet. prohibited from connecting to the Internet	k List	t		
M DDNS/FRP	Name List							
VPN Service	Name	Protocol	Local	Destination	Actio	on Enable	Sort	
🛠 System			This	section contains no values yet				
🔁 Logout			Name	New list				
			Protocol	All	~			
			Match ICMP type	All	~	Oustomize the of the local IP	name, choose one address and the	•
			Local IP address	192.168.2.59 (40:8d:5c:7a:f3:f7)	~	target address	ress, here the is the server's	
			Local MAC address		~	public network	address, and the	
			Destination IP address	18	~	action is Reject	, I	
			Action	REJECT	~			
						click		

After clicking Add, a rule will be automatically refreshed in the page list, click "SAVE & APPLY".

Name	Protocol	Local	Destination	Action	Enable	Sort	
2.59	All	IP 192.168.2.59	IP 183.10 - •	Refuse forward		~ ~	DELETE
							ADD
					_		
							-

After adding the blacklist, you cannot access the public address of the server, only the Internet, and other devices are not restricted.



C:\Users\Administrator>ping www.baidu.com
Pinging www.a.shifen.com [14.215.177.39] with 32 bytes of data: Reply from 14.215.177.39: bytes=32 time=10ms TTL=54 Reply from 14.215.177.39: bytes=32 time=9ms TTL=54 Reply from 14.215.177.39: bytes=32 time=10ms TTL=54 Reply from 14.215.177.39: bytes=32 time=9ms TTL=54
Ping statistics for 14.215.177.39: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 9ms, Maximum = 10ms, Average = 9ms
C:\Users\Administrator>ping 183.
Pinging 183
Ping statistics for 183: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

If the destination address is empty, it means that the devices in the blacklist cannot access all external networks. If you want to disable the blacklist and whitelist function, just uncheck the enabled option, "SAVE & APPLY".

4.5 Frp Client

Frp is to provide http or https services in multiple external network environments by using machines behind the intranet or firewall. For http, https services support domain name-based virtual hosts, and support custom domain name binding, so that multiple domain names share one port 80; Use the machine behind the intranet or firewall to provide tcp and udp services to the external network environment, such as accessing the host in the company's intranet environment through ssh at home.

The main functions of frp: the external network accesses the internal network machine through ssh; the external network accesses the port forwarded by the internal network machine through frp through the public network address plus the port number; custom binding domain name accesses the internal network web service.

The premise of configuring intranet penetration is to ensure that the router can access the Internet. If the router cannot access the Internet, the intranet penetration cannot be performed. Navigation bar "Device Management" - "Diagnosis"; and disable the firewall, navigation bar "Routing Setting" -"Firewall".

If you can ping 8.8.8.8, it means that the device can access the Internet. For details, see Chapter 2.9. Disable the firewall. After choosing to disable the firewall, click "SAVE & APPLY".

4.5.1 Connect to Frps

Preparation before configuration:

(1)One public network server.

(2)One router (a router that supports frp, that is, 1 intranet server).

(3)One domain name is bound to the public network server.

The frp client configuration is as follows:

(1) The client needs to add the configuration of the server first to connect to the server, the



navigation bar "DDNS/FRP" - "Frp Client", select "Servers", There is an empty server by default, you can directly click to modify it, or you can directly delete it and add one yourself.

Routing Status	Settings Pulse	Servers 6						
Network Setting	Settings Thires		erver					
📼 Serial Utility	rpc - Frp	s Servers						
🗂 Routing Setting								
🎄 Switch Control	Alias	Server Addr	Server Port	TCP Mux				
M DDNS/FRP 1 DDNS/FRP	None	0.0.0.0	7000	True	× •	EDIT	DELETE	
Dynamic DNS	ADD					(4) ED	лт	
FRP Client 2 FRP Client							_	
VPN Service							Contractor and	
🛠 System							SAVE & APPLY	
 Routing Status 	Settings Rules	Servers 3 S	erver					
Network Setting								
🖾 Serial Utility	-rpc - Frp	s Servers						
Routing Setting								
🏡 Switch Control	Alias	Server Addr	Server Port	TCP Mux		100		
	None	0.0.0	7000	True	· · · · · · · · · · · · · · · · · · ·	EDIT	DELETE	
Dynamic DNS	ADD 4	ADD						
FRP Client 2 FRP Client								
E VPN Service								
🛠 System							SAVE & APPLY	

(2)After clicking "ADD" or "EDIT", a page for editing the frps server will pop up, configure it according to the settings of the server, and click "SAVE & APPLY" after the configuration is complete.

A.Alias: To customize the name of a server, you can define a meaningful name.

B.Server addr: The address of the server (usually the public IP address).

C.Server port: The port set by the server.

D.Token: The password set by the server.

E.TCP mux: View and view are consistent with the server side. If the server side TCP mux is true, you need to choose here, if not, you don't need to choose.

F.Click "SAVE & APPLY" after the setting is complete.



	Alias	frpc		
S	erver addr	120.48.120.113		6 Configure the port taken and
s	Gerver port	5443		TCP mux according to the
	Token	slk100200	8	server
	TCP mux			

(3)After the addition is successful, there will be an additional frp server, click "SAVE & APPLY" to start the server.

Alias	Server Addr	Server Port	TCP Mux			
		our all or	1.51 1144	6		

(4)Next, go to the "Settings" page of "Frp Client", start the frpc client, and configure as shown below. After the configuration is complete, click "SAVE & APPLY". After the configuration is complete, "Running" will appear on the "Common Settings" page, prove that the frp client has been started.

