

User Manual

---Apply to WL-R522 Series 4G+/4G Router

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Updates between document versions are cumulative. The latest document version contains all updates made to previous version.

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Hardware Introduction

This chapter is mainly for installation introduction, there would be some difference between the scheme and real object. But the difference won't have any influence to products performance.

1.1 Interface



NOTE NOTE

There are some difference on Antenna interface and indicator light for the device with extended Wi-Fi, GPS features.

Table 1-1 Router Interface

Port	Instruction	Remark
SIM	Support 1.8/3V automatic detection.	Two SIM as default

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|--|

Port	Instruction	Remark
Antenna Connectors	SMA connector, 50Ω. LTE1 as Main, LTE2 as 4G Aux. Wi-Fi1, Wi-Fi2 and GNSS Optional.	
LAN1	10/100Base-TX, MDI/MDIX self-adaptio	
LAN2	10/100Base-TX,MDI/MDIX self-adaption	LAN as Default
WAN	10/100Base-TX,MDI/MDIX self-adaption	LAN as Default
TTL/RS232	Gnd, Tx, Rx	RS232 as default
RS485	А, В	
GPIO	2 GPIOs	
Reset	Reset button, (press on button at least 5 seconds)	
PWR	1xDC Power connector 1x Terminal Block(2 Pins)	7~48VDC

1.2 LED Status

Table 1-2 Router LED indicator Status

silk-screen	Indicator		Note	
		Slow Blinking (1s)	System Auto-check	
System(S)	Blue	Quick Blinking (0.5s)	Dialing	
		Solid light	4G/3G online	
	Orange	Solid light	Power on	
Power(P)		light off	Power off or power fault	
High(H)	Green	Solid light	Good Signal(CSQ≥-19)	
Low(L)	Red	Solid light	Weak Signal(CSQ<-18)	

Figure 1-2 R522 Series Router Dimension

1.3 SIM/UIM card install

Please insert the dual SIM cards before configure the router.







1.4 Ethernet Cable Connection

Connect the router with a computer by an Ethernet cable for GUI configuration, or transit by a switch.

1.5 Power Supply Connection

Voltage input range +9~48VDC, 5.5mm DC interface and 2Pins terminal block are alternative.

1.6 Serial Port and GPIO Connection

WL-R522 supports one RS232 and one RS485 ports as default. It might be requested serial port for TTL when placed order. The serial port feature supports TCP/UDP client/server as optional, also supports Modbus protocol.





1.7 Review

After insert the SIM/UIM card and connect Ethernet cable and antenna, connect power supply adaptor or power cable.



Please connect the antenna before power on, otherwise the signal maybe poor because of impedance mismatching.

Notice:

Step 1 Check the antenna connection.

- Step 2 Check SIM/UIM card, confirm SIM/UIM card is available.
- Step 3 Power on the industrial Router

----END



2 Router Configuration

WL-R522 Series routers support GUI. This chapter introduce GUI configuration via Ethernet port, if need CLI configuration guide, please contact our technical support department by email: support@wlink-tech.com.

2.1 Local Configure

The router supports to be configured by local Ethernet port, you could specify a static IP or set as DHCP. The default IP address is 192.168.8.1, subnet mask is 255.255.255.0, please refer to following.

Step 1 Click "start > control panel", find "Network Connections" icon and double click it to enter, select "Local Area Connection" corresponding to the network card on this page. Refer to the figure below.



Figure 2-1 Network Connection

- Step 2 Obtain a IP address automatically or set up IP address,192.168.8.xxx(XXX can be any number between 2~254)
- Step 3 Run an Internet Explorer and visit "http://192.168.8.1/", to enter identify page.

The default username is admin and password is admin168. User should modify the login password.



admin	<u></u>
	Ø

Figure 2-2 User Identify Interface

----END

2.2 Dashboard

Check routers information such as status, 4G/WAN speed, after login router. Especially, suggest change the password according to the prompts because of security requirement.

Dashboard	A > Dashboard									
Utilization	ALTE				ITE Council					
Interface	all Core				LIE Speed					
Network		Status	Online		15K					🗖 TX byte
Wireless	0%	ICCID	898601148511	13626956	13K					RX byte
- Station		IMEI	862708044140	0445	10K					
		Network	中国联通 FDD	LTE	816					
Application		Signal all RSSI:-109dBm CSQ:13		er.						
👷 System	010	IPv4 Address	10.227.121.29		5K					
n. Debug		Online Time	00:40:47:0		зк					
C Development	V Byte	Packet 3001	A Byte	↑Packet 3216	ок	~	~	1	$\wedge \wedge$	AA A
(e)	327.98KB		221.45KB		07:45 07:50	07:55	08:00	08:05	08:10 0	3:15 08:20 08:2
	II LAN				LAN Speed					
		IPv4 Address	IPv4 Address 192.168.8.1		15K		_	-		letter series
	$ \langle . \rangle$	Subnet Mask	255.255	5.255.0	10K					RX byte
	0%	MAC Address	30:3D:5	1:1A:00:10	5K					
		Online Time	00:40:56	6:0	ок				_	
		Client Number	1		07:45 07:50	07:55	08:00	08:05	08:10 0	3:15 08:20 08:2
		2.4G 55ID	2.4G 55ID WL-R320-1A0010		2.4G SSID Speed					
	0% T	2.4G Channel	11		15K					La constante
		2.4G BSSID	30:3D:5	1:1A:00:10	10K					TX byte
			10000							
					SK					

2.3 Utilization

The Utilization GUI will be display router system information such as CPU, Memory information

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	How Utilization				
Utilization	Lat Utilization			CPU Usage	
Interface		CPU User	6520	100%	
Network		CPU system	11128	75%	
Station	3% CPU	CPU IRQ	0	50%	
Application		CPU Softirg	110	25%	\wedge
⊘ ⁸ System		Memory Total	61912	0% 10:08:55	10:09:00 10:09:05
🔒 Debug	79% Memory	Memory Buffers	4288	Memory Usage	
K Development		Memory Cached	14480	100%	Memory
•	65% Config 5	2.0K		90%	
				80%	
				75%	10:09:00 10:09:05

Figure 2-3 Resource GUI

2.4 Interface

The interface GUI will display network interface status such 4G information, LAN and Switch Status including ISP name, network type, signal, band, SIM IP address and 4G online time.

Unization		LTE		LAN		Switch
Interface		_	1			1.2
Network	Status	Online 🛄 🗡	Status	Online 🖌	WAN	×
Wireless	Network	中国联通 FDD LTE	MAC Address	30:3D:51:1A:00:10	LANI	~
Station	ICCID	89860114851113626956	IPv4 Address	192.168.8.1	LAINZ	*
Application	RSSI	all CSQ:13 RSRP:-108dBm	Subnet Mask	255.255.255.0		
Application	RSRQ/SINR	RSRQ:-4dB SINR:-18dB	Rx/Tx	581.99KB / 2.25MB		
System	Band	LTE BAND 1				
Debug	IPv4 Address	10.227.121.29				
Development	Subnet Mask	255.255.255.252				
۲	Gateway	10.227.121.30				
	IPv4 DN5	120.80.80.80				
	IPv4 DN52	221.5.88.88				
	Rx/Tx	338.96KB / 228.89KB				
	Online Time	00:42:25:0				
	Modem	Quectel-EC2X				
	IMEI	862708044140445				
	IMSI	460015786507638				
	10000	2222				
	LAC	770E				



Figure 2-4 Interface. GUI

2.5 Network

2.5.1 LTE Setting

Step 1 Network>LTE to enter LTE Status GUI. It supports to disable 4G connection by Status button.

A > Network > LTE				
Status	UP II	IP Address	10.42.212.49	
Operator	中国移动	Network	TDD LTE	
RSSI	all -59dBm	IMEI	862506040853791	
Live Time	00:00:10:0	ICCID	89860000192127678193	
Rx/Tx	8.85KB / 8.61KB	IMSI	460077121812838	

Step 2 Network>LTE to Network Mode setting GUI as following.

APN Setting

APN	3gnet	
<mark>U</mark> sername		
Password		¢
IP Type		~
Authentication	Auto	~
Dial Number	*99#	



Parameter	Instruction	Default
APN Custom	Auto APN will be enable when APN Custom switch is Off. The router will recognize the access point name(APN)automatically.	Off
	Regarding to private SIM card, please enable APN Custom button to configure SIM information such as APN, Username and Password.	
APN	APN is provided by local ISP	internet
Username	SIM card user name is provided by ISP	
Password	SIM card password is provided by ISP	
ІР Туре	IP/IPv4v6/IPv6 optional.	Null
Authentication	Select Auto/NONE/PAP/Chap/PAP/CHAP authentication as requested	
Dial Number	4G/3G connection service code	*99#
Dial CID	Connect to the specified cellular ID. CID number is provided by local carrier.	

Cellular Attach Setting

Attach Mode	Auto	~
GPS (
	Modem Settings	

Parameter	Instruction	Default
Attach Mode	【Auto】The router will automatically connect to 4G/3G networks and give priority to 4G.	Auto
	[LTE(4G)] Router will connect to 4G only.	
	【WCDMA/TDSCDMA/EVDO】Router will connect to 3G only.	
	【CDMA/GSM】Router will connect to 2G only.	
GPS	The GPS is built-in 4G module.The GPS feature will be related to model and hardware.	Off
Modem Settings	Supports Lock IMEI, Lock IMSI, Lock PIN and Lock Band.	Null



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Parameter	Instruction	Default
	Supports no SIM Card,PLMN and Signal for testing as requested.	Need



Configuration Instance

Please check lock bank configuration in the chapter 3 as reference.

