



QUANTUM NETWORKS QN-I-220 Quantum Wireless Access Point User Guide

[Home](#) » [QUANTUM NETWORKS](#) » QUANTUM NETWORKS QN-I-220 Quantum Wireless Access Point User Guide



QUANTUM NETWORKS QN-I-220 Quantum Wireless Access Point User Guide



Contents

- 1 Copyright Information
- 2 Glossary
- 3 Icon description
- 4 Before you begin
- 5 Step 1 – Create new account on Quantum Rudder
- 6 Step 2 – Basic setup
- 7 Step 3 – Setting up device IP address
- 8 Step 4 – Set the management mode
- 9 Step 5 – Access Point quick setup in Rudder Mode
- 10 Step 6 – Access Point quick setup in standalone mode
- 11 Bridge
- 12 Reset Access Point to factory defaults
- 13 Documents / Resources
 - 13.1 References
- 14 Related Posts

Copyright Information





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This Quick Setup Guide provides step-by-step instructions on how to set up Quantum Networks Access Point. After completing the steps described in this Guide, you will be able to install the Access Point (AP) on-site and provide wireless network access to users

Glossary

Feature	Description
Management Mode	Standalone: In this mode, each device is configured and managed individually. It can be useful in scenarios with few devices or sites with limited Internet access and basic features. Cloud: In this mode, devices are configured and managed from a central controller hosted in the cloud. It offers many more sets of features as compared to the Standalone mode.
Operation Mode	Bridge: In this mode, the device connects to a network over an ethernet cable and extends the coverage over wireless. Router: In this mode, the device connects to Internet Service Provider directly using DHCP / Static IP / PPPoE protocols and shares Internet access over a wired or wireless network to users.
Quantum Rudder	Quantum Rudder is a cloud-hosted controller which can be used to configure, manage & monitor devices associated with it. It can be accessed from https://rudder.qntmnet.com

Icon description

Icon on GUI	Description
	Click to get the option for the firmware update.
	Click to get back to the home page.
	Click to check the documentation.
	Click to check device information.

Before you begin

Your Quantum Networks Access Point can work in “Standalone Mode” or can be managed by “Rudder”.

Package contents

- Access Point.
- Mounting kit

Prerequisites

- Internet access.
- Desktop / Laptop / Handheld device.
- 802.3af / 802.3at PoE Switch / PoE Injector.
- 12V, 2A DC power adapter.

Network requisites

The listed ports must be opened or allowed in the network firewall.

- **TCP:** 80, 443, 2232, 1883.
- **UDP:** 123, 1812, 1813.
- Allow rudder.qntmnet.com and reports.qntmnet.com in the destination field.

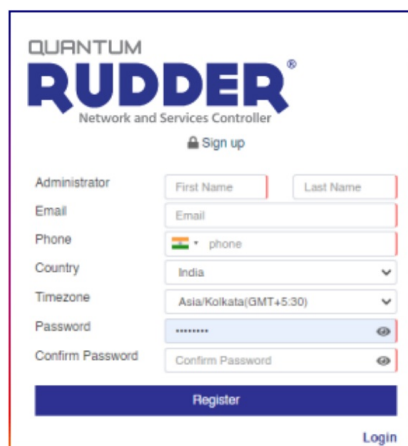
Connect Access Point

- After unpacking Access Point, connect it to an Internet source.
- Plug-in Ethernet cable of Access Point.
- Power on Access Point by using 802.3af / 802.3at PoE Switch / PoE Injector.

Note: Access Point must have Internet access during initial setup for the first time to activate the device, warranty and support.

Step 1 – Create new account on Quantum Rudder

- Browse <https://rudder.qntmnet.com>.
- Click “Create New Account” to sign up for a new account.



The image shows the 'Sign up' form for Quantum Rudder. The form includes fields for Administrator (First Name, Last Name), Email, Phone (with a country code dropdown set to India), Country (dropdown set to India), Timezone (dropdown set to Asia/Kolkata), Password, and Confirm Password. A 'Register' button is at the bottom, and a 'Login' link is at the bottom right.

Figure 1

- Follow the steps as guided on the screen for Registration.
- Verify Quantum Rudder account from registered email id. (you will get)
- Once the account gets validated, it turns the page to “Add License Key” (User will get the license key from respective (Partner / Resource))
- Account on Quantum Rudder (Quantum Networks Cloud Controller) is now ready to use.