A.Enable: Tick Enabled.

B.Server: The server alias you just customized.

C.Run daemon as user: Generally choose the default, you can modify it according to your needs.

D:Enable logging: Tick as required.

E:After the configuration is complete, click "SAVE & APPLY".



C - Common Settings	ngs		
s a fast reverse proxy to help you e	xpose a local server behind	a NAT or firewall to the internet.	
lot Running			
General Options Advanced Opti	ons		
General Options Advanced Opti	ons	inable	
General Options Advanced Opti Enabled Server	ons B Check to E frpc	inable	
General Options Advanced Opti Enabled Server Run daemon as user	ons Check to E frpc default	nable 9 Select the server you just added	
General Options Advanced Options Enabled Server	ons	inable Select the server you just added	
General Options Advanced Option Enabled Server Run daemon as user Enable logging	ons	nable Select the server you just added	

Displaying that the service is running indicates that the frp client has been successfully started.

Settings	Rules	Servers
Frpc - Com	mon Set	tings
Frp is a fast r	everse prox	xy to help you expose a local server behind a NAT or firewall to the internet.
Running		

(5)Next, go to the "Rules" page of "Frp Client", click "ADD", there is a rule by default, if you don't need this rule, you can delete this rule, keep it if you need it, and add a new rule directly.

Disabled	Mama	Turne	Level ID	Local Dark	Remete Dest				
Disabled	Name	Type	Local IP	Local Port	Remote Port	_			_
	ssh	TCP	127.0.0.1	22	6000	^	×	EDIT	DELE



(6)After adding, an "Edit Proxy Rule" page will pop up, there will be different protocol types, and the functions implemented by different protocol types are different.

Disabled				
Proxy Name				
Туре	тср	~		
Local IP	TCP UDP HTTP			
Local port	HTTPS STCP			
Remote port				
Use encryption	7			

4.5.2 Add TCP proxy protocol

The TCP protocol supports ssh connection, and also supports forwarding the page port (usually port 80)Through the public network, the remote port can access the page of the local device.

On the "Edit Proxy Rule" page, configure according to the requirements as shown in the figure below. After the configuration is completed, click "SAVE & APPLY", and you will return to the "Proxy Rules" page, and there will be an additional rule on the page, click "SAVE & APPLY" again to make the rule take effect. Finally, you can access the local port opened by the local device through the public network ip: port number (format: 106.107.108.109:5555, where 106.107.108.109 is the public network address). You can add multiple tcp rules, just make sure that the remote ports are not the same. If the remote ports are the same as the previous ones, the latest ones will overwrite the previous ones, and the previous rules will not take effect.

A.Disabled: If checked, it means to disable this rule.

B.Proxy Name: Customize a proxy name. The proxy name cannot be repeated, otherwise it will not take effect due to name conflict.

C.Type: Select the TCP protocol.

D:Local IP: Fill in the ip of the local machine or the ip allocated by the lan port of the local machine for the connected device. (The ip address of the device that needs to be accessed through the public network).

E.Local port: The selected device needs to be forwarded to the port of the public network.

F.Remote port: Add this remote port to the public network address to access the local port opened by the corresponding local device. This port number should not be the same as other rules, and do not use the occupied port, otherwise this rule will not take effect.

G.Use encryption, Use compression: Check these two as needed.



Multiple rules can be added, as long as the remote port numbers do not conflict. After the configuration is complete, click "SAVE & APPLY".

	Disabled					
Pr	oxy Name	HTTP		0	Configure the forwarding rules ,he	ere is
	Туре	TCP		~	forward the 80 port of this device, the webpage,and you can access it	,that i it
	Local IP	127.0.0.1			plus the port number.	
	Local port	80				
Re	mote port	5555				
BACK TO OVERVIEW	a new r	⁻ ule, you ne	ed to click "	SAVE & APP	SAVE & APPLY 2 SAVE &	2 APPL
BACK TO OVERVIEW After generating Settings Rules Servers	a new r	⁻ ule, you ne	ed to click "	SAVE & APP	SAVE & APPLY 2 SAVE &	L APPL
BACK TO OVERVIEW After generating Settings Rules Servers Frpc - Proxy Rules	a new i	rule, you ne	ed to click "	SAVE & APP	SAVE & APPLY 2 SAVE &	Ł APPĽ
BACK TO OVERVIEW After generating Settings Rules Servers Frpc - Proxy Rules Disabled Name	a new r	rule, you ne Local IP	ed to click "S	SAVE & APP	SAVE & APPLY 2 SAVE &	¥ APPL
BACK TO OVERVIEW After generating Settings Rules Servers Frpc - Proxy Rules Disabled Name Share	a new r	rule, you ne Local IP 127.0.0.1	ed to click "S Local Port 22	SAVE & APP	SAVE & APPLY 2 SAVE & PLY" to make the rule take effect.	2 APPL



Access the local port of the local device through the public network ip and port number, and 106.107.108.109:5555 to access 192.168.2.1 (default port 80).

← → C û ③ 🛄 U. :5555/cgi-bin/luci		🗆 😩 i
#Seriallink®		
	Language - English	
	Authorization Required	
	Password	
	Login	

Multiple tcp rules can be added. It is necessary to ensure that the remote port number and proxy alias are not repeated with those previously set. If they are repeated, the rule may not take effect even if it exists.

4.5.3 Add STCP Proxy Rules

(1)STCP needs to configure the client and the access terminal, of which 192.168.2.111 (the device connected to the lan port) is used as the client, and the PC is used as the access terminal. The access terminal can access the client by binding the local IP and port.

