Robustel Centre Manager RobustLink

Centralized M2M Management Platform

For GoRugged Series Router & Gateway

User Guide

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About This Document

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Technical Support Contact Information Tel: +86-18924045664 Fax: +86-20-82321505 E-mail: <u>support@robustel.com</u> Web: <u>www.robustel.com</u>

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Chapter 1 Product

1.1 Overview

Robustel RobustLink is an industrial-grade centralized management and administration system for Robustel GoRugged series router & gateway, including R3000 Standard, R3000 Quad, R3000 Lite, M1000 XP Lite, M1000 XP and M1000 Pro V2.

RobustLink consists of three parts: Web Server (Apache), Agent Server and MySQL. Users can configure relevant parameters of RobustLink via Web Server; Agent Server is platform for data communication which will process all the data coming from slave device, or via vise; MySQL is a database used to store parameters and transaction data. Three parts should work together to ensure all the functions of RobustLink.



RobustLink allows user to monitor, configure and manage large numbers of remote devices on a private network over the web.

It mainly has following features:

- Remote Monitoring
- Remote Configuration
- Remote Firmware Updates
- Data Forwarding
- Number of Devices: 1000+
- Management: Web

1.2 Hardware Requirement

- 2 GHz CPU or above
- 2 GB RAM or above
- 500 GB disk space

1.3 Software Requirement

- O/S: Linux CentOS 6.3 or above
- Apache 2.2, PHP 5.3, MySQL 5.1 or above
- Browser: IE 9.0 or above, Chrome, Firefox

Chapter 2 Configuration settings over web browser

2.1 Login In

Open the browser, such as IE 9.0, Chrome, Firefox --> enter http://127.0.0.1/login.html in the address bar.

R 127.0.0.1/login.html ×		
← → C	🗋 127.0.0.1/login.html	

Enter the username and password to login in RobustLink.

RobustLink		
Username admin Password		
K ⁷ R ₈ Login		
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2.2 Control Panel

User can click " button to logout RobustLink.



2.3 **HOME**

This section shows status of slave devices which had ever registered in RobustLink.



HOME

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Item	Description
Search	Search by device ID or device name.
Device Status	The small window shows the Status of the registered devices.
	Click the button at the upper right, select you choice:
	Print chart,
=	Download PNG image,
=	Download JPEG image,
	Download PDF document,
	Download SVG vector image.
Online	Click the button, it only shows the status of the devices online.
Offline	Click the button, it only shows the status of the devices offline.
Device Type	The small window shows the type of the registered devices.

2.4 DEVICES -> Device Groups

This section allows user to add device groups.

Devices -> Device Group	S		
Device Groups			+ Add
No record to display.			
Click + Add to add a	new device group.		
Add Device Group		⊗ `	
Device Group:* Description:			
	OK Cancel		

Device Groups			
Item Description Default			
Device Group	Enter the device group name.	Null	
Description	Enter some simple words about your device group.	Null	

When it succeeds in adding a new device group, it will show as the following.

E Devices	-> Device Groups	
Device Group	ps	+ Add
<u>test</u>	Number of devices: 0	Zedit Zelete

Click the line except the device group name (test), the information of device group will be displayed in follow.

Devices -> D	evice Groups	
Device Groups		+ Add
test	Number of devices: 0	Zedit Celete
Device Gro	oup: test	
Number of devi	ces: 0	
Descript	tion: test device	
Records from 1 to 1	(Total: 1)	

Click the device group name (test); it will switch to devices tab. And you can add devices in this page, more details refer to section 2.5 DEVICES->Devices.

E Devices -> Devices	ces	
Device Group: test	•	+ Add + Import
No record to display.		

2.5 DEVICES -> Devices

This section allow user to add the device to the device group.



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Add Device		8
Device ID:*		
Device Group:*	Please select	-
Device Name:*		
Description:		
		_
		_
	OK Cancel	

Click

to import device list into device group.

Import Devices		8
Device Group:*	Please select.	~
File:*		Select file
Click here to download	d the file template.	OK Cancel

Devices			
Item	Description	Default	
	Enter the device ID of the device. A globally unique identifier. This		
	ID is always used when addressing this device.		
	Device ID of M1000 XP/M1000 Pro V2 is its IMEI number which		
Dovice ID @ add	will be found in the back label, or you can check this in Modem	NUUL	
Device D @ add	Configurator -> NMS -> M2M Platform -> Device ID.	nuli	
	Device ID of R3000 is its SN number which will be found in the side		
	label of R3000, or you can check this SN number in R3000's Web		
	GUI -> Status -> System -> Router Information -> Serial Number.		
Davica Croup @ add	Select the device group to add device. This device group must	NUUL	
Device Group @ add	have been added in section device groups.	nun	
Device Name @ add	Enter the device name what you want.	Null	
Description @ add	Enter some simple words about your device.	Null	
Device Group@ import	Select the device group which you had added.	Null	
File @ import	Choose the correct file to import you device list.	Null	

Click here to download	Download the template, and you can use it as your file to import	,	
the file template	Download the template, and you can use it as your file to import.	/	

When you succeed in adding a device in a device group, it will show as the following.

Devices -> Devices			
Device Group: test			+ Add + Import
00300314091221	R3000standard	R3000 Standard	Edit XDelete

Click the line except the device ID (00300314091221), the key information of device will be displayed following.

Devices -> Devices	es			
Device Group: test	•			+ Add + Import
00300314091221		R3000standard	R3000 Standard	✓ Edit
Device ID:	00300314091221	Status:	Online	
IMEI:		Device Group:	test	
Device Name:	R3000standard	Device Type:	R3000 Standard	
Firmware Version:	1.01.37	Wan IP:	172.16.99.42	
Registeration Time:	2015-03-26 16:18:09	Last Online Time:	2015-03-26 16:28:01	
Description:	test device			
Records from 1 to 1 (Tota	al: 1)			

Click device ID (00300314091221), the details of device will be displayed following. It includes Info, Statistics, Location, Control, Alarm, and Event.

E Info	∠∕ Statistics	♀ Location	மீ Control	e Alarms	Events		
€ 0030	00314091221 -> D	evice Info					
Device	Information						2 Refresh
	Device ID :	0030031409	1221		Status :	Online	
	Device Name :	R3000stand	lard		Device Group :	test	
	Device Type :	R3000 Stan	dard		Firmware Version :	1.01.37	
	hardware Version :	1.02.01			Kernel Version :	2.6.39-9	
	Module Type :	MU609			Module Version :	12.105.29.00.00	
	Data Socket State :	Disconnect	ed		Startup Time :	2015-3-26 16:29:36	
	System Time :	2015-03-26	16:29:36		Registeration Time :	2015-03-26 16:18:09	
	Last Online Time :	2015-03-26	16:28:01		Description :	test device	

2.5.1 Info

This section shows the device's info. When the registered devices used different mode to connect to the RobustLink, the displayed info of those devices will be different.

The displayed info of R3000 series devices is as below.

Using Ethernet connect mode: Device information, Network information and Ethernet information.

Using Cellular connect mode: Device information, Network information and Cellular information.

Using Wifi connect mode: Device information, Network information and Wifi information.

The displayed info of M1000 series device includes Device information and Cellular information.

