Installation & Operational Manual

Radio Over IP Gateway

Model RoIP-300D

Firmware Version 2.34.0.14

RoIP Box Contents

1. Radio Over IP Gateway
2. Ethernet Cable
3. Radio Interface Cable
4. Power Adopter 9V DC

For any support, email us at support@stackiot.tech

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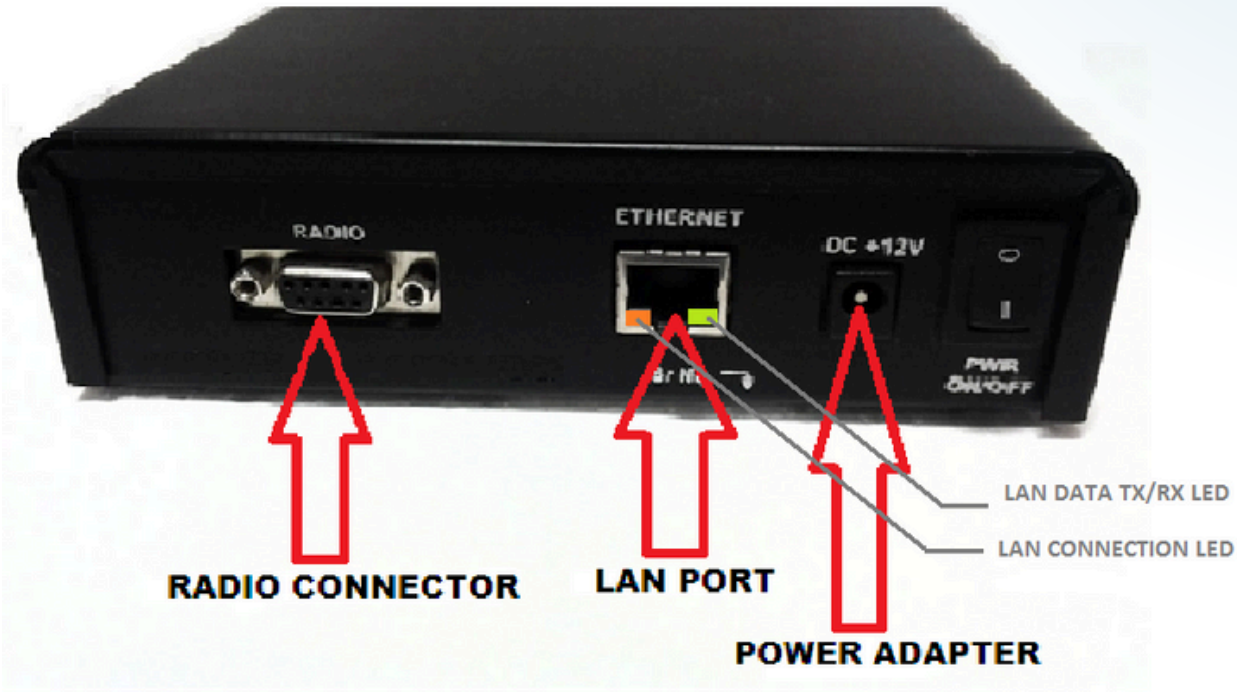
BASIC INSTALLATION

Hardware Interface Overview



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.
DB-15 Pin	Radio Interface	Radio connector to interface with Radio

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Hardware Front Overview

LED Notifications

LED	COLOR	STATUS	DESCRIPTION
PWR	RED	ON	System Power ON
		OFF	System Power OFF
LINK	RED	Fast Blinking	Not Connected
		Slow Blinking	Connected to Server. Call Disconnect Mode.
		ON	Connected to Server.
PTT	Green	ON	Radio Set connected is Transmitting Audio.
CSQ	Yellow	ON	Radio Set connected is Receiving Audio.