A.Disabled: Checking here will disable this rule.

B.Proxy Name: Customize a proxy name, which cannot be the same as other rules, otherwise it will not take effect due to conflict.

C.Type: Select the STCP protocol.

D.Local IP: The IP address assigned by the local device or the lan port to the connected device.

E.Local port: The device needs to open a port to the public network.

F.SK: Set a password, the access terminal needs to enter the SK set here when accessing the device.

G.Use encryption, Use compression: Configure as needed.

H.Role,Server name,Bind addr,Bind port:These four as clients do not need to be set.



Disabled		
Proxy Name	НТТР	
Туре	STCP 🗸	
Local IP	192.168.2.111	• Here 192.168.2.111:80 refers to forwarding the login webpage of a
Local port	80	routing device in the same network ,and there is no need to
Use encryption		fill the blank
Use compression		
Role		
Server name		
SK		8
Bind addr		
Bind port		

Disabled	Name	Туре	Local IP	Local Port	Remote Port				
	ssh	TCP	127.0.0.1	22	6000	^	~	EDIT	DEL
	stcp	STCP	192.168.2.111	80	Not set			EDIT	DEL



If the PC wants to access the connected device of the router as the access end, it needs to be a client of frp, and it is also the stcp protocol, but it needs to set the visitor role and bind the local address and port. The frp file for Windows can be downloaded from the company's official website. After downloading, open the frpc.ini configuration file for configuration.

Name	Date modified	Туре	Size		
systemd	4/12/2022 2:21 PM	File folder			
frpc.exe	4/14/2022 2:55 PM	Application	10,807 KB		
🔊 frpc.ini	5/9/2022 9:25 AM	Configuration sett	1 KB		
📓 frpc_full.ini	3/23/2022 9:30 PM	Configuration sett	11 KB		
📧 frps.exe	3/23/2022 9:27 PM	Application	13,814 KB		
📓 frps.ini	3/23/2022 9:30 PM	Configuration sett	1 KB		
📓 frps_full.ini	3/23/2022 9:30 PM	Configuration sett	6 KB		
	3/23/2022 9:30 PM	File	12 KB		
<pre>frpc.ini - Notepad Eile Edit Format View Help [common] #Server public address server_addr = 10° € ´ 1° * #server port server_port = 5443 #The server provides the token for token = slk100200 #Prevent exiting after a connectio login_fail_exit = false #Connect to the server through the protocol = tcp #consistent with the server tcp_mux = true pool_count = 0 tls_enable = false heartbeat_interval = 30</pre>	or authentication on failure the TCP protocol	n be consiste er	ent with the cor	ifiguration of the public network	
[stcp_abc] #select stcp protocol type = stcp #in the role of visitor role = visitor #Agent name for client server_name = stcp #Consistent with the client's SK sk = 123456 #Bind the local address and port bind_addr = 127.0.0.1 bind_port = 6005	Visitor role needs To be consistent v for accessing the client Generally set to th	to be set as with the proxy	visitor y name of the c dress (127.0.0.1	lient to be accessed), the port number should be unused	

Use the shortcut key "win+R" to quickly open the cmd command window.

Open: cmd	resource, and	ne of a program, folder, docum I Windows will open it for you.	ient, or Interne
	Open: cmd	55 25	



					- 0	×
File Home Share View						^ 🕐
Pin to Quick Copy	ath Move Copy Delete Rename	New item ▼ 1 Easy access ▼	Properties	Select all		
access Paste sh	to + to + +	folder	+ 🙆 History	Invert selection	1	
Clipboard	Organize	New	Open	Select		
← → ~ ↑ E:\frp_0.41.0					✓ ひ Search frp_0.41.0	P
	Name	Date modified	Туре	Size	Use the cd command to enter the	
	systemd	4/12/2022 2:21 PM	File folder		Use the cu command to enter the	
This PC	Frpc.exe	4/14/2022 2:55 PM	Application	10,807 KB	directory where frpc.exe is located	1
so WPS网盘	📓 frpc.ini	5/9/2022 10:15 AM	Configuration sett	1 KB		
📮 JiangSong (192.168.16.222 (slk	frpc_full.ini	3/23/2022 9:30 PM	Configuration sett	11 KB		
share (192.168.16.200 (slk-Serv	Frps.exe	3/23/2022 9:27 PM	Application	13,814 KB		
software (192 168 16 200 (slk-	frps.ini	3/23/2022 9:30 PM	Configuration sett	1 KB		
Solution (192,100,10,200 (Sik-	🔊 frps_full.ini	3/23/2022 9:30 PM	Configuration sett	6 KB		
Local Disk (C:)	LICENSE	3/33/2022 0.20 014	F31-	10 100		

First enter "E:" to enter the disk where frpc.exe is located, then use "cd+file path" to enter the folder where frpc.exe is located, and use the command "frpc.exe -c frpc.ini" to run the client.

C:\Windows\system32\cmd.exe - frpc.exe - c frpc.ini	_		×
Microsoft Windows [Version 10.0.17763.253] (c) 2018 Microsoft Corporation. All rights reserved.			^
C:\Users\Administrator>E:			
3:\/ <mark>cd frp_0.41.0</mark>			
E:\frp_0.41.0 <mark>}frpc.exe -c frpc.ini] Enter the command to run frpc, frpc.ini is the configuration file just edited</mark> 2022/05/09 10:34:23 [J] [service.go:326] [c0ece70b451d189d] login to server success, get run id [c0ece70b451d189d], server udp port [0] 2022/05/09 10:34:23 [J] [visitor_manager.go:86] [c0ece70b451d189d] start visitor success 2022/05/09 10:34:23 [J] [visitor_manager.go:130] [c0ece70b451d189d] visitor added: [stcp_abc]			
← → C ① 127.0.0.1:6005 cgi-bin/luci 🖻 🖈		Updat	e :

#Seriallink®

Language : English 🗸	
Authorization Required	
Password	
Login	

(2)If there are two routers, and one router needs to remotely access the other router or the connected device of the other router, one is the stcp access terminal, and the other is the stcp client.