Info	∠∕ Statistics	Control	Alarms Events	
≣ 00	300314091221 -> De	evice Info		
Devic	e Information			2 Refresh
	Device ID :	00300314091221	Status :	Online
	Device Name :	R3000standard	Device Group :	test
	Device Type :	R3000 Standard	Firmware Version :	1.01.37
	hardware Version :	1.02.01	Kernel Version :	2.6.39-9
	Module Type :	MU609	Module Version :	12.105.29.00.00
	Data Socket State :	Disconnected	Startup Time :	2015-3-26 16:29:36
	System Time :	2015-03-26 16:29:36	Registeration Time :	2015-03-26 16:18:09
	Last Online Time :	2015-03-26 16:28:01	Description :	test device
Netwo	ork Information			℃ Refresh
	Current WAN Link :	Ethernet	IP Address :	172.16.99.42
	Gateway :	172.16.99.1	NetMask :	255.255.0.0
	Primary DNS Server :	8.8.8.8	Second DNS Server :	0.0.0.0
LAN	1			
	IP Address :	192.168.0.1		
	MAC Address :	00:ff:74:46:dc:b2		
	MTU :	1500		
	NetMask :	255.255.255.0		
Ether	net Information			2 Refresh
	WAN IP :	172.16.99.42	WAN MAC :	00:ff:74:46:d3:e3
	WAN MTU :	1500	WAN Gateway :	172.16.99.1
	WAN NetMask :	255.255.0.0	WAN Primary DNS Server :	8.8.8.8
WAN	I Second DNS Server :	0.0.0.0	Interface Type :	Static IP

2.5.2 Statistics

This section shows the statistics of device online/offline, send/receive traffic and signal strength. When the mouse moves to a certain point in time, it can display the status at the moment.

Info	<u>∧∕</u> Statistics	O Location	ដំ Control	🔔 Alarms	Events				
L~ 0030	0314091221	-> Statistics							
Online/0	Offline SIM1	Send/Recv Traffic	SIM2 Send/Recv Traffi	c Signal Str	ength				
				O	nline/Offline				=
Zoor	m lh ld lw	1m 3m All						From Mar 26, 20	15 To Mar 27, 2015
Diffine	20								
0 ultine	ne								
	16:30	16:40 16:	50 17:00	17:10	17:20	17:30	17:40	17:50	27. Mar
		16:44:00	17:0	0:00	17:15:45	17:	32:15	17:48:30	27. Mar
					Online/Offline				

Online/Offline			
Item	Description	Default	
	Select from "1h", "1d", "1w", "1m", "3m" and "All".		
	1h: one hour		
	1d: one day		
Zoom	1w: one week	1h	
	1m: one month		
	3m: three month		
	All: up to now since the registration moment		
	Click the button at the upper right, select you choice:		
	Print chart,		
=	Download PNG image,	,	
=	Download JPEG image,	/	
	Download PDF document,		
	Download SVG vector image.		
	Online: up	/	
Unine/Unine	Offline: down	/	



SIM1 Send/Recv Traffic			
Item	Description	Default	
	Select from "1h", "1d", "1w", "1m", "3m" and "All".		
	1h: one hour		
	1d: one day		
Zoom	1w: one week	1h	
	1m: one month		
	3m: three month		
	All: up to now since the registration moment		
	Click the button at the upper right, select you choice:		
	Print chart,		
=	Download PNG image,	,	
=	Download JPEG image,	/	
	Download PDF document,		
	Download SVG vector image.		
SIM1 Send	The send traffic data, unit: byte.	1	
SIM1 Recv	The receive traffic data, unit: byte.	1	
SIM1 Total	Send traffic data added to Receive traffic data equal to the total	1	
	value of traffic data.	/	
SIM1 Send Different Value	The different value between the current send traffic data and last	1	
	second send traffic data. Unit: byte.	/	
SIM1 Rocy Different Value	The different value between the current receive traffic data and	,	
SIM1 Recv Different Value	last second receive traffic data. Unit: byte.	/	
SIM1 Total Different Value	Send Different Value added to Recv Different Value equal to the	/	





SIM2 Send/Recv Traffic			
Item	Description	Default	
	Select from "1h", "1d", "1w", "1m", "3m" and "All".		
	1h: one hour		
	1d: one day		
Zoom	1w: one week	1h	
	1m: one month		
	3m: three month		
	All: up to now since the registration moment		
	Click the button at the upper right, select you choice:		
	Print chart,	1	
=	Download PNG image,		
=	Download JPEG image,	/	
	Download PDF document,		
	Download SVG vector image.		
SIM2 Send	The send traffic data, unit: byte.	1	
SIM2 Recv	The receive traffic data, unit: byte.	1	
	Send traffic data added to Receive traffic data equal to the total	1	
SIIVIZ IOLAI	value of traffic data.	/	
SINA2 Cond Different Value	The different value between the current send traffic data and last	1	
SINIZ Send Different value	second send traffic data. Unit: byte.	/	
SINA2 Book Different Value	The different value between the current receive traffic data and	,	
SIM2 Recv Different Value	last second receive traffic data. Unit: byte.	/	
SIM2 Total Different Value	Send Different Value added to Recv Different Value equal to the	1	

Total Different Value.



Signal Strength			
Item	Description	Default	
	Select from "1h", "1d", "1w", "1m", "3m" and "All".		
	1h: one hour		
	1d: one day		
Zoom	1w: one week	1h	
	1m: one month		
	3m: three month		
	All: up to now since the registration moment		
	Click the button at the upper right, select you choice:		
	Print chart,		
=	Download PNG image,	1	
=	Download JPEG image,	/	
	Download PDF document,		
	Download SVG vector image.		
Signal Strength	Unit: DB	/	

2.5.3 Location

This section shows the location map of the device and allows user to configure the locating mode. Click the locating point, it will show the details of device's location.



Location				
Item	Description	Default		
Longitude	Enter the longitude of the device location.	0.000000		
Latitude	Enter the latitude of the device location.	0.000000		
Refresh	Click to refresh the device location by GPS.	/		
Save	Click to save the longitude and latitude by manual positioning.	/		

2.5.4 Control

This section allows user to update firmware, configuration file and reboot the device.

Info	Statistics L	♀ ocation	战 Control	e Alarms	Events
<u>ភំ 003003</u>	314091221 -> Con	trol			
Update Fir	mware				
	File Path:	Please	select		•
	Update Time:	2015-3-	-27 11:32:25		
		• You she	ould add firmware fi	rst. <u>Go to upload</u>	
		Update	Firmware		
		opaulo			
Confirment	· · · ·				
Configurat	tion				
Configurat	File Path:	Please	select		•
Configura	File Path:	Please	select device(s) after con	figurate.	•
Configura	File Path:	Please Reboot You sha	select device(s) after con puld add configurati	figurate. ion file first. <u>Go to uploa</u>	• id
Comgura	File Path:	Please Reboot You shu configurati	select device(s) after con puld add configurati on file. rate	figurate. ion file first. <u>Go to uploa</u>	• 2d

Remote Control					
Reboot:	Reboot				

Control					
Item	Description	Default			
File Path @ Update Firmware	Select the firmware file, which you had imported in Files.	Null			
Update Time @ Update Firmware	Enter the time that you want to update the firmware.	The current time			
Update Firmware	Click to update the firmware.	/			
File Path @ Configuration	Select the configuration XML file, which you had imported in Files.	Null			
Reboot device(s) after configuration	Click to enable that Reboot device(s) after configuration.	Unable			
configurate	Click to configure RobustLink web according to the configuration file.	/			
Reboot	Click to reboot the device.	/			

2.5.5 Alarms

This section shows the status of Alarms.

E Info	<mark>∦</mark> Statistics	Cortion Cor	trol Alarms	Events				
٥٥ الله	♣ 00300513070066 -> Alarms							
Alarm	Configurations							
Dev	rice Offline							
	Enable :			Name :				
	Level :			Fire Condition :				
	Description :							
Net	work Traffic Flow							
	Enable :	🕏 Enable		Name :	outflow			
	Level :	Critical		Fire Condition :	Detects when netwo device flow over th	ork traffic for is count(unit: KB):		
	Description :				1			
Curre	ent Alarms					@ Ack	All 🏾 🎜 Reset All	
٠	9 00300513070066	R3000-ssss	R3000 Stan	dard Network	Traffic Flow	👁 Ack 🔀 Reset		
Histo	oty Alarms						X Delete All	
٥	00300513070066	R3000-ss	ss R3000) Standard	Device Offline	× Delete		
Reco	ords from NaN to NaN (Tota	ıl: 1)						

Alarms				
Item	Description			
Device Offline	This part shows the configuration of Device Offline alarm.			
Network Traffic Flow	This part shows the configuration of Network Traffic Flow alarm.			
Current Alarm	This part shows the current alarm.			
Ack All	Click to acknowledge all the alarms.			
CReset All	Click to reset all the alarms.			
@ Ack	Click to acknowledge the current alarms.			
2 Reset	Click to reset the alarms.			
History Alarm	This part shows the history alarm.			