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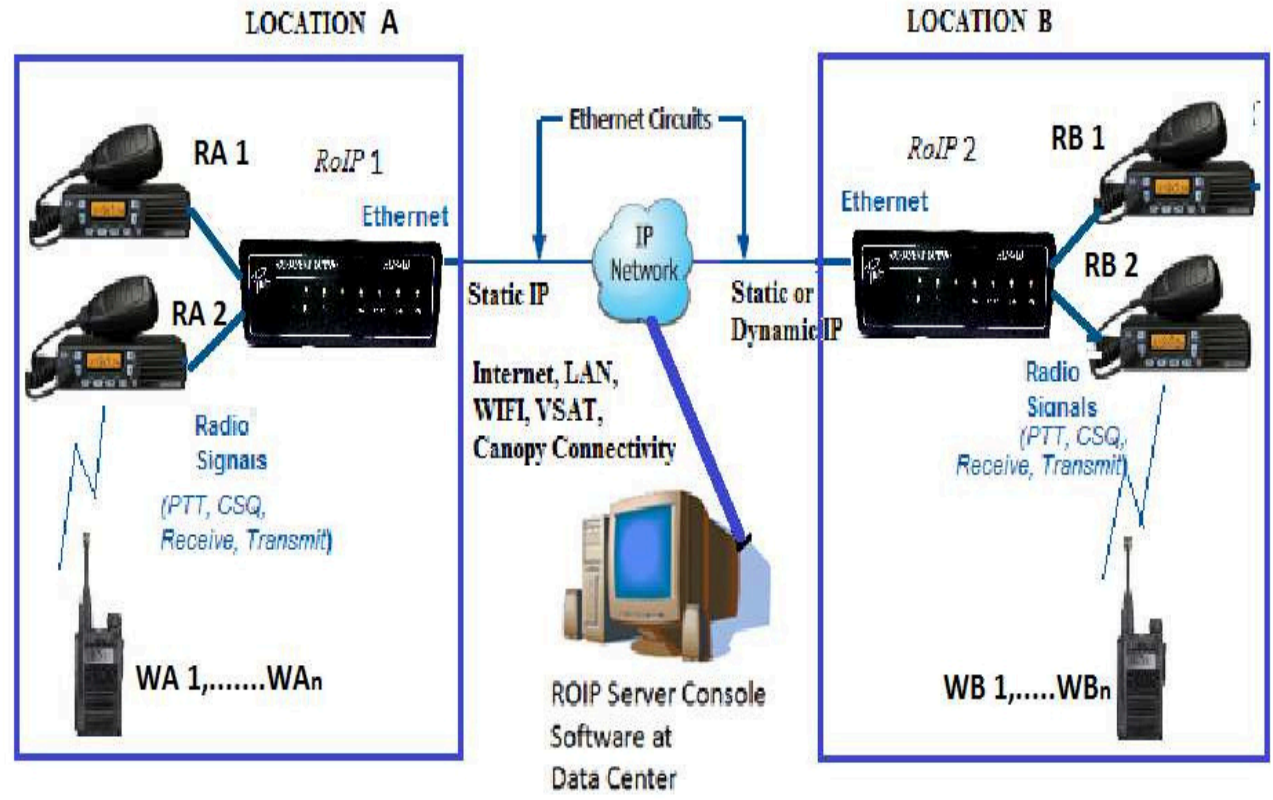
ROIP Quick Setup Guide

- 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 (DB-15 Pin Connector) and other end at Radio Accessory Connector Port
- Once the RoIP Link Led turns to Permanent On, your RoIP System is connected and Ready to Use.



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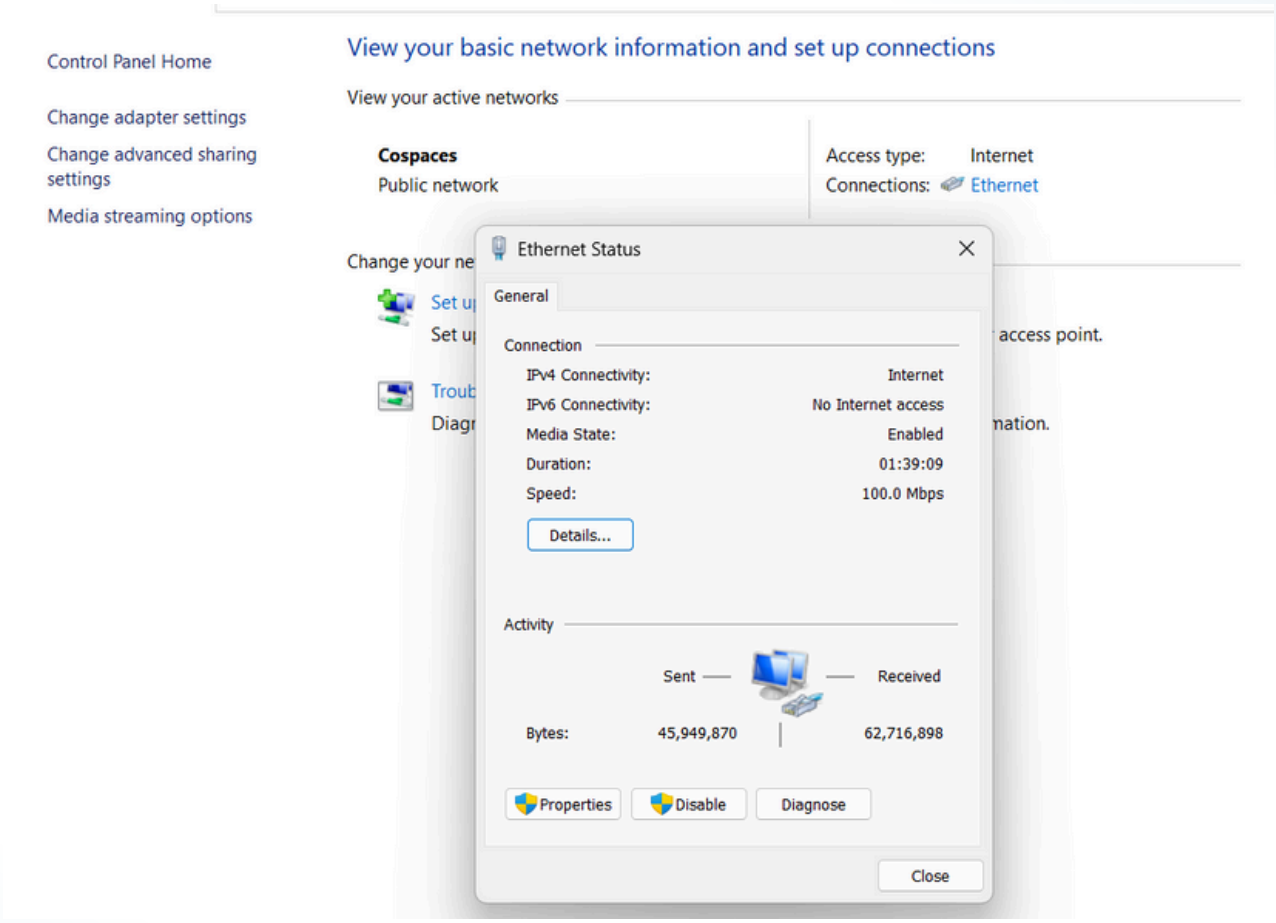
SETTINGS CONFIGURATION