The configuration is as follows:

① Configure the client (first router,IP:192.1682.1)

A.Disabled: Checking here will disable this rule.

B.Proxy Name: Customize a proxy name, which cannot be the same as other rules, otherwise it will take effect due to conflict. not

C.Type: Select the STCP protocol.

D.Local IP: The IP address assigned by the local device or the lan port to the connected device.

E.Local port: The device needs to open a port to the public network.

F.SK: Set a password, the access terminal needs to enter the SK set here when accessing the device.

G.Use encryption, Use compression: Configure as needed.

H.Role,Server name,Bind addr,Bind port:These four as clients do not need to be set.



c - Edit Proxy Rule	9		
Disabled			
Proxy Name	stcp		
Туре	STCP	~	
Local IP	192.168.2.111		
Local port	80		Here 192.168.2.111:80 refers to
Use encryption	0		forwarding the login webpage of routing device in the same
Use compression			network,and there is no need to f in the blank
Role			
Server name			
SK		8	
Bind addr			
Bind port			

BACK TO OVERVIEW

After generating a new rule, you need to click "SAVE & APPLY" to make the rule take effect.



SAVE & APPLY

SAVE & APPLY

SLK-R660 Industrial 4G Multifunctional Gateway

② Configuring the Access Side (Second Router, IP: 192.168.2.2)

A.You need to connect to the frp server first. For details, please refer to chapter 2.5.1

B.Disabled: If checked here, this rule will be disabled.

C.Proxy Name: Customize a proxy name, which cannot be the same as other rules, otherwise it will not take effect due to conflict.

D.Type: Select the STCP protocol.

<u>Seriallink</u>®

E.Local IP,Local port: These two access terminals can be left blank.

F.SK:Set a password, the access terminal needs to enter the SK set here when accessing the device.

Use encryption, Use compression: Configure as needed.

G.Role: The access terminal needs to fill in the visitor.

H.Server name: The stcp proxy name set by the first router client.

I.Bind addr,Bind port: The client can be accessed by binding the address and port. The address and port are the local machine or the connected device of the local machine.

-			
Disabled			
Proxy Name	stcp1_visitor		
Туре	STCP	~	
Local IP			
Local port			• input configuration
Use encryption			
Use compression	0		
Role	visitor		
Server name	stcp		
SK	slk100200	8	
Bind addr	192.168.2.2		
Bind port	6006		

After generating a new rule, you need to click "SAVE & APPLY" to make the rule take effect.



r Rules	Servers								
isabled	Name	Туре	Local IP	Local Port	Remote Port				
1	stcp1_visitor	STCP	?	?	Not set	^	≁ ED	IT DELETE	
						CALE		A	
						SAVE	2 APPLY	SAVE & API	PLY
A Not secur	re 192.168.2.2:6006 cgi-b	in/luci						ie 🌣 🗖 🥯	Update
iallin	K								
			Auth	Langua orization Requ	age: English ~ J ired				
			Pas	sword	Login				

4.5.4 Add UDP Proxy Rules

The UDP protocol is used to transmit a large amount of data. The port of the connected device needs to support the udp protocol. If the port that supports the udp protocol is opened to the public network, data transmission can be performed through the public network and the remote port number. Multiple udp protocol rules can be configured.

A.Disabled: Checking here means to disable this rule.

- B.Proxy Name: Customize a proxy name. The proxy name cannot be repeated, otherwise the rule will not take effect due to conflict.
- C. Type: Select the UDP protocol.
- D.Local IP: Fill in the ip of the machine or the ip assigned by the lan port of the machine for the
- connected device (the ip address of the device that needs to be accessed through the public network).
- E.Local port: The device needs to be forwarded to the port of the public network, which must be the port using the UDP protocol.
- F.Remote port: Add this remote port to the public network address to access the local port opened by the corresponding local device. This port number should not be the same as other rules, and do not use the occupied port, otherwise this rule will not take effect.
- G.Use encryption, Use compression: Check these two as needed.
- H.Multiple rules can be added, the remote port and proxy name should not conflict, and click "SAVE & APPLY" after the configuration is complete.



Disabled			
Proxy Name	udp		
Туре	UDP	~	1 Select UDP and fill in the configuretion
Local IP	192.168.2.233		
Local port	4001		
Remote port	6007		
Use encryption			
Use compression			

After generating a new rule, you need to click "SAVE & APPLY" to make the rule take effect.

Disabled	Name	Туре	Local IP	Local Port	Remote Port				
	udp	UDP	192.168.2.233	4001	6007	^	~	EDIT	DELETE

Through the UDP protocol, use the public network address and remote port number to access the device forwarded to the public network (111.111.111.111:6007 accesses 192.168.2.233:4001).



