

# User Manual ---Apply to RT620 4G/3G RTU Gateway

V1.5 http://www.wlink-tech.com Feb 2025



#### Copyright © Shenzhen WLINK Technology Company Limited 2012 $\,\sim\,$ 2025

Without our written approval, anyone can't extract, copy whole or part of content of this file and can't spread out in any format.

#### Caution

Due to product updates or functional upgrading, we may renew the content of this file, and this file only for reference. All statement, information, suggestion .etc in this file do not compose any form of guarantee and we WLINK reserves the right of final explanation.

### Shenzhen WLINK Technology Company Limited

- Add: 2A, F5 Building, TCL International E City, No.1001 Zhongshanyuan Rd., Nanshan Dist., Shenzhen, 518052, China
- Web: http://www.wlink-tech.com
- Service Email: support@wlink-tech.com

Phone: 86-755-86089513

Fax: 86-755-26059261

# Contents

1 Product Introduction	1
1.1 Product Overview	1
1.2 Product Appearance	1
1.3 Equipment configuration and accessories	2
1.4 Functional Features	2
1.5 Technical indicators and specifications	4
2 Hardware Installation	6
2.1 Prepare	6
2.2 Product Interfaces	7
2.3 Power Supply	
2.4 LED status	10
3 RTU Configuration	
3.1 Web configuration environment	
3.2 System Status	
3.3 Collection and Reporting	
3.4 Data Scan	15
3.4.1 Old data	15
3.4.2 New Data	
3.5 Connection Settings	

#### Shenzhen Wlink Technology Co., LTD 深圳市徳传物联技术有限公司

3.5.1 Networking Setting	
3.5.2 Cellular Setting	
3.5.3 MQTT Setting	
3.6 LAN	
3.7 WLAN Configuration (WIFI)	
3.7.1 Basic Settings	23
3.7.2 Advanced Wireless	24
3.7.3 Wireless Survey	
3.8 Administration	
3.8.1 Scheduled Reboot	
3.8.2 Time	
3.8.3 Log	
3.8.4 Admin Access	
3.8.5 Upgrade	
3.8.6 Reboot	

Product Introduction

## **1.1 Product Overview**

RT620 is an intelligent acquisition and transmission terminal device that focuses on the acquisition, data processing, transmission of cellular connections. The device supports various analog signal sensors, switch signal sensors and RS485 communication interface; supports GPS/Beidou positioning acquisition and transmits location information through 3G/4G mobile network,.

The built-in temperature sensor allows users to better collect and judge the ambient temperature.

Rechargeable built-in clock battery supports power-down operation of the real-time clock.

Rich interface resources can cater to various changing and complex market application scenarios.

### **1.2 Product Appearance**



Front View



**Back View** 

## **1.3 Equipment configuration and accessories**

Accessories name	Quantity	Remark
RT620	1x	None
WIFI Antenna	1x	None
4G Antenna	1x	None
Network Cable	1x	None
Terminal Block	1x	None
Installation Kit	1x	None
Certificate of Conformity	1x	None
Power Adapter	1x	24 V /1A

Accessories are described in Table 1-1.

Table 1-1

## **1.4 Functional Features**

#### Basic Features

- 3G/4G
- RS485, Modbus-RTU Protocol Support, up to 32 devices can be mounted on a single channel.
- DI: Digital signal input: connect to switch signals such as door sensors and smoke detectors
- ADC Input: It can be connected to an external 4~20mA current sensor or a 0~+5V voltage sensor,
- Wide voltage power supply, anti-reverse protection. The power supply range can reach 18V~32V DC; the standard power supply is 24V/1A DC power supply.
- Built-in clock battery
- Local parameter configuration and status viewing through the web page.
- The built-in programmable function is used to collect the analog and switch values of the

machine, as well as the data of the Modbus protocol sensor connected to the serial port and control the relay output. Support local data calculation

#### > Scalability

- Support GPRS/WCDMA/TDD-LTE/FDD-LTE wireless real-time transmission of regular data
- Support remote parameter setting, modification or reset.
- Support remote firmware upgrade.
- Support Detran M2M terminal remote management protocol.
- Support MQTT protocol, send data to public cloud server.
- Scalable large-capacity data storage (8GB~64GB), common applications can meet at least one month of local data storage.
- Built-in temperature sensor.
- Optional support for GPS or Beidou satellite positioning.
- Support Wi-Fi to expand local applications, handheld terminals can be connected through Wi-Fi or APP to view the status of local devices.