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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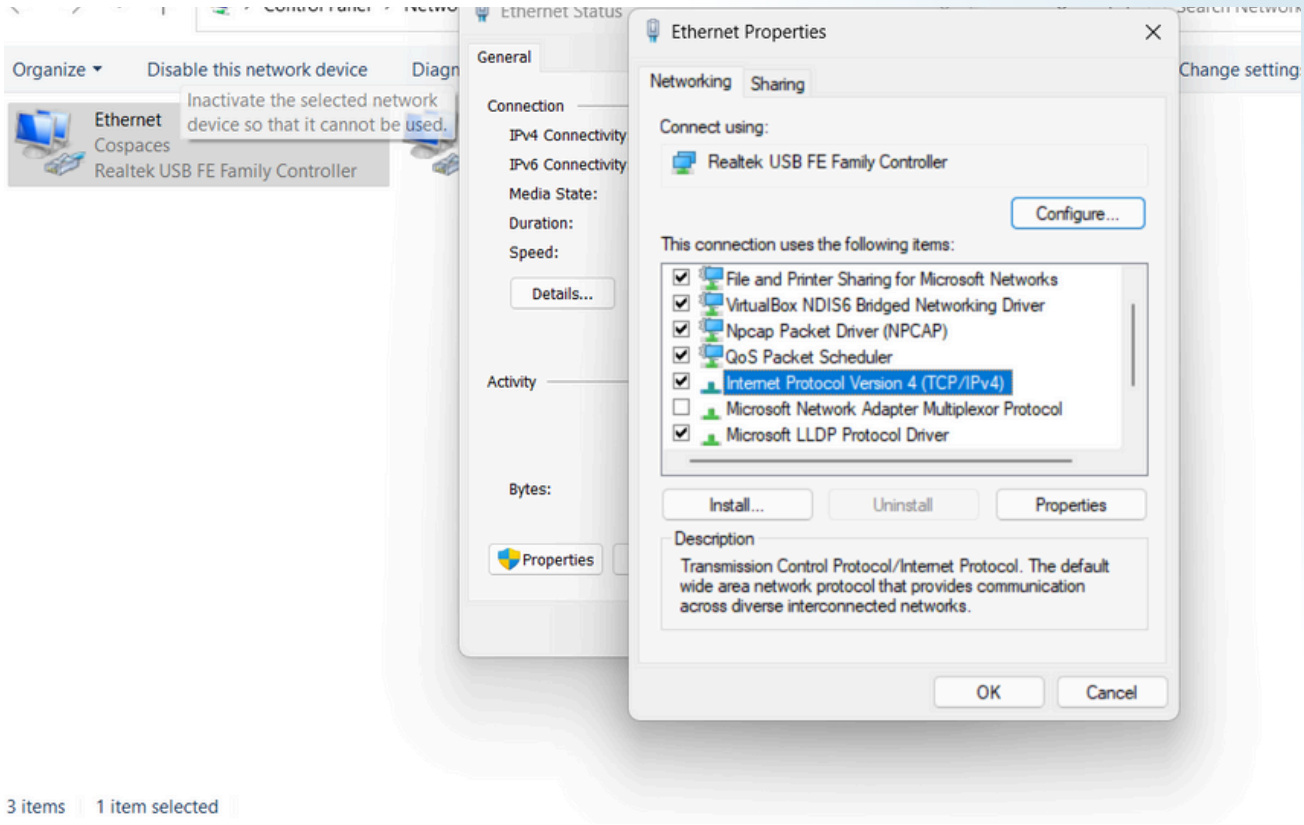