Network Status Setting

Advise	~
 O 	
	Advise

Parameter	Instruction	Default
Dial Mode	[Advise]The router will automatically dial-up 4G/3G by ECM protocol.	Advise
	【PPP】The router will automatically dial-up 4G/3G by PPP protocol.	
	【DHCP】The router will automatically dial-up 4G/3G by DHCP protocol.	
	【Static IP】The router will automatically dial-up 4G/3G and obtain SIM IP as ISP requested.	
MTU	Maximum Transmission Unit on Cellular network.	1500
LCP Echo Interval	LCP(link control protocol) check interval	10
LCP Echo Times	LCP check Times. If no replace, the PPP will reconnect.	12
PPP Option	PPP debugging information	debug
Custom DNS	Configure DNS server IP address	Disable
IP Masquerade(NAT)	Replace internal ip address to SIM IP address when sent data.	Enable

Network Availability Check Setting





Parameter	Instruction	Default
Availability Check	Disable, ICMP Check and Receive Count Optional	Disable

Availability Check	ICMP	~
Test Address	8.8.8.8	
Test Address 2	114.114.114.114	
Test Address 3	223.5.5.5	
Each Query Timeout(sec)	10	
Test Times	6	
Test Interval(sec)	20	

Parameter	Instruction	Default
Availability Check	Disable, ICMP Check and Receive Count Optional	Disable
ICMP	Configure 3 destination IP address to check check the Cellular connection available.	
Test Address	Reachable destination IP address1	
Test Address2	Reachable destination IP address1	12
Test Address3	PPP debugging information	debug
Each Query Timeout(sec)	Configure DNS server IP address	10
Test Times	ICMP times	6
Test Interval(sec)	ICMP Interval	20

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Availability Check	Receive Count	~
Duration(sec)	20	
Test Times	30	
Request packets	1	

Parameter	Instruction	Default
Receive Count	Disable, ICMP Check and Receive Count Optional	Disable
Duration(sec)	Configure 3 destination IP address to check check the Cellular connection available.	20
Test Times	Reachable destination IP address1	30
Request packets	Reachable destination IP address1	1

Step 3 After Setting, please click "Apply" icon.

----End

2.5.2 LTE SMS Setting

Step 1 Network>LTE SMS to enter LTE SMS GUI.

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	*	Network > LTE SMS			
L Utilization			SMS Function		
i Interface			HE Agent		
Network					
- LTE			Command Contact		
LTE SMS	4		Command Prefix	123456	
··· LTE Backup SIM					
LAN					
Hosts	SM	IS List(11)		N	^
ALG	0	Contact	Date	Content	Operation
··· Firewall		8613760365619	22/11/12,09:26:00+32	123456land>machine.restart	Ð
··· Port Map		8613760365619	22/11/12,09:40:59+32	123456ifname>lte.status:gw	Ê
··· Port Proxy	D	8613760365619	22/11/12,09:43:43+32	123456ifname>lte.status:ip	Ô
Route Table		8613760365619	22/11/12,09:49:13+32	123456ifname>lte.status:csq	
Advanced Routin		8613760365619	22/11/12,09:49:58+32	123456ifname>lte.status:imei	Û
🗢 Wireless	D	I			View 1 - 5 of 5
Station					
Application					
OC System				Refresh Apply	
🙀 Debug					
A Development					

Parameter	Instruction	Default
SMS Function	SMS Function Enable/Disable Optional.	Disable
HE Agent	Enable SMS command inquiry by HE command line mode.	Disable
Command Contact	Specify the acceptable phone number. If null, the router will accept anyone phone number without limitation.	Null
Command Prefix	SMS command identify. The router will implement message command with correct prefix.	Null

Step 2 After Setting, please click "Apply" icon.



Configuration Instance

Please check LTE SMS Configuration in the chapter 3 as reference.

----End

2.5.3 LTE Backup SIM

Step 1 Network>LTE Backup SIM to enter Setting GUI.

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	☆ > Network > LTE Backup SIM			
Utilization	Backup Simcard	~		
Interface	Main Simcard	In Use	Backup Simcard	Disable
Network	Main Simcard ICCID		Backup Simcard ICCID	
LTE	Main Simcard IMSI		Backup Simcard IMSI	
- LTE SMS				
LTE Backup SIM	<			
··· LAN	Simcard select	Auto	~	
Hosts	Signal failed times	60		
ALG				
Firewall	Dial failed times	4		
Port Map	Failover duration(sec)	600		
Port Praxy	PIN Code			
- Route Table				
- Advanced Routing	APN Custom	×		
S Wireless				

Table 2-1 LAN Setting Instruction

Parameter	Instruction	Default
Backup SIM	Enable Backup Simcard	Disable
Simcard Select	Auto, Main Simcard, Backup Simcard optional	Auto
Signal failed times	Router will switch to backup Sim card once detect signal failure times exceeds the defined times.	60times
Dial failed times	It will switch to backup Sim card once dail-up failure times exceeds the defined times.	4times
Failover duration(sec)	The router will work on the backup Sim card time(sec)	600s
PIN Code	Some SIM cards are locked with a Personal Identification Number (PIN) code in case they are lost or stolen.	86400
APN Custom	Auto APN will be enable when APN Custom switch is Off. The router will recognize the access point name(APN)automatically.	Off
	Regarding to private SIM card, please enable APN Custom button to configure SIM information such as APN, Username and Password.	

Step 2 After setting, please click "Apply" to finish, the device will reboot.

----End

2.5.4 LAN Setting

Step 1 Network>LAN to enter below GUI.

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≓	Dashboard	* Network > LAN
	Utilization	IPv4 Address 192.168.8.1
	Interface	Subnet Mask 255.255.0
.th	Network	
-	LTE	
1	LTE SMS	Address 2 🔵 🗙
-	LTE Backup SIM	
	LAN	
	Hosts	Address 3 🔘 🗙
-	ALG	
	Firewall	
	Port Map	
-	Port Proxy	Start IP Address 192.168.8.2
	Route Table	End IP Address 192.168.8.250
	Advanced Routing	86400
(1)	Wireless	Lease(Sec) 00400
۵	Station	Assign Gateway
	Application	Assign DNS
Q ⁰	System	Assign DNS2
Ň	Debug	
*	Development	Refresh Apply

Table 2-2 LAN Setting Instruction

Parameter	Instruction	Default
IP Address	Router IP address, default IP is 192.168.8.1	192.168.8.1
Subnet Mask	Router subnet mask, default mask is 255.255.255.0	255.255.255.0
Address2	Add LAN address	Disable
Address3	Add LAN address	Disable
DHCP Server	Dynamic allocation IP service, after enable, it will show the IP address range and options of lease	Enable
Start IP Address	DHCP IP poor start IP address	192.168.8.2
End IP Address	DHCP IP poor end IP address	192.168.8.250
Lease	The valid time, unit as sec	86400
Assign Gateway	Specified the gateway IP address	Null
Assign DNS	Specified the DNS server IP address	Null
Assign DNS2	Specified the DNS server IP address	Null

Step 2 After setting, please click "Apply" to finish, the device will reboot.

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----End

2.5.5 Hosts

Step 1 Network->Host to enter the Hosts setting GUI.

	*	Network > Hosts			
Utilization	Ho	sts Table		^	
Interface		Hostname	IP Address	Operation	
A Network	0	localhost	127.0.0.1	1	
LTE	0	ip6-localhost ip6-loopback	:1	1	
- LTE SMS	0			View 1 2 of 2	
··· LTE Backup SIM				view 1 * 2 01 2	
LAN					
Hosts	Warr	ining: Intranet device to use this mai	pping need set DNS to th	is router	
- ALG		•			
- Firewall				Refresh Apply	e l
··· Port Map					- 1
Port Proxy					
Route Table					
- Advanced Routing					

Step 2 Please Click " Apply " to finish.

----End

2.5.6 **ALG**

Step 1 Basic Network->ALG to enter the application layer gateway setting GUI.



Network > ALG	
FTP	
PPTP	
GRE	
RTSP	
SIP	
H323	
SNMP	
TFTP	● ×
Amanda	
IRC	
UDP Lite	
	Refresh Apply

Step 2 Please Click "Apply " to finish.

----End

2.5.7 Firewall

Step 1 Network->Firewall to enter the Firewall setting page.

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=	Dashboard	*	> Network > Firew	all						
	Utilization				Interface	LTE				~
	Interface				Status	~ 0				
-	Network									
	Connection				ICMP Access	() ×)				
	LTE				Telnet Access) ×				
-	LTE SMS				SSH Access	×				
	LTE Backup SIM									
	WAN				WEB Access	() ×)				
	WISP(2.4G)				ICMP Through	< O				
	LAN				NAT Through	~				
F	Hosts				J					
	ALG				Default Action	Extranet acce	ss is prohibited			~
	Firewall	Ac	tion Rule Table						^	
	Port Map		Name(unique)	Extranet Address	Intranet Address	Protocol	Intranet Port	Action	Operation	
	Port Proxy									
	Route Table								ino recoras to view	
	Advanced Routing	-								
-	VPN					Refresh	Apply			



	In	terface	LTE			~
		Status	0			
	ICMP	Access C	×			
	Telnet	Access C	×			
	SSH	Access	X			
	WEB	Access C	×			
ICMP Through						
	NAT TI	hrough				
	NAT Ti Default	hrough	Drop			~
Action Rule Table	NAT Ti Default	hrough	Drop			~
Action Rule Table	NAT Ti Default Extranet Address Intr	hrough C t Action	Drop s Protocol	Intranet Port	Action	V Operation
Action Rule Table Name(unique)	NAT Ti Default Extranet Address Intra	hrough C t Action	Drop s Protocol	Intranet Port	Action	Operation
Action Rule Table Name(unique) Image: Contract of the second se	NAT TI Default	hrough t Action	Drop s Protocol	Intranet Port	Action	Operation o records to view

Click 💽 to add firewall rules. The maximum rule count is 30.