Step 2 – Basic setup

- Connect the WAN port of the Access Point to the network with Internet access.
- You should see a new wireless network with SSID QN_XX:XX (where XX:XX are the last four digits of Access Point MAC Address).
- Connect to QN_XX:XX SSID and browse Access Point’s default IP “169.254.1.1”.

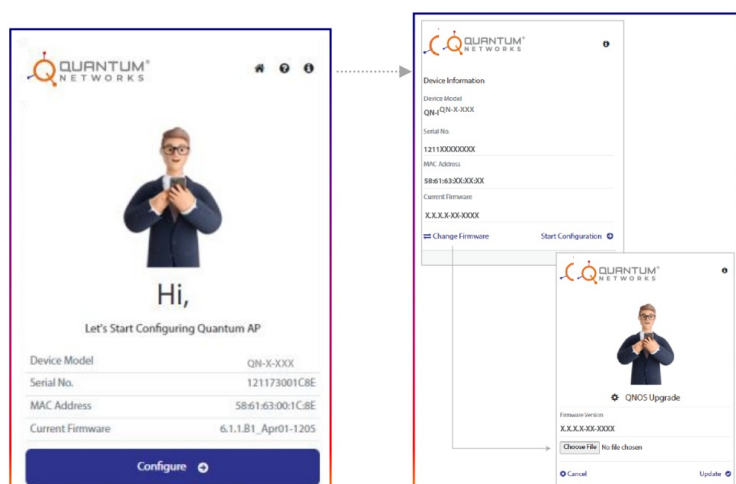


Figure 2


Let's start the configuration.

On the configuration start page, it will display,

- Device model number
- Serial number

- MAC address
- Current firmware

Note:

- Click button  to get the option to “change the firmware” if required.
- Click Change Firmware to update firmware if required. Select the firmware file from the respective location and update it.

Step 3 – Setting up device IP address

Click “**Configure**” and set the device IP address by selecting the required options.

- Connectivity Mode – Select the connectivity mode.
- Protocol – DHCP, Static or PPPoE
- Interface – Select interface
- VLAN Assignment- Enable parameter. Enter VLAN ID and click “Fetch IP Address” to get the respective IP in case of VLAN setup is required.

The screenshot shows the 'Device IP Address' configuration interface for Quantum Networks. It includes dropdown menus for 'Connectivity Mode' (set to Ethernet), 'Protocol' (set to DHCP), and 'Interface' (set to eth0). There is a 'VLAN Assignment' section with a checkbox checked and a value of 1. Below this, the 'Fetch IP Address' button is visible. The resulting IP address is 192.168.7.40. Other fields include Subnet (255.255.255.0), Gateway (192.168.7.1), Primary DNS (192.168.7.4), and Secondary DNS (4.2.2.2). A 'Back' button and a 'Proceed' button are at the bottom. A note at the bottom right states: 'Note: As per the Access Point specifications -Connectivity Mode, Protocol and Interface options will come. Select the options as per the requirement.'

Figure 3

Click “Proceed” to apply configuration and turn to the next page.

Step 4 – Set the management mode

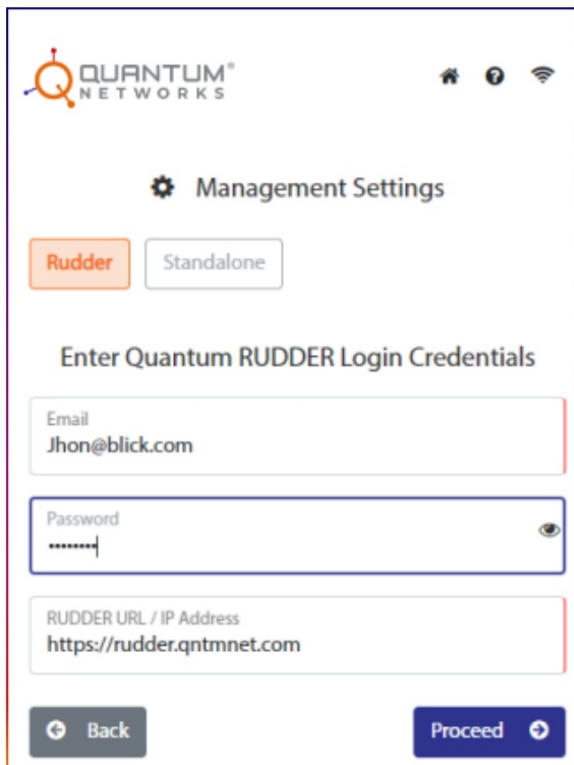
Management Mode

Quantum Networks Access Point can be configured in two modes:

Rudder (on cloud / on-premise)

Standalone

Independent management of each Access Point

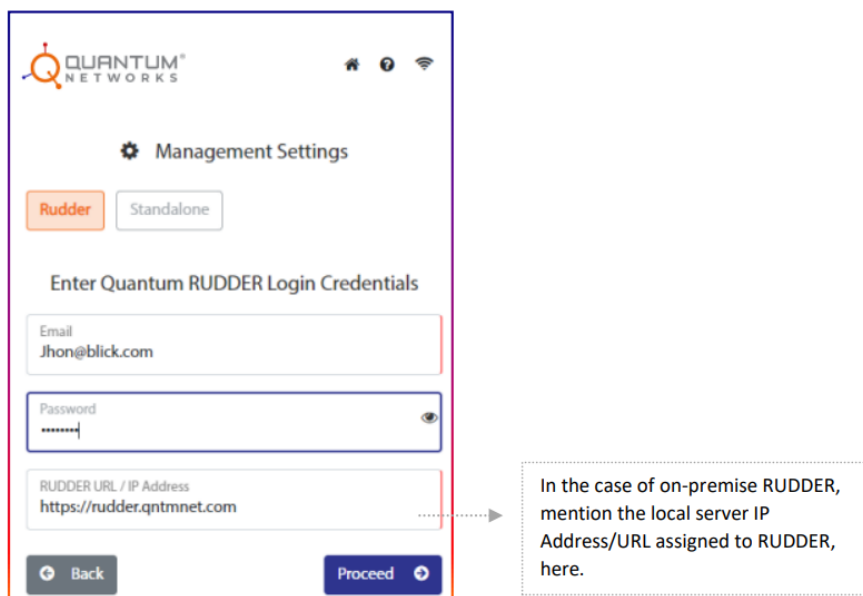


The screenshot shows the Quantum Networks Management Settings interface. At the top, the Quantum Networks logo is on the left, and icons for home, help, and Wi-Fi are on the right. Below the logo, the text "Management Settings" is displayed. There are two buttons: "Rudder" (highlighted in orange) and "Standalone". Underneath, the heading "Enter Quantum RUDDER Login Credentials" is followed by three input fields: "Email" with the value "Jhon@blick.com", "Password" with masked characters "*****", and "RUDDER URL / IP Address" with the value "https://rudder.qntmnet.com". At the bottom, there are "Back" and "Proceed" buttons.

Figure 4

Step 5 – Access Point quick setup in Rudder Mode

- Select “Management Mode” as “Rudder”, enter Quantum Rudder login credentials and click “Proceed”.



This screenshot is identical to Figure 4, showing the Quantum Networks Management Settings page in Rudder Mode. It includes the Quantum Networks logo, "Management Settings" header, "Rudder" and "Standalone" buttons, and the login credential fields (Email: Jhon@blick.com, Password: masked, RUDDER URL / IP Address: https://rudder.qntmnet.com). The "Back" and "Proceed" buttons are at the bottom. A callout box with a dotted arrow pointing to the "RUDDER URL / IP Address" field contains the text: "In the case of on-premise RUDDER, mention the local server IP Address/URL assigned to RUDDER, here."