# 1.5 Technical indicators and specifications

Name	Spec	Remark			
Physical properties					
Size	236 X 125 X 40 mm				
Weight	500g				
Operating	-30 ~ 75°C				
temperature					
Storage	-40 ~ 85°C				
temperature					
Humidity	0% $\sim$ 95% No condition				
Shock	SAE J1455				
System					
CPU	MIPS32 74K Core. 533MHz/560DMIPs	Up to MIPS32 74K Core. 533MHz/560DMIPs			
Flash	8MB	Up to 16MB			
RAM	64MB	Up to 128MB			
Microprocessor	Cortex M3				
Internal storage	8GB	Up to 64GB			
<b>Electrical properties</b>					
Operating Voltage	+18V $\sim$ +32V DC (Standard 24V/1A power adapter)	Lower than 18V will lead to inaccurate 12V output			
Working average	180mA/24V	4G and Wi-Fi enable			
power consumption					
Standby power	100mA/24V	4G and Wi-Fi disable			
consumption					
4G/3G					
Module	Industrial grade	The frequency band needs to indicate the country or region			
Frequency	FDD Band1/3/5   TDD Band38/39/40/41  WCDMA				
	900/2100MHz				
Output	Class4 (2W) @900MHz; Class1 (1W) @1800MHz				
GPRS	Class10				
Communication	PPP、TCP、UDP、Ping				
Protocol					
Gain	1.4dBi@900MHz, 3dBi@1800MHz				
RF impedance	50Ω				
SIM card	1.8/3V micro-SIM				
Data storage					
Data storage	Expandable to a maximum of 64GB data storage space	Customization, determine the storage time according to the user agreement			

#### LINK Shenzhen Wlink Technology Co., LTD 深圳市徳传物联技术有限公司

Physical interface		
24 Power Input	Power input, support V+, V- reverse connection; Vin=18 ~	Standard 24V@1A power adapter
	32V	
24 Power Output	Power output = Vin - 1V; for 24V sensor equipment to	Equivalent input power voltage
	take power	value
+12V Power Output	12V DC output, for 12V sensor equipment to take power	
+5V Power Output	5V DC output, for DI wet contact to take power	
AI	12 channels of analog signal input detection, 12Bit	
	precision	
DI dry contact	12-channel switch signal input detection	
DI wet contact	4 channels 0 - 5V voltage digital signal detection	
The relay		
Communication interfac	ce – the wireless communication part can be extended to	o support
WAN/LAN		
	LAN port	
LAN	10/100M Ethernet port, local area network LAN port	
USB2.0	Can be used for external data storage or encryption,	
	upgrade	
4G Main ANT	4G/3G Main antenna for mobile communication	The corresponding external
		antenna must be connected
4G Aux ANT	4G/3G Auxiliary antenna for mobile communication	
Wi-Fi	2.4G Wi-Fi Antenna	
GPS/BD	GPS / Beidou Antenna	
SIM	Drawer SIM card slot	
RS485	Support 3 channels RS485 local communication	The default baud rate is 9600
	interface, which can be used to connect sensor	
	equipment with 485 interfaces	
RS232	Support 1 RS232 local communication interface, which	The default baud rate is 115200
	can be used for system configuration	
	•	·

Table1-2



# **Hardware Installation**

## 2.1 Prepare

RT620	RT620					
	It is used for parameter configuration and debugging and needs to be purchased by					
USB to Serial	the user.					
Cable	It is recommended to buy a superior quality USB-to-serial cable to avoid various					
Cable	problems that are difficult to judge.					
	Not required if the computer has a physical serial port.					
RS232/RS485	Need to be purchased by users.					
Power	220V AC, used to provide power for RT620 products.					
Fower	For other power environments, please contact our technical support for help.					
Serial port	It is used to assist in debugging RT620, check the running status of RT620 to know					
debugging	whether it is working correctly. You can download general related software from the					
software	internet or contact our technical support.					
	It is used to upgrade the program of RT620, or restore the default parameters,					
Upgrade the	which can be downloaded from our website.					
software	Note: Under normal circumstances, it is not necessary to upgrade the program and					
Soltware	restore the default parameters. Please contact our technical support to confirm the					
	necessity before performing this operation.					
Internet	The communication function used to debug RT620 can be realized by using ADSL					
Internet	broadband, or portable mobile access devices such as USB modem.					
	User's own business platform software. In order to facilitate debugging, it is					
Business platform	recommended that users connect to the temporary platform of the UDP/TCP test					
	software first, and then change the RT620 to the business platform after the					
	debugging is completed.					

Table 2-1



## **2.2 Product Interfaces**

#### >>>Front View<<<



Port/LED	Remark
LAN	10/100M Ethernet port
WAN/LAN	10/100M Ethernet port
USB2.0	USB2.0
RST	Restore the default value switch, press, and hold for
	8-15 seconds to restore the system factory configuration
NET (LED)	Network indicator light
WAN (LED)	Network port indicator light, flashes when connected
LAN (LED)	Network port indicator light, flashes when connected
Wi-Fi (LED)	Wi-Fi indicator light, flashes when the Wi-Fi function is
	turned on
SYS (LED)	System Operation Indicator
485 (LED)	485 interface communication indicators, flashes when
	there is data transmission
PWR (LED)	Power indicator light, always on

Table 2-2

#### >>>Back View<<<





#### a) Power input and output part

VIN=:	24V	VIN 24V	VIN 24V	+12V	+12V		+5V	Close 1	COM 1	Open 1
V+	V-	GND	GND	GND	GND		GND	Close 2	COM 2	Open 2
Power 18~3		Power Output Relay interface						face		