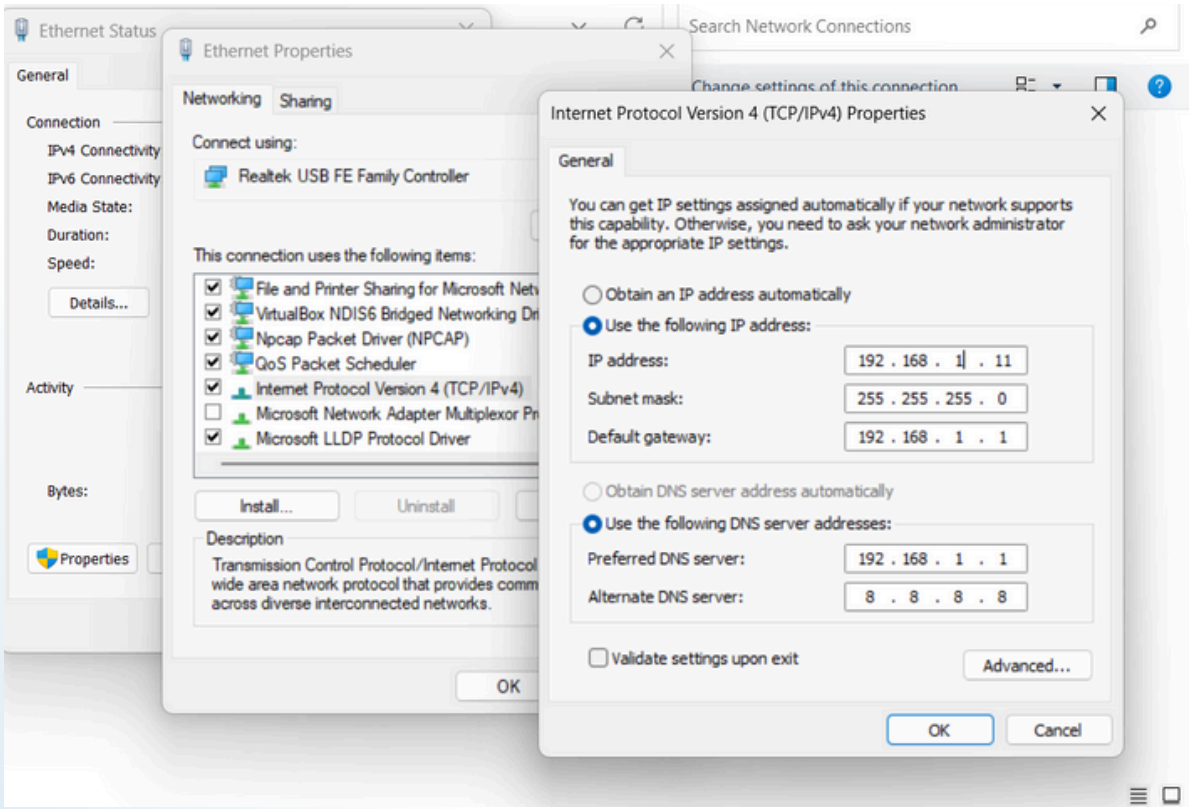

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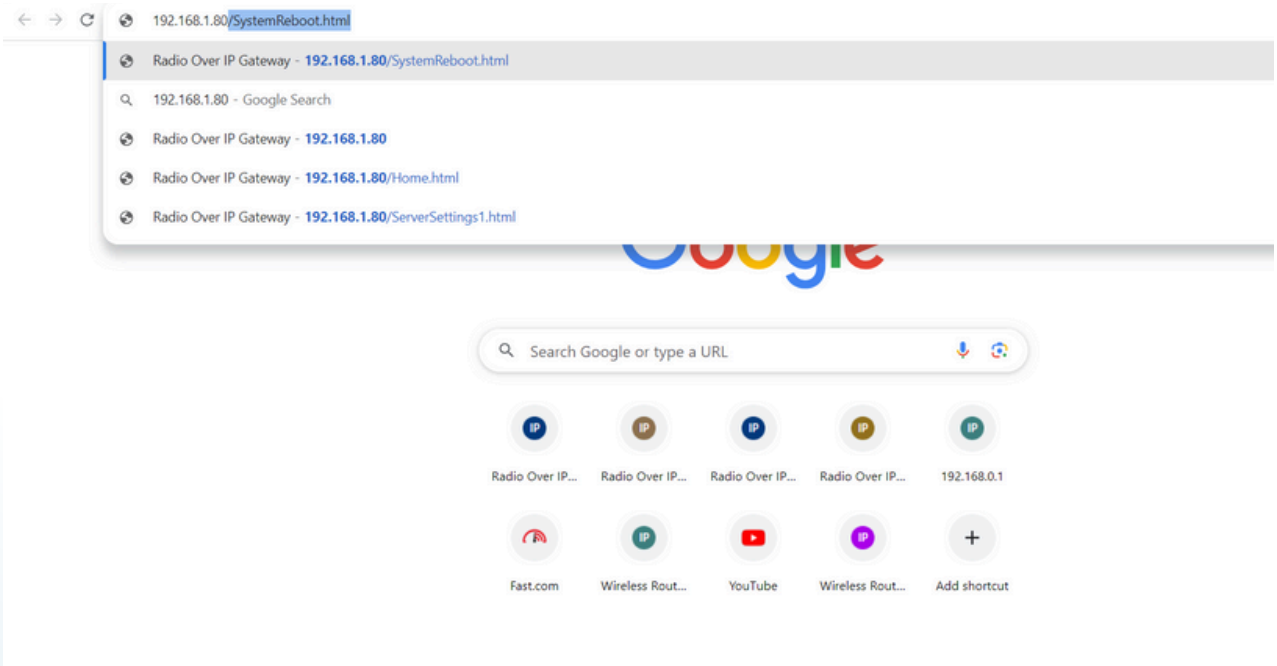
Factory Default ROIP Settings