Figure 5

- It will verify the credentials, and turn to a next page

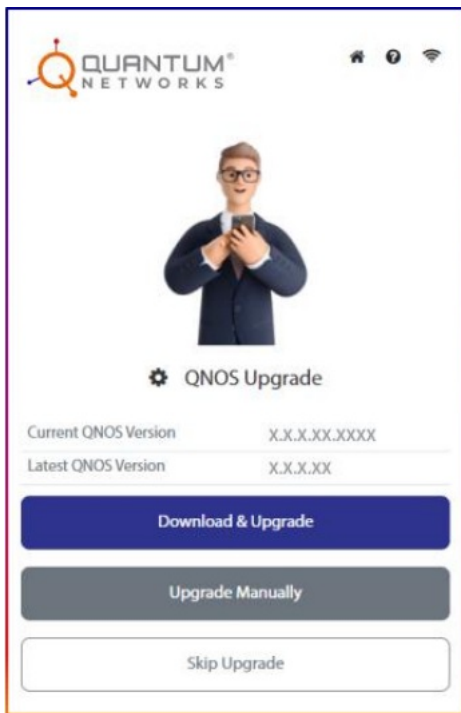


Figure 6

- Upgrade QNOS version by either downloading from the cloud or by selecting manually from respective location and upgrade or click “Skip Upgrade” to move further.
- The user will turn to a page where the user has to select the site and AP group.

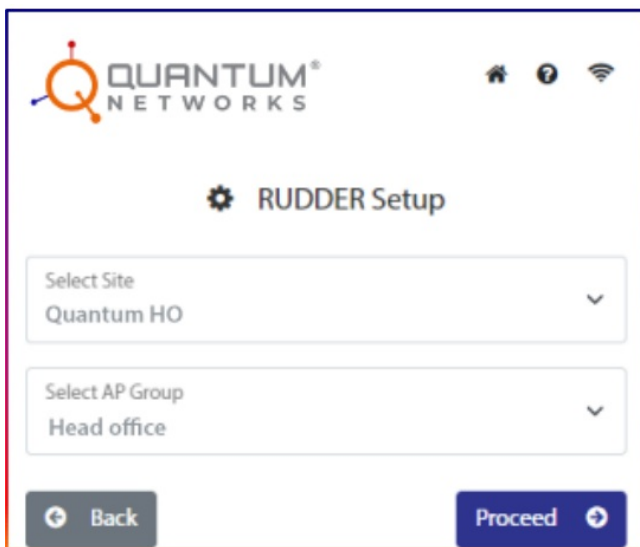
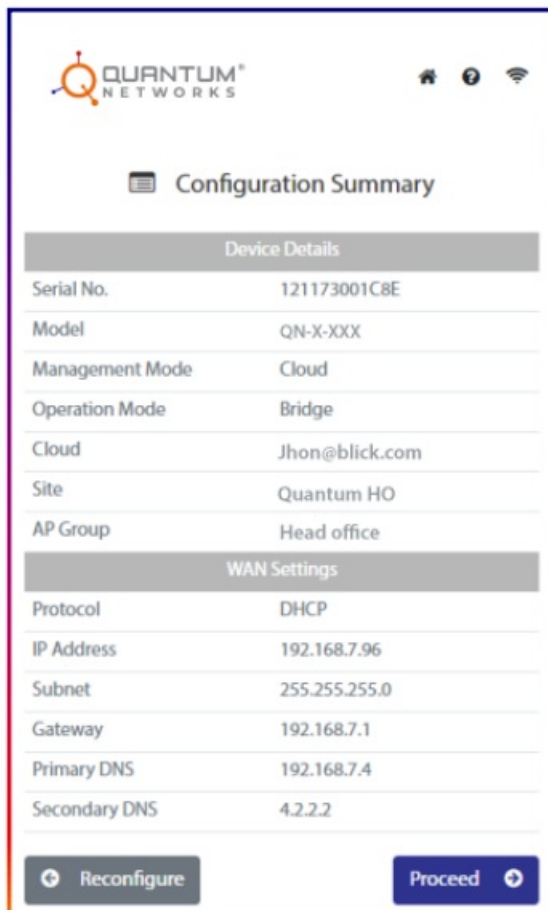


Figure 7

- Select Rudder site and AP Group where Access Point's needs to be added and click “Proceed”.
- If the selected site is already having another Access Point, it will automatically configure AP in a bridge mode and will turn the user on the summary page after clicking “Proceed”. **(Figure 8)**



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Configuration Summary

Device Details	
Serial No.	121173001C8E
Model	QN-X-XXX
Management Mode	Cloud
Operation Mode	Bridge
Cloud	Jhon@blick.com
Site	Quantum HO
AP Group	Head office

WAN Settings	
Protocol	DHCP
IP Address	192.168.7.96
Subnet	255.255.255.0
Gateway	192.168.7.1
Primary DNS	192.168.7.4
Secondary DNS	4.2.2.2

Reconfigure **Proceed**

- If this is the first Access Point for the selected site – the user will turn on the page, where the user can select Access Point Operation mode as Bridge or Router. **(Figure 9)**



QUANTUM NETWORKS

Operation Mode

Bridge **Router**

In Bridge Mode, device connects to the network by ethernet cable and extends the wireless coverage of existing network.