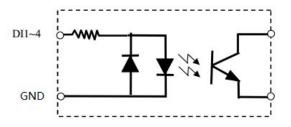
- Power input: V+, V-, non-polar design, can be connected to positive and negative poles arbitrarily, anti-reverse. The input voltage range is +18V ~ 32V DC, recommend +24V/1A DC power adapter.
- Power output: 2-way VIN output, that is, the output voltage is approximately equal to the VIN input voltage value (the actual voltage is VIN-1.1V); 2-way +12V voltage power output; 1-way +5V voltage power output. The output voltage power supply can directly supply power to external sensors, or to relays for control, or to provide power to 0~5V DI digital signal input devices.
- Relay interface: 2-way relay interface Close normally closed, COM public node, Open normally open. Small signal relay, support control Max 1A/30V DC; 0.3A/60V DC; 0.5A/125V AC.
- b) Power input and output part

485 -A1	485 -B1	GND	485 -A2	485 -B2
ТХ	RX	GND	485 -A3	485 -B3
23	32		485	

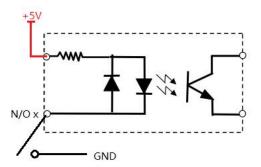
- RS485 interface: supports 3 channels RS485 interface communication, which can be used to directly connect to 485 interface devices, such as sensors or meters. The default baud rate is 9600, and the baud rate range can be configured from 1200 to 57600 through the web page.
- RS232 interface: 1 channel RS232 serial port, the default baud rate is 115200. It is used for local software upgrade or parameter configuration and can also be connected to serial devices for data upload.
- c) Digital signal input

DI 1	GND	DI 3	GND		N/O 1	GND	N/O 2	GND	N/O 3	GND	N/O 4	GND	N/O 5	GND	N/O 6	GND
DI 2	GND	DI 4	GND		N/O 7	GND	N/O 8	GND	N/O 9	GND	N/O 10	GND	N/O 11	GND	N/O 12	GND
0-5V digital signal input Digital switch signal access: N/O IN is directly connected to GND or disconnect							nected									

Active digital signal input: 4 channels of active 0~5V digital signal input, the GND of the input signal source and the system GND need to be common ground.



Passive digital signal input: 12-way passive digital signal input



#### d) Analog signal input

AI	AI	AI	AI	AI	AI	A	A
1	3	5	7	9	11	GND	GND
AI	AI	AI	AI	AI	AI	A	A
2	4	6	8	10	12	GND	GND
4-20mA / 0~5V Analog input interface							

12 channels of analog signal input, the sampling accuracy is 12Bit. It can be connected to 4~20mA power supply type sensor or 0~5V type voltage sensor. The configuration is realized through the programmable window [Note: This step must be operated by a professional!]

#### 2.3 Power Supply

RT620 can be used in complex external environments, usually the power supply range is relatively large, in order to better adapt to the complex application environment and improve the stability of the system, the RT620 power interface is compatible with the DC power socket, which is firm in plugging and unplugging, and stable in use . When RT620 exchanges information with the base station, the instantaneous current changes rapidly and the peak current is large, so the requirement for external power supply is high. RT620 supports  $+18V \sim +32V$  DC power supply.

#### 2.4 LED status

Connect the power cord and check that it is correct, connect the antenna, put in a valid SIM/UIM card, supply power to the RT620 through the power cord, the PWR indicator on the RT620 is on, and judge the status of the RT620 according to Table 2-3.

Status	Description	NET Light	PWR Light		
Module self-check	Detect SIM card、	100 MS interval on			
	GPRS/CDMA/WCDMA/EVDO				
Stand Dy	Lights up once every 2				
Stand By	Waiting to wake up or reconnect	seconds	Always on		
Online	Already opling	Lights up for 2 seconds			
Online	Already online	and turns off once			



Good signal	The signal field strength is 21 and above	Green	
Poor signal	Poor signal The signal field strength is 21 and below		

Table 2-3 RT620 LED status



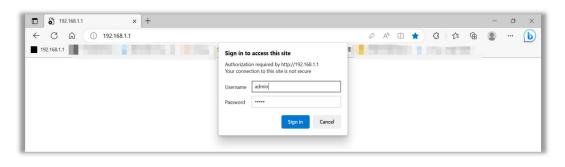
# **RTU Configuration**

#### 3.1 Web configuration environment

The device supports configuration through the local Ethernet interface. The default IP address set for the local Ethernet interface is 192.168.1.1 and the subnet mask is 255.255.255.0. Follow the steps below to build a web configuration environment:

1. Connect the LAN interface of the device and the Ethernet interface of the computer with an Ethernet cable. By default, the computer can obtain an IP address automatically. The IP address of the computer can also be fixed, the format is: 192.168.1.xxx (where xxx represents any number between 2 and 254), and the subnet mask is 255.255.255.0.

2. Open the browser, enter "http://192.168.1.1" in the address bar, and press Enter. In the pop-up login dialog box, enter the login username and password. The default username/password is: **admin/admin** as shown below:



### 3.2 System Status

By checking the system status, you can get "mobile network status" and "mobile network device information". In this way, you can judged whether the network and equipment are normal according to the relevant status. It is also used to analysis and problem solving of abnormal situations.

