STACK IOT

Installation & Operational Manual

Radio Over IP Gateway

Model RoIP400

Firmware Version 6.0.0.19

RoIP Box Contents

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2. Ethernet Cable
3. Radio Interface Cable
4. Power Adopter 9V DC
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For any support, email us at support@stackiot.tech

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BASIC INSTALLATION

Hardware Interface Overview

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CONNECTOR TYPE	INTERFACE	DESCRIPTION
Power connector	Power interface	Power connector to provide external DC power supply to ROIP
Ethernet (RJ45)	LAN interface	LAN port provides LAN connectivity with other ROIP or Computers.
(RJ45) x 4 Nos	Radio Interface (RA1, RA2, RA3, RA4)	Radio connector to interface with 4 Radio Set

Hardware Front Overview

LED	COLOR	STATUS	DESCRIPTION
PWR	RED	ON	System Power ON
		OFF	System Power OFF
LINK L1/L2 L3/L4	L1/L2–RED/GREEN	Blinking	ROIP Connection not established
		RED ON (Constant)	Connection 1 – established
	L1/L2–RED/GREEN	Blinking	ROIP Connection not established
		GREEN ON (Constant)	ROIP Connection 2 – established
	L1/L2–RED/GREEN	ORANGE ON (Constant)	ROIP Connection 1 & 2 established.
	L3/L4–RED/GREEN	Blinking	ROIP Connection not established
		RED ON (Constant)	Connection 3 – Connected
	L3/L4–RED/GREEN	Blinking	ROIP Connection not established
		GREEN ON (Constant)	Connection 4 – Connected
	L3/L4–RED/GREEN	ORANGE ON (Constant)	ROIP Connection 3 & 4 established.
Radio R1, R2, R3, R4	RED (PTT)	ON	Radio Set Connected is in Transmit Mode (1, 2, 3, 4 denotes corresponding Radio Port)
	GREEN (CSQ)	ON	Radio Set Connected is in Receiving Mode (1, 2, 3, 4 denotes corresponding Radio Port)

ROIP Quick Setup Guide

- Plug the Power Adopter in RoIP
- Connect Lan Cable in the RoIP and other end to your Laptop/ Desktop.
- Configure your Laptop/ Desktop Ethernet Adapter IPv4 Settings to Manual with following IP Settings:
  (IP Address / Subnet Mask)
  192.168.1.20 / 255.255.255.0
- Open Web Browser and enter RoIP Default IP: 192.168.1.80
- Default Login Password is : admin
- Open IP config Settings.
- Configure the Local IP Settings of ROIP Device which you need. Click on Save and reboot.
- Connect Radio Interface Cable at RoIP Radio Port (RJ-45 Connector) and other end at Radio Accessory Connector Port.
- Configure the Server IP Settings with the Remote ROIP/ Server IP/Port and Save.
- Once the RoIP Link Led turns to Permanent On, your RoIP System is connected and Ready to Use.
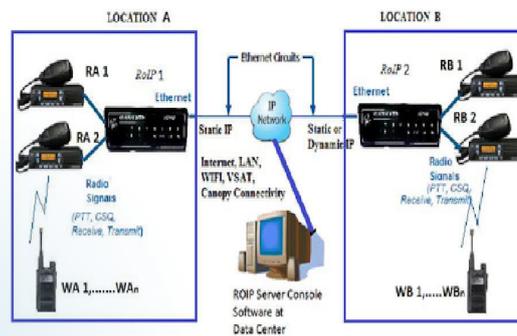
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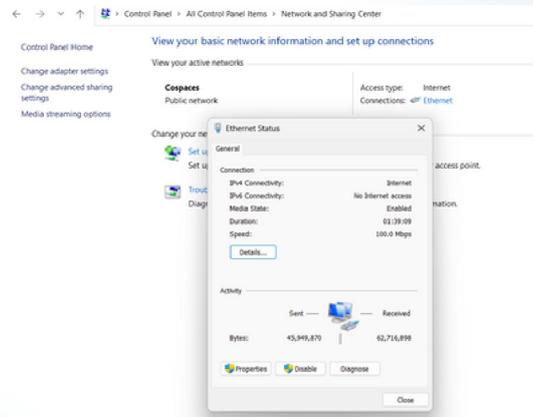www.stackiot.tech   support@stackiot.tech

SETTINGS CONFIGURATION

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## Computer IP Configuration to configure ROIP

- Go to Control Panel-> Network and Internet-> Network and Sharing Center
- Click on Local Area Connection/ Wireless Network Connection.
- Click "Properties".