X Delete All	Delete all the historical alarms.
× Delete	Delete this historical alarm.

2.5.6 Events

This section shows the status of current events.

Note: Firstly, user should enable the Event function in R3000's configuration Web. The path in R3000's configuration web is Configuration->Event.

Info	⊘ Statistics	O Location	ដំង Control	🔔 Alarms	Events		
♣ 0030	♣ 00300513070066 -> Events						
Current	Events						The Ack All Collete All
Not	tice 0030	0513070066	R3000-ssss		R3000 Standard	3G-DOWN	Ack Celete
Records	from 1 to 1 (Tota	: 1)					

Events				
Item	Description			
👁 Ack All	Click to acknowledge all the events.			
@ Ack	Click to acknowledge this current event.			
× Delete All	Delete all the current events.			
X Delete	Delete this current event.			

2.6 **DEVICES** ->Location

This section allows user to configure the locating mode.

onfig	G Location		
Devices	-> Locati	on Config	
ocation Cor	nfig		
Choose the	devices yo	u need to show	
All	Devices:	Show All Devices (1)	
Dev	ice Type:	✓ M1000 Pro V2 (0)	
		✓ M1000 XP (0)	
		✓ M1000 XP Lite (0)	
		R3000 Standard (1)	
		R3000 Lite (0)	
		Unknown (0)	
	Status:	Online (1)	
		Offline (0)	
Locating Mo	ode	0.00	
ine Fir	st Mode:	GPS	-
The Secor	nd Mode:	Manual positioning	•
		Apply	

Config @ Location				
Item	Description	Default		
	Enable "Show All Devices", following options of "Device Type" and "Status" will all			
All Devices	be chosen.	Unable		
	A device type represents a category of devices that have the same characteristics,			
	typically a hardware family.			
Device Type	Select from "M1000 Pro V2", "M1000 XP", "M1000 XP Lite", "R3000 Standard",	, Unable		
	"R3000 Lite", "R3000 Quad" and "Unknown".			
	Your choice will be showed in section location, the path is location\location.			
Status	Select from "Online" and "Offline".	Unable		
Status	Your choice will be showed in section location, the path is location\location.	Unable		
The first Mede	Select "GPS" or "Manual Positioning", which you want to be the preferred locating	Null		
The first wode	mode.			
The Second Mede	Select "GPS" or "Manual Positioning", which you want to be the second locating	NUU		
The Second Mode	mode.	NUII		

The section show the location map of devices.

Click the locating point, it will show the details of device's location.



2.7 DEVICES ->Data Forwarding

The section allows user to configure Data Forwarding.

Note: If you want to forward data, please enable this function first. The path is ADMIN\Agent Server\Agent Server Basic Setting.



Click Click

to set Device Data Forwarding Configuration.

Set Device Data Forwarding Configurations			
Device ID:*	00300314091221		
Port:*	0	\$	
Modbus Start Addr:	0	*	
Modbus End Addr:	0	\$	
	OK Cancel		

Data Forwarding				
Item	Description	Default		
Device ID	Enter the Serial Number of the device.	Null		
Dent	Enter the port to forward data. And then the port of receiving data must			
POIL	be consistent with this data forwarding port.	0		
Modbus Start Addr	Enter the Modbus Start Address, the maximum value for this field is 247.	0		
Modbus End Addr	Enter the Modbus End Address, the maximum value for this field is 247.	0		

2.8 DEVICES ->Control

In this section, user can batch processing those devices. The processing for devices includes update firmware, import XML and reboot devices.

Note: You should add firmware for this device type first. The path is DEVICES\Files\Upload.

🕹 Update firmware	🕹 Import XML	C Reboot					
🕹 Devices -> Cor	Devices -> Control -> Update Firmware						
Device Group: All	Group	All Devices			🕹 Update Firmware		
	<u>1221</u>	R3000standard	R3000 Standard	1.01.37	🚯 Normal		
Records from 1 to 1 (To	otal: 1)						

Update firmware @ Control				
Item	Description	Default		
Device Group	Select device group from the drop-down box. This device group must have added in section device groups.	All Group		
All Devices	Click to choose all devices.	Unable		
🕹 Update Firmware	Click to update the firmware.	/		

🕹 Update firmware	상 Import XML	C Reboot			
🕹 Devices -> Cor	ntrol -> Import XM	1L			
Device Group: AI	l Group 🔻	All Devices			📥 Import XML
□ ⊘ <u>003003140</u>	<u>91221</u>		R3000standard	R3000 Standard	
Records from 1 to 1 (T	otal: 1)				

Import XML @ Control				
Item	Description	Default		
Device Group	Select device group from the drop-down box. This device group must have added in section device groups.	All Group		
All Devices	Click to choose all devices.	Unable		
🕹 Import XML	Click to import XML.	/		

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I Group All Devices
I Group All Devices
R3000standard R3000 Standard
otal: 1)

Reboot @ Control				
Item	Description	Default		
Device Group	Select device group from the drop-down box. This device group must have been added in section device groups.	All Group		
All Devices	Click to choose all devices.	Unable		
Reboot	Click to reboot devices.	/		

2.9 DEVICES ->Alarms/ Events

This section allows user to add the alarms and ack those occurred Alarms and Events.

پ ت Alarms Config	🔔 Current Alarms	🔔 Historical Alarms	e Events	
° Devices -> A	larms -> Alarm Cor	nfigrations		
Alarm Configration	ns			+ Add
No record to displa	ıy.			arms
				/ Ever
				Its
k + Add to	o add a new alar	m.		

Add Alarm Configration	1			8
Enable:	Enable this Configration	alarm Level:*	 Critical 	
Alarm Name:*			🔵 Major	
Alarm Type:*	Please select.		Minor	
Alarm Scope (Device Group):*	Please select		◯ Warning	
Descriptions		Fire Condition		
Description:		Compare Condition:*	More than or equal to	
		More than or equal to:*	0	\$
	ок	Cancel		

Alarms Config @ Alarms/Events				
Item	Description	Default		
Enable	Click to enable the alarm configuration.	Enable		
Alarm Name	Enter the alarm name.	Null		
Alarm Type	Select from "Device Offline", "Network Traffic Flow".	Null		
Alarm Scope (Device	Select device group from the drop-down box. This device group must have	Null		
Group)	been added in section device groups.	NUII		
Description	Enter some simple words about the alarm.	Null		
Alarm level	Select from "Critical", "Major", "Minor", "Warning".	Critical		
Compare Condition	Select "More than or equal to".	Null		
More than or equal to	Enter a time interval, once the keeping time of device alarm type is more	0		
(unit: sec)	than or equal to this interval, the alarm will be triggered.	U		

Alarms Config	e Current Alarms	🔔 Historical Alarms	🔔 Events		
Devices -> A	larms -> Current /	Alarms			
Device Group:	All Group	T			👁 Ack All 🛛 📿 Reset All
. 00300314	4091221	R3000standard	R3000 Standard	Device Offline	Ack CReset
Records from 1 to 1	(Total: 1)				

Current Alarms @ Alarms/Events					
Item	Description	Default			
Device Group	Select device group from the drop-down box. This device group must have been added in section device groups.	All Group			
Ack All	Click to acknowledge all the alarms.	/			
C Reset All	Click to reset all the alarms.	/			
Ack	Click to acknowledge the current alarms.	/			
2 Reset	Click to reset the alarms.	/			

Click the line, the information of device historical alarm will be displayed.