Log in to the WEB configuration interface, click System Information, the page is shown below:

			Rou
Status	System Status		
Overview			
WLAN	Product Name Product Model	Acquisition Gateway RT620	
LAN	Hardware Version	C11-D20	
Collection Report	Product Sn	1120R522311300171	
Data Scan	Firmware Version	Router-4.3.4.1	
Connection Setting	MQTT connection status	Connect	
LAN	Router Time	Sat, 01 Jan 2000 09:03:56 +0800 Clock Sync.	
WLAN	Uptime	00:03:04	
Administration	Total / Free Memory	60.05 MB / 46.08 MB (76.73%)	
Logout			
	Internet Status		
	Connection Type	Cellular Network	
	MAC Address	1A:E6:24:2A:C2:32	
	IP Address	0.0.0.0	
	Subnet Mask	0.0.0.0	
	Gateway	0.0.0.0	
	DNS	0.0.0.0	
	Connection Status	Renewing	
	Connection Uptime		

Table 3-1 for the parameter description of overview page:

Parameter name	Explain
Connection Type	Cellular or Wan
Firmware version	version of the current program
Uptime	Display the online duration of the device after dialing up this time
Total/Free Memory	The router's total memory, remaining available memory
MAC Address	Physical address of the device
IMEI	International Mobile Equipment Identity
Modem Status	Check the module connection
USIM Status	Check the SIM card connected
Signal strength	The signal strength of the wireless network.
	Value range: 1~31
IP Address	The IP address obtained
Subnet mask	Obtained net mask
Gateway	Obtained gateway address.
Connection Status	Including connected and disconnected states

Table 3-1

# 3.3 Collection and Reporting

Log in to the WEB configuration interface, click the collection function, the page is shown as below:

						RT620
Status	Collection Set	ting				Rou
Collection Report Collection Setting Data Scan Connection Setting LAN WLAN Administration	Slave Id1 Baud Rate Parity Bit Data Bit Stop Bit	01 96 no 8 *	ne ❤ ❤	eg:1,2,3		
ogout	Slave Id2 Baud Rate2 Parity Bit2 Data Bit2 Stop Bit2 Slave Id3 Baud Rate3 Parity Bit3 Data Bit3 Stop Bit3 Modbus cycle interr	8 ° 1 ° 96 no 8 °		eg:1,2,3		
	RTU scripts	SE INT IN	(seconds) [_ADDR 1; F 4012 W FS; UA_B FS;1,01040FA00001A,100; EP 1000;		li	
	Modbus Cmd					
	Cmd 04	<b>Addr</b> 4012	Data Type Digital(Two Byte) Analog 🗸	Signal Id 1	Alarm Flag No No Y	Description* TEST Add
	Note:*Means that yo	u can input	Chinese			Au
						Save Cancel

"Collection setting" parameters are described in the following table 3-2:

Parameter	
Farameter	



Parameter			
	This configuration item mainly configures the addresses of the connected		
Slave Id 1/2/3	Modbus slave devices on the three 485 interfaces 1, 2, and 3. Note: The slave		
	addresses connected to each 485 interfaces cannot be repeated.		
baud rate/baud	Configure the baud rate of three 485 interfaces		
rate2/baud rate3	Compute the badd fate of three 465 interfaces		
Parity Bit/Parity	Configure the parity bit of three 485 interfaces		
Bit2/Parity Bit3	Compute the party bit of three 465 interfaces		
Data Bit/ Data Bit 2/	Configure the data hit of three 495 interfaces		
Data Bit 3	Configure the data bit of three 485 interfaces		
Stop Bit/ Stop Bit 2/	Configure the step hit of three 495 interfaces		
Stop Bit 3	Configure the stop bit of three 485 interfaces		
Modbus cycle interval	The time interval for the master to execute RTU scripts to obtain data.		
	Different scripts need to be written according to different sensors to obtain		
RTU Scripts	sensor data.		
	Device obtain data processed by RTU script, using Modbus protocol.		
	Cmd: standard Modbus command, temporarily supports 02 and 04 commands;		
	Addr: register address;		
Modbus Cmd Table	Data type: the data type of returned value;		
	Signal ID: the number of the read data;		
	Alarm flag: enable or not;		
	<b>Description:</b> describe the relevant characteristics of the acquired data.		

Table 3-2

After the configuration is complete, click the "Save" button. After the configuration is saved, the device will automatically restart to make the corresponding configuration take effect.

Please contact WLINK sales/FAE for script writing and config support.

## 3.4 Data Scan

## 3.4.1 Old data

This is the history data recorded. Log in to the WEB configuration interface, click Data Scan, the page is shown below:

					RT620
Status	Request Settin	g			Router
Collection Report					
Data Scan	Signal ID	(*ID can	be empty) check		
Old data	Begin Time	2000-01-01 09:03:00	(eg: 2000-08-08 10:00:00)		
New data	End Time	2000-01-01 09:05:00	(eg: 2000-08-08 10:00:00)		
Connection Setting	Life fille	2000-01-01 05.05.00	(eg. 2000-08-08 10.00.00)		
LAN					
WLAN					
Administration	Signal ID	Orignal Value	Signal Value	Pickup Time	
Logout					
			Prev Page	Current Page 1/1 Total Page	Next Page

"Old data Parameters" configuration parameters are described in Table 3-3 below:

Parameters	
Signal ID	Signal ID to be queried
Begin Time	Data storage time
End Time	Data storage time

Table 3-3

After the configuration is complete, click the "Check" button, and the corresponding information will be queried from the stored information and displayed.