	TCP/UDP Net Assistant	₩ - □ ×
Settings	Data log	NetAssist V4.3.26
(1) Protocol	[2022-05-09 11:54:32.053]# SEND ASCII TO 1. 2:6007>	^
(2) Local host addr 192.168.20.59 (3) Local host port 4001	[2022-05-09 11:54:32.082]# RECV ASCII FROM 1	
Close	[2022-05-09 11:54:32.676]# SEND ASCII TO 18 6007> short circuit	
Recv Options	and shared here	
	[2002_05_00 11.54.32 712]# BECK ASCIT BEOM 10	
✓ Log display mode	short circuit	
Auto linefeed		
Recv save to file <u>AutoScroll</u> <u>Clear</u>	[2022-05-09 11:54:33.283]# SEND ASCII TO 1	
Send Options		
• ASCII C HEX	[2022-05-09 11:54:33.322]# RECV ASCII FROM 1000000000000000000000000000000000000	
✓ Use escape chars	short circuit	
AT CMD auto CR+LI		~
Append checkcode	Data Send Remote: 1	- Clean Clear Clear
□ Period 1 ms Shortout History	short circuit	Send
Ready!	175/141 RX:10	850 TX:2410 Reset

4.5.5 Add HTTP Proxy Rules

For http and https services, domain name-based virtual hosts are supported, and custom domain name binding is supported, so that multiple domain names can share a port 80 and access intranet web pages through the custom domain name. Multiple http rules can be configured, which can be accessed directly through a custom domain name. After the configuration is complete, you can access the corresponding web page through the custom domain name plus the http penetration port (ie vhost_http_port) provided by the server.

A.Disabled: Checking here means to disable this rule.

B.Proxy Name: Customize an agent name. The agent name cannot be repeated, otherwise the rule will not take effect due to conflict.

C.Type: Select the HTTP protocol.

- D.Local IP: Fill in the ip of the machine or the ip assigned by the lan port of the machine for the connected device (the ip address of the device that needs to be accessed through the public network).
- E.Local port: The device needs to be forwarded to the port of the public network, and this port must be the port number of the internal page.
- F.Use encryption, Use compression, HTTP user, HTTP password: These four are selected as needed.
- G.Subdomain: Write it if you have it, or leave it out if you don't have it.
- H.Custom domains: xxx. The domain name bound to the public network, xxx is defined by itself, but the latter must be the domain name bound to the public network.



Disabled		
Proxy Name	http	
Туре	HTTP 🗸	
Local IP	192.168.2.233	1 Fill in the configuration
Local port	4001	
Use encryption		
Use compression		
HTTP user		
HTTP password		
Subdomain		
Custom domains		
RVIEW		SAVE & APPLY 2 SAVE & APPLY
enerating a new	rule, you need to click "SAVE & A	APPLY" to make the rule take effect.
Rules Servers		

WEB: www.seriallink.net

ADD

SAVE & APPLY

SAVE & APPLY



The browser can log in to openwrt.frp.****.5080 to enter the client routing management page. Among them, openwrt is a custom part, and you need to add a record on the domain name application website to resolve the subdomain name;frp.****.*** is the value of subdomain_host of the frpc server; port 5080 is the intranet penetration port provided by the server, and the value of vhost_http_port;

You can configure multiple http rules in this way, and the custom domain name does not need to be the same.



4.6 1:1 NAT

The specified address performs one-to-one mapping. In the navigation bar, "Route Settings" - "1:1 NAT" can establish a one-to-one correspondence between external addresses and internal addresses.

Enable: Check Enable to make it take effect.

External interface: The external interface that needs to be mapped.

External IP Address: The external interface IP address that needs to be mapped.

Internal IP Address: The IP address of the internal network device.

After the configuration is complete, click "Save & Apply" to make it take effect. After it takes effect, you can directly access the internal network device with 1:1 NAT by accessing the external IP address.

external IP

WAN Configuration

(General Setup	Advanced Setting	js		
		Status	 Device: eth0.2 Uptime: 0h 0m 9s MAC: EA:C7:79:04:48:C6 RX: 1.01 KB (5 Pkts.) TX: 271.08 KB (798 Pkts.) IPv4: 192.168.20.192 		
		Protocol	DHCP address	~	



Ping internal network devices:

Network Utilities

92.168.2.101	ww	w.seriallink.cn		www.selidi	IIIIK.CII	
3.8.8.8 ¥ IPv4 ¥	PING	iallink 🖌 IPv4	TRACEROUTE	seriallink	✓ NSLOOKUP	
IG 192.168.2.101 (192.16)	8.2.101): 56 dat:	a bytes				
bytes from 192.168.2.10	1: seq=0 tt1=128	time=0.963 ms				
bytes from 192.168.2.10	1: seq=1 tt1=128	time=0.753 ms				
bytes from 192.168.2.10	1: seg=3 tt1=128	time=0.896 ms				
bytes from 192.168.2.10	1: seq=4 tt1=128	time=0.881 ms				
- 192.168.2.101 ping sta	tistics					
192.168.2.101 ping sta packets transmitted, 5 p	tistics ackets received,	0% packet loss				
– 192.168.2.101 ping sta packets transmitted, 5 p. und-trip mín/avg/max = 0.	tistics ackets received, .753/0.857/0.963	0% packet loss ms				
– 192.168.2.101 ping sta packets transmitted, 5 p md-trip min/avg/max = 0.	tistics ackets received, .753/0.857/0.963	0% packet loss ms				
- 192.168.2.101 ping sta packets transmitted, 5 p. md-trip min/avg/max = 0. Configure 1:1 NAT:	tistics ackets received, .753/0.857/0.963	0% packet loss ms	~			
- 192.168.2.101 ping sta packets transmitted, 5 p. md-trip min/avg/max = 0. Configure 1:1 NAT: uting Status	tistics ackets received, .753/0.857/0.963 :1 NAT	0% packet loss ms	<i></i>			
192.168.2.101 ping sta packets transmitted, 5 p und-trip min/avg/max = 0. Configure 1:1 NAT: uting Status	tistics ackets received, .753/0.857/0.963 :1 NAT	0% packet loss ms	~~`			
- 192.168.2.101 ping sta packets transmitted, 5 p. md-trip min/avg/max = 0. Configure 1:1 NAT: uting Status [] twork Setting Τ	tistics ackets received, .753/0.857/0.963 : 1 NAT he specified address perfo	0% packet loss ms				
- 192.168.2.101 ping sta vackets transmitted, 5 p. md-trip min/avg/max = 0. Configure 1:1 NAT: uting Status 1 twork Setting T rial Utility	tistics ackets received, .753/0.857/0.963 : 1 NAT he specified address perfo	0% packet loss ms				
 192.168.2.101 ping star packets transmitted, 5 p. und-trip min/avg/max = 0. Configure 1:1 NAT: uting Status uting Status uting Status rial Utility uting Setting Routing S 	tistics ackets received, . 753/0. 857/0. 963 :1 NAT he specified address perfo etting ^A Records	0% packet loss ms	Select the	external interfac	e IP	
 192.168.2.101 ping star packets transmitted, 5 p. und-trip min/avg/max = 0. Configure 1:1 NAT: uting Status twork Setting trial Utility uting Setting Routing S 	tistics ackets received, .753/0.857/0.963 :1 NAT he specified address perfo ettingAT Records Name	0% packet loss ms rms a one-to-one mapping eck to enable	3 Select the External IP address	external interface	e IP ernal IP address	
 192.168.2.101 ping star vackets transmitted, 5 p. und-trip min/avg/max = 0. Configure 1:1 NAT: uting Status twork Setting trial Utility uting Setting Routing S tic Routes wall 	tistics ackets received, .753/0.857/0.963 :1 NAT he specified address perfor etting ^A T Records Name	0% packet loss ns orms a one-to-one mapping eck to enable	Select the External IP address	external interface Int 192.168.2.1	e IP ernal IP address	
 192.168.2.101 ping star packets transmitted, 5 p. und-trip min/avg/max = 0. Configure 1:1 NAT: Uting Status uting Status uting Status rail Utility uting Setting Routing S for Routes wall torwards 	tistics ackets received, . 753/0. 857/0. 963 :1 NAT he specified address perfor etting AT Records Name	0% packet loss ns orms a one-to-one mapping eck to enable wan	Select the External IP address	external interface	e IP remai IP address 01	
 192.168.2.101 ping star packets transmitted, 5 p. und-trip min/avg/max = 0. Configure 1:1 NAT: uting Status twork Setting trial Utility uting Setting Routing S tic Routes wall tForwards z 	tistics ackets received, .753/0.857/0.963 .1NAT he specified address performed etting AT Records Name Enable Ch 1 2 0 4	0% packet loss ms orms a one-to-one mapping eck to enable wan	3 5 Select the External IP address 192.168.2.214 interface	external interface Int 192.168.2.1 6 Enter	e IP emal IP address 01 the internal device	ce IP
 192. 168. 2. 101 ping star packets transmitted, 5 p. md-trip min/avg/max = 0. Configure 1:1 NAT: Uting Status twork Setting trial Utility uting Setting Routing S ic Routes wall Forwards z k/White List 	tistics ackets received, .753/0.857/0.963 :1 NAT he specified address performed ettingAT Records Name Example Ch 1 2 0 4 2 0 4	0% packet loss ms orms a one-to-one mapping eck to enable wan	Select the External IP address 192.168.2.214 interface	external interfac	e IP emai IP address 01 the internal devic	ce IP

Click "Save & Apply" to make the configuration take effect. Here, the test can directly access the webpage of route 192.168.2.101 with the external IP address 192.168.20.192



Chapter 5 VPN Service

5.1 L2TP VPN

Navigation bar "VPN Service" - "L2TP VPN", select Enable, fill in the user name and password according to the server settings, click "SAVE & APPLY".

A.Enable: To us e L2TP VPN, you need to check it, and you can just uncheck it when you don't use it. B.Server Address: The server IP address, usually the public IP.

C.Username, Password: Enter the username and password set by the server.

 Routing Status 	L2TP Client				
😢 Network Setting	Configurable L2TP access to VPN.				
📼 Serial Utility					
🗂 Routing Setting	Status	Device: l2tp-l2tp			
🔹 Switch Control		MAC: 00:00:00:00:00:00 RX: 54 B (3 Pkts.)			
M DDNS/FRP		TX: 419 B (9 Pkts.) IPv4: 192.168.18.2			
E VPN Service VPN Service	Enable	Check to enable			
L2TP VPN 📀 L2TP VPN	Satuar Address	100 40 100 110			
GRE VPN	Server Audress	120.48.120.113			
OpenVPN	Username	slkl2tp		4 Enter configuration	
SERIALLINK VPN	Password		8		
🛠 System					
🗗 Logout	Metric	9 Configure the priority of this network			
				SAVE & APPLY	PPLY

After the connection is successful, the address assigned by the server will appear in the status bar. If l2tp is not used, uncheck it and click "SAVE & APPLY".

L2TP Client

Status	Device: 12to_12to	
Status	Uptime: 0h 8m 7s	
	PV -54 B (2 Pktc)	



5.2 GRE VPN

Navigation bar "VPN Service" - "GRE VPN", select Enable, select gretap or gre according to the protocol of the opposite end (keep the protocol at both ends the same). The local IPv4 address and remote IPv4 address are filled in according to the local wan port (public network) address and the peer wan port (public network) address, and the local tunnel address and the peer tunnel address are in the same network segment.