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Add Record	×
Name(unique)	
Extranet Address	
Intranet Address	
Protocol	тср 🛩
Intranet Port	
Action	Drop 🗸
	Submit Cancel

Parameter	Instruction	Default
Interface	WAN/LTE/VPN interface Options	WAN
Status	Enable/Disable Options	ON
ICMP Access	Indicate the ordinal of the list.	OFF
Telnet/SSH/WEB Access	Enable/Disable Telnet/SSH/WEB remote access	Disable
ICMP Through	Enable/Disable ICMP Through	Enable
NAT Through	Configure external port of router which can be accessed by other hosts from internet.	Enable
Default Action	Accept/Drop Options	Drop
Name(unique)	Indicate the ordinal of the list.	Null
Extranet Address	Defines if access is allowed from one or a range of IP addresses which are defined by Source IP Address, or every IP addresses.	Null
Intranet Address	The destination address inside the LAN.	Null
Protocol	TCP, UDP and ALL options	Null
Intranet Port	The destination port inside the LAN.	Null
Action	Accept and Drop	

Step 2 Please Click "Apply" to finish.

----End



2.5.8 **Port Map**

	A > Network > Port	Map					
Utilization			Interface	LTE			~
Interface			Mode	Forward			~
A Network				-			
LTE		DMZ H	ost Address				-
LTE SMS	NAT Rule Table					~	
LTE Backup SIM	Name(unique)	Port	Protocol	Intranet Address	Intranet Port	Operation	
- LAN	0/8				No rec	ords to view	
Hosts							
- ALG							
Firewall	Warnning: Firewall can	enable the ports	of the NAT/DN	//Z table			
Port Map	•						
Port Proxy				Refresh A	pply		
Route Table							
Advanced Routing							

Step 1 Basic Network->Port Map routing to enter setting page.

Click 💿 to add port mapping rules. The maximum rule count is 30.

NAT Rule Table	^
Add Record	×
Name(unique)	
Port	
Protocol	TCP+UDP ¥
Intranet Address	
Intranet Port	
	Submit Cancel

Table 2-3 Port Map Setting Instruction

Parameter	Instruction	Default
Interface	LTE/VPN interface Options	LTE

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Parameter	Instruction	Default
Mode	Forward/DNAT Options	Forward
DMZ Host Address	The destination IP address inside the LAN. The DMZ will be available after configured host IP address.	Null
Name(unique)	Indicate the ordinal of the list.	Null
Port	Configure external port of router which can be accessed by other hosts from internet.	Null
Protocol	UDP,TCP, Both UDP/TCP Options	UDP+TCP
Intranet Address	The destination address inside the LAN.	Null
Intranet Port	The internal port of router's LAN	Null

Step 2 Please Click "Apply" to finish.

----End

2.5.9 Port Proxy

Step 1 Network->Port Proxy to enter the setting page.



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×

	Name(unique)
	Port
TCP+UDP 🗸	Protocol
	Internet Address
	Internet Port

Table 2-4 Port Map Setting Instruction

Parameter	Instruction	Default
Name(unique)	Indicate the ordinal of the list.	Null
Port	Configure external port of router which can be accessed by other hosts from internet.	Null
Protocol	UDP,TCP, Both UDP/TCP Options	UDP+TCP
Intranet Address	The destination address inside the LAN.	Null
Intranet Port	The internal port of router's LAN	Null

NOTE

The feature is suitable for those device without gateway IP address. However, the device need to connect internet. The WL-R522 will provide port proxy for the device. Then WL-R522 will transfer device data to internet.

Step 2 Please Click "Apply" to finish.

----End

2.5.10 Routing Table

Step 1 Network->Routing Table to enter the setting page.

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☆ > Network > Routing Table

Name(unique)	IP Address	Subnet Mask	Gateway	Interface	Network Device	Metric	Operation
System Rules	192.168.10.0	255.255.255.0	0.0.0.0	WAN	eth0.2	0	Ŵ
System Rules	192.168.8.0	255.255.255.0	0.0.0.0	LAN	lan	0	Ŵ
Sy <mark>s</mark> tem Rules	127.0.0.0	255.255.255.0	0.0.0.0	Not Specified	lo	0	Đ
System Rules	8.8.8.8	255.255.255.255	192.168.10.1	WAN	eth0.2	0	Ô
System Rules	0.0.0.0	0.0.0.0	192.168.10.1	WAN	eth0.2	0	Ŵ

Refresh

Add Record	×
Name(unique)	
IP Address	
Subnet Mask	
Gateway	
Interface	Not Specified 💙
Metric	
	Submit Cancel

Table 2-5	Router Setting	Instruction
-----------	----------------	-------------

Parameter	Instruction	Default
Name(unique)	Indicate the ordinal of the list.	Null
IP Address	Router can reach the destination IP address.	Null
Subnet Mask	Subnet mask for destination IP address	Null
Gateway	Next hop IP address which the router will reach.	Null
Interface	Interface from router to gateway.	Null



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Parameter	Instruction	Default
Metric	The metric value acts as a measurement of priority. If a packet about to be routed matches two or more rules, the one with the lower metric is applied. Metric value range 0~255.	Null

Step 3 Please Click "Apply" to finish.

----End

2.5.11 Advanced Routing

Step 1 Basic Network->Advanced routing to enter setting page.

Pad	ket Mark List							1
	Name(unique)	Mark ID	Source IP	Dest IP	Protocol	Source Port	Dest Port	Operation
~	a 🚓 1				10 1		Norr	e o rele to vie

Rou	Routing Rule List							
	Name(unique)	Source Address	Subnet Mask	Source Interface	Mark ID	Table ID	Pref	Operation
0	a 🗊 🛛		د (ا	/0 > > 10	~		No	records to view

Rou	uting Table List							^
	Name(unique)	Table ID	Dest Address	Subnet Mask	Gateway	Interface	Metric	Operation
0	n 🖻 🖉		(«) («		» 10 🗸		No re	ecords to view

NOTE

Advanced Routing Features used to configure routing based on packet Mark, source addresses or ports. It will include 3 steps configuration as following.

- 1) Packet Mark. Mark the packet in the Packet Mark list. It will provide Mark ID.
- 2) Routing rule. Specify source address or Mark ID. It will provide routing Table ID.
- 3) Add Routing. Add a routing rule to the routing table specified by the routing table id, requiring that data accessing the specified IP address or IP address segment is sent to the specified next hop address via the specified interface.

Commonly, the source address is widely used for applications. It just need to configure routing rule and



configure routing table.

Add Record	×
Name(unique)	
Source Address	
Subnet Mask	
Source Interface	Not Specified 💙
Mark ID	
Table ID	
Pref	
	Submit Cancel

Parameter	Instruction	Default
Name(unique)	Name(unique) Indicate the ordinal of the list.	
Source Address Allow the specified subnet IP address/IP segment data to specify the destination IP or interface.		Null
Subnet Mask	Subnet mask for destination IP address	Null
Source Interface	Specify source address interface.	Not specified
Mark ID	Mark ID is created in Mark ID list. Source address without the Mark ID.	Null
Table ID	Create routing table ID and Add the table ID in routing table list. Table ID value range 100~250.	Null
Pref	Controls the order of IP rules. Rules with a lower priority value will be checked first.	Null

Add Record	2
Name(unique)	
Table ID	
Dest Address	
Subnet Mask	
Gateway	
Interface Not Specified 🗸	
Metric	
	Submit Cancel

Table 2-7 Source Address Routing Setting Instruction

Parameter	Instruction	Default
Name(unique)	Indicate the ordinal of the list.	Null
Table ID	Table IDInput the Table ID as the same as in Routing Rule list	
Dest Address	Routing can reach the destination IP address.	Null
Subnet Mask	Subnet mask for destination IP address	Null
Gateway	Next hop IP address which the routing will reach.	Null
Interface	Interface from router to gateway.	Not specified
Metric	The metric value acts as a measurement of priority. If a packet about to be routed matches two or more rules, the one with the lower metric is applied. Metric value range 0~255.	Null

Step 2 Please Click "Apply" to finish.

----End

2.6 VPN Setting

2.6.1 **IPSec Setting**

Step 1 VPN > IPSec to check or modify the relevant parameter.

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≓	Dashboard	☆ > VPN > IPSEC Connection	n				
	Utilization		IPSEC Client				
	Interface	Connection Status	Online		Peer Address		222.248.230.163
đ	Network	Local <-> Peer	10.18.92.217<=>222	2.248.230.163	Local Network <-> Peer Netwo	rk	192.168.8.0/24<=>192.168.31.0/24
•	VPN	Online Time	56 seconds ago		Rx/Tx(byte)		0/0
	IPSEC Connection						
-	OpenVPN client		Peer Address	222.248.230.163			
	OpenVPN Server		Peer Network	192.168.31.0			
	L2TP Client		Peer Network Mask	255 255 255 0			
441	PPTP Client		T CET TELEVOIR MOSK				
	GRE Tunnel		Peer Identify Type	IP	~		
(0	Wireless		Local Identify Type	IP	*		
۵	Station		Aggressive Mode	() ×			
	Application		Password		Ø		
00	System		0.000.000.000				
Ŵ	Debug		IKE Version	IKEv1	~		
*	Development		IKE Authentication	MDS	~		

Step 2 Please click "Apply" to finish.



Configuration Instance

Please check lock bank configuration in the chapter 3 as reference.

----End

2.6.2 OpenVPN Client Setting

Step 1 VPN > Openvpn client to check or modify the relevant parameter.



~	Subnet	Topology
		Server Address
~	TUN	Device
~	UDP	Protocol
	1194	Port
~		Cipher
~	Disable	LZO Compress
~	Certificate	Auth Type
~	Disable	HMAC Signature Check
		IP Masquerade(NAT)
		Default Route
	×	Custom DNS
	10	Keepalive Interval(sec)
	120	Keepalive Timeout(sec)
	1	OpenVPN Custom Options(Separated by semicolons)

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Table 2-8 OpenVPN Client Instruction

Parameter	Instruction	Default
Technology	Technology Subnet/Point-to-point options	
Server Address	Server Address The Openvpn server public IP address and port.	
Device Type	Tap and Tun type are optional. Tap is for bridge mode and Tunnel is for routing mode.	TUN
Protocol	UDP and TCP optional.	
Port	The Openvpn server port.	
Cipher	Encryption Cipher as requested. Null as Auto	Null



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Parameter	Instruction	Default
LZO Compress	Disable/Adaptive/Yes/No options	No
Auth. Type	Certificate and Username/password options	Certificate
HMAC Signature	Disable/TLS options	Disable

Step 2 Please click "Apply" to finish.