#### 3.4.2 New Data

The latest data. Log in to the WEB configuration interface, click Data Scan, the page is shown below:

nal Value Table		Router
-UD		
	Signal Name	Signal Value
		12

According to the signal information list setting, the latest sensor data information will be displayed here.

## **3.5 Connection Settings**

## 3.5.1 Networking Setting

According to the networking situation of the field application, select the Internet connection type provided by your ISP from the drop-down menu. The WAN connection type includes the following methods: DHCP, PPPoE, static address and 3G/4G. As shown in P 3-7:

			RT620
Status	Networking Set	ing	Route
Collection Report			
Data Scan	Туре	3G/4G 🗸	
Connection Setting	Dial Mode	ECM 🗸	
WAN Setting			
Cellular	Bridge WAN port to		
MQTT Setting	primary LAN (br0)		
LAN			
WLAN			
Administration			
Logout			
			Save Cancel

Configure the WAN port connection type, parameter settings Table 3-4:

Parameter Name	Description	Configuration mode
Туре	WAN connection type	Select from the drop-down box, including: <b>3G/4G</b> : default 4G/3G network <b>Static address:</b> Manually configure the interface IP. If you need to access the Internet through WAN, you need to add gateway, DNS, default route and other configurations in the network connection type. <b>DHCP:</b> DHCP client automatically obtains IP. If you need to access the Internet through WAN, you need to add the default routing configuration in the network connection type. <b>PPPoE:</b> PPPoE dial-up to obtain IP (usually an external ADSL modem for ADSL dial-up Internet access), if you need to access the Internet through WAN, you need to add the default routing configuration in the network type.
	IP: Displayed when " Type" is selected as "Static address"	
IP	It needs to be configured when "Connection Type"	It needs to be configured when "Connection Type" is selected as "Static IP".

#### は に い に い に い に Shenzhen Wlink Technology Co., LTD 深圳市徳传物联技术有限公司

	is selected as "Static IP".	
	Basic settings: Displayed	d when "Type" is selected as "PPPoE"
Interface name	The unique identification name of the interface is used for other function calls or when associated with this interface, such as configuring the routing of the interface, controlling the disabling and enabling of the rule interface.	PPPoE non-configurable items. The PPPoE interface name configured on the webpage is specified by the system. Its interface name is: pppoe
Service name	Configuring the PPPoE service name is usually used for identification and judgment between the client and the server, usually provided by the server, and provided by the ISP for ADSL dial-up.	General WORD type, maximum 64 bytes, cannot be empty
Username Password	The username/password used for PPPoE dial-up is usually provided by the server, and it is provided by the ISP for ADSL dial-up.	General WORD type/CODE type, each with a maximum length of 64 bytes, none of which is empty
Bridge WAN port to Primary LAN(br0)	WAN port used as LAN when selected.	

#### Table 3-4

After the configuration is complete, click the "Save" button to make the configuration take effect.

## 3.5.2 Cellular Setting

You can modify relevant parameter according to the application

			RT620
Status	Cellular Settings		Router
Collection Report			
Data Scan	Cellular Network Type	EC25:LTE/WCDMA	
Connection Setting			
WAN Setting	ICMP Check		
Cellular			
MQTT Setting	Cellular Traffic Check		
LAN	CIMI Send to	:	
WLAN			
Administration	SMS Code		
Logout	PIN Code		
	Operator Lock	ex:46001	
	Mode	Auto 🗸	
	APN	3GNET	
	User	CARD	
	Password	••••	
	1 4350014		
	Auth Type	Auto 🗸	
	Local IP Address		
		Say	/e Cancel

parameter	
	If enable ICMP check and setup a reachable IP address as
ICMP check	destination IP, the router will reconnect/reboot once ICMP
	check failed.
Cellular Traffic	The router will reconnect/reboot once there's no Rx/Tx data.
Check	
CIMI Send to	Send CIMI to a defined IP and port by TCP protocol.
SMS Code	Remote control the router by SMS. Only the configured SMS
	code will work.
Pin Code	Some SIM cards are locked with a Personal Identification Number
	(PIN) code in case they are lost or stolen
Operator Lock	Lock a specified operator for the router by MCC/MNC code.
	Auto ] The router will automatically connect to 3G/4G networks and give
Mode	priority to 4G.
Midde	[LTE] Router will connect to 4G only.
	【3G】 Router will connect to 3G only.
APN	APN is provided by local ISP, usually CDMA/EVDO networks do not need
	this parameter.
User	SIM card user name is provided by ISP
Password	SIM card password is provided by ISP
Auth. Type	Auto/PAP/Chap/MS-Chap/MS-Chapv2 authentication optional.
Local IP Address	Fix SIM IP. The feature is available if carrier can provide this service.

Table 3-5

NOTE ICMP Check and Cellular Traffic Check are alternative.

#### 【ICMP Check】

Enable ICMP, Router will automatically check whether the defined IP address is reachable per 60s. If the IP address is unreachable and ICMP check is timeout at the first time, it will check 2 times every 3 seconds. If the third time is still failed, the router will redial.