ی Alarms Config	🔔 Current Alarms	tistorical Alarms	events			
levices -> /	Alarms -> Historic	al Alarms				
Device Group:	All Group	T				× Delete All
🏶 🖲 0030031	4091221	R3000standard	R3000 Standard	Device Offline	X Delete	
Device ID:	00300314091221					
Device Name:	R3000standard					
Device Type:	R3000 Standard					
Alarm Status:	Automatic Reset					
Alarm Level:	Critical					
Alarm Name:	deviceoff					
Alarm Type:	Device Offline					
Fire Time:	2015-3-31 15:58:22					
Reset Time:	2015-3-31 16:28:51					
Description:	off					
Records from 1 to	1 (Total: 1)					

Historical Alarms @ Alarms/Events					
Item	Description	Default			
Dovice Croup	Select device group from the drop-down box. This device group must have				
Device Group	been added in section device groups.				
X Delete All	Delete all the historical alarms.	/			
× Delete	Delete this historical alarm.	/			

"O Alarms Config	🔔 Current Alarms	🔔 Historical Alarms	Events		
A Devices -> I	Events -> Current Ev	vents			
Device Group:	All Group	¥			Ack All Celete All
Notice	00300513070066	R3000-ssss	R3000 Standard	3G-DOWN	Ack Celete
Records from 1 to	1 (Total: 1)				

Note: Firstly, user should enable the Event function in R3000's configuration Web. The path in R3000's configuration web is Configuration->Event.

Events @ Alarms/Events

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Item	Description	Default
Device Group	Select device group from the drop-down box. This device group must have been added in section device groups.	All Group
Ack All	Click to acknowledge all the events.	/
Ack	Click to acknowledge this current event.	/
X Delete All	Delete all the current events.	/
XDelete	Delete this current event.	/

Click, the following page will appear, those are the status of alarms and events of the devices.

پ و Alarms Config	& Current Alarms	🔔 Historical Alarms	events			Alarms Unacknowledged	Ack all @
Devices -> A	larms -> Current A	larms				00300314091221 Device 2015-03-31 15:58:22	e Offline 🛛 👁
Device Group:	All Group	T				Displaying 1 item of 1 Events	Details
♣ ● 00300314	4091221 F	R3000standard	R3000 Standard	Device Offline	Alar	Unacknowledged No unacknowledged even	Ack all @ nt.
Records from 1 to 1	(Total: 1)				ms /		Details
					Even		
					ts		

2.10DEVICES ->Files

Alarms / Ever

This section allows user to upload firmware and configuration file. And then user can use those file to update the firmware and configuration in tab "DEVICES>"Control".

Devices -> Files			
Files			🕹 Upload 📓 Remove
Name	Path	Size	Last Modified
- Custom	/custom		
+ configuration	/custom/configuration		
🖶 🖿 firmware	/custom/firmware		
■ RT_UG_RobustLink_v.1.0.0 Confidential	05.08.20	15	31 / 58

Click Click to upload the correct file.

Upload File		8
File Type:* File:*	Please select. Select file	
	OK Cancel	

Events @ Alarms/Events				
Item	Description	Default		
File Type @ Upload File	Select from "firmware" and "configuration file".	Null		
File @ Upload File	Select the correct file from your PC.	Null		
🖀 Remove	Remove the file.	/		

2.11ADMIN -> User Groups

This section allows user to add user groups.

Note: the super_user group can only add one user, and the user in super_user group has the highest authority.

Admin -> User Groups	3		
User Groups			+ Add
super_user	Number of users: 1		
Records from 1 to 1 (Total: 1)			
Click + Add to add a	new user group.		
Add User Group		\otimes	
User Group:*			
	OK Cancel		

Add User Group					
Item	Description		Default		
RT_UG_RobustLink_v.1.0.0 Confidential		05.08.2015	32 / 58		

User group	Enter the user group name.	Null

Click the user group name which you have added, and then it will switch to Users page. The path of Users' page is \ADMIN\Users. More details of Users configuration refers to 2.12ADMIN->Users.

2.12ADMIN -> Users

This section allows users to add users to user group.

Note: the super_user group can only add one user, and the user in super_user group has the highest authority.

🤽 Admin ->	Users		
User Group:	All Group	•	+ Add
admin	super-user	Last Login: 2015-04-01 09:44:51	🖊 Edit 🔒 Pwd
Records from 1	to 1 (Total: 1)		
+ Add			

Click

to add a new user to user group.

Add User 🛞			
User Name:*			
User Group:*	Please select.	•	
Password:*			
Confirm Password:*			
Privilege:*	Please select.	•	
Email:*			
Description:			
		_	
	OK Cancel		

Add @ User			
Item	Description	Default	
User Name Enter the user name.		Null	
User Group Select the user group which you want to add user in.		Null	
Password	Enter the password. The range of data length is from 5 to 64.	Null	

Confirm Password Enter again the password as what you set in "New Password". The range of data length is from 5 to 64.		Null
	Select from "administrator", "user" and "readonly".	
	Administrator: User can read and change the settings of all configuration	
	items.	
Privilege	User: it can read the status of tab "HOME" and "DEVICES and change the	Null
	settings.	
	readonly: it can only read the status of tab "HOME" and "DEVICES, but	
	can't change the settings	
Email	Enter the email which uses to receive the alarm of slave device.	Null
Description	Enter some simple words about the user.	Null

2.13ADMIN-> Agent Server

This section allows user to configure the agent server.

Admin -> Agent Server		
Agent Server Connection		
Agent Server Address:	127.0.0.1	
Web Server Connection Port:	31001	
Protocol:	tcp	
Timeout (s):	30	
	Connect	
Agent Server Basic Setting		
Device Login Password:	admin	
Heartbeat Interval (min):	1	
Enable Data Forwarding:	Enable	
Forward Data By Modbus Address (Modbus TCP):	Enable	
	Apply	

Agent Server			
Item	Description	Default	
	Set IP address of Agent Server. For example, when Agent Server and		
	Apache installed in the same server, user can enter "localhost" or		
Agent Server Address	"127.0.0.1" in this field; If Agent Server is set away from Apache, not in the	127.0.0.1	
	same IP address, user should enter the IP address of Agent Server. For		
	example, when Agent Server is installed in remote server (PC), its IP		

address is 120.197.58.89, and then we shall enter "120.197.58.89" in this filed.		
Web server Connection Port	Enter the port number which was set by agent server. For example, when start the agent server and set the 31001 for web server to access the agent server, user should enter 31001 in this field.	
Protocol	The protocol for web server to connect agent server.	tcp
Timeout (s)	Set timeout when web server connects to Agent Server. For example, if "Timeout" is set as "30", when web server keep on connecting Agent Server, after 30 seconds but still can't succeed to connect to Agent Server, log information will show connection timeout. Data range is from 5 to 60 seconds.	
Connect	Click to update settings to Agent Server after above settings.	
Device Login Password	Enter the device login password.	
Heartbeat Interval (min)	When using GPRS/UMTS with a session running, most ISPs will monitor the traffic flow. If there is none for a predetermined period of time then it will shut the connection down at either the DHCP server or the APN, this is performed so that system resources are not taken up unnecessarily. To stop this happening you will need to send periodic Heartbeat bytes to keep the TCP connection always online. This item allows user to set time interval between two Heartbeat packets. The range is from 1 to 1440 min.	10
Enable Data Forwarding	Click to enable data forwarding.	
Forward Data By Modbus Address (Modbus TCP)	Click to enable forward data by Modbus address.	unable
Apply	Click to make you configuration effect.	/

2.14ADMIN -> Mysql

This section allows user to send params from MySQL to agent server.

🖾 Admin -> MySQL		
MySQL Connection		
Agent-Server dbhost:	127.0.0.1	
Username:	root	
Password:		
Port:	3306	
DataBase Name:	robustlink	
	Sond parame to agont conjur	
	Senu paranis lo agent server	

Mysql			
Item	Description D		
Send params to agent server	Click to send params from MySQL to agent server.	/	

2.15ADMIN->Emails

This section allows user to set the SMTP server.

🗷 Admin -> Email	
SMTP Server Setting	
SMTP Server:	
SMTP Port:	
SMTP SSL:	None
Auth. Username:	
Auth. Password:	
	Apply

Email			
Item Description		Default	
SMTP Server	SMTP Server Enter the SMTP server IP address or domain.		
SMTP Port Enter the port of SMTP server.		Null	
Select from "None", "SSL" and "TLS".			
SMTP SSL	None: without certificate	None	
	SSL: Secure Sockets Layer		

TLS: Transport Layer Security		
Auth. Username Enter the username which had been authenticated by SMTP		Null
Auth. Password	Enter the password which had been authenticated by SMTP Server.	Null
Apply	Click to apply your setting.	/

2.16ADMIN -> Logs

This section shows the historical logs of RobustLink.