Configuration Instance

Please check lock bank configuration in the chapter 3 as reference.

----End

2.6.3 OpenVPN Server Setting

Step 1 VPN > Openvpn Server to check or modify the relevant parameter.

×		
Refresh Apply		
A No File	K	Choose Generat
1 No File		Generat
te 🔬 No File		Choose Generat
Y No File		Generat
5 No File		Generat
	^	
	Refresh Apply Image: No File Image: No File	Refresh Apply No File



Status		
Topology	Subnet	~
Device	TUN	~
Protocol	PDD	~
Port	1194	
Cipher		~
LZO Compress	Disable	~
Tunnel Subnet	10.0.0.0	
Tunnel Subnet Mask	255.255.255.0	
Tunnel DNS		
Tunnel DN52		
Client to Client		
Client Duplication		
Auth Type	Certificate	~
HMAC Signature Check	Disable	~
Keepalive Interval(sec)	10	
Keepalive Timeout(sec)	120	
OpenVPN Custom Options(Separated by semicolons)		

Table 2-9 OpenVPN Client Instruction

Parameter	Instruction	Default
Technology	Subnet/Point-to-point options	Subnet
Server Address	The Openvpn server public IP address and port.	Null
Device Type	Tap and Tun type are optional. Tap is for bridge mode and Tunnel is for routing mode.	TUN
Protocol	UDP and TCP optional.	
Port	The Openvpn server port.	
Cipher	Encryption Cipher as requested. Null as Auto	Null
LZO Compress	Disable/Adaptive/Yes/No options	No
Auth. Type	Certificate and Username/password options	Certificate
HMAC Signature	Disable/TLS options	Disable

Step 2 Please click "Apply" to finish.



NOTE NOTE

The OpenVPN server supports to generate certificate for testing. We suggest generate certificate from third party server.

----End

2.6.4 L2TP Client Setting

Step 1 VPN > L2TP Client to check or modify the relevant parameter.

Application > L2TP Client

Status	 ••• 		
Connection Status	Dawn		Server IP Address
Local IP Address			Remote IP Address
Subnet Mask			Gateway
DNS			DNS2
Rx/Tx(byte)	1		Live Time
l: Server Address			
Server Port	1701		
Username			
Password		Þ	
Tunnel Auth Mode	NONE	~	
IP Masquerade(NAT)			
Default Route	 Image: Contract of the second s		
Custom DNS	() ×		
Custom IP Address			
МТО	1400		
LCP Echo Interval			
LCP Echo Times			
PPP Option	debug	1	

Step 1 Please click "Apply" to finish.

----End

2.6.5 **PPTP Client Setting**

Step 1 VPN > PPTP client to check or modify the relevant parameter.


Status			
Connection Status	Down		Server IP Address
Local IP Address			Remote IP Address
Subnet Mask			Gateway
DNS			DNS2
Rx/Tx(byte)	1		Live Time
Server Address			
Username			
Password		Þ	
MPPE Encryption	MPPE MPPE State Encryption		
IP Masquerade(NAT)	~ 0		
Default Route			
Custom DNS			
Custom IP Address			
мти	1400		
LCP Echo Interval			
LCP Echo Times			
PPP Option	debug:refuse-eap	li	
	Refresh Apply		

----End

2.6.6 **GRE**

Step 1 Application > GRE client to check or modify the relevant parameter.



Connection Status	Down			Peer IP Address
Local IP Address				Remote IP Address
Subnet Mask				Gateway
DNS				DN52
tx/Tx(byte)	1			Live Time
Extern Interface	Not Specified		~	
Peer Address				
Local IP Address				
Remote IP Address				
πι	255			
IP Masquerade(NAT)	×			
Default Route	× •			
Route Table			^	
	Rule Name Tar	get Address	Target Mask	
	0 / 💼		No records to view	

----End

2.7 Wireless Setting

It's mainly for router which support Wi-Fi, you can modify and configure Wireless parameter through Web GUI, below is the common setting.

2.7.1 SSID Setting

Step 1 Wireless->SSID Setting to configure relative parameter.



Yureless > 2.4G SSID	
Status	
SSID	WL-R320-1A0010
Security Mode	Mixed WPA-PSK(Private)
WPA Mode	AES
Password	••••••
Hide SSID	() ×
Isolate Clients	• ×
Clients ACL	ACL Settings

Step 2 Wireless->SSID Setting to ACL relative parameter.

			Clients ACL	\bigcirc		
			ACL Type 🔘 B	lack List 🔵 Whit	e List	
Stat	tion List					^
0	MAC	Hostname	IP Address	Live Time	RSSI	Operation
0	/ 8 8	Scan			No rec	ords to view

Step 3 Wireless->SSID Setting to Channel relative parameter.



Mode	11N	~
Band Width	20	¥
Country	UNITED STATES	~
Channel	11	~
Beacon	100	
DTIM	1	
STBC		
Short Gl		
Tx Power	Default	~

----End

2.7.2 AP Client

Step 1 Wireless->AP Client to enter the setting page.

Status	
Status DOWN	
Peer MAC Peer MAC	
RSSI all Channel	
Rx/Tx 0B/0B Rate	
Scan Peer SSID Peer SSID2 Peer SSID3 Lock Strong Signal Lock BSSID	
Security Mode Disable(None) ~	

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Parameter	Instruction	Default
2.4G AP Client	Wi-Fi Client ON/OFF	OFF
Peer SSID	Defined the available SSID to connect. Supports 3 SSIDs as Options.	Null
Lock Strong Signal	The Wi-Fi client will always connect the strongest signal SSID.	Null
Lock BSSID	The Wi-Fi client will always connect the Basic Service Set Identifier(BSSID)	Null
Hidden SSID	Supprts to connect hidden SSID. It's necessary to define the channel of hidded SSID.	Null

Step 2 Please click "Apply" to finish.

----End

2.7.3 Clients

Step 1 Wireless->Clients to enter the client list page.

Online Number(1)						^
Hostname	MAC Address	IP Address	Live Time	Rx/Tx	RSSI	Operation
HUAWEI_Mate_20-da5235c086	12:B5:09:6B:23:28	192.168.8.67	00:00:04	08 / 08	-68dBm	Knock

----End

2.8 Station

2.8.1 Access Control

Step 1 Station Control > Access Control to check or modify the relevant parameter.

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😭 > Station > Access Control

ACI	Rule										~
0	Rule Name	Action	Dest	Protocol	Port	Start Date	End Date	Start time	End time	Week	Operation
0	N 🛛 🗎									No	records to view

Configure access control for the entire network, need click <apply> to save and apply

Add Record								
Add Necord								<u>(</u> 4
Rule Name								
Source								
Туре	ТСР	~						
Action	Drop	~						
)est&Domain&Keyword								
Dest Port								
Time Settings	Enable	~						
Start Date								
End Date								
Start time	00 🗸	00 🗸	/ 00 ~					
End time	23 🗸	59 🔨	59 🗸					
Week	Mon	day 💽	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday

Table 2-10	Access	Control	Instruction
10010 2 10	/ 1000000	0011001	1100 00001

Parameter	Instruction	Default
Rule Name	Indicate the ordinal of the list.	Null
Source Address	Specify the station device IP, MAC and IP segment.	Null

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WL-R522 Series	Router	User	Manual
----------------	--------	------	--------

Parameter	Instruction	Default
	If configure multiple IP addresses with comma(,) as separator.	
Туре	Support UDP/TCP/Domain/keyword filter	ТСР
Action	Drop, Accept and Return options	Drop
Destination Address	Indicate the ordinal of the list.	Null
Protocol	All, UDP, TCP options	All
Time Setting	Define access control available time.	Disable

Step 2 Please click "Apply" to finish



- 1) It will accept/drop the destination address and content(keyword/domain name) from router.
- 2) It will accept/drop the whitelist/blacklist.



Configuration Instance

Please check lock bank configuration in the chapter 3 as reference.

----End

2.8.2 Internet Control

Step 1 Station Control > Internet Control enter the setting GUI.

Internet	No Setting	
 and and a state of		

Step 2 Please click "Apply" to finish



It will support to control internet access authority and time management

----End



2.8.3 Station List

Step 1 Station Control > Station List to enter the GUI to check station list. We may check the device list in the station.

Online Number(2)				^			
0	Hostname	MAC Address	IP Address	Online Time	Rx/Tx	IFdev	Operation
		00:0E:C6:6B:25:42	192.168.8.100	00:30:25			1
0	HUAWEI_Mate_20-da5235c086	12:85:09:68:23:28	192.168.8.67	00:01:14		wifi@nssid	F

The <delete> here will clear the station of all configure

Step 2 Please click "Apply" to finish.

1) It will support to control and manage the specified devices to access to internet.

2) It will support accept/drop the specified devices destination address and content(keyword/domain name).

----End

2.9 Application

2.9.1 **DDNS**

Step 1 Application > DDNS to check or modify the relevant parameter.

Client	
Service Provider	oray.com
Domain	
Username	
Password	Ð
Client2	





Please check lock bank configuration in the chapter 3 as reference.

----End

2.9.2 Dynamic Routing

Step 1 Application > Dynamic Routing to check or modify the relevant parameter.

≓ Dashboard	Application > Dynamic Routing	
Utilization	RIPv1&RIPv2	
Interface	Interface Table	â
Network		
VPN		interiate Name
흊 Wireless		🛈 🖋 📋 No records to view
Station	Configure Options	
Application		li li
DDNS		
Dynamic Routing	OSPFv2	
GNSS		
- HA(VRRP)	Router ID	
- Remote IO	RFC1583	
··· SNMP Agent	Incode Table	xe.a
TTL&R5232	interface lable	^
RS485&TTL		J Interface Name Area
UPNP		🖸 🥒 📋 No records to view
- IGMP Proxy		
··· Multicast Routing	Configure Options	



----End

2.9.3 GNSS(Optional)

Step 1 Application > GNSS to check or modify the relevant parameter.