The ICMP Check IP is a public IP or company server IP address.

#### 【Cellular Traffic Check】

[Check Mode] there are Rx(Receive), Tx(Transmission) and Rx/Tx check modes.

**[**Rx**]** Router will check the 3G/LTE cellular receiver traffic. If no receiver traffic within the defined check interval, the router will implement the specified action reconnect or reboot.

## 3.5.3 MQTT Setting

		RTé	520
Status	MQTT Setting		Route
Collection Report			
Data Scan	Collection Enable		
Connection Setting	IoT topic	mqtt	
WAN Setting	IoT Hostname	212.64.75.228	
Cellular	IoT Port	13183	
MQTT Setting	IoT username	admin	
LAN			
WLAN	IoT password	admin2022	
Administration	IoT clientid	aaa	
Logout	Report interval	10 (s)	
	Data template	{ "consumption":%06.2f,< <intf(4010) "type":"FLOW", "created_on":"%s",&lt;<time(yy-mm-ddthh:mm:ssz) "unit_id":"TFG2108F" }</time(yy-mm-ddthh:mm:ssz) </intf(4010) 	
		Save Ca	ncel

You can config MQTT Server info and Data Template here:

parameter	
Collection Enable	Enable to start reporting to MQTT server.
IoT topic	Topic of MQTT Server.
IoT Hostname	ip or domain name of MQTT Server
IoT Port	Port of MQTT service
IoT username	Username of MQTT service
IoT password	Password of MQTT service
IoT Client Id	ClientID assigned by MQTT service
Report Interval	The interval between each report
Data template	Customize the data packet format for reporting. Device replace the variables with terms from RTU script. The key terms are as follows: o TIME (X) where X time format used in report. o INTF(X) where X represents a custom register value configured in Modbus CMD table in 3.3.1;
	You can consult WLINK sales/FAE for support.

Table 3-6

## 3.6 LAN

By viewing the "LAN status" information of RT620, you can know the basic information of the system "LAN status". The specific operation method is as follows:

Select "Basic Configuration > LAN" in the navigation bar, and in the opened page, you can modify the parameters related to configuring the LAN, as shown below:

Status	LAN		Route
Collection Report Data Scan Connection Setting LAN LAN Setting WLAN Administration Logout	Router IP Address Subnet Mask DHCP Server IP Pool Lease Use internal DNS	192.168.1.1 255.255.255.0 192.168.1.2 - 192.168.1.53 (52) 1440 (minutes) ✓	

"LAN" configuration parameters are described in Table 3-9:

parameter	
Router IP Address	The IP address of the router, the default IP is 192.168.1.1
Subnet mask	The mask address of the router, the default mask is 255.255.255.0
DHCP	Dynamically assign IP services. After the DHCP service is selected, the IP
DHCF	address range and lease options will appear below.
IP Pool	The range of IP addresses in the LAN
Lease	Valid time of IP automatically assigned by DHCP

Table 3-7

After the configuration is complete, click the "Save" button. After the configuration is saved, the device will automatically restart to make the corresponding configuration take effect.

## 3.7 WLAN Configuration (WIFI)

For RTU series products that support Wi-Fi, you can modify and configure WLAN properties through the Web. The following is an introduction to the common configuration parts of the Wi-Fi part.

## 3.7.1 Basic Settings

Choose WLAN Configuration > Basic Settings from the navigation bar. In the opened page, you can modify and configure the basic parameters of Wi-Fi.

The factory default setting of the Wi-Fi password is blank, and the user can set or not set the Wi-Fi password according to their own needs. The way to set the Wi-Fi password is: the last item [Security Options] in [Basic Parameter Settings], select the required encryption method from the drop-down list, and fill in the custom Wi-Fi password, save it.

		RT620
Status	Wireless (2.4 GHz	/ eth1)
Collection Report Data Scan Connection Setting LAN WLAN Basic Settings MultiSSID Advanced Wireless Wireless Survey	Enable WLAN MAC Address Wireless Mode Wireless Network Mode SSID Broadcast SSID Channel	30:3D:51:11:32:A0         Access Point          Auto         router-wifi-32A0         7 - 2.442 GHz         Scan
Administration	Channel Width	40 MHz 🗸
Logout	Control Sideband	Upper V Disabled V
		Save Cance

"Basic settings" configuration parameter description.

