Quick Setup Guide
Model: QN-H-220
Copyright Information

Copyright & trademark specifications are subject to change without prior notice. Copyright © 2018 Quantum Networks (SG) Pte. Ltd. All Rights Reserved. Quantum Networks® & the logo are trademarks of Quantum Networks (SG) Pte. Ltd. Other brands or products mentioned may be trademarks or registered trademarks of their respective owners. Mentioned contents of this document can’t be used, translated or transmitted in any form or by any means without taking prior written permission from Quantum Networks (SG) Pte. Ltd.
Contents

Glossary ................................................................. 4
Icon description ..................................................... 4
Before you begin ...................................................... 5
Package contents ..................................................... 5
Prerequisites .......................................................... 5
Network requisites ................................................... 5
Connect Access Point ............................................... 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 .................................. 8
Step 5 - Access Point quick setup in RUDDER Mode ................ 9
Step 6 - Access Point quick setup in standalone mode ............... 14
Reset Access Point to factory defaults ............................ 17
Access Point default login detail .................................. 17
FCC statement ......................................................... 18
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**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
</table>
| 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.  
**RUDDER:** 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](https://rudder.qntmnet.com) |

**Icon description**

<table>
<thead>
<tr>
<th>Icon on GUI</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>☰</td>
<td>Click to get the option for the firmware update.</td>
</tr>
<tr>
<td>🏡</td>
<td>Click to get back to the home page.</td>
</tr>
<tr>
<td>🕵️</td>
<td>Click to check the documentation.</td>
</tr>
<tr>
<td>📡</td>
<td>Click to check device information.</td>
</tr>
</tbody>
</table>
Before you begin
Your Quantum Networks’ Access Point can work in “Standalone Mode” or can be managed by “RUDDER”.

Package contents
- Access Point.

Prerequisites
- Internet access.
- Desktop / Laptop / Handheld device.
- 802.3af / 802.3at PoE Switch / PoE Injector.
- 48VDC 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](https://rudder.qntmnet.com).
- Click “Create New Account” to sign up for a new account.

![Figure 1](image)

- Follow the steps as guided on the screen for Registration.
- Verify Quantum RUDDER© account from registered email id.
- 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”.

![Image of configuration start page]

Let’s start the configuration.

On the configuration start page, it will display,

- Device model number
- Serial number
- MAC address
- Current firmware

Note:

- Click the 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 – Ethernet / USB
- 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.

![Image](figure3.png)

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)
Centralized management of Access Points using Quantum RUDDER®

Standalone
Independent management of each Access Point
Step 5 - Access Point quick setup in RUDDER Mode

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

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

- Select RUDDER site and AP Group where Access Point’s needs to be added and click "Proceed".
o 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)

o 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)

![Figure 8](image8.png)
![Figure 9](image9.png)

**Bridge**

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLAN Name</td>
<td>Define a name for the network</td>
</tr>
<tr>
<td>SSID</td>
<td>Define visible wireless network name</td>
</tr>
<tr>
<td>Passphrase</td>
<td>Configure a passphrase for SSID</td>
</tr>
</tbody>
</table>

![Figure 10](image10.png)

**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.

Router

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLAN</td>
<td></td>
</tr>
<tr>
<td>WLAN Name</td>
<td>Define a name for the network</td>
</tr>
<tr>
<td>SSID</td>
<td>Define visible wireless network name</td>
</tr>
<tr>
<td>Password</td>
<td>Configure passphrase for SSID</td>
</tr>
<tr>
<td>Local Subnet</td>
<td></td>
</tr>
<tr>
<td>IP Address</td>
<td>LAN IP address. This IP address can be used for accessing this Access Point</td>
</tr>
<tr>
<td>Subnet Mask</td>
<td>LAN Subnet mask</td>
</tr>
</tbody>
</table>
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

- 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.

Figure 14

Figure 15
Bridge

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>Select country for radio management.</td>
</tr>
<tr>
<td>Timezone</td>
<td>Select timezone for RUDDER management.</td>
</tr>
<tr>
<td>WLAN Name</td>
<td>Define a name for the network.</td>
</tr>
<tr>
<td>SSID</td>
<td>Define visible wireless network name.</td>
</tr>
<tr>
<td>Passphrase</td>
<td>Configure a passphrase for SSID.</td>
</tr>
</tbody>
</table>

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

![Figure 16](image16.png)

![Figure 17](image17.png)
Router

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WLAN</strong></td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>Select country for radio management.</td>
</tr>
<tr>
<td>Timezone</td>
<td>Select timezone for RUDDER management.</td>
</tr>
<tr>
<td>WLAN Name</td>
<td>Define a name for the network.</td>
</tr>
<tr>
<td>SSID</td>
<td>Define visible wireless network name.</td>
</tr>
<tr>
<td>Password</td>
<td>Configure a passphrase for SSID.</td>
</tr>
<tr>
<td><strong>Local Subnet</strong></td>
<td></td>
</tr>
<tr>
<td>IP Address</td>
<td>LAN IP address. This IP address can be used for accessing this Access Point.</td>
</tr>
<tr>
<td>Subnet Mask</td>
<td>LAN subnet mask.</td>
</tr>
</tbody>
</table>

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

Figure 18  
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](http://www.qntmnet.com) for:

- Direct contact with the support center.
  - Contact: 18001231163
  - Email: support@qntmnet.com
- Frequently Asked Questions (FAQ)
- Download area for the latest software, user documentation and product updates.
FCC statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Consult the dealer or an experienced radio/TV technician for help.

Important Note:
Radiation Exposure Statement
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.