IP Settings:

Local IP: “192.168.1.80”
Subnet Mask: “255.255.255.0”
Gateway: “192.168.1.1”
Password: “admin” (without using “”)

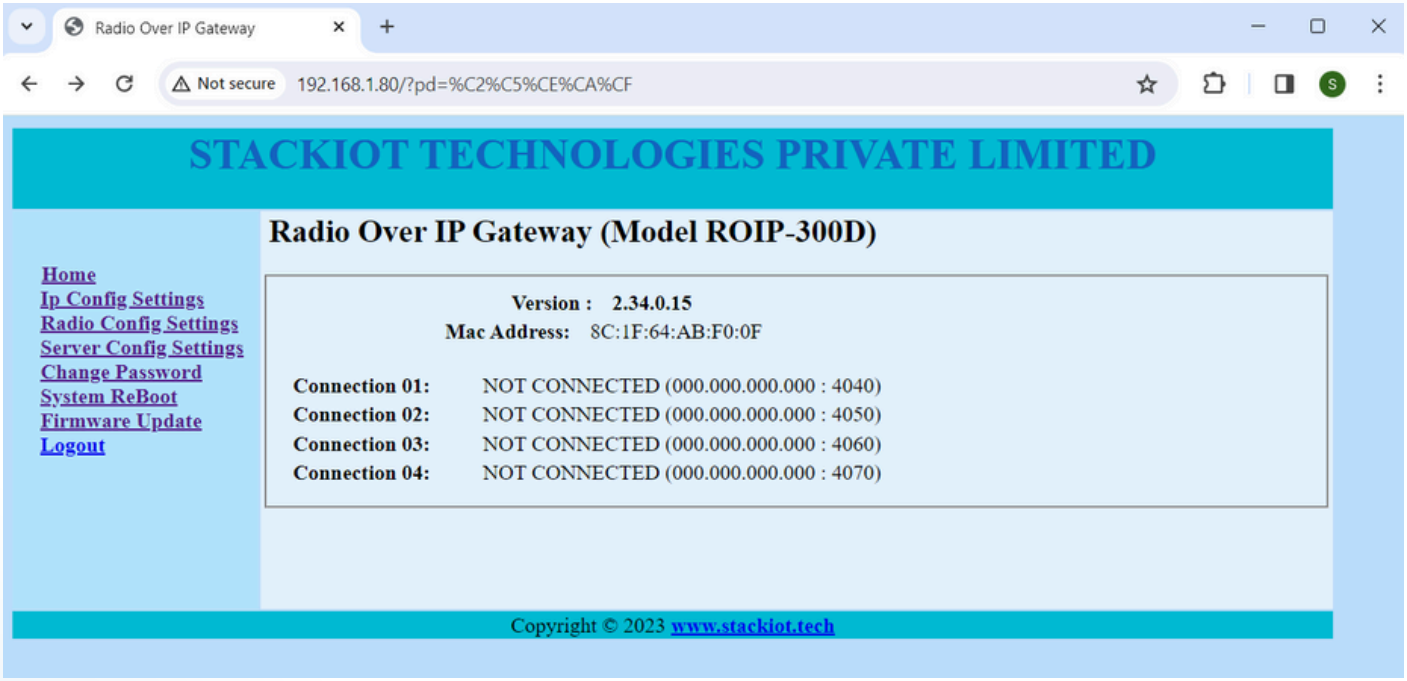
ROIP Configuration

- 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).

