ALFA NETWORK

**ALFA Tube 2HQP
2.4 GHz Long Distance Outdoor
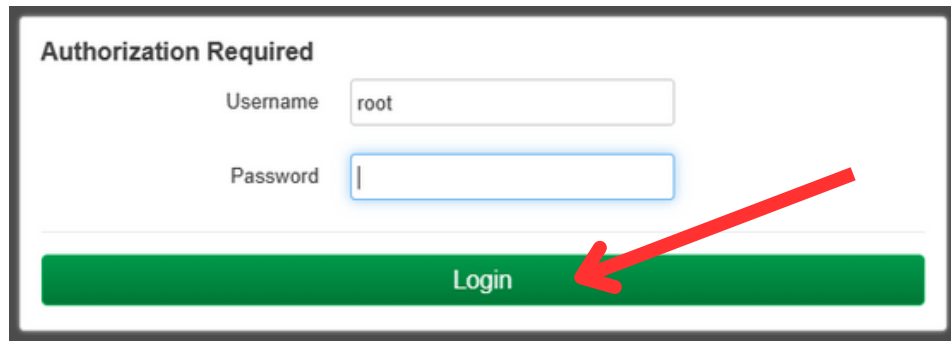Wi-Fi PoE AP/CPE IP68**

Router Mode - Quick Guide

Power

ALFA 802.3af/at Gigabit PoE Adapter

P+D/OUT   **Data IN**

Visit 192.168.1.1 in browser

ALFA Tube-2HQP

Laptop / Desktop Computer
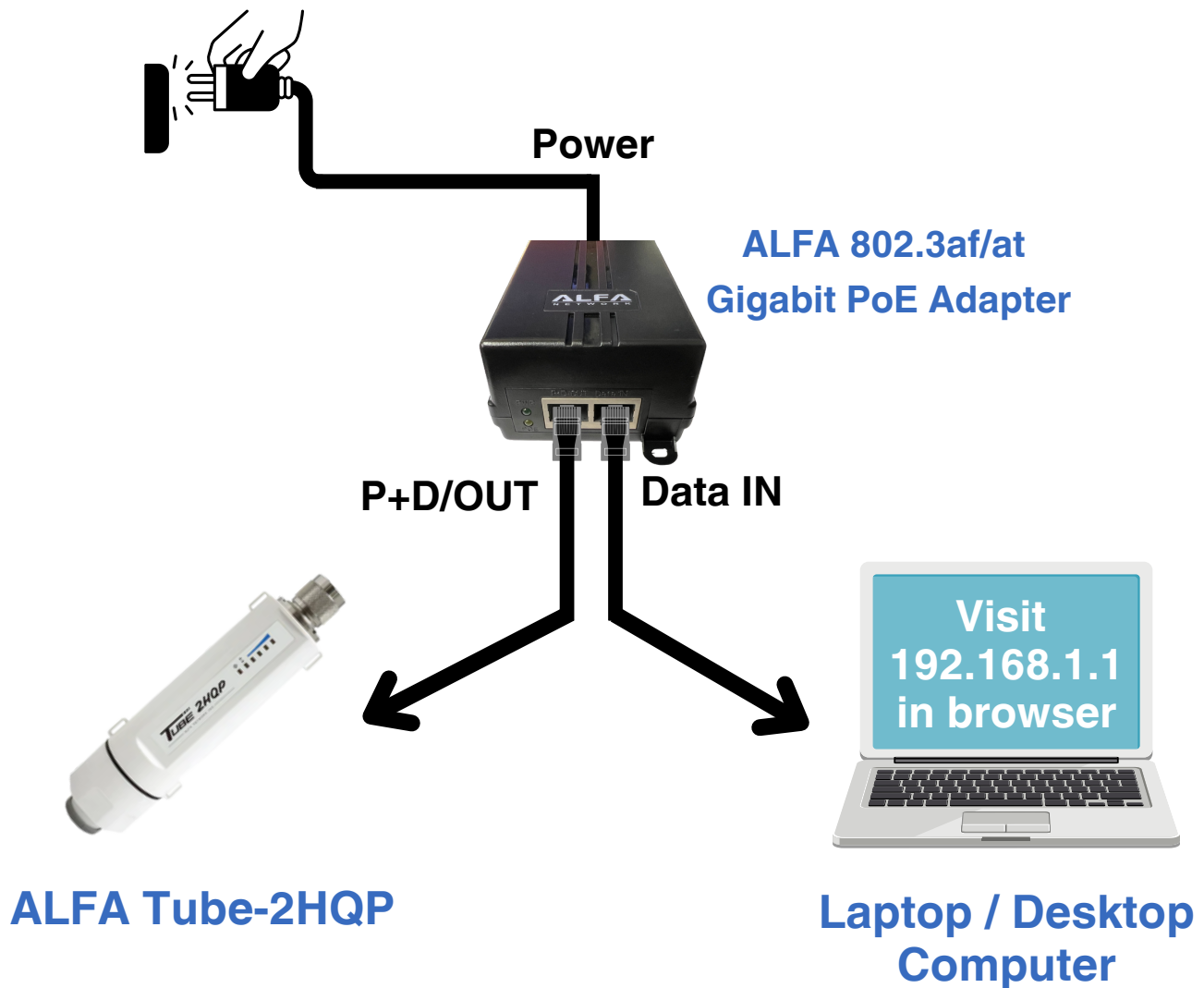
Tube-2HQP Configuration Hardware Setup