Routing Status	GRE VPN			
Network Setting	Configurable GRE access to VPN.			
📼 Serial Utility				
🗂 Routing Setting	Interface information			
Switch Control	Status	Device: gre4t-gre Uptime: 0h 0m 16s MAC: F2:0C:DB:DE:DC:18		
M DDNS/FRP	ico	RX: 0 B (0 Pkts.) TX: 0 B (0 Pkts.)		
VPN Service		Check to enable		
L2TP VPN	Ellable			
GRE VPN 🛛 🙆 GRE VPN	J Protocol	gretap	~	
OpenVPN	Local IPv4 address	106.15.120.21		Select the protocol,fill in the local
SERIALLINK VPN	······································			and peer addresses
🛠 System	Remote IPv4 address	106.15.110.21		
🕒 Logout				
	Turnelinformation			
	Tunnel Information			
	Local tunnel address	11.11.11.21		
	Netmask	255.255.255.0		network segment as the peer
				-
				SAVE & APPLY 6 SAVE & APPLY

Refresh status information after "SAVE & APPLY".

onligurable GRE a	ccess to vPiv.			
nterface informat	tion			
	Status	gre-gre	Uptime: 0h 0m 4s MAC-Address: BE:E3:F4:9B:7C:D5 RX: 0.00 B (0 Pkts.) TX: 0.00 B (0 Pkts.) IPv4: 11.11.11.21/24	
	Enable	2		



Then add routing table rules, you can successfully access the peer Lan port device.

n	Routing Status	Static Routes						
3	Network Setting	Static Routes specify over w	hich interface and gateway a certain	host or network can be reached.				
œ	9 Serial Utility							
C	Routing Setting	outing Setting						
	Static Routes	Interface	Target	IPv4-Netmask	IPv4-Gateway	Metric	MTU	
	Firewall	tatic Routes	Host-IP or Network	if target is a network				
	Port Forwards			This section contains no values yet				
	DMZ							
	Black/White List	ADD 🕘 click	ADD					
	1:1 NAT							
					~			

Static Routes

Static Routes specify over which interface and gateway a certain host or network can be reached.	
--	--

Interface H	Target lost- <u>IP</u> or Network	IPv4-Netmask if target is a network	IPv4-Gateway	Metric	MTU	
gre_stati 🖌 1	92.168.2.0	255.255.255.255	11.11.11.31	0	1500	DEL
Interface selection gre static	Target is the remote LAN port	12 Peer lan port subnet mask	13 peer tunn	el IP		
Static IPv6 Route	S					
hand an		T	ID C C		an end	1.0771.1
Interface	IPv6-Addre	Target ess or Network (CIDR)	<u>IPv6</u> -0	ateway	Metric	MTU
Interface	IPv6-Addre	Target ess or Network (CIDR) This section contai	IPv6-0	Gateway	Metrid	MTU
Interface	<u>IPv6</u> -Addro	Target ess or Network (CIDR) This section contai	IPv6-0	ateway	Metrid	MTU
Interface	<u>IPv6</u> -Addre	Target ess or Network (CIDR) This section contai	<u>IPv6</u> -0	lateway	Metrid	MTU



5.3 OpenVPN

Navigation bar "Virtual Private Network" - "OpenVPN", click "SAVE & APPLY" after all configurations are consistent with the server, the three certificates are provided by the server.

Routing Status OpenVP	PN Settings	
Network Setting	General Setting	
☑ Serial Utility General S	Settings Advanced Settings	
Routing Setting	Status Device: tun0	
🎄 Switch Control	RX: 0 B (0 Pkts.) TX: 0 B (0 Pkts.)	
M DDNS/FRP	Enable 🔽 🚳 Check to Enable	
≡ VPN Service ● VPN Service	dev tun	
L2TP VPN	tun/tap device	
GRE VPN	proto udp	
OpenVPN (2) OpenVPN	Use protocol	
SERIALLINK VPN	port 1194	
× System	TCP/UDP port # for both local and remote	
🕒 Logout	remote 183.15.121.62 +	
	Remote host name or ip address	
	ca C:\fakepath\ca.crt SELECT	
	Certificate authority	
	cert C:\fakepath\slk.crt SELECT 6 Select or drag in the	
	Local certificate corresponding file	
	key C:\fakepath\slk.key SELECT	
	Local private key	

The advanced settings page is modified according to the server. If relink is checked, it means that openvpn can automatically reconnect. If you need to automatically reconnect, you can check it. If you don't need it, leave it unchecked. After all configurations are completed, click "SAVE & APPLY".



General Settings Advance	Advanced Setting	S	
r	elink Z Auto connect server		
	verb 3	~	
	Set output verbosity		
	auth SHA512	Change th	e corresponding ion according to the
	HMAC authentication for packets	configurea	tio file of the server
ci	pher BF-CBC	e. con	
	Encryption cipher for packets		
	Izo no	~	
	Set Comp_lzo		
remote_cer	t_tls server	~	
	Require explicit key usage on certificate		
no	bind 🗹 Do not bind to local address and port		
c	lient Configure client mode		
client_to_c	lient Allow client-to-client traffic		

After the connection is successful, the status bar will refresh the address. If openvpn is not used, uncheck it and click "SAVE & APPLY".