- Select "Internet Protocol Version 4 TCP/IPv4" and Click "Properties".
- Select "Use the following IP address" option.
- Enter IP Address of computer (should be in the same local network range as of ROIP). If ROIP is in default mode, enter "192.168.1.x" (x is any value from 1 to 254 other than 80)
- Enter Subnet Mask. If ROIP is in default mode, enter "255.255.255.0"
- Enter Default Gateway. If ROIP is in default mode, enter "192.168.1.1"

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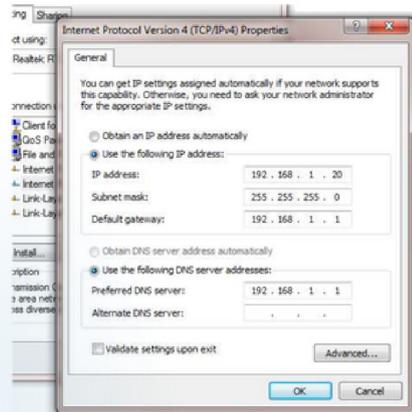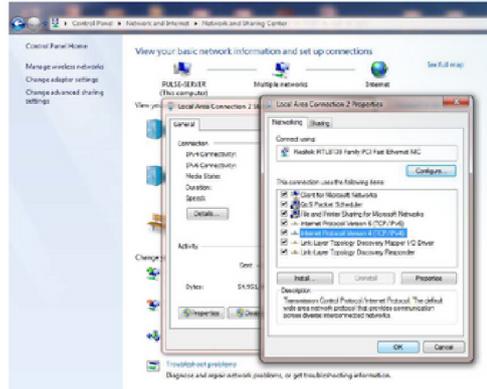
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Factory Default ROIP Settings
IP Settings:

> Local IP: "192.168.1.80"
> Subnet Mask: "255.255.255.0"
> Gateway: "192.168.1.1"
> Password: "admin" (without using "")

ROIP Configuration

- Connect ROIP to a computer/laptop using Ethernet Cable and follow "Computer IP Configuration" procedure.
- Open a Web browser (Internet Explorer, Mozilla Firefox, Chrome, etc) on the computer.
- Enter the Local IP address of the ROIP on the address bar of web browser as shown below (factory default: "192.168.1.80"):
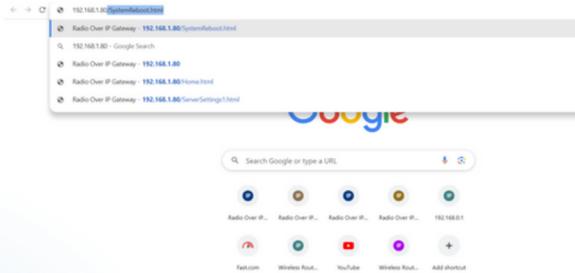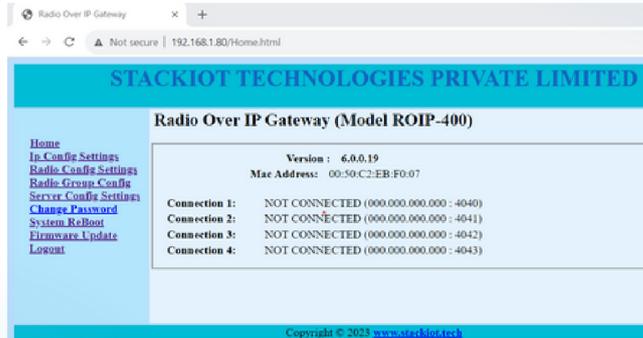

- A Login page will appear as shown below. Enter login password andpress Login (factory default: admin).

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- Radio Over IP Gateway Settings Home Page will appear as below.

Local-IP Settings Configuration

- Select "IP Config Settings" on the Home Page.
- An IP Configuration Settings Page will open as shown below.
- Modify values as mentioned in "System Configuration".
- Click on Save to confirm the changes.
- Reset Power of Roip for changes to take effect.

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- You can also change IP Configuration.
- Select DHCP Enable Checkbox to request IP Configuration Settings from the Network Gateway / DHCP Server
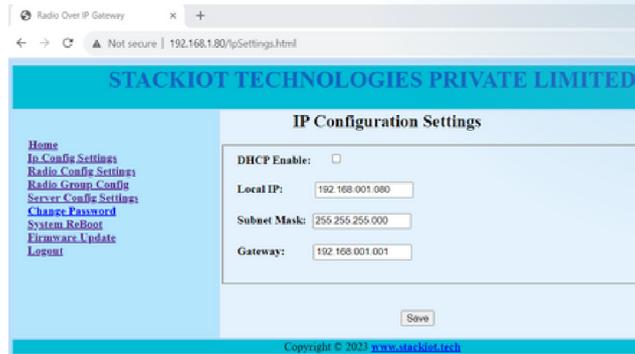
Server IP Configuration

- On this Page, we will configure the Server Connection Details to connect to the RoIP Server.
- There are four connection Ports provided to enter Connection Details for four Server. They could be configured either in Multi-Connection or as Redundant Mode.
- Remote IP : Enter the Server IP Address or leave as blank or 0.0.0.0 if not available.
- Remote Port: Enter the Port Address on Server where this RoIP will connect. Check User Configuration Settings on the RoIP Server for this RoIP Account Port details

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Other Configuration Settings

Home
In Config Settings
Radio Config Settings
Radio Group Config
Server Config Settings
Change Password
System ReBoot
Firmware Update
Logout

Connection Port: CONN 1
Remote IP: 000.000.000.000
Remote Port: 4040

Parallel Group: ☐
Radio Port/Group Map: RADIO PORT 1
Local Port: 4040

Eth Link Config: ☐

WAN Dynamic IP: ☐

Connection Less Transmission: ☐

Port Farwarding Enable: ☐

Health Time Out: 000010

Health Retry: 000007
Connection Timer: 000005

Connection Wait Timer: 000001
Connection Retry Count: 000020

- Local Port: This is the Local Port of RoIP Device from which it will make the IP Connection to Server. Leave it as default. It would be 4040 for Connection 1, 4041 for Connection 2 and so on upto four ports.
- Click on Save.
- Click on System Reboot after Saved Successfully is shown.