Diagram: Internet (Globe) — Router — Access Point — Laptop

Back **Proceed**

Bridge

- Select option **Bridge** and click “**Proceed**”.
- Configure **WLAN (SSID)** parameters and click “**Proceed**”.

Parameter	Value
WLAN Name	Define a name for the network
SSID	Define visible wireless network name
Passphrase	Configure a passphrase for SSID



The screenshot shows the Quantum Networks Configuration interface. At the top, there is a header with the Quantum Networks logo and navigation icons. Below the header, the title "Configuration" is displayed. The main section is titled "WLAN" and contains three input fields: "WLAN Name" with the value "Jhon", "SSID" with the value "Demo1", and "Passphrase" with a masked value "*****". At the bottom, there are three buttons: "Back", "Skip", and "Proceed".

Figure 10

Note: If you do not want to create WLAN (SSID)/LAN now, click the Skip option. It will turn to Configuration Summary.

Review the Configuration Summary. Click "Reconfigure" if any changes are required or click "Proceed" to complete the configuration.



The image shows a mobile application interface for Quantum Networks. At the top, there is a logo and status icons. The main heading is 'Configuration Summary'. Below this, there are three sections: 'Device Details', 'WAN Settings', and 'WLAN Details'. Each section contains a list of parameters and their values. At the bottom, there are two buttons: 'Reconfigure' and 'Proceed'.

Device Details	
Serial No.	121173001C8E
Model	QN-X-XXX
Management Mode	Cloud
Operation Mode	Bridge
Cloud	Jhon@blick.com
Site	Quantum HO
AP Group	Head office

WAN Settings	
Protocol	DHCP
IP Address	192.168.7.96
Subnet	255.255.255.0
Gateway	192.168.7.1
Primary DNS	192.168.7.4
Secondary DNS	4.2.2.2

WLAN Details	
WLAN	Jhon
SSID	Demo1
Radio	2.4 GHz, 5 GHz
Encryption	WPA2
Algorithm	AES
Passphrase	*****

Buttons: Reconfigure, Proceed

Figure 11

Router

- Select option Router and click “Proceed”.
- Configure WLAN (SSID) and Local subnet parameters and click “Proceed”

Parameter	Value
WLAN	
WLAN Name	Define a name for the network
SSID	Define visible wireless network name
Password	Configure passphrase for SSID
Local Subnet	
IP Address	LAN IP address. This IP address can be used for accessing this Access Point
Subnet Mask	LAN Subnet mask