- Using a PoE compatible ethernet cables connect the Tube-2HQP to the P+D/OUT port and a Computer to the Data IN port on the on the PoE Adapter.
- Connect the ALFA 802.3af/at Gigabit PoE Adapter to a power source.
- On the computer that is connected to the PoE adapter, open a browser and type 192.168.1.1 into the address bar.

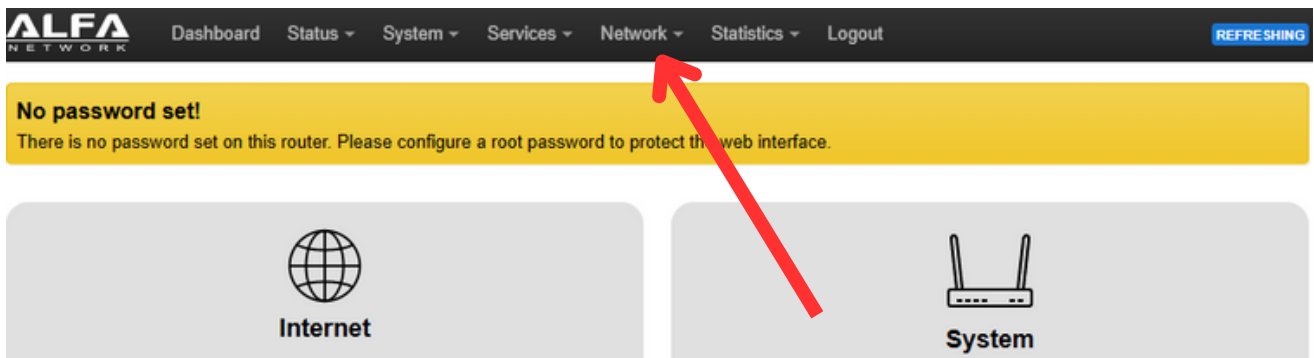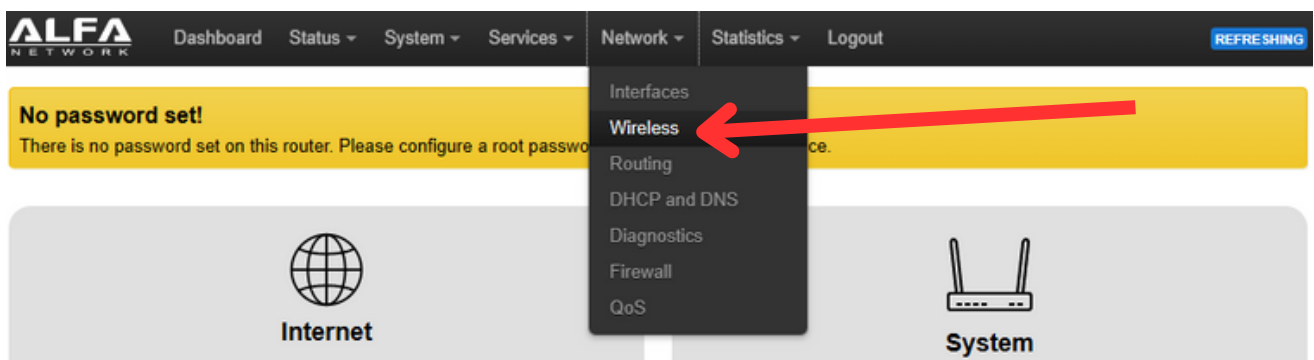There is no password set, so just click Login.