Admin ->	Log		
User Group:	All Group	on Time: To 04/01/2015	Remove All
admin	Remove log(s)	2015-04-01 14:40	6:02
Records from 1	to 1 (Total: 1)		

Logs			
Item Description		Default	
User Group	Select the user group which you want.		
Operation Time Click to select the date.		Null	
Click to delete all the logs.		/	

2.17ADMIN -> License

This section allows user to import the license key of RobustLink.

RobustLink have two versions, one is trial version and the other is paid version. The trial version only supports five devices connections. The paid version has no limitation to number of client connections. If you want to use RobustLink without limitation, you will need to register for this software.

RobustLink		Search by device ID or device name. Q 1 ac	dmin G•
Admin -> License			
Bevices	1		
ADMIN RobustLink have two ve	sions, one is trial version and the other is paid version. The tient connections. If you want to use RobustLink without limits	trial version only supports five client connections. The paid version has	no 🎽
User Groups 1. Offer the System ID to 2. Enter the License Key	 we will according to your System ID to generate a Licen in this web page, then apply. 	ise Key.	/ sm
▲ Users Agent Server			Events
E Mysql License Key:	987A8F13E3D70D7A17FA99993FB8775D5		
Email	Apply		
License			

Offer the System ID to our sales, we will according to your System ID to generate a License Key. E.g.

System ID: 0005db73

License key: 68BB896715913B99B8A8CE2EABA86876

Enter the License Key in RobustLink, then click "Apply".

Chapter 3 Examples



3.1 Application Diagram for Introduction

- 1. M1000 Pro V2/ R3000 works as TCP Client with any IP which can access to Internet.
- 2. RobustLink works as TCP Server with fixed public IP or dynamic IP with domain name.
- 3. Another TCP Client site, Control Center for example, works as another TCP Client which connects with RobustLink via intranet (LAN port) or via Internet.

3.2 Manage M1000 Pro V2 via RobustLink

3.2.1 Connect M1000 Pro V2 to RobustLink

 Login RobustLink Web GUI, go to tab "DEVICES" -> "Devices Groups", click " Add " to add a new group. The device group names test1.

De						
	JUUSLLI		Search by device ID or device name.	4	x admin C	
#	номе	Devices -> Device Groups				
Ξ	DEVICES	Device Groups			+ Add	
	Device Groups	No record to display.				
	Devices					
6	Location					
X\$	Data Forwarding					
ដា	Control					
\$	Alarms / Events					
	Repository					
_	ADMIN					

Edit User	8
Device Group:*	test1
Description:	test1
	OK Cancel

2. Click "test1" (device group name), and then it will switch to Devices page.

Click "

", download the file template. File name: devices.xls

Re	obustLi	nk	Search by device ID or device name.	۹.	L admi	in C
#	номе	Devices -> Devices				
:=	DEVICES	Device Group: test1		+ Add	+ Imp	oort
	Device Groups	No record to display.				
	Devices					
6	Location					
X\$	Data Forwarding					
ដា	Control					
\$	Alarms / Events					
	Repository					
_	ADMIN					

Import Devices		8
Device Group:*	test1	~
File:*		Select file
Click here to download	the file template.	OK Cancel

 Open devices.xls, enter IMEI number of M1000 Pro V2 in tab "Device ID" and M1000_ProV2 in tab "Device Name", and then save this file. Section 3.4 DEVICES ->devices-> device ID will show how to find IMEI number of M1000 Pro V2.

	А	В	С
1	Device ID	Device Name	Description
2	351535052009180	M1000_ProV2	tes1
3			

Note: In tab "Device Name", it could consist of the characters "0-9", "A-Z", "a-z", "_", ".", "-".

4. Click tab "Select file ..." to import file devices.xls which you have filled in "Device ID" and "Device Name" of M1000 Pro V2.

Import Devices		8
Device Group:* File:*	test1	Select file
Click here to download	the file template.	OK Cancel

Click "Ok", the following page will display. It means M1000 Pro V2 registers the RobustLink successfully.



 Regarding of M1000 Pro V2: install an antenna -> insert SIM card into one of the SIM card slots -> connects M1000 Pro V2 to the PC's serial port -> switch to Config Mode -> power on M1000 Pro V2.



 Run M1000 Pro V2 Configurator, Upgrade M1000 Pro V2's firmware to "Version 2.5.0" (firmware version greater than or equal to version 2.3.3, such as version 2.5.0, will support RobustLink function), and then use M1000 Pro V2 Configurator V2.5.0.exe to configure.

R M1000 Pro V2 Configurator					
File Settings Help					
COM7 - * Reboot for changes to take effect					
Wakeup Reboot Modbus Advanced NMS Status Management Com Basic GPRS Connection Dual SIM DDNS Phone Book					
* This COM is only available under Normal Mode					
Serial Interface					
COM Type RS232 - Flow Ctrl None -					
Baud Rate 115200 - Parity None -					
Data Bits 8 💌 Stop Bits 1 💌					
Data Packing					
Interval Timeout 3 (2 - 100) *100ms					
Packet Length 0 (0 - 5000)					
Delimiter 1 00 (Hex) 🗖 Enable					
Delimiter 2 00 (Hex) 🗖 Enable					
Delimiter Process Do Nothing 👻					
Read Write Default Reboot					
Komp 2011-06-15 08:48:02					

Note: Please check the firmware version at the button of the Configurator to confirm that if it is newer than Version 2.3.3. If not please let us know what your firmware version is, we will provide you the proper firmware and configurator.

- 7. Go to tab "**COM**", select relevant com Type and Baud Rate. For example, COM type RS232, Baud Rate 115200, Data Bits 8, Flow Ctrl None, Parity None, and Stop Bits 1.
- 8. Go to tab "**GPRS**" --> enter relevant ISP information, for example APN, User Name, etc. Make sure M1000 Pro V2 can establish PPP connection successfully.
- 9. Go to tab "**Connection**" --> go to item "Connection Control" --> select "Always Online" mode. Other settings stay default.
- Go to tab "NMS"-->M2M Platform, click Enable to allow M1000 Pro V2 connect to RobustLink --> enter IP address and Port number of RobustLink's in item "Address" and "Port"--> enter a password which set in the RobustLink's Web in item "Password" --> click to enable data forwarding in item "Data Forwarding Enable".

R M1000 Pro V2 Configurator				
File Settings Help				
COM7 - * Reboot for changes to take effect				
Com Basic GPRS Connection Dual SIM DDNS Phone Book Wakeup Reboot Modbus Advanced NMS Status Management				
Basic				
Device Name DTU Configurator Password				
SMS Control				
Password Phone Group				
Remote TCP Management				
Enable TCP Server Port 30000				
Note: You can start a TCP client by SMS control				
M2M Platform				
Enable 🔽 Data Forwarding Enable 🔽				
Address 113.113.49.201 Port 31000				
Password Device ID 351535051012052				
Read Write Default Reboot Exit				
Scom 115200,n,8,1 Version 2.4.3 2013-11-04 18:44:54				

Note:

- **Address:** This address is RobustLink's IP address, which should be a public IP address or domain name. For example, 113.113.49.201, the address of USB dongle we use for test in this document.
- **Port:** This port number is the local port number of Agent Server (default port number is 31000), and then enter this number in this field. If Agent Server's port number is changed to another port number basing on the real application, 11021 for example, please enter 11021 in this field.
- **Password:** This password is configured in the RobustLink. This item shall be same with the password set in the RobustLink. Please refer to section **3.12 DEVICES ->** Server -> Device Login Password.
- **Device ID:** This item let you know the default single ID number of M1000 Pro V2, can't be changed.
- Data Forwarding Enable: Click to enable data forwarding, the topology is: data from M1000 Pro V2 (TCP client) --> RobustLink (TCP server) --> another TCP Client. At this time tab "Connection"--> "Socket Application" can't be configure. If you disable this tab, data will not be forwarded via RobustLink, they will be sent normally as you set in tab "Connection"--> "Socket Application". But RobustLink still can manage and monitor the status of M1000 Pro V2. Whether Data Forwarding should be enabled depends on customer (user). "Data Forwarding Enable" will be enabled for instruction in this document.
- 11. Go to tab "**Status**" --> go to item "TCP/IP", if succeed to establish PPP connection and TCP connection, "PPP Status" will show "Up" and "TCP Status" will show "Connected".
- 12. Other tabs stay default. Click "Write" to save the settings --> click "Reboot".
- 13. Switch to Normal Mode (data transmission mode).