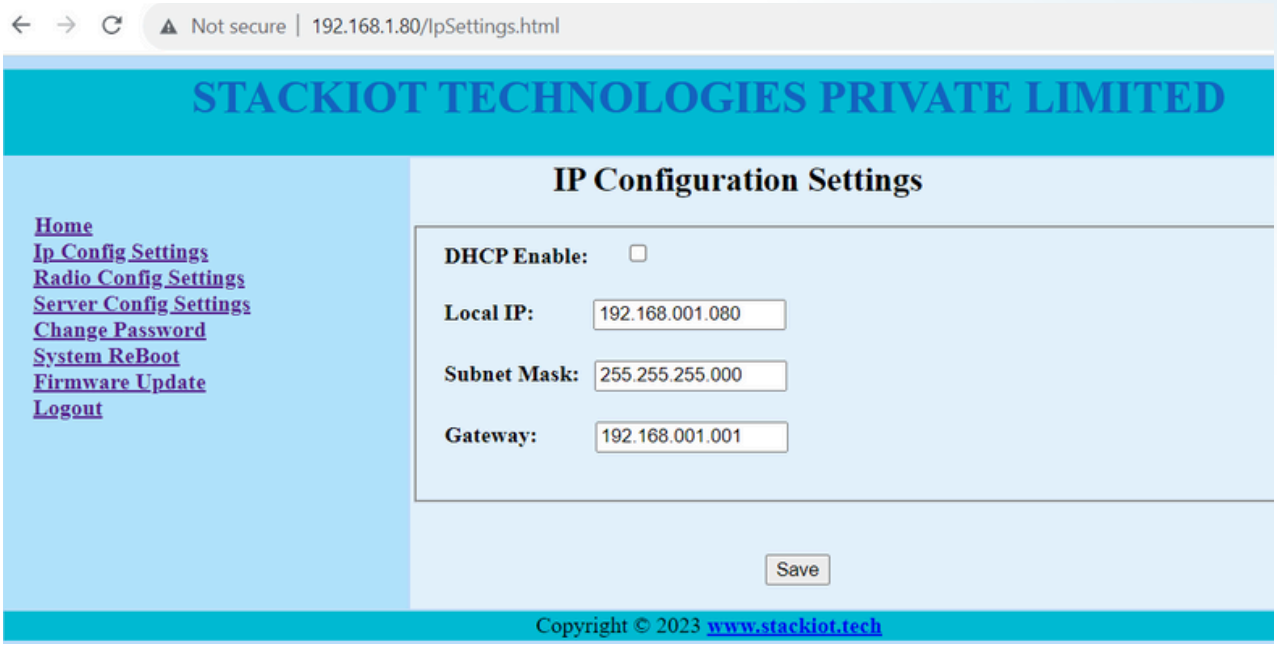
- Radio Over Ip Gateway Settings Home Page will appear as below.



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.

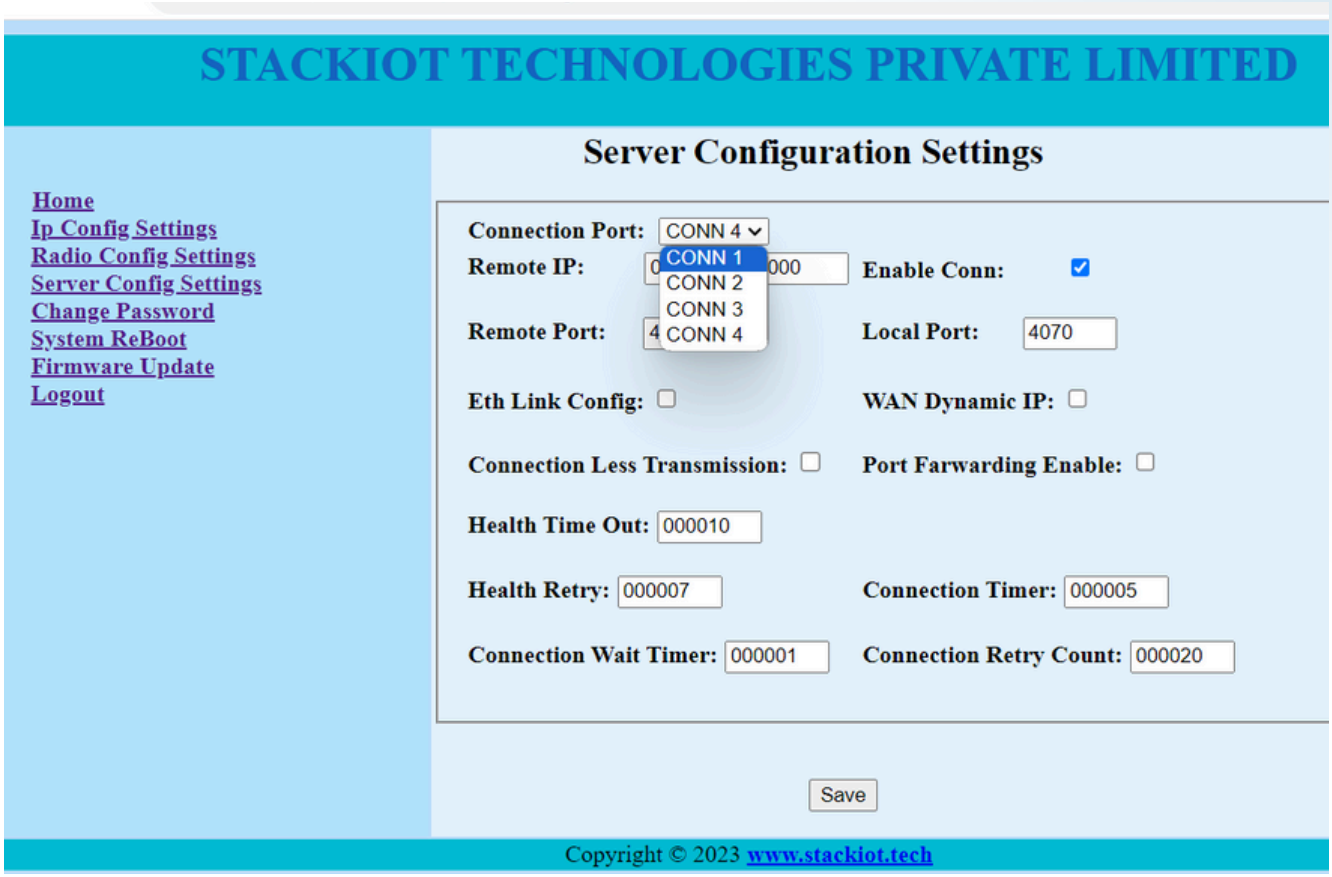
- You can also change IP Configuration in IP Config Settings.
- Select DHCP Enable Checkbox to request IP Configuration Settings from the Network Gateway / DHCP Server.