Parameter		Configuration mode
	Turn on wireless mode. After this item is	Button selection
Enable WLAN	enabled, the relevant Wi-Fi parameters	Enable
	can be set.	Disabled

Parameter		Configuration mode
Wireless mode	Select the networking mode of the wireless network	AP working mode is supported by default, and AP+WDS, client, bridge, and pure WDS modes are also supported.
Wireless Network	The router supports multiple protocols	802.11b only; 802.11g only; B/G
Mode	such as 11b/g/n.	mixed
SSID	The ID of the wireless network service set, which is Router by default.	General WORD type, up to 32 bytes, please refer to "Parameter Specification Table" for input specifications.
Channel	The channel used by the wireless network	It is recommended to use the default value.
Channel Width	The channel width used by the wireless network	Support 20MHz and 40MHz
Security Options	Configure the WLAN encryption mode, which can be disabled when encryption authentication is not required. WEP encryption is relatively easy to be cracked, it is recommended to use WPA encryption.	Drop-down box options: WEP; WPA; WPA2

Table 3-8

If need multi SSID servie, you could add it at "MultiSSID" page:

Status	MultiSSI	D						Route
Collection Report	Overvie	w	eth1	(wl0)	wl0.1	wl0.2	wl0.	3
Data Scan			-	(				
Connection Setting	Interface		Enabled	1	SSID	Mode	B	ridge
LAN	eth1 (wl0)		Yes		-wifi-32A0	Access Point		AN (br0)
WLAN	wl0.1		No		er-wifi1	Access Point		AN (br0)
Basic Settings	wl0.2		No		er-wifi2	Access Point		AN (br0)
	wl0.3		No	rout	er-wifi3	Access Point		AN (br0)
MultiSSID	wl0.1	~				Access Point	~	~
Advanced Wireless								Add
Wireless Survey								
Administration								
Logout								

## 3.7.2 Advanced Wireless

Choose WLAN Configuration > Advanced Wireless from the navigation bar. In the opened page, you can modify the relevant parameters of the wireless advanced parameter function.

<b>MUINK</b>			RT620
Status	Wireless Advance	d Settings(2.4 GHz / eth1)	Rout
collection Report	Winciess Advance		
ata Scan	Afterburner	Disabled * V	
onnection Setting	AP Isolation	Disabled * 🗸	
AN	Authentication Type	Auto*	
/LAN			
Basic Settings	Basic Rate	Default * 🗸	
MultiSSID	Beacon Interval	100 (range: 1 - 65535; Default: 100)	
Advanced Wireless	CTS Protection Mode	Disabled * 🗸	
Wireless Survey	Regulatory Mode	Disabled * 🗸	
dministration	Country / Region	CHINA 🗸	
ogout	Bluetooth Coexistence	Disabled * 🗸	
	Distance / ACK Timing	0 meters (range: 0 - 99999; Default: 0)	
	DTIM Interval	1 (range: 1 - 255; Default: 1)	
	Fragmentation Threshold	2346 (range: 256 - 2346; Default: 2346)	
	Frame Burst	Disabled * 🗸	
	Maximum Clients	128 (range: 1 - 255; Default: 128)	
	Multicast Rate	Auto * 🗸	
	Preamble	Long * 🗸	
	802.11n Preamble	Mixed Mode * 🗸	
	Overlapping BSS Coexistence	Disabled * V	
	RTS Threshold	2347 (range: 0 - 2347; Default: 2347)	
	Receive Antenna	Auto * 🗸	
	Transmit Antenna	Auto * 🗸	
	Transmit Power	0 mW (range: 0 - 400, actual max depends on Country selected; use 0 for hardware default)	
	Transmission Rate	Auto * 🗸	
	Interference Mitigation	None *	
	WMM	Enabled 💙	
	No ACK	Disabled * ¥	
	APSD Mode	Disabled 🗸	
	Wireless Multicast Forwarding	Disabled * 🗸	
	The default settings are indicated with	an asterisk <sup>‡</sup> symbol .	
		Save	Cance

After the configuration is complete, click the "Save " button, and the configuration will take effect.

### 3.7.3 Wireless Survey

Select "WLAN Configuration > Wireless Survey" in the navigation bar. In the opened page, you can search for related parameters of nearby wireless networks.



Status	Wireless	Site Surve	ey							Rou
Collection Report	Last Seen	▲ SSID	BSSID	RSSI	Noise	Quality	Ch	Capabilities		Rates
Data Scan	0 added, 0 rem	oved 0 total				Auto Expire		Auto Refresh	~	Refresh
Connection Setting										
LAN	Last updated: Thu	14:54:02								
WLAN										
Basic Settings	Warning: Wireless o	onnections to this r	outer may be disrupt	ted while using this tool.						
MultiSSID										
Advanced Wireless										
Wireless Survey										
Administration										

## 3.8 Administration

### 3.8.1 Scheduled Reboot

Choose Administration > Scheduled Restart from the navigation tree. In the opened page, you can modify the relevant parameters of the scheduled restart function.

			RT620
Status	Scheduled R	leboot	Rout
Collection Report			
Data Scan	Enabled		
Connection Setting	Time	Every 24 Hours 🗸	
LAN	Days	Sun Mon Tue Wed Thu Fri Sat Everyday	
WLAN	Days		
Administration			
Scheduled Reboot			
Time			
GPS			
Configuration			
M2M Settings			
Logging			
Admin Access			
Upgrade			
Reboot			
Logout			
			Save Cancel

After the configuration is complete, click the "Save " button, and the configuration will take effect.

#### 3.8.2 Time

The RT620 supports NTP (Network Time Protocol) network protocol for time synchronization. Performing NTP network time synchronization can ensure that the system time of the router corresponds to the actual time and can ensure that functions such as task management are executed at the correct time. Specific steps are as follows.

Step 1: Select "Administration > Time".