Click the Network Tab.

Click the Wireless option within the dropdown menu.

No password set!
There is no password set on this router. Please configure a root password to protect the web interface.

Wireless Overview

📶 radio0	**Qualcomm Atheros QCA9530 802.11bgn** **Channel: 11 (2.462 GHz)	Bitrate: 72.2 Mbit/s**	Restart Scan Add
📶 -40/-95 dBm	**SSID: Tube-2HQ	Mode: Master** **BSSID: 00:C0:CA:B1:12:41	Encryption: WPA2 PSK (CCMP)**	Disable Edit Remove

Associated Stations

Network	MAC address	Host	Signal / Noise	RX Rate / TX Rate	
📶 Master "Tube-2HQ" (wlan0)	D8:12:65:36:15:B1	LAPTOP-QPNOR78J.lan (192.168.1.137, fd2c:679e:96d8:0:8566:215a:ea92:79f7)	📶 -50/-95 dBm	72.2 Mbit/s, 20 MHz, MCS 7, Short GI 72.2 Mbit/s, 20 MHz, MCS , Short GI	Disconnect

Save & Apply ▾   Save   Reset

In the Wireless Overview section click the Edit button.

Device Configuration

General Setup | Advanced Settings

Status
-50/-95 dBm

Mode: Master | SSID: Tube-2HQ
BSSID: 00:C0:CA:B1:12:41
Encryption: WPA2 PSK (CCMP)
Channel: 11 (2.462 GHz)
Tx-Power: 27 dBm
Signal: -50 dBm | Noise: -95 dBm
Bitrate: 72.2 Mbit/s | Country: US

Wireless network is enabled   [Disable]

Operating frequency

Mode   Channel   Width
N   auto   MHz

auto
1 (2412 Mhz)
2 (2417 Mhz)
3 (2422 Mhz)
4 (2427 Mhz)
5 (2432 Mhz)
6 (2437 Mhz)
7 (2442 Mhz)
8 (2447 Mhz)
9 (2452 Mhz)
10 (2457 Mhz)
11 (2462 Mhz)

Allow legacy 802.11b rates   ☐

❓ Legacy or   ...vices may require legacy 802.11b rates to interoperate. Airtime efficiency may be
significant   ...ese are used. It is recommended to not allow 802.11b rates where possible.

Maximum transmit power   driver defa...   ...t power: 27 dBm

❓ Specifies   ...mit power the wireless radio may use. Depending on regulatory requirements and
wireless u...   ...nsmit power may be reduced by the driver.

- In the Device Configuration section select the General Setup Tab.
- Change the Operating Frequency Channel to Auto or your desired frequency.

Device Configuration

General Setup | Advanced Settings

Country Code: US - United States

Coverage cell density: Disabled
Configures data rates based on the coverage cell density. Normal configures basic rates to 6, 12, 24 Mbps if legacy 802.11b rates are not used else to 5.5, 11 Mbps. High configures basic rates to 12, 24 Mbps if legacy 802.11b rates are not used else to the 11 Mbps rate. Very High configures 24 Mbps as the basic rate. Supported rates lower than the minimum basic rate are not offered.

Distance Optimization: auto
Distance to farthest network member in meters.