Server IP Configuration

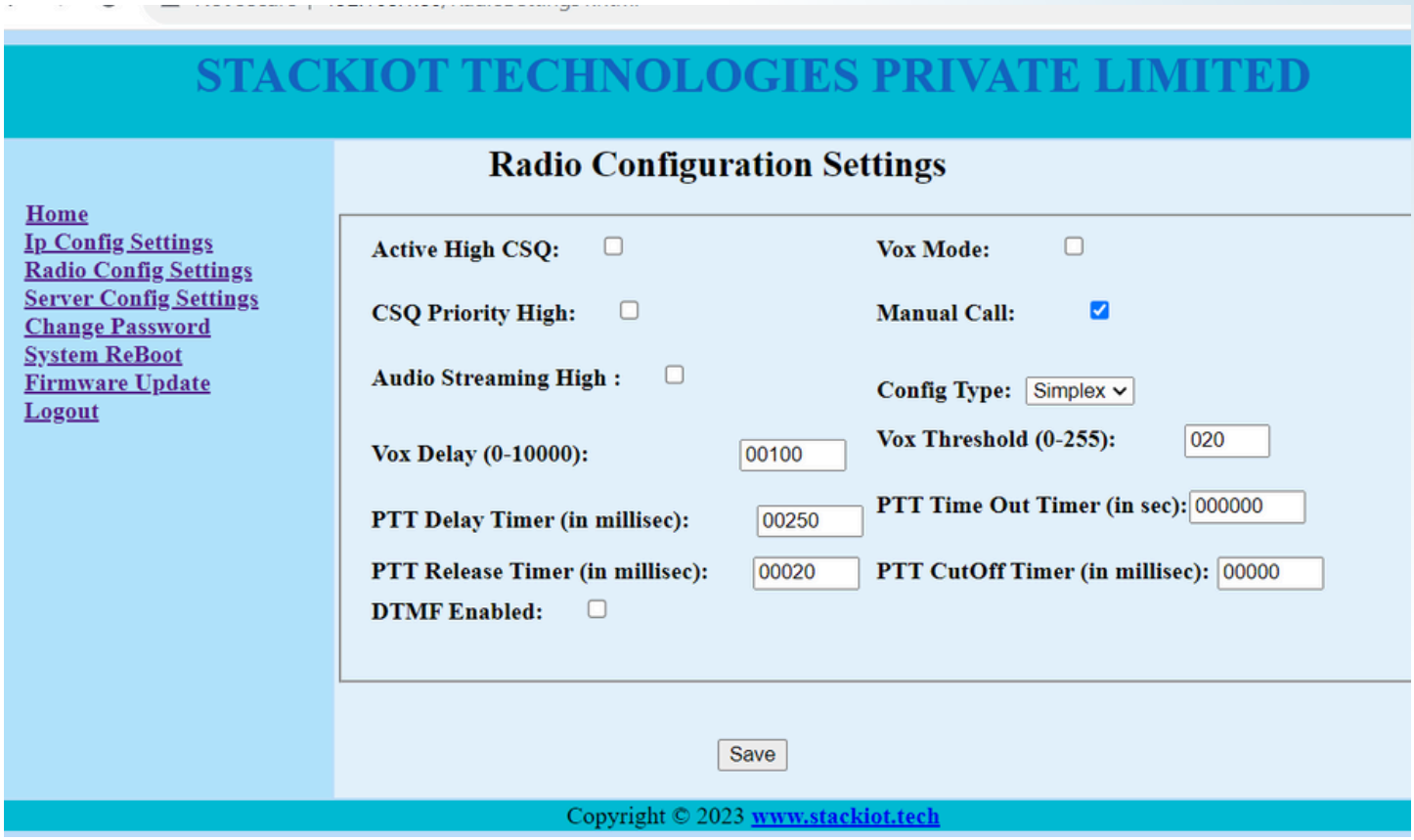
- On this Page, we will configure the Server Connection Details to connect to the RoIP Server.
- There are four connection Ports provided to enter Connection Details for four Server. They could be configured either in Multi-Connection or as Redundant Mode.
- Remote IP : Enter the Server IP Address or 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
- 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 and 4050 for Connection-2 by default and so on.