			RT620
Status	Time		Route
Collection Report			
Data Scan	Router Time	Sat, 01 Jan 2000 09:03:50 +0800 Clock Sync.	
Connection Setting			
LAN	Time Zone	UTC+08:00 China, Hong Kong, Western Australia, Singapore, Taiwan 🗸	
WLAN			
Administration	Auto Update Time	Every 4 Hours 💙	
Scheduled Reboot	Trigger Connect On		
Time	Demand		
GPS	NTP Time Server	Asia 🖌	
Configuration		0.asia.pool.ntp.org, 1.asia.pool.ntp.org 2.asia.pool.ntp.org	
M2M Settings			
Logging			
Admin Access			
Upgrade			
Reboot			
Logout			
		s	ave Cancel
		3	Calicer

Step 2: Parameter configuration instructions:

Parameter Name		
Time Zone	Time synchronization type for system time verification.	drop-down list box selection.
Auto Update Time	Set the time for automatic	drop-down list box selection.
	synchronization	drop-down list box selection.
Trigger Connect On Demand	Synchronize time only when	Enable or Disable
	needed	
NTP Time Server	NTP clock server	Choose Default or Region

#### Table 3-9

Step 3: Click "Save" to complete the system log parameter configuration.

If you can access the Internet but fail to update the time, please try to select another NTP time server.

### 3.8.3 Log

Local log refers to directly viewing information such as system operation and operation configuration on the RT620 management interface. Through this information, it is possible to find abnormal conditions of the system, accurately locate problems and take effective preventive or remedial measures.

Select Administration > Log, as shown below:

			RT620
Status	Syslog		Route
Collection Report			
Data Scan	Log Internally		
Connection Setting	Log To Remote System		
LAN	Generate Marker	Every 1 Hour 🗸	
WLAN			
Administration	Limit	60 (messages per minute / 0 for unlimited)	
Scheduled Reboot			
Time			
GPS			
Configuration			
M2M Settings			
Logging			
Admin Access			
Upgrade			
Reboot			
Logout			
			Save Cancel

In this log configuration interface, you can choose the save path (local or remote server), and the log generation time.

After the configuration is complete, click the "Save" button to make the configuration take effect.

#### 3.8.4 Admin Access

Choose Administration > Admin Access. In the opened page, you can modify the relevant parameters of Admin Access.

On this page, you can configure some basic web access setting items, which is convenient for users.

The password setting option is to modify the password of the system account "admin".

Remote access: Enable remote access, open the corresponding port, and save it.

		RT62
Status	WebAccess	Ra
Collection Report		
Data Scan	Local Access	HTTP V
Connection Setting	HTTP Access Port	80
LAN	Remote Access	Disabled V
WLAN		
Administration	Allow Wireless Access	
Scheduled Reboot	Allow Telnet Remote	
Time	ACCESS	
GPS		
Configuration		
M2M Settings	Password	
Logging		
Admin Access	Password	********
Upgrade	(re-enter to confirm)	
Reboot		
ogout	Language	
	System Language	English 🗸
		Save Canc

After the configuration is complete, click the "Save " button.

#### 3.8.5 Upgrade

RT620 supports local network mode to upgrade system files. Before upgrading, please make sure that you have obtained the updated firmware.

Select Administration > Upgrade. From Main Upgrade Firmware, Select the new upgrade file, check "After flashing, erase all data in NVRAM meory", click [Upgrade], do not cut off the power or network cable during the upgrade process, the upgrade can be completed in about 2 minutes, please wait patiently, and ping the address of the router on the PC (for example : ping 192.168.1.1 -t), if the ping is successful, it means the upgrade is successful.

	RT62	20
Status	Ra Main Upgrade Firmware	oute
Collection Report	Select the file to use:	
Data Scan	选择文件 未选择文件 Upgrade	
Connection Setting		
LAN	After flashing, erase all data in NVRAM memory	
WLAN	Current Version: Router-4.3.4.1-231130-110657	
Administration	Free Memory: 46.11 MB (aprox. size that can be buffered completely in RAM)	
Scheduled Reboot		
Time	Minor Upgrade Firmware	
GPS	Select the file to use:	
Configuration	选择文件 未选择文件 Upgrade	
M2M Settings		
Logging		
Admin Access		
Upgrade		
Reboot		
Logout		

#### 3.8.6 Reboot

	192.168.1.1 Reboot?	显示			RT620
Status	Main U		确定	取消	Route
Collection Report	Select the file to use:				
Data Scan	选择文件 未选择文件	Upgrade			
Connection Setting					
LAN	After flashing, erase all data	in NVRAM memory			
WLAN	Current Version: Router-4.3.	4.1-231130-110657			
Administration	Free Memory: 46.11 MB (a	aprox. size that can be buffered completely i	in RAM)		
Scheduled Reboot	Minor Ungrado Fir				
Time	Minor Upgrade Fir	mware			
GPS	Select the file to use:				
Configuration	选择文件 未选择文件	Upgrade			
M2M Settings					
Logging					
Admin Access					
Upgrade					
Reboot					
Logout					

Choose Administration > Reboot. The system will pop up the "Reboot?". If you do not want to restart, you can select "cancel".

If you select "OK", the system will restart, and the saved change or upgrade will take effect after restarting.