14. If M1000 Pro V2 login RobustLink successfully, it will show the following diagram.

Devices -> Devices				
Device Group: test1	×		+ Add + Import	
351535052009180	M1000_ProV2	M1000 Pro V2	Edit Delete	
Records from 1 to 1 (Total: 1)				

15. If click the any place of device name (M1000_ProV2), it will show the key information of M1000 ProV2.

E Devices -> Devices					
Device Group: test	1 •			+ Add + Import	
351535052009180		M1000_ProV2	M1000 Pro V2	Celete	
Device ID:	351535052009180	Status:	Online		
IMEI:	351535052009180	Device Group:	test1		
Device Name:	M1000_ProV2	Device Type:	M1000 Pro V2		
Firmware Version:	Version 2.5.0	Wan IP:	10.155.176.52		
Registeration Time:	2015-04-03 02:14:09	Last Online Time:	2015-04-08 09:55:35		
Description:					
Records from 1 to 1 (Tota	al: 1)				

16. Click the device ID (00300500011111), it will show the detail information of R3000 Standard which include Info, Statistics, Location, Control, Alarms and Events.

E Info	₩ Statistics	O Location	ណឺ Control	🔔 Alarms	Events		
≣ 35153	5052009180 ->	Device Info					
Device In	formation						
	Device ID :	3515350520	009180		Status :	🔮 Online	Alarms
	Device Name :	M1000_Pro	V2		Device Group :	test1	S / Ev
	Device Type :	M1000 Pro	V2		Firmware Version :	Version 2.5.0	ents
h	ardware Version :				Kernel Version :		
	Module Type :	BGS2-W			Module Version :	REVISION 01.301	
	Data Socket State :	Connected			Startup Time :	2015-04-08 17:55:25	
	System Time :				Registeration Time :	2015-04-03 02:14:09	
	Last Online Time :	2015-04-08	09:55:35		Description :		
							_
Cellular Ir	nformation						_
Cur	rent SIM Number :	SIM1			ToTal SIM Number :	1	

3.2.2 Forward data from M1000 Pro V2 to RobustLink

1. Open RobustLink, go to tab "CONFIGURATION" --> Basic Settings--> click "Enable Data Forwarding"--> click "Apply" to activate these settings.

Agent Server Basic Setting	
Device Login Password:	
Heartbeat Interval (min):	1
Enable Data Forwarding:	Enable
Forward Data By Modbus Address (Modbus TCP):	Enable
	Apply

2. Go to tab "CONFIGURATION"--> Data Forwarding.

X Devices -> I	C Devices -> Device Data Forwarding						
Device Group:	tes	t1 •	If you want to forward data,	please enable this function first. <u>Go to configurate.</u>			
351535052009180		M1000_ProV2	M1000 Pro V2	/ Edit			
Device	e ID:	351535052009180	Status:	🔮 Online			
Device Na	ime:	M1000_ProV2	Device Type:	M1000 Pro V2			
F	Port:	0	Modbus Start Addr:	0			
Modbus End A	ddr:	0					
Records from 1 to	1 (To	tal: 1)					

3. Click the any place of Index 1, show details of Data Forwarding information. Set an idle port number, for example 22233. Then click "Apply".

☆ Devices -> Device D	ata Forwarding			
Device Group: test1	• If you	want to forward data, plea	ase enable this function first. <u>Go to</u>	
S 351535052009180	M1000	_ProV2	M1000 Pro V2	✓ Edit
Device ID: 3515	35052009180	Status: 🥏	Online	
Device Name: M100	0_ProV <u>2</u>	Device Type: M	1000 Pro V2	
Port: 0	Set Device Data Forwa	rding Configurations	⊗	
Modbus End Addr: 0	Device ID:*	351535052009180		
	Port:*	22233	\$	
Records from 1 to 1 (Total: 1)	Modbus Start Addr:	0	\$	
	Modbus End Addr:	0	\$	
		OK Cancel		
		Caller		

Note: Now RobustLink agent has become a TCP server, IP address is 113.113.49.201, local port number is 22233.

4. Run Hercules (download via link <u>http://www.hw-group.com/products/hercules/index_en.html</u>) --> go to tab "TCP Client" --> enter IP address and Port number of above TCP server which has been created in RobustLink --> click "Connect". If succeed to connect to the TCP Server, in this document, it will show up message "Connecting to 113.113.49.201 ...

Connected to 113.113.49.201".

😵 Hercules SETUP utility by HW-group.com	
UDP Setup Serial TCP Client TCP Server UDP Test Mode About	
Received/Sent data	
Connecting to 113.113.49.201 Connected to 113.113.49.201	Module IP Port 113.113.49.201 22233
	Ping X Disconnect
	TEA authorization TEA key 1: 01020304 3: 090A0B0C 2: 05060708 4: 0D0E0F10 Authorization code 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2
	PortStore test
	Received test data
	Redirect to UDP
F HEX	Send Send Send Send Version 3.2.5

5. Run Terminal exe (download via link <u>https://www.box.com/s/67a68jraki9k1r0lijuz</u>) --> select the same serial port settings of M1000 Pro V2: COM 1, Baud Rate 115200, Data Bits 8, Parity none, Stop Bits 1, Handshaking none -->

🛿 Terminal v1.9b - 20030716 - by Br @y++
Connect COM Port Baud rate Data bits Parity Stop Bits Handshaking Disconnect C OM2 C 1200 1 4400 5 5600 C 5 Image: Connect C 0M3 Image: Connect 0M3 Image: Connect 0M3 Image:
Auto Dis/Connect Section Time CH=LF Hxbox Clear 27 - ASULTable
Receive <u>CLEAR Reset Counter</u> 0
Transmit CLEAR DTR SET CLR CR=CR+LF Send File
123456 CEEXXem0
123456 ▼ M1 1000 € M2 1000 € M3 1000 € M3 1000 €
Connected //

click "Connect" --> enter characters like "123456" --> click "Send".

6. Check Hercules, if data "123456" shows up, that means RobustLink succeed to forward data "123456" sent from M1000 Pro V2.

😵 Hercules SETUP utility by HV-group.com	
UDP Setup Serial TCP Client TCP Server UDP Test Mode About	
Received/Sent data	- TCB
Connecting to 113.113.49.201	Nextern Rest
Connected to 113.113.49.201	
123456	1113.113.49.201
	Ping X Disconnect
	TEA authorization
	TEA key
	1 01020304 3 090A0B0C
	2: 05060708 4: 0D0E0F10
	Authorization code
	8
	PortStore test
	🗖 NVT disable
	Received test data
	Bedirect to UDP
r Send	
	Sand
L HEX	Send www.HW-group.com
1	Hercules SETUP utility
T HEX	Send Version 3.2.5

7. Enter characters "Hello" in Hercules --> click "Send".

🗞 Hercules SETUP utility by HW-group.com					
UDP Setup Serial TCP Client TCP Server UDP Test Mode About					
Received/Sent data	TCP				
Connecting to 113.113.49.201	Module IP Port				
123456Hello	113.113.49.201 22233				
	Ping X Disconnect				
	TEA authorization				
	TEA key				
	1: 01020304 3: 0304060C				
	2: 05060708 4: 0D0E0F10				
	Authorization code				
	•				
	PortStore test				
	🕅 NVT disable				
	Received <u>t</u> est data				
	Redirect to UDP				
Send					
Hello	Send HW group				
T HEX	Send www.HW-group.com				
	Hercules SETUP utility				
I HEX	Version 3.2.5				

8. Check Terminal.exe, if data "Hello" shows up, that means RobustLink succeed to forward data "Hello" which is sent from Control Center.