 Configuration

WLAN

WLAN Name
Jhon

SSID
Demo1

Passphrase
*****

Local Subnet

IP Address
192.168.7.60

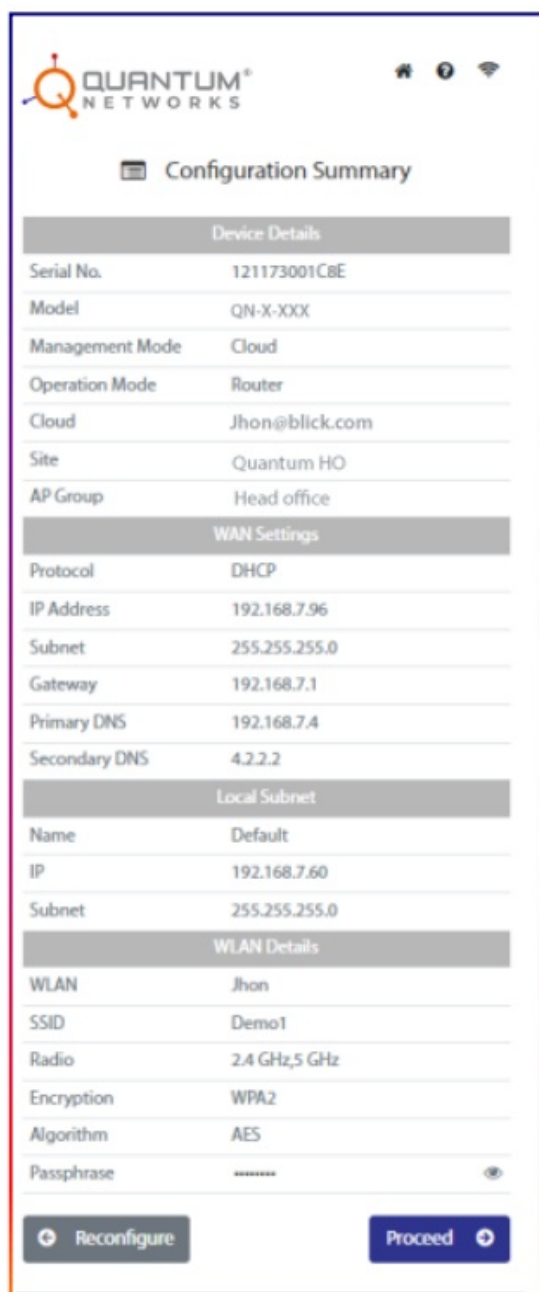
Subnet
255.255.255.0

 Back

 Skip

Proceed 

Figure 12



The image shows a mobile application interface for Quantum Networks. At the top, there is a logo for Quantum Networks and three status icons (home, info, and signal). Below the logo, the title 'Configuration Summary' is displayed. The screen is divided into four main sections: Device Details, WAN Settings, Local Subnet, and WLAN Details. Each section contains a list of configuration parameters and their values. At the bottom, there are two buttons: 'Reconfigure' and 'Proceed'.

Device Details	
Serial No.	121173001CbE
Model	QN-X-XXX
Management Mode	Cloud
Operation Mode	Router
Cloud	Jhon@blick.com
Site	Quantum HO
AP Group	Head office

WAN Settings	
Protocol	DHCP
IP Address	192.168.7.96
Subnet	255.255.255.0
Gateway	192.168.7.1
Primary DNS	192.168.7.4
Secondary DNS	4.2.2.2

Local Subnet	
Name	Default
IP	192.168.7.60
Subnet	255.255.255.0

WLAN Details	
WLAN	Jhon
SSID	Demo1
Radio	2.4 GHz, 5 GHz
Encryption	WPA2
Algorithm	AES
Passphrase	*****

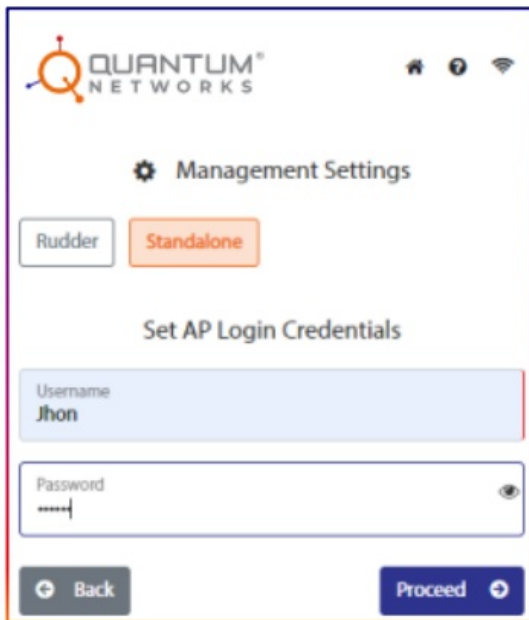
Reconfigure Proceed

Figure 13

Note: If you do not want to create WLAN (SSID)/LAN now, click the Skip option. It will turn to Configuration Summary.

- Review the Configuration Summary. Click “Reconfigure” if any changes are required or click “Proceed” to complete the configuration.

Step 6 – Access Point quick setup in standalone mode



Quantum Networks logo and status icons (home, info, Wi-Fi) are at the top. The title is "Management Settings". Below it are two buttons: "Rudder" and "Standalone" (highlighted in orange). The section "Set AP Login Credentials" contains a "Username" field with the text "Jhon" and a "Password" field with masked characters. At the bottom are "Back" and "Proceed" buttons.