- 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.



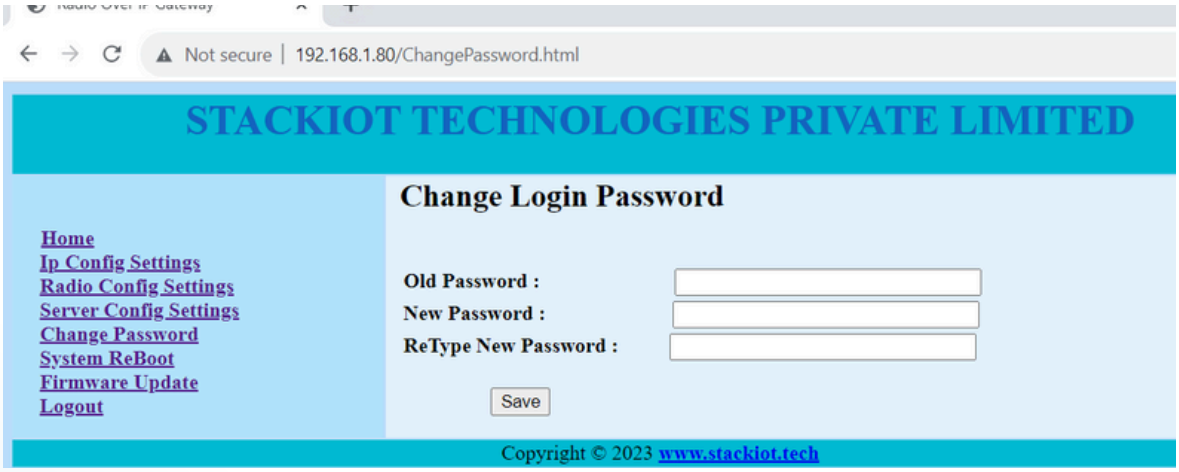
Key Points

- 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.

- 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.
- DTMF: Enable Option for DTMF Dialing feature through Hand Sets Held.
- Manual Call Enable: Enable Option for permanent Call Active Mode

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..



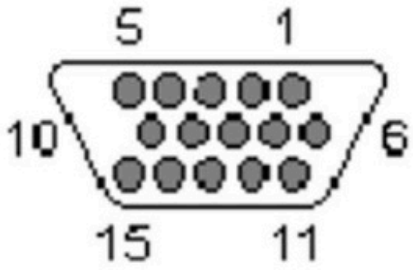
Reset ROIP to Factory Default Settings

- Power On the ROIP.
- Locate a small press button at the bottom side 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 CONFIGURATION

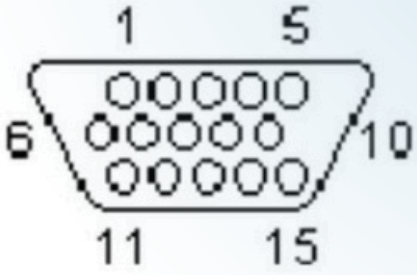
Interface Cable Connections

ROIP BACK PANEL



Female Head

INTERFACE CABLE



Male Head

- **Pin 1 - RX AUDIO (Green Color)**
- **Pin 2 -** *No Connection*
- **Pin 3 -** *No Connection*
- **Pin 4 - TX Audio (Yellow Color)**
- **Pin 5 - GND (Black Color)**
- **Pin 6 - Channel Select 1/ Accessory Output Pin** *(Optional)*
- **Pin 7 - Channel Select 1/ Accessory Output Pin** *(Optional)*
- **Pin 8 - Channel Select 1/ Accessory Output Pin** *(Optional)*
- **Pin 9 - Channel Select 1/ Accessory Output Pin** *(Optional)*
- **Pin 10 - RSSI Signal** *(Optional)*
- **Pin 11 -** *No Connection*
- **Pin 12 -** *No Connection*
- **Pin 13 -** *No Connection*
- **Pin 14 - PTT (Red Color)**
- **Pin 15 - CSQ (Blue Color)**

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QUICK TROUBLESHOOT

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.

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