🦼 Terminal v1.9b - 20030716 - by Br 8y++
Connect COM Port Baud rate Data bits Parity Stop Bits Handshaking Disconnect C DM2 C 1200 C 14400 C 56000 C 5 C none C 11 C RTS/CTS About. C COM5 C 2400 C 19200 C 115200 C 7 C mark C 8 C 2 C RTS/CTS + X0N/X0 Quit C COM6 C 4800 C 38400 C 256000 C 8 C space C 2 C RTS or TX
Settings Auto Dis/Connect Set font Time CR=LF RxBox Clear 27 🜩 ASCII table
Receive Clean Reset Counter □ Counter = 0 C HEX CLEAR Reset Counter □ Image: Counter = 0 Image: StartLog StopLog Dec Image: Hex Image: Bin
Hello
Transmit CLEAR DTR SET CLR CR=CR+LF Send File
123456 CEXX800
123456
Connected

3.3 Manage R3000 Standard via RobustLink

3.3.1 Connect to RobustLink

There are two ways for R3000 Standard to connect to RobustLink, one is R3000 Standard connect to Internet through cellular network (GPRS), then connect to RobustLink; the other is to connect to Internet through Ethernet (broadband), then connect to RobustLink. In this document we use the first method.

 Login RobustLink Web GUI, go to tab "DEVICES" -> "Devices Groups", click " Add " to add a new group. The device group names test2.

Ra	obustLi	nk	Search by device ID or device name.	٩	👤 admin C
#	номе	Devices -> Device Groups			
:=	DEVICES	Device Groups			+ Add
	Device Groups	No record to display.			
	Devices				
6	Location				
×\$	Data Forwarding				
ሐ	Control				
	Alarms / Events				
646	Repository				
•	ADMIN				

Add Device Group		8		
Device Group:*	test2			
Description:	test 2			
	OK Cancel			

2. Click "test2" (device group name), and then it will switch to Devices page.

Click " + Import ", download the file template. File name: devices.xls

Robustlink Central Manager User Guide

Re	RobustLink Search by device ID or device name.				
#	номе	Devices -> Devices			
:=	DEVICES	Device Group: test2	+Add + import		
-	Device Groups	No record to display.			
	Devices				
٢	Location				
X\$	Data Forwarding				
ំំំំំំំំ	Control				
\$	Alarms / Events				
666	Repository				
•	ADMIN				
	Import Do	licon			

Device Group:*	test2	v
File:*		Select file

 Open devices.xls, enter Serial Number of R3000 Standard in tab "Device ID" and R3000_Standard in tab "Device Name", and then save this file. Section 2.5 DEVICES ->devices -> Device ID @ add will show how to find Serial Number of R3000 Standard.

	А	В	С
1	Device ID	Device Name	Description
2	351535052009180	M1000_ProV2	tes1
3	300500011111	R3000_Standard	test2
4			

Note: In tab "Device Name", it could consist of the characters "0-9", "A-Z", "a-z", "_", ".", "-".

4. Click tab "Select file ..." to import file devices.xls which you have filled in "Device ID" and "Device Name" of M1000 Pro V2.

Import Devices		8
Device Group:* File:*	test2	Select file
Click here to download	the file template.	OK Cancel

Click "Ok", the following page will display. It means M1000 Pro V2 registers the RobustLink successfully.

Results Of Import Devices	⊗
Results: ✓ Row [2]: Add a new device successfully.	

5. Regarding of R3000 Standard, Install an antenna, insert SIM card into one of the card slot. Power on R3000 Standard, login R3000 Standard's Web GUI page.

User authentication required. Login please.						
Username:	admin					
Password:	••••					
Language:	English 💌					
Please enter your log	gin username and password.					
	Login					

6. Go to tab "Configuration"--> "Cellular WAN" --> enter relevant correct ISP settings --> click "Apply".

				Log	ged in as: admin
Status 📤	Basic Advanc	ced ISP Profile			
System	Cellular Settings				^
Network		SIM1	SIM2		
Route	Status:	Not inserted	Ready		
VPN	Network Provider Type:	Aut o 🐱	china-mobile 💙		
Services	APN:		3gnet		
Event/Log	Username:				
Configuration	Password:				
Connigaration	Dialup No.:		*99***1#		
Link Management	PIN code request:	Set PIN Code	Set PIN Code		
Cellular WAN	Connection Made				
Ethernet	Connection Mode				
Serial 📃	Connection Mode:	Always online 🛛 👻			
USB	Redial Interval (s):	30			
NAT/DMZ	Max Retries:	3			
Firewall	Dual SIM Policy				
IP Routing	Main SIM Card:	SIM1 🔽			
DynDNS	🗹 Switch to backup SIM ca	rd when connection fails			
IPsec	Switch to backup SIM ca	rd when roaming is detected			
OpenVPN	Switch to backup SIM ca	rd when data limit is exceede	d		
GRE	🔲 Switch hark Main SIM ca	rd after timeout			~
L2TP				Apply	Cancel
пптп					
	Copyright © 20	13 Robustel Technologies. All rig	hts reserved.		

7. Go to tab "Configuration"--> "RobustLink" --> enter server (RobustLink) address and local port in the item "Server Address" and "Port". If you want set a login password for RobustLink, go to item "Password", enter a password which is preseted in the RobustLink. For example, if RobustLink set password "1234", we need to enter "1234" in here --> click "Apply" --> click "Save" --> click "Reboot".

Note: Please check the firmware version and confirm that if it is newer than Version 1.2.4.

QoS	*	RobustLink			
IP Routing					
DynDNS		RobustLink Settings			
IPsec		Enable RobustLink			
OpenVPN		Server Address:	113. 113. 49. 201		
GRE		Port:	31000		
L2TP		Password:			
РРТР	-				
SNMP					
VRRP					
AT over IP					
Phone Book	=				
SMS					
Reboot					
RobustLink					
Syslog					
Event					
USR LED					
Administration					
Aummstration	-			Apply	Cancel
		Convright @ 20	12 Robustol Technologica, All rights reconved		
		Copyright © 20.	to Robuster rechnologies. All rights reserved.		

Note:

- Server Address: This address is RobustLink's IP address, which should be a public IP address or URL. For example, 113.113.49.201, the address of USB dongle we use for test in this document.
- **Port:** This port number is the local port number of Agent Server (default port number is 31000), and then enter this number in this field. If Agent Server's port number is changed to another port number basing on the real application, 11021 for example, please enter 11021 in this field.
- **Password:** Enter the password which set in the RobustLink. Please refer to section **2.13 DEVICES -> Server** ->Device Login Password.
- 8. If R3000 Standard login RobustLink successfully, it will show the following diagram.

Devices -> Devices								
Device Group: All Group	T		+ Add + Import					
00300500011111	R3000_Standard	R3000 Standard	Edit Delete					
Records from 1 to 1 (Total: 1)								

9. If click any place of device name (R3000_standard), it will show the key information of R3000 Standard.

evice Group: test	2	•		+ Add + Import
<u>00300500011111</u>		R3000_Standard	R3000 Standard	Zedit Delete
Device ID:	00300500011111	Status:	🔮 Online	
IMEI:		Device Group:	test2	
Device Name:	R3000_Standard	Device Type:	R3000 Standard	
Firmware Version:	1.01.18	Wan IP:		
Registeration Time:	2015-04-08 11:45:41	Last Online Time:	2015-04-08 13:39:51	
Description:				

10. Click the device ID (00300500011111), it will show the detail information of R3000 Standard which include Info, Statistics, Location, Control, Alarms and Events.