Figure 14

- Select “Management Mode” as “Standalone” if each Access Point is to be configured and managed individually. Define username and password for the device and click “Proceed”.
- User can select Access Point Operation mode as Bridge or Router.



Quantum Networks logo and status icons are at the top. The title is "Operation Mode". Below it are two buttons: "Bridge" (highlighted in orange) and "Router". A text block explains: "In Bridge Mode, device connects to the network by ethernet cable and extends the wireless coverage of existing network." Below this is a network diagram showing a globe connected to a router, which is connected to an access point, which is then connected to a laptop. At the bottom are "Back" and "Proceed" buttons.

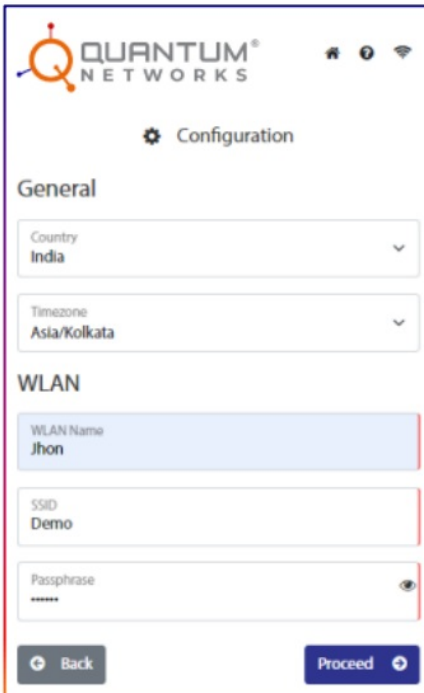
Figure 15

Bridge

- Select option Bridge and click “Proceed”.
- Configure WLAN (SSID) parameters and click “Proceed”.

Parameter	Value
Country	Select country for radio management.
Timezone	Select timezone for Rudder management.
WLAN Name	Define a name for the network.
SSID	Define visible wireless network name.
Passphrase	Configure a passphrase for SSID.

- Review the Configuration Summary. Click “Reconfigure” if any changes are required or click “Proceed” to complete the configuration.



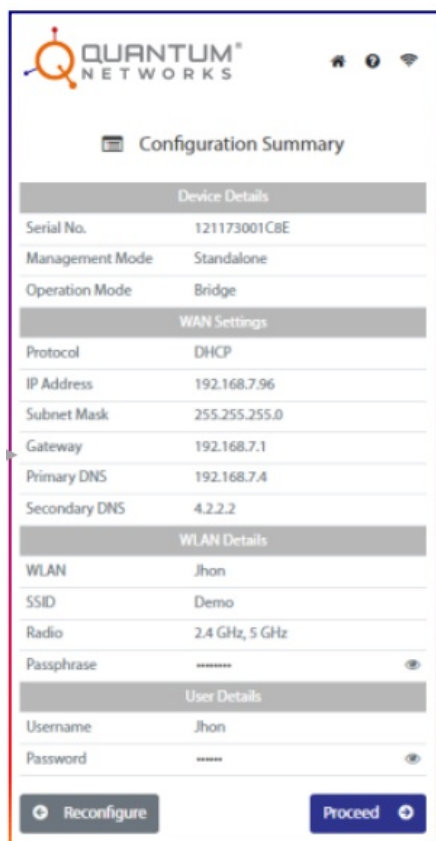
The screenshot displays the Quantum Networks Configuration interface. At the top, the Quantum Networks logo is visible alongside icons for home, settings, and Wi-Fi. Below the logo, a gear icon is labeled "Configuration". The interface is divided into two main sections: "General" and "WLAN".

In the "General" section, there are two dropdown menus: "Country" set to "India" and "Timezone" set to "Asia/Kolkata".

In the "WLAN" section, there are three input fields: "WLAN Name" with the value "Jhon", "SSID" with the value "Demo", and "Passphrase" with masked characters "*****". A toggle icon for the passphrase is visible on the right side of the field.

At the bottom of the interface, there are two buttons: a "Back" button with a left arrow and a "Proceed" button with a right arrow.