Application > GNSS	
Status	
Source	4G GPS
State	Searching
UTC	15:28:34:11:13:2022
LON/LAT	0.000000, 0.000000
Elevation	0.00m
Speed	0.00km/h
Direction	0.000
Declination	0.000
Number Of Satellite	0
	Map Preview
Client	
Client2	
Local Server	



GNSS feature is optional according to customer requirements. It supports two clients mode and one server mode. When the GNSS located successfully, the GNSS information will be display in the GUI. WL-R522 supports UDP/TCP/MQTT protocol to send GNSS data in the client mode and supports UDP/TCP protocol to send GNSS data in the server mode.



Please check lock bank configuration in the chapter 3 as reference.

---End



2.9.4 VRRP

Status	
Virtual IP	192.168.8.254/24
Device Group ID	1
Mode	Master 🗸
Priority	100
Advert(sec)	1
Preempt	
Auth	1234

Step 1 Application > VRRP to check or modify the relevant parameter.

Table 2-11 VRRP Filtering Instruction

Parameter	Instruction	Default
Status	Enable/Disable options	OFF
Virtual IP	Drop, Accept and Return options	Drop
Device Group ID	Specify which VRRP group of this router belong to.	Null
Mode	Master/backup option	Master
Priority	Enter the priority value from 1 to 255. The larger value has higher priority.	100
Advert(Sec)	Advertisement interval, unit as sec	1
Preempt	Enable preemption on the router and configure its preemption delay in a specific VRRP group.	OFF
Auth.	Master and backup mode router authentication key	1234

Step 2 Please click "Apply" to finish.

----End



2.9.5 **Remote IO**

Step 1	Application	> Remote IO	to check or	modify the	relevant	parameter.

Current IO Status	g1=00;g2=01;
G1	
G2	
CMS Macing Control	
SMS Monitoring Center	
Center Number	
Center2 Number	
Center3 Number	
Client	
Client2	

GPIO Value Format

Item	Value	Indication
GPIO number	g1	g1 for GPIO1(G1) port
		g2 for GPIO2(G2) port
		g3 for G3 port(Reserved)
First Digit	1	Output(DO)
	0	Input(DI)
Second Digit	1	High Level(3.3v)
	1	Low Level(0v)
Separator sign	;	

Step 2 Please click "Apply" to finish.



The remote IO feature support to remotely control IO by SMS and TCP protocol, and support IO status to report server by SMS and TCP protocol.



Configuration Instance



Please check lock bank configuration in the chapter 3 as reference.

----End

2.9.6 TTL/RS232

Step 1 Application > TTL/R232 to check or modify the relevant parameter. Serial #1 for RS232 port and Serial #2 for RS485 port as default.

Application > Serial#1		
Status		
Mode	Transparent Forwarding	~
Convert		
Serial Baud Rate	57600	~
Flow Control	Dicable	~
How Control	Diable	
Parity	Disable	
Data Bit	8	~
Stop Bit	1	~
Active Packet	Disable	~
Data Center		
Data Center2		
Data Center3		

Table 2-12 Serial Port Instruction

Parameter	Instruction	Default
Status	ON/OFF Options	ON
Mode	GNSS, Command Line, Modbus, MQTT, Transport Forwarding Options. Transport Forwarding for example as below.	Command Line
Convert	ON/OFF Options. RS232/RS485 for ON status. Two	ON

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Parameter	Instruction	Default
	serial port for TTL/TTL, please choose OFF status.	
Server Address	The Openvpn server public IP address and port.	
Baud rate	1200~230400 Options	57600
Flow Control	Disable/Hard/Soft options	Disable
Parity	Disable/Odd/Even	Disable
Data Bit	Data bit 5,6,7,8 options	8
Stop Bit	Stop bit 1,2 options	1
Active Packet	Disable/Idle/Time options	Disable
Center Address	Supports 3 data server synchronously. IP address and domain name are acceptable for Server IP	OFF
Protocol	Data server port	Null
Port	TCP/UDP options	TCP

NOTE Customize Register Packet

Registration Packet	Disable	~
Packet Size(Byte)		
Time between Packets(ms)		~
Prefix of Pac <mark>k</mark> et	Disable	~
Suffix of Packet	Disable	~
Keepalive Packet	Disable	~

Step 2 Please click "Apply" to finish.

----End

2.9.7 L2TP Client

2.10 System

2.10.1 **Device**

Step 1 System > Device to check or modify the relevant parameter.

	V	/L-R322	2 Series Rouler User Maril
> System > Device			
Device Name	WL-R320-12BC30 Modify		
MAC Address	00:03:7F:12:BC:30		
Current Time	12:20:09 (06/19/2022) Copy from computer		
Time Source	NTP Server		
Run Time	03:59:46		
	System Reboot		
Operation Mode	Mix	~	
Language Settings	English	~	Restore to factory will not change its set
Time Zone	UTC+8(EAT - China Standard Time(BJT)	~	
NTP	Sync Sync		
NTP Server	ntp1.aliyun.com		
NTP Server2	ntp2.aliyun.com		
NTP Server3	ntp3.aliyun.com		
NTP Service	() ×		
	Refresh Apply		

----End

2.10.2 Configure

Step 1 System > Configure to check or modify the relevant parameter.

Configure Version	8		
	Backup Configure	Default Configure	

Step 2 Please click "Apply" to finish.

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----End

2.10.3 Software

Step 1 System > Software to check or modify the relevant parameter.

☆ System > Software	
Firmware	
Firmware Version	4.3.5-053022
Upgrade	2 No File Choose
Upgrade Online	
	Check new version
Software Repositories	
	Enter Repositories

Software List

			The second second		
Name	Size	Version	Author	Introduction	Operation

Step 2 Please click "Apply" to finish.

---End

$2.10.4 \hspace{0.1 cm} \textbf{Password}$

Step 1 System > Password to check or modify the relevant parameter.



Username	admin
Old Password	
New Password	
Repeat New Password	

Step 2 Please click "Apply" to finish.

---End

2.10.5 Auto Reboot

Step 1 System > Auto Reboot to check or modify the relevant parameter.

Reboot Mode	Idle Reboot 🗸
Minimum running time(sec)	208800
None Client duration(sec)	300
Point Reboot Time	3 🗸 30 🗸
Maximum running time(sec)	295200

Step 2 Please click "Apply" to finish.

---End

2.10.6 Manage Server

Step 1 System > Manage Server to check or modify the relevant parameter.

Shenzhen Wlink Technology Co., LTD 深圳市德传物联技术有限公司	WL-R522 Series Router User Manual
🖌 > System > Remote Management	
Rmote Manage Agent	
Broadcast Responses	
Group	default
Json Talk Agent	
	Refresh Apply

---End

2.10.7 Telent Server

Step 1 System > Telnet Server to check or modify the relevant parameter.

Telnet Server	
Designated Address Access	•
Port	23

Step 2 Please click "Apply" to finish.

---End

2.10.8 **SSH Server**

Step 1 System > SSH Server to check or modify the relevant parameter.



SSH Ser	ver 💌 🔿
Designated Address Acc	ess 🔘 🗙
F	ort 22

---End

2.10.9 Web Server

Step 1 System > Web Server to check or modify the relevant parameter.

Web Server	
Enable HTTP	
Port	80
Enable HTTPS	• ×
Designated Address Access	• ×
	Refresh Apply

Step 2 Please click "Apply" to finish.

---End

2.11 Debug

2.11.1 Syslog

Step 1 Please click "Debug> Syslog" to enter the GUI to download logs and capture logs by local or remote.

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A > Debug > Syslog	
Syslog	
Log Location	Memory 🗸
Log Max Size(KB)	100
Log Level	info 🗸
Remote Log	• ×
Log Operation	Clear Download
	Refresh Apply

Step 2 Please click "Apply" to finish

----End

2.11.2 Terminal

Step 1 Debug > Terminal to check or modify the relevant parameter.

🖀 > Debug > Terminal				
Close before leave	HE Terminal	Serial Terminal	Serial2 Terminal	LTE Terminal
Connected. at				
ati Quectel EC20F				
Revision: EC20CEHCR06A02M1G OK				
ati Quectel EC20F				
Revision: EC20CEHCR06A02M1G OK				

Step 2 Please click "Apply" to finish.

---End

2.11.3 Diagnostic

Step 1 Please click "Debug> Diagnostic" to enter the GUI for Ping and Traceroute.



A	ldress	Ping
А	ldress	Traceroute
	Close before leave	

----End

2.11.4 AT Command(LTE)

Step 1 Please click "Debug> Diagnostic" to enter the GUI for Ping and Traceroute.

AT command(LT	E)		
_	-		
Close before leave	Open AT Command		
Connected.			
at OK			
Quectel EC25			
Revision: EC25AUXGAR08A06M1G			
ак			

Step 2 Please click "Apply" to finish.



The 4G connection will be closed once opened AT command.

---End



2.12 Development(SDK)

```
    Development > SDK
    a. How to download SDK and compile upgrade package
    1. It is recommended to download this SDK after setting up the compilation environment in Ubuntu
    2. Enter the following command line to download from the Ubuntu terminal command line
        git clone https://github.com/skinos7/tiger7.git
    3. After waiting for the download, enter the tiger7 directory and input the following instructions to update the SDK to the latest state
        cd tiger7
        make ubuntu_preset
        make gid BOARDID=mtk2-mt7628-d218
        make update
        make update
        so the update, you can input the following instructions to compile the corresponding products
        s. After waiting for the update, you can input the following instructions to compile the corresponding products
        s. After waiting for the update, you can input the following instructions to compile the corresponding products
        s. After waiting for the update, you can input the following instructions to compile the corresponding products
        s. After waiting for the update, you can input the following instructions to compile the corresponding products
        s. After waiting for the update, you can input the following instructions to compile the corresponding products
        s. After waiting for the update, you can input the following instructions to compile the corresponding products
        s. After waiting for the update, you can input the following instructions to compile the corresponding products
        s. After waiting for the compilation, an upgrade package file ending with zz will be generated in the,/build directory, which can be upgraded through the upgrade interface of the router
        s. After waiting for the compilation, an upgrade package file ending with zz will be generated in the,/build directory.
```

2.13 Default Factory Configuration

Three methods to default factory configuration

2.13.1 Reset in GUI

Click System--->Configure to enter Configure UI, Click Default Configure to reset router to default factory configuration.