E Info	⊥∕ Statistics	♀ Location	ំំំំំំំំំំំំំំំំំំំំំំំំំំំំំំំំំំំំំ	Alarms	Events		
€ 0030	0500011111 -> D	evice Info					
Device	Information						
	Device ID :	0030050001	1111		Status :	Online	Alarm
	Device Name :	R3000_Star	ıdard		Device Group :	test2	s / E
	Device Type :	R3000 Stan	dard		Firmware Version :	1.01.18	rents
	hardware Version :				Kernel Version :		
	Module Type :	BGS2			Module Version :	REVISION 01.301	
	Data Socket State :	Disconnect	ed		Startup Time :	2015-4-8 13:37:36	
	System Time :				Registeration Time :	2015-04-08 11:45:41	
	Last Online Time :	2015-04-08	13:39:51		Description :		
Cellular	Information						
Cı	urrent SIM Number :				ToTal SIM Number :	0	

3.3.2 Forward data from R3000 Standard to RobustLink

 Before forwarding data from R3000 Standard via RobustLink, please check section 3.3.1 Connect to RobustLink, configure settings such as "Cellular WAN" and "Portal" to confirm R3000 Standard can successfully connect to RobustLink. After that, go to tab "Configuration" --> "Serial" --> "RS232" --> "Protocol Settings" --> "Protocol", select "**Transparent Over Rlink**". Other settings such as "Interval Timeout" and "Serial Port Settings" stay default --> click "Apply" --> click "Save" --> click "Reboot".

obuste	1		• Save • Reboot	• Logout • English
				Logged in as: ad
us 🔷	RS232 RS	\$485		
em	Serial Port Settings			
work	Baudrate:	115200 🗸		
e	Data bit:	8		
	Parity:	None 🗸		
ices	Stop bit:	1		
it/Log	Flow control:	None 👻		
iguration	Protocol Settings			
Management	Protocol:	Transparent Over Rlink 💌		
ılar WAN	Interval Timeout (1*10n	ns): 10		
rnet				
al				
0				
/DMZ				
wall				
outing				
ONS				
;				
IVPN				
))				
. 💌				Apply Cancel

2. Open RobustLink, go to tab "Home", confirm R3000 Standard (device number is 300513060001) has logged in RobustLink.

Devices -> Devices								
Device Group: test2	T		+ Add + Import					
00300500011111	R3000_Standard	R3000 Standard	Celete Celete					
Records from 1 to 1 (Total: 1)								

3. Go to tab "ADMIN" --> "Agent Server" --> "Agent Server Basic Setting"--> click " Enable "Enable Data

Forwarding--> click " Apply " to activate these settings.

Agent Server Basic Setting	
Device Login Password:	admin
Heartbeat Interval (min):	1
Enable Data Forwarding:	C Enable
Forward Data By Modbus Address (Modbus TCP):	Enable
	Apply

Go to tab "DEVICES"--> "Data Forwarding". Click any place of device name "R3000_Standard", show details of 4. Data Forwarding information.

☆ Devices -> De	evice Data Forwardin	ng		
Device Group: t	est2 🔻	If you want to forward data b	y modbus address, please enable this fun	ction first. Go to configurate.
0030050001111	11	R3000_Standard	R3000 Standard	✓ Edit
Device IE	00300500011111	Status:	Online	
Device Name	e: R3000_Standard	Device Type:	R3000 Standard	
Por	t: 0	Modbus Start Addr:	0	
Modbus End Add	r: 0			
Records from 1 to 1 (Total: 1)			
L				

5. Click Click to set an idle port number, for example 22222. Then click "Apply".

Device Group: test2	• 🕒 If you	want to forward data by	modbus address, please enable this	function first. Go to configura
o0300500011111	R3000_Star	ndard	R3000 Standard	✓ Edit
Device ID: 003005000	11111	Status:	Online	
Device Name: R3000_Sta Port: 0	Set Device Data Forwa	rding Configurations	R3000_Standard	
Modbus End Addr: 0	Device ID:* Port:*	00300500011111 22222	*	
Records from 1 to 1 (Total: 1)	Modbus Start Addr: Modbus End Addr:	0	÷	

Note: Now RobustLink agent has become a TCP server, IP address is 113.113.49.201, local port number is 22222.

6. Run Hercules (download via link <u>http://www.hw-group.com/products/hercules/index_en.html</u>) --> go to tab "TCP Client" --> enter IP address and Port number of above TCP server which has been created in RobustLink --> click "Connect". If succeed to connect to the TCP Server, in this document, it will show up message "Connecting to 113.113.49.201 ...

Connected to 113.113.49.201".



Run *Terminal exe* (download via link <u>https://www.box.com/s/67a68jraki9k1r0lijuz</u>) --> select the same serial port settings of R3000 Standard: COM 1, Baud Rate 115200, Data Bits 8, Parity none, Stop Bits 1, Handshaking none --> click "Connect" --> enter characters like "123456" --> click "Send".

🦼 Terminal v1.9b - 20030716 - by Br@y++	
COM Port Baud rate Disconnect © COM1 © 600 © 9600 © 56000 Disconnect © COM2 © 1200 © 14400 © 57600 About © COM4 © 2400 © 19200 © 115200 Quit © COM6 © 4800 © 38400 © 256000	Data bits Parity Stop Bits Handshaking C 5 © none © 1 © none C 6 C even C 1.5 C XON/XOFF C 7 C mark C 2 C RTS/CTS + XON/XO © 8 C space C 2 C RTS on TX
Auto Dis/Connect Set font Time CR=LF RxE	lox Clear 27 🚖 ASCII table
Receive ○ Counter ○ HE CLEAR Reset Counter ○ ◆ Counter = 0 ○ Strip	X ngStartLog StopLog Dec 🔽 Hex 🖵 Bin
Transmit CLEAR DTR SET CLR RTS SET CLR	CR=CR+LF SendFile
123456	CHEMEDOLI
123456	Transmit Macros ✓ M1 1000 ✓ ✓ M2 1000 ✓ ✓ M3 1000 ✓
Connected	

8. Check *Hercules*, if data "123456" shows up, that means RobustLink succeed to forward data "123456" sent from R3000 Standard.

😵 Hercules SETUP utility by HW-group.com	
Received/Sent data Connected to 113.113.49.201 123456	TCP Module IP Port 113.113.49.201 22222 Ping X Disconnect TEA authorization TEA key 1: 01020304 3: 090A0B0C 2: 05060708 4: 0D0E0F10 Authorization code
	PortStore test NVT disable Received test data Redirect to UDP
Send	
	Send HUDgroup Send Hercules SETUP etility Send Version 3.2.5

9. Enter characters "Hello" in *Hercules* --> click "Send".

😵 Hercules SETUP utility by HW-group.com		
UDP Setup Serial TCP Client TCP Server UDP Test Mode About		
Received/Sent data Connecting to 113.113.49.201 Connected to 113.113.49.201 123456Hello	TCP Port Module IP Port 113.113.49.201 22222 Ping X Disconnect TEA authorization TEA key 1: 01020304 3: 090A0B0C 2: 05060708 4: 0D0E0F10 Authorization code 🕰	
	PortStore test NVT disable Received test data Redirect to UDP	
Send		
	Send HWDgroup Send www.HW-group.com Hercules SETUP willity Send Version 3.2.5	

10. Check *Terminal.exe,* if data "Hello" shows up, that means RobustLink succeed to forward data "Hello" which is sent from Control Center.

Z Terminal v1.9b - 20030716 - by Br€y++
Connect COM Port Baud rate Data bits Parity Stop Bits Handshaking Disconnect C C0M2 C 600 9600 56000 C 5 C none C 1 C none C RTS/CTS About. C C0M4 C 2400 C 19200 C 115200 C 7 C mark C 1.5 C NN/XOFF Quit C C0M6 C 4800 C 38400 C 256000 C 8 C 2 C RTS/CTS + XON/XC Settings Auto Dis/Connect Set font Time C R=LF RxBox Clear 27 ASCII table
Beceive
CLEAR Reset Counter O Counter = 0 C HEX StartLog StopLog Dec Image: Hex Bin
Hello
Transmit CLEAR DTR SET CLR CR=CR+LF Send File
123456 C:::::Xerot::
123456
Connected //