Figure 16



The image shows a mobile application interface for Quantum Networks. At the top is the Quantum Networks logo and status icons. Below is a 'Configuration Summary' section with three expandable categories: Device Details, WAN Settings, and WLAN Details. The Device Details section shows Serial No. 121173001C8E, Management Mode Standalone, and Operation Mode Bridge. The WAN Settings section shows Protocol DHCP, IP Address 192.168.7.96, Subnet Mask 255.255.255.0, Gateway 192.168.7.1, Primary DNS 192.168.7.4, and Secondary DNS 4.2.2.2. The WLAN Details section shows WLAN Jhon, SSID Demo, Radio 2.4 GHz, 5 GHz, and a masked Passphrase. Below these is a 'User Details' section with Username Jhon and a masked Password. At the bottom are 'Reconfigure' and 'Proceed' buttons.

Device Details	
Serial No.	121173001C8E
Management Mode	Standalone
Operation Mode	Bridge

WAN Settings	
Protocol	DHCP
IP Address	192.168.7.96
Subnet Mask	255.255.255.0
Gateway	192.168.7.1
Primary DNS	192.168.7.4
Secondary DNS	4.2.2.2

WLAN Details	
WLAN	Jhon
SSID	Demo
Radio	2.4 GHz, 5 GHz
Passphrase	*****

User Details	
Username	Jhon
Password	*****

Reconfigure Proceed

Figure 17

Router

- Select option Router and click “Proceed”.
- Configure WLAN (SSID) and Local subnet parameters and click “Proceed”.

Parameter	Value
WLAN	
Country	Select country for radio management.
Time zone	Select time zone for Rudder management.
WLAN Name	Define a name for the network.
SSID	Define visible wireless network name.
Password	Configure a passphrase for SSID.
Local Subnet	
IP Address	LAN IP address. This IP address can be used for accessing this Access Point.
Subnet Mask	LAN subnet mask.

- Review the Configuration Summary. Click “Reconfigure” if any changes are required or click “Proceed” to complete the configuration.



Configuration

General

Country
India

Timezone
Asia/Kolkata

WLAN

WLAN Name
Jhon

SSID
Demo

Passphrase


Local Subnet

IP Address
192.168.1.1

Subnet Mask
255.255.255.0

Back Proceed

Figure 18



Configuration Summary

Device Details	
Serial No.	121173001C8E
Management Mode	Standalone
Operation Mode	Router

WAN Settings	
Protocol	DHCP
IP Address	192.168.7.96
Subnet Mask	255.255.255.0
Gateway	192.168.7.1
Primary DNS	192.168.7.4
Secondary DNS	4.2.2.2

Local Subnet	
Name	LAN
IP	192.168.1.1
Subnet	255.255.255.0

WLAN Details	
WLAN	Jhon
SSID	Demo
Radio	2.4 GHz, 5 GHz
Passphrase	*****

User Details	
Username	Jhon
Password	*****

Reconfigure Proceed

Figure 19

Reset Access Point to factory defaults

- Power on the Access Point
- Push the reset button on the back panel and hold it for 10 seconds.
- Access Point would restart with factory defaults

Access Point default login detail

With standalone mode:

User Name: Created while doing “Quick Setup”

Password: Created while doing “Quick Setup”

With Rudder mode:

User Name: Auto Generated, administrator can change from site settings.

Password: Auto Generated, administrator can change from site settings.

If you encounter problems while installing or using this product, please browse www.qntmnet.com for:

- Direct contact with the support center.
 - **Contact:** 18001231163
 - **Email:** support@qntmnet.com
- For the latest software, user documentation and product updates browse: qntmnet.com/resource-library







Documents / Resources

The image shows the cover of a 'Quick Setup Guide' for Quantum Networks. It has an orange header with the Quantum Networks logo and the text 'Quick Setup Guide' and 'Model QN-I-400'.	<p>QUANTUM NETWORKS QN-I-220 Quantum Wireless Access Point [pdf] User Guide QN-I-220 Quantum Wireless Access Point, QN-I-220, Quantum Wireless Access Point, Wireless Access Point, Access Point</p>
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References

- [Resource Library | Quantum Networks](#)
- [Welcome to nginx!](#)
- [Quantum Network](#)
- [Quantum Networks | Reinventing Networks](#)

-  [Quantum Networks | Reinventing Networks](#)
-  [Resource Library | Quantum Networks](#)
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-  [Quantum Network](#)
- [User Manual](#)