Dashboard	☆ System > Configure	
Resource	Configure Version	Default
Interface		
Network		
奈 Wireless		Backup Configure Default Configure
Station Control	Restore Configure	▲ No File Choose
Application		
Q [₽] System		
Device		
Configure		

2.13.2 Reset in SSH/Telnet

Login router via SSH/Telnet, then implement machine.default command to reset the router.

は LINK Shenzhen Wlink 深圳市徳传物	Technology Co., LTD 1联技术有限公司	W	L-R522 Series Router User Manual
admin120-D17F38 login: Password:			
EEEEEEEEE EE EE EEEEEEEEE EE Ashy EEEEEEEEE	LL LL LL LL LL LL LL LLLLLLLLL	FFFFFFFF FF FF FFFFFFFFF FF FF FF	
<pre>ww</pre>	List all the List all the List all the Show componen List all comp Get componen Set componen	project static component dynamic component nt configure ponent interface t configure attribute t configure attribute	9
# machine.default			

2.13.3 Reset via RST button

Press the RESET button for 5~8sec after the router startup and run, the router will auto reset to default factory configuration.



3.1 Link Backup

1) Operation mode

Click System--->Device GUI, Choose Mix in Operation mode.

· 深圳巾德传物	联技不有限公司	WL-R522 Series Router	User Manua
lo System	Run Time	07:23:17	
Device		System Reboot	
- Configure			
Software			
Password	Operation Mode	Mix	~
- Auto Reboot			
Remote Management			
Telnet Server	Time Zone	UTC-4(AST - Atlantic Ocean Standard Time)	~
SSH Server	NTP	Sync Sync	
Web Server	NTP Server	nto1 alivuo com	
e Debug	All Select	inp ranjoiteon	
Development	NTP Server2	ntp2.aliyun.com	
	NTP Server3	ntp3.aliyun.com	
	NTP Service	• *	
	NTP Service	Refresh Annly	

2) Link Backup

Click Network--->Connection GUI, choose link backup mode.

1	A > Network > Connection		
	WAN	valid	In Use
	LTE	invalid	Unused

, ypc		
Main Connection	WAN	~
Alternate Connection	LTE	~
King Connection	NONE	~
Reserve Connection	NONE	~

The King Connection with the highest priority. The router link will switch to King Connection once the defined King Connection available.

The Reserved Connection just keep the Connection reachable.

3) Link Backup

Click Network--->WAN GUI, configure WAN and add Availability Check rule. ICMP failure as configured, the router link will switch to 4G link.

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Availability Check	ICMP	~
Test Address	208.67.222.222	
Test Address 2	8.8.8.8	
Test Address 3		
Each Query Timeout(sec)	5	
Test Times	5	
Test Interval(sec)	15	

The router support to check 3 test addresses max one time. If ICMP is failed, the router will send ICMP as Each Query Timeout. If ICMP is reachable, the router will send ICMP as Test Interval.

For example.

If both 208.67.222.222 and 8.8.8.8 are unreachable, the router will check the test address 5 times as interval 5s. It will switch to 4G link. When one of 208.67.222.222 and 8.8.8.8 is reachable, it will switch back to WAN link.

3.2 Lock Band

Click Network--->LTE GUI, Modem Setting to enter Lock Band GUI.

	Utilization	Status	Online 👖	IPv4 Address	10.227.121.29		
	Interface	Network	中国联通 FDD LTE	RSSI	dl CSQ:13 RSRP:-119dBm		
	Network	ICCID	89860114851113626956	IMEI	862708044140445		
	LTE	Online Time 00:48:08:0 Ro/Tx 1.79MB / 1.19MB					
	LTE SMS						
	LTE Backup SIM						
	LAN		APN Custom				
	Hosts						
	ALG		Amon 24-4-				
	Firewall		Attach Mode				
	Port Map	GPS V					
	Port Proxy	Modem Settings					
	Route Table						
4	> Network >	LTE					
			Lock IMEI				
		Lock IMSI					
		Lock PIN					
		Lock Band					



Input command to lock the corresponding band as below list.

Items	Band	Commands
1	Band1	0,1,0,1
2	Band3	0,4,0,1
3	Band5	0,10,0,1
4	Band7	0,40,0,1
5	Band8	0,80,0,1
6	Band20	0,80000,0,1

For example.

Lock band3 as below.

Lock Band	0,4,0,1					
-----------	---------	--	--	--	--	--

3.3 LTE SMS

Click Network --->LTE SMS Setting GUI.

☆ Network > LTE SMS	
SMS Function	
HE Agent	
Command Contact	13760365619
Command Prefix	123456

The router will just accept the message command as the specified Command phone number and Prefix.

The Contact phone number 13760365619 and Prefix 123456 as example. The prefix doesn't support special characters such as $@#>\&^*[]$.

The SMS command lists as following.

Inquiry Items	SMS Command	SMS ACK	Note
4G Status	123456ifname>lte.status:status	Up/Down	
RSRP	123456ifname>lte.status:rsrp	RSRP Value	
CSQ	123456ifname>lte.status:csq	0~31	
IMEI	123456ifname>lte.status:imei	IMEI Value	
ICCID	123456ifname>lte.status:iccid	ICCDI Value	
IMSI	123456ifname>lte.status:imsi	IMSI Value	
Network Type	123456ifname>lte.status:nettype	Network Type	
Operator	123456ifname>Ite.status:operator	Operator Name	
MCC/MNC	123456ifname>lte.status:plmn	MCC/MNC	
Online Time	123456ifname>Ite.status:livetime	Online Time	hh:mm:ss

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SIM IP	123456ifname>lte.status:ip	SIM IP Address	
Restart	123456land>machine.restart(5)	ttrue	Restart after 5sec.

Mobile Phone Inquiry and ACK.

0"4899	00	₩ IQI () # 15:48
← 🧧	100 · 010 · 1,	~ & ::
		17:42
<u>00:42:19</u> 0		
17:42		
	今天星期一	
	123456ifname>	lte.status:plmn
		12:41
46001		
12:41		
	123456ifname>lte	status:nettype
		12:48
FDD LTE		
12:48		
	123456land>mag	chine.restart(5)
		28分钟前
ttrue		
and		
20X1 F4.H0		

3.4 DDNS

Click Application-->DDNS GUI to configure DDNS. The default update time is 600sec for domain name sevice.





0.04

Chefre		
State	Update Succeed	
Domain IP Address	222.248.230.163	
Extern IP Address	222.248.230.163	
Service Provider	oray.com	Ŷ
Domain	dimmalex.wicp.net	
Username	dimmalex	
Password		Þ
Client2		
State	Update Succeed	
Domain IP Address	222.248.230.163	
Extern IP Address	222.248.230.163	
Service Provider	oray.com	×
Domain	dimmalex.site	
Username	dimmalex	
Password		Þ

3.5 GNSS

Click Network--->LTE GUI, Modem Setting to enable GPS feature GUI.

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Ltilization	Status	Online 🔲		IPv4 Address	10.46.165.129
Interface	Network	中国联通 FDD LTE		RSSI	util CSQ:18 RSRP:-107dBm
Network	ICCID	8986011485111362	26956	IMEI	865847058016203
LTE	Online Time	00:05:51:0		Rx/Tx	77.55KB / 66.82KB
- LTE SMS					
- LTE Backup SIM					
- LAN		APN Custom	×		
Hosts					
ALG					
Firewall		Attach Mode	ALICO	v	
- Port Map		GPS			
- Port Proxy			Modern Settings		
Route Table					
Advanced Routing					

Click Application-->GNSS GUI to check GPS status GUI.

Application > GNSS	
Status	
Source	4G GPS
State	Located
UTC	3:1:33:11:14:2022
LON/LAT	113.920944, 22.574869
Elevation	37.60m
Speed	0.00km/h
Direction	283.700
Declination	286.000
Number Of Satellite	5
	Map Preview

GPS client mode

Configure TCP server IP, port and GPS data interval. You may custom GPS data as requested such router's ID, GPS data prefix and so on.



Client	 ••• 	
Server Address	113.87.83.74	
Protocol	TCP	~
Port	40001	
Report Interval	5	
Device ID		
Username		
Verification Code		
Report NMEA Header		
Registration Packet	Disable	~
Prefix of frame	Disable	~
Suffix of frame	Disable	~
Rx/Tx	0/7408	

Receive GPS data in transparent TCP server.