Radio Settings Configuration

- Select "Radio Config Settings" on the Home Page.
- A Radio Configuration Settings Page will open as shown below.
- Modify values as mentioned in "System Configuration".
- Click on save to confirm the changes.
- Reset Power of ROIP for changes to take effect.

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- Active High CSQ: Enable Option if CSQ is Active High.
- Vox Mode: Enable Option for Vox mode operation, CSQ Signal not coming from Radio Set.
- CSQ Priority High: Enable option for permanent Call Active Mode.
- Config Type: Select "Simplex " for Radio Communication (default).
- Vox Delay: Vox Delay value in millisecond, applicable only when Vox mode is enabled.
- Vox Threshold: Minimum threshold audio level to trigger CSQ Signal in Vox mode. (Range: 0 to 255).
- PTT Delay Timer: PTT Audio Delay/Buffering Timer in millisecond.
- PTT Time Out Timer: Max Continuous PTT Enable Timer (in millisecond). Enter 0 to disable the feature.

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- PTT Release Timer: CSQ Signal Wait Timer (in millisecond) after PTT signal is disabled.
- PTT Cut off Timer: Transmit Audio Cut off Timer at end to truncate.

RADIO GROUP Configuration

- Select "Radio group Config " on the Home Page.
- A Radio group configuration Settings Page will open as shown below. Create Group as per your requirement.
- Click on Save to confirm the changes.
- Reset Power of ROIP for changes to take effect .

Change Login Password

- Select "Change Password" on the Home Page.
- A Change Login Password Page will open as show on web as shown below.
- Enter "Old Password" , "New Password", Re-Enter "New Password" Click on Save to change password
- Click on System reboot ROIP for changes to take effect..

Reset ROIP to Factory Default Settings

- Power On the ROIP.
- Locate a small press button near power on/off switch of ROIP.
- Press the button for 5-6 seconds while the ROIP wise led on, till all led at the front panel blinks twice.
- Reset Power of ROIP for changes to take effect.

RADIO Interface CONFIGURATION

Interface Cable Connections

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Connections At ROIP

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Pin 1   Pin 8

PIN 8
PIN 7
PIN 6
PIN 5
PIN 4
PIN 3
PIN 2
PIN 1

SPK + (RX AUDIO)
PTT
NC   CARRIER (CSQ DETECT)
NC
NC   MIC + (TX AUDIO)
GND
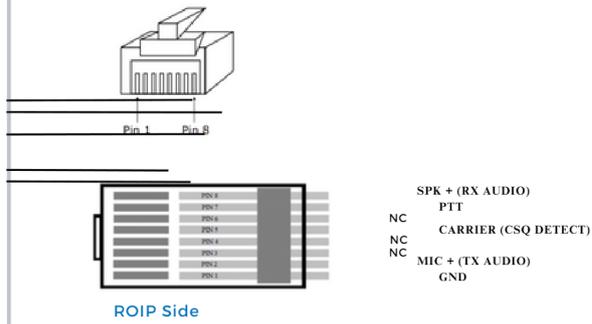
ROIP Side

ROIP (RJ 45)	Description
PIN 1	GND
PIN 2	TX AUDIO (MIC +)
PIN 5	CARRIER (CSQ DETECT)
PIN 7	PTT
PIN 8	RX AUDIO (SPK +)

Caution: The 16 pin connector supplied with the equipment is non-polarized. Extreme care must be taken before connecting to radio. Connector is marked as RADIO TOP Cover Side/ RADIO Sr. No.

QUICK TROUBLESHOOT

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Indication	Problem	Resolution
Link Led Off	Ethernet not initialized	Reset Power of Roip and check for Lan Connection Led on the Ethernet (RJ45) Connector.
Link Led Blinking Fast	Connection Not Established	Check Lan Connection. Check Ping status of both IP. Check ROIP IP Configuration
Lan Connection Led Off/Blinking	Not Connected to LAN	Check Ethernet Cable.
Radio Receiving but CSQ Led not glowing	ROIP not receiving	Check Interface Cable. Check Radio Configuration Settings for CSQ mode or Vox mode. Check Radio Settings.
PTT Led glowing but Radio not transmitting	Radio not transmitting	Check Interface Cable. Check Radio Settings.
ROIP's CSQ Led glowing but other ROIP's PTT Led not glowing	Connection Break	Check Lan Connection. Check Ping status of both IP. Check ROIP IP Configuration.