Chapter 6 System

6.1 Date Time

Time synchronization is enabled by default. If necessary, you can change the NTP server to synchronize the time of the server.

Navigation bar "System" - "Date Time", click "SAVE & APPLY" after setting.

A	Routing Status	NT	^o time server			
0	Network Setting	After t	he wireless gateway is powered o	ff, the date and time settings	are not saved. Enable the S	ync from network function to keep the date and time current.
œ	Serial Utility					
C	Routing Setting	Sy	nchronize browser time			
43	Switch Control		Local Time 2	022-07-29 10:51:23 SYNC	WITH BROWSER	sync with browser
a	DDNS/FRP		Timezone	Asia/Shanghai	~	
=	VPN Service					
×	System	System	ne Synchronization			
	Date Time 🛛 🙆	Date Time	Enable NTP client		Syn	e with browser or modify NTP server
10	Language Setting		Lindble WTP client		Pserver	
	Modify Password		NTP server	0.asia.pool.ntp.org	×	delete the current line address
	Backup File			1.cn.pool.ntp.org	•	add a line
	Update Firmware					
1	Factory Reset					
	Reboot					SAVE & APPLY

6.2 Language Setting

Change the language displayed on the page according to your own needs, you can choose English or Chinese, change it in the navigation bar "System" - "Language Setting", or change the language in the login interface.

•	Routing Status	Language Setting		
Q	Network Setting			
œ	5 Serial Utility	Language Setting		
Ċ	Routing Setting	Language	English 🗸	Modify language
4	Switch Control		English 中文 (Chinese)	
a	DDNS/FRP			
	VPN Service			
5	System 🚺 System		Copyright ©2013-2022 Seriallink inc, All i	rights reserved.
	Date Time			
	Language Setting 🛛 Language	ge Setting		
	Modify Password			



6.3 Modify Password

The default password for login is admin. If the user needs to protect the configuration interface to avoid being modified by others, he can modify the login password, click "System" - "Modify Password" in turn, then fill in the password to be modified, and then SAVE & APPLY, as follows.

 Routing Status 	Router Password	
Network Setting	Changes the administrator password for accessing the device	
🖾 Serial Utility		
📋 Routing Setting	Password	<i>©</i>
🚓 Switch Control	Confirmation	Cnter new password twice
M DDNS/FRP		
💼 VPN Service		SAVE & APPLY
🛠 System 🚺 System		
Date Time	Conviciant @2013-20	122 Seciallink inc. All rights reserved
Language Setting	ooprigit ezera-a	zzz detraining inv, vir righto read ved.
Modify Password 2 Modify Pas	ssword	

6.4 Update Firmware

•	Routing Status	Flash operations
3	Network Setting	
	Serial Utility	Flash new firmware image
e	Routing Setting	Upload a sysupgrade-compatible image here to replace the running firmware. Check "Keep settings" to retain the current configuration
\$	Switch Control	(requires a compauble inmware image).
m	DDNS/FRP	Keep settings:
	VPN Service	Image: 选择文件 openwrt-ramiysupgrade.bin FLASH IMAGE 6 < click UPDATE
*	System 🚺 System	Select or drag in a file
	Date Time	
	Language Setting	Copyright ©2013-2022 Seriallink inc, All rights reserved.
	Modify Password	
	Backup File	
	Update Firmware 2 Update	Firmware



Navigation bar "System" - "Update Firmware", select the file and click "UPDATE", the MD5 check code page will appear after uploading, click "PROCEED" to upgrade, the upgrade will take a certain time,it takes about 1~2 minutes, after the upgrade is complete, log in again through "192.168.2.1".

When upgrading the firmware, you need to uncheck the "Keep settings" option.

Flash Firmware - Verify

The flash image was uploaded. Below is the checksum and file size listed, compare them with the original file to ensure data integrity. Click "Proceed" below to start the flash procedure. Checksum MD5: a996e5f73d723c596a93c762453ff08b SHA255: 4c52d951bf05923f2a194d1bea21b1bc63e42b00d671c1ba0b4ef9da049ebac7 Size: 11.25 MB (15.69 MB available) Note: Configuration files will be erased. CANCEL PROCEED PROCEED

6.5 Factory Reset

Factory reset is generally when the device fails to enter the device page, or there are many function settings, and you want to reset it,you can restore the factory default settings, the navigation bar "System" - "Factory Reset", click "Execute reset", you can restore the device to the factory default.

Routing Status	Factory Reset
Network Setting	
🐵 Serial Utility	
Routing Setting	
🄹 Switch Control	
7 DDNS/FRP	
E VPN Service	Copyright ©2013-2022 Seriallink inc, All rights reserved.
🛠 System 🏮 System	
Date Time	
Language Setting	
Modify Password	
Backup File	
Update Firmware	
Factory Reset 2 Factory I	Reset
Reboot	

6.6 Reboot

Immediately restart, the device can be restarted through the page, the navigation bar "System" - "Reboot", click "Execute restart" to restart the device.



Routing Status	Reboot	
Network Setting		
🖾 Serial Utility	Restart now PERFORM REBOOT 3 Click PERFORM REBOOT	
🛱 Routing Setting		
🎄 Switch Control		
M DDNS/FRP	Copyright ©2013-2022 Seriallink inc, All rights reserved.	
VPN Service		
🛠 System 🏮 System		
Date Time		
Language Setting		
Modify Password		
Backup File		
Update Firmware		
Factory Reset		
Reboot		
47 page log out		
o. r paye toy out		



Click "Logout" to exit to the login interface.





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If you have any questions, please email: info@seriallink.net or www.seriallink.net