	TCP/UDP Net Assistant	· · · ·
Settings (1) Protocol	Data log	HetAssist V4. 3. 2
TCP Server	[2022-11-14 11:03:07.469]# RECV ASCII FROM	[192.168.10.2 :37231>
(2) Local host addr	\$PAHYR, 88124ED4BC28, , ,	
192.168.10.112 -	\$GPGSV, 3, 1, 09, 10, 26, 323, 27, 12, 19, 130, 18, 18	61, 219, 49, 25, 14, 163, 27, 1*67
	\$GPGSV, 3, 2, 09, 29, 01, 188, 26, 32, 21, 275, 42, 02	, 31, 177, , 15, 24, 052, , 1*63
(3) Local host port	\$GPGSV, 3, 3, 09, 40, , , 45, 1*68	
40001	\$GPGGA, 030204.00, 2234.491743, N, 11355.25632	:7, E, 1, 04, 1. 2, 37. 5, M, -2. 0, M, , *4F
Close	CODDING 030204 00 & 2234 401743 W 113EE 2E6	397 ¥ 0 0 983 7 141199 9 3 W 4
	V*5D	321, E, 0. 0, 203. 1, 141122, 2. 3, 8, K,
Recy Options	\$GPGSA, A. 3, 10, 18, 25, 32,	. 1*20
(• ASCII (HEX	[2022-11-14 11:03:12.236]# RECV ASCII FROM	[192, 168, 10, 2 :37231>
✓ Log display mode	\$PAHYR, 88124ED4BC28, , ,	
T Auto linefeed	\$GPGSV, 3, 1, 09, 10, 26, 323, 26, 12, 19, 130, 18, 18	i, 61, 219, 49, 25, 14, 163, 28, 1*69
Recv save to file	\$GPGSV, 3, 2, 09, 29, 01, 188, 25, 32, 21, 275, 42, 02	, 31, 177, , 15, 24, 052, , 1*60
1 0 11 01	\$GPGSV, 3, 3, 09, 40, , , 45, 1*68	
AutoScroll <u>Clear</u>	\$GPGGA, 030209.00, 2234.491746, N, 11355.25631	5, E, 1, 04, 1. 3, 37. 5, M, -2. 0, M, , *47
Sand Ontions	\$GPVTG, 283. 7, T, 286. 0, M, O. O, N, O. O, K, A*21	
	\$GPRMC, 030209.00, A, 2234.491746, N, 11355.256	315, E, O. O, 283. 7, 141122, 2. 3, W, A,
• ASCII C HEX	V*54	
Use escape chars	\$GPGSA, A, 3, 10, 18, 25, 32, , , , , , , , 1. 5, 1. 3, 0. 7	, 1*20
T AT CMD auto CR+Ll		~
Append checkcode		
Sand from file	Data Send Clients: All Connections (1)	
- Send from me	1	
Period 1000 ms	1	Send
Shortcut History		
Readv!	5 //0 RX:16036	1X:0 Keset



GPS Server mode

Configure TCP server local port and GPS data interval. You may custom GPS data as requested such router's ID, GPS data prefix and so on.

Local Server	••••				
Protocol	ТСР				~
Port	50001				
Report Interval					
Max Connections	5				
Device ID	wlink001				
Username					
Verification Code					
Report NMEA Header					
Registration Packet	Disable				~
Prefix of frame	Disable				~
Suffix of frame	Disable				~
Connections List	Clients(1)			^	
	Peer	Connection	Tx	Rx	
	192.168.8.100:61606	Online	10024	0	

Receive GPS data in transparent TCP Client.

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	TC	P/UDP Net Assistant	国	- 🗆 >
Settings	Data log		HetAssist V	4.3.2
(1) Protocol	-			
TCP Client 💌	[2022-11-14 11:2	4:39.174]# RECV ASCII>		^
(2) Remote host addr	\$PAHYR, 88124ED4B	C28, wlink001, ,		
192.168.8.1 👻	\$GPGSV, 3, 1, 12, 02	, 21, <mark>1</mark> 74, 38, 10, 33, 329, 26, 18, 52, 206, •	45, 22, 06, 264, 33, 1*6I)
(2) Pamata hast part	\$GPGSV, 3, 2, 12, 32,	, 25, 285, 38, 05, 06, 122, , 12, 24, 120, , 1	5, 19, <mark>0</mark> 60, , 1*6A	
(5) Remote nost port	\$GPGSV, 3, 3, 12, 23	, 61, 001, , 24, 50, 036, , 31, , , , 40, , , 46, .	1*62	
10001	\$GPGGA, 032336.00	, 2234. 491882, N, 11355. 253017, E, 1, 05,	, 1. 3, 34. 1, M, -2. 0, M, ,	*4D
Disconnect	\$GPVTG, 235. 7, T, 2	38.0, M, O. O, N, O. O, K, A*29		202
	\$GPRMC, 032336.00	, A, 2234. 491882, N, 11355. 253017, E, O. (0, 235. 7, 141122, 2. 3, %	I, A,
D. O. C.	\$CPCSA & 2 02 10	10 00 00 1 5 1 0 0 1 404		
Recv Options	- \$01 05K, K, 5, 02, 10	, 10, 22, 32, , , , , , , 1. 3, 1. 3, 0. 0, 1*2K		
• ASCII C HEX	[2022-11-14 11:2	4:40 377]# RECV ASCITS		
✓ Log display mode	\$PAHYR. 88124ED4B	C28. wlink001.		
Auto linefeed	\$GPGSV, 3, 1, 12, 02	, 21, 174, 37, 10, 33, 329, 27, 18, 52, 206, 4	45, 22, 06, 264, 33, 1*63	3
Recv save to file	\$GPGSV, 3, 2, 12, 32,	, 25, 285, 38, 05, 06, 122, , 12, 24, 120, , 1	5, 19, 060, , 1*6A	
Aut. 2	\$GPGSV, 3, 3, 12, 23	, 61, 001, , 24, 50, 036, , 31, , , , 40, , , 46, :	1*62	
AutoScroll Clear	\$GPGGA, 032337.00	, 2234. 491883, N, 11355. 253016, E, 1, 05,	, 1. 3, 34. 1, M, -2. 0, M, ,	*4C
Send Options	\$GPVTG, 235. 7, T, 2	38. 0, M, 0. 0, N, 0. 0, K, A*29		
	\$GPRMC, 032337.00	, A, 2234. 491883, N, 11355. 253016, E, O. (D, 235. 7, 141122, 2. 3, W	I, A,
(• ASCII (HEA	V*54			
Use escape chars	\$GPGSA, A, 3, 02, 10,	, 18, 22, 32, , , , , , , 1. 5, 1. 3, 0. 8, 1*2A		
T AT CMD auto CR+L1	<u> </u>			~
Append checkcode	Data Sand J			C1
Send from file	Data Send		w Ciear √	- Clear
Period 1000 ms				1
Shortcut History			5	ena
🖉 Ready!	<u>r</u>	102/0 RX:47416	TX:0 Re	set

3.6 Remote IO

Click Application-->Remote IO GUI.



Current IO Status	g1=00;g2=01;
G1	
G2	
SMS Monitoring Center	
Center Number	13760365619
Center2 Number	
Center3 Number	
Client	• ×
Client2	
	Refresh Apply
TCP Login Data format	
acid=88124ED18010;id=wlink0001;user=	test;vcode=123456;
Network	·

A Network		
🗢 Wireless	IO Control Center	
Station Control	Server	113.110.228.155
Application	Protocol	TCP 🗸
🛱 System	Port	40002
Device	Device ID	wlink0001
Software	Username	test
Password	Verification Code	123456
Web Server	Connection Status	connecting
Telnet Server	Py/Ty	0/55
- Manage Server	DA/12	
Auto Reboot		
LED/IO Control	MQTT Server	

2) GPIO Value Format

g1=11;g2=10

Item Value Indication	Item	Value	Indication
-----------------------	------	-------	------------



GPIO number	g1	g1 for GPIO1 port
		g2 for GPIO2 port
		g3 for G3 port(Reserved)
First Digit	1	Output(DO)
	0	Input(DI)
Second Digit	1	High Level(3.3v)
	1	Low Level(0v)
Separator sign	;	

3) SMS Control and Report

SMS Control

Network---> LTE SMS to enable SMS function and configure the Contact phone number and command prefix code. The router will implement the command from the configured contact phone number and ignore other phone number command.

	SMS Function		
	HE Agent		
	Command Contact	13760365619	
	Command Prefix	123456	
	continent from		
_			
Contact	Date	Content	Operation
a			No records to view
-			

The SMS command lists as following.

	-		
Inquiry Items	SMS Command	SMS ACK	Note
G1 output high level	12345io>agent.modify[g1=11]	g1=11;g2=01;	
G1 input high level	12345io>agent.modify[g1=01]	g1=01;g2=01;	
G1 output low level	12345io>agent.modify[g1=10]	g1=10;g2=01;	
G1 input low level	12345io>agent.modify[g1=00]	g1=00;g2=01;	
G2 output high level	12345io>agent.modify[g2=11]	g1=00;g2=11;	
G2 output low level	12345io>agent.modify[g2=10]	g1=00;g2=10;	

Apply

SMS Report



Application > Remote IO	
Current IO Status	g1=00:g2=01;
G1	
G2	
SMS Monitoring Center	
Center Number	13760365619
Center2 Number	
Center3 Number	
Client	
Client2	
	Refresh Apply

G1 and G2 as DI mode

G1 port from low level to high level, it will trigger report as g1=01;g2=01; G1 port from high level to low level, it will trigger report as g1=00;g2=01; G2 port from low level to high level, it will trigger report as g1=00;g2=01; G2 port from high level to low level, it will trigger report as g1=00;g2=00;

4) TCP Server Demo

g1=10;g2=01;

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	Network Assistant	
Settings	Data Log	<mark>Assist V5.0.3</mark> 🗇 ζ
[1] Protocol		^
TCP Server	[2022-12-17 20:53:16.316]# Client 192.168.8.1:57256 gets onlin	ne.
(2) Local Host Addr		
192168.8.2	[2022-12-17 20:53:16.348]# RECV ASCII FROM 192.168.8.1 :57256)	>
	macid=303D511A0010;id=wlink001;user=test;vcode=123456;	
(3) Local Host Port	[2022-12-17 20:53:52.403]# SEND ASCII TO ALL>	
9000	g1=01;g2=11;	
	[2022-12-17 20:53:52.412]# RECV ASCII FROM 192.168.8.1 :57256)	>
- Close	g1=00;g2=11;	
<u> </u>	[2022-12-17 20:53:52.454]# RECV ASCII FROM 192.168.8.1 :57256)	>
0.4	g1=00;g2=11;	
ecv Uptions	[2022-12-17 20:56:43.019]# SEND ASCII TO ALL>	
ASCIL C HEX	g1=10;g2=11;	
✓ Log Display Mode	[2022-12-17 20:56:43.025]# RECV ASCII FROM 192.168.8.1 :57256)	>
A shall in a famal	g1=10;g2=11;	
	[2022-12-17 20:56:43.067]# RECV ASCII FROM 192.168.8.1 :57256)	>
Hide Received Data	g1=10;g2=11;	
🔲 Save Recv to File	[2022-12-17 20:57:38.060]# SEND ASCII TO ALL>	
AntoSanoll Class	g1=10;g2=01;	
Adrosof off Crear	[2022-12-17 20:57:38.072]# RECV ASCII FROM 192.168.8.1 :57256)	>
Send Options	g1=10; g2=01;	
	[2022-12-17 20:57:38.111]# RECV ASCII FROM 192.168.8.1 :57256)	>
• ASCII C HEX	g1=10;g2=01;	
🔲 Use Escape Chars 🛈		~
Auto Append Bytes		10
E Sand from File	Data Send Clients: All Connections (1) 💌 < Discon	🗸 🗸 Clear 🗶 Clea
	g1=10: g2=01:	1
Cycle 1000 ms		Send
Shortcut <u>History</u>		

Current IO Status g1=10;g2=01;

3.7 OpenVPN(TAP Mode)

OpenVPN two peers subnet IP addressed are in the same IP segment.
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Configure Openvpn client according to OpenVPN server.

~	Subnet	Topology
	113.87.83.74	Server Address
~	ТАР	Device
~	UDP	Protocol
	1194	Port
~	BF-CBC	Cipher
~	Adaptive	LZO Compress
~	Certificate	Auth Type
~	Disable	HMAC Signature Check
	10	Keepalive Interval(sec)
	120	Keepalive Timeout(sec)
		OpenVPN Custom Options(Separated by semicolons)

Upload OpenVPN certificate key as OpenVPN server provided.

Certificate Authority(CA)	🕹 No File	Choose	Download	Delete
Client Certificate	No File	Choose	Download	Delete
Client Private Key	No File	Choose	Download	Delete

OpenVPN Status

OpenVPN client will be assigned the same segment IP address from OpenVPN server.



Status			
Connection Status	Online II	Server IP Address	113.87.83.74
Local IP Address	192.168.5.3	Remote IP Address	192.168.5.3
Subnet Mask	255.255.255.0	Gateway	192.168.5.1
DNS		DNS2	
Rx/Tx(byte)	474291/13493727	Live Time	13:52:09:0

Ping Testing from laptop 192.168.5.11 to OpenVPN server 192.168.5.1

🔳 🕨 🛑 🔚	1 🖻 🗳 🔧 📲				
Host Name 🧳	IP Addre	ss Reply	IP Addre	Succeed Co	Failed Count
192.168.5.1	192.168.5	5.1 192.1	58.5.1	9	0
<					>
nt On 🧳	Reply IP Address	Ping Time	Ping T	TL Ping	Status ^
2022-11-23 1	192.168.5.1	8	64	Succe	eeded
2022-11-23 1	192.168.5.1	4	64	Succe	eded
2022-11-23 1	192.168.5.1	4	64	Succe	eded
2022-11-23 1	192.168.5.1	4	64	Succe	eded
2022-11-23 1	192.168.5.1	4	64	Succe	eded
2022-11-23 1	192.168.5.1	4	64	Succe	eded
2022.11.22 1	102 168 5 1	٨	64	Succe	Y hahaa

Ping Testing from laptop 192.168.5.11 to OpenVPN subnet PC 192.168.5.5

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Host Name /	IP Address	Reply IP A	ddre	Succeed Co	Failed Cou	int
DESKTOP-2B1Q	VF7 192.168.5.5	192.168.5.	.5	8	0	
<						>
Sent On 🧳	Reply IP Address	Ping Time	Ping	TTL P	ing Status	^
2022-11-23 1	192.168.5.5	51	128	S	ucceeded	
2022-11-23 1	192.168.5.5	5	128	S	ucceeded	
● 2022-11-23 1	192.168.5.5	4	128	S	ucceeded	
2022-11-23 1	192.168.5.5	4	128	S	ucceeded	
2022-11-23 1	192.168.5.5	4	128	S	ucceeded	
2022-11-23 1	192.168.5.5	5	128	S	ucceeded	
▲ 2022.11.22 1 <	102 168 5 5	N	128	c	ucceeded)	. *

3.8 IPSec Setting



4.8.1 IPSec Server Mode

The router will run IPsec as server mode when didn't configure peer address.

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WL-R522 Series Router User Manual

	New York					
Name	Status	Local <-> Peer		Local Network <-> Peer Network	Encryption	Rx/Tx(byte)
connect	Online	222.248.230.163 <	> 183.9.202.143	192.168.31.0/24 <-> 192.168.8.0/24	3DES_CBC/HMAC_MD5	6_96 0B / 0B
						View 1 - 1 of
		Peer Address				
		Peer Network	192.168.8.0			
	P	eer Network Mask	255 255 255 0			
	5		233,233,233,0			
		Peer Identify Type	IP II		·	
		Local Identify Type			v	
		Aggressive Mode				
		Password			Ø	
		IKE Version	IKEv1		~	
		IKE Authentication	MD5		~	
		IKE Encrypt	3DES		~	
	IKI	E DH Group	MODP1024		~	
		IKE Lifetime	3600			
		Ē				
	IPS	EC Protocol	ESP		~	
	IPSEC Aut	hentication	MD5		~	
	IP	SEC Encrypt	3DES		~	
		L III				
	IPSE	C DH Group	MODP1024		~	
	IPS	SEC Lifetime	2600			
		DPD Type	Clear		~	
		DPD Delay				
	D	PD Timeout				
	Config	ure Options				
	Coung	are options			1	

We can check IPsec Tunnel list in the table.



IPSEC Client

	Name	Status	Local <-> Peer	Local Network <-> Peer Network	Encryption	Rx/Tx(byte)
0	connect	Online	222.248.230.163 <-> 119.143.94.109	192.168.31.0/24 <-> 192.168.8.0/24	3DES_CBC/HMAC_MD5_96	840B / 840B

4.8.2 IPSec Client Mode

Interface	Connection Status	Online		Peer Address		222.248.230.163
Network	Local <-> Peer	10.7.72.2<=>222.2	48.230.163	Local Network <-> Peer Net	work	192.168.8.0/24<=>192.168.31.0/24
VPN	Online Time	50 minutes ago		Rx/Tx(byte)		0/0
IPSEC Connection	4					
··· OpenVPN client		Peer Address	222.248.230.163			
··· OpenVPN Server		Peer Network	192.168.31.0			
- L2TP Client		Peer Network Mask	255.255.255.0			
··· PPTP Client						
- GRE Tunnel		Peer Identify Type	. IP		~	
Wireless		Local Identify Type	IP		~	
Station		Aggressive Mode	×			
Application		Password			Ø	
9 <mark>8</mark> System						
🙀 Debug		IKE Version	IKEv1		~	
Cevelopment		IKE Authentication	MD5		~	
۲		IKE Encrypt	3DES		~	
		IKE DH Group	MODP1024		~	
		IKE Lifetime	3600			
_						
		IKE Encrypt	3DES	~		
		IKE DH Group	MODP1024	~		
		IKE Lifetime	3600			
		IPSEC Protocol	ESP	~		
		IPSEC Authentication	MD5	~		
		IPSEC Encrypt	3DES	~		
			Nonnan			
		IPSEC DH Group	MODP1024	·		
		IPSEC Lifetime	600			
		DPD Type	Hold	~		
		DPD Delay				
		DPD Timequit				
		Deb mileout				
		Configure Options				
				ĥ		

IPsec Status

☆ > VPN > IPSEC Connect	tion		
	IPSEC Client		
Connection Status	Online	Peer Address	222.248.230.163
Local <-> Peer	10.15.91.48<=>222.248.230.163	Local Network <-> Peer Network	192.168.8.0/24<=>192.168.31.0/24
Online Time	57 seconds ago	Rx/Tx(byte)	504/504

Ping Server Subnet Testing



A > Debug > Diagnostic		
Address	192,168.31.1	Ping
Address		Traceroute
	Close before leave	
PING 192.168.31.1 (192.168.31.1): 56 data bytes 64 bytes from 192.168.31.1: seg=0 tt1=64 time=5	3.249 ms	
64 bytes from 192.168.31.1: seq=1 ttl=64 time=9	9.115 ms	
64 bytes from 192.168.31.1: seq=2 ttl=64 time=7 64 bytes from 192.168.31.1: seq=3 ttl=64 time=6	3.983 ms 3.955 ms	
64 bytes from 192.168.31.1: seq=4 ttl=64 time=4	7.336 ms	

3.9 Station Setting

1) Allow one Station device IP address 192.168.8.250 to access to destination IP 163.177.151.109, TCP protocol and port 80.

Add Record	×
Rule Name	1
Source	192.168.8.250
Туре	тср 🗸
Action	Accept 🗸
Dest&Domain&Keyword	163.177.151.109
Dest Port	80
Time Settings	Disable 🗸

2) Refuse one Station device MAC address 00:E0:4C:68:17:E8 to access to destination IP 163.177.151.109, TCP protocol and port 80.

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Add Record	×
Rule Name	1
Source	00:E0:4C:68:17:E8
Туре	тср 🗸
Action	Drop 🖌
Dest&Domain&Keyword	163.177.151.109
Dest Port	80
Time Settings	Disable 💙
	Submit Cancel

NOTE

- > Configure device MAC if need to limit only one device in the LAN.
- > Configure device IP address if need to limit only one device in the LAN.
- Configure multiple devices IP addresses with comma(,) as separator if need to limit multiple devices in the LAN.
- Configure IP segment from start address to end address if limit devices with successive IP addresses.
- 3) Refuse 192.168.8.250, 192.168.8.224, 192.168.8.100 to access to <u>www.google.com</u>

Add Record	×
Rule Name	2
Source	192.168.8.250, 192.168.8
Туре	Domain 🗸
Action	Drop 🗸
Dest&Domain&Keyword	www.google.com
Time Settings	Disable 💙
	Submit Cancel

4) Refuse those IP address from 192.168.8.250 to 192.168.8.254 to access to www.google.com

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Add Record	×
Rule Name	3
Source	192.168.8.250-192.168.8
Туре	Domain 🗸
Action	Drop 🗸
Dest&Domain&Keyword	www.google.com
Time Settings	Disable 🗸
	Submit Cancel

5) It will accept/drop the whitelist/blacklist.

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