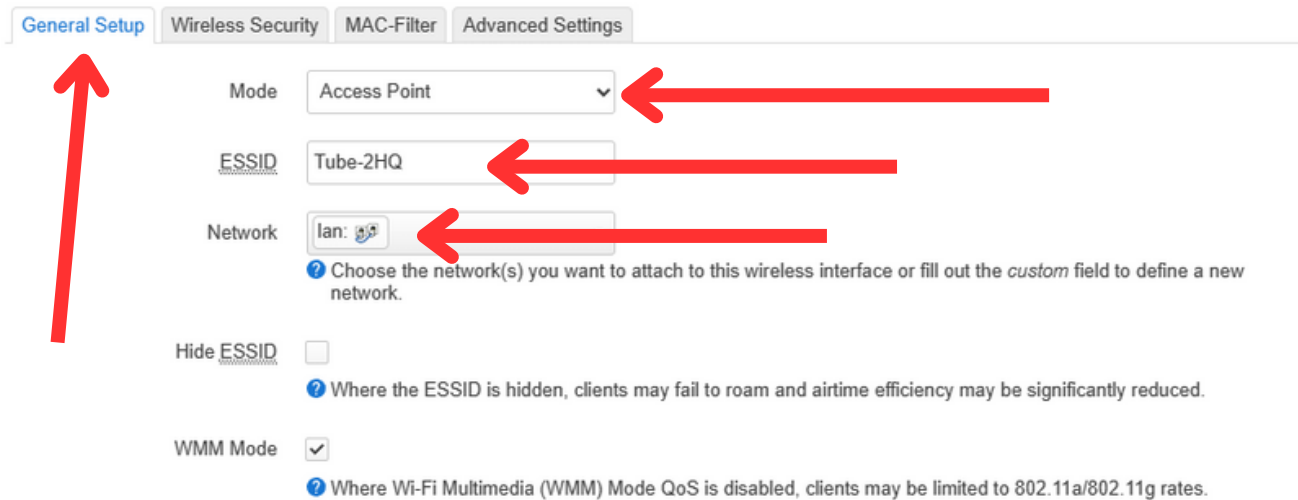Fragmentation Threshold: off

RTS/CTS Threshold: off

Force 40MHz mode: ☐
Always use 40MHz channels even if the secondary channel overlaps. Using this option does not comply with IEEE 802.11n-2009!

Beacon Interval: 100

- In the Device Configuration section select the Advanced Settings Tab.
- Change the Country Code to the US - United States or the Country in which you are operating from.

Interface Configuration

General Setup | Wireless Security | MAC-Filter | Advanced Settings

Mode Access Point ⌄ ←

ESSID Tube-2HQ ←

Network lan: 🖧 ←

❓ Choose the network(s) you want to attach to this wireless interface or fill out the *custom* field to define a new network.

Hide ESSID ☐

❓ Where the ESSID is hidden, clients may fail to roam and airtime efficiency may be significantly reduced.

WMM Mode ☑

❓ Where Wi-Fi Multimedia (WMM) Mode QoS is disabled, clients may be limited to 802.11a/802.11g rates.

- In the Interface Configuration section select the General Setup Tab.
- Change the Mode to Access Point.
- Change the ESSID to your preferred Wi-Fi name.
- Select "lan" as the Network.

Interface Configuration

General Setup | Wireless Security | MAC-Filter | Advanced Settings

Encryption WPA2-PSK (strong security)

Cipher auto

Key password

802.11r Fast Transition
☐
❓ Enables fast roaming among access points that belong to the same Mobility Domain

802.11w Management Frame Protection
Disabled
❓ Note: Some wireless drivers do not fully support 802.11w. E.g. mwlwifi may have problems

Enable key reinstallation (KRACK) countermeasures
☐
❓ Complicates key reinstallation attacks on the client side by disabling retransmission of EAPOL-Key frames that are used to install keys. This workaround might cause interoperability issues and reduced robustness of key negotiation especially in environments with heavy traffic load.

Enable WPS pushbutton, requires WPA(2)-PSK/WPA3-SAE
☐

- In the Interface Configuration section select the Wireless Security Tab.
- Change the Encryption to your preferred type (We suggest WPA2-PSK as it compatible to help prevent compatibility issues).
- Create a Key(Password).

Interface Configuration

General Setup | Wireless Security | MAC-Filter | Advanced Settings

Mode	Access Point
ESSID	Tube-2HQ
Network	lan:

Choose the network(s) you want to attach to this wireless interface or fill out the *custom* field to define a new network.

Hide ESSID	☐

Where the ESSID is hidden, clients may fail to roam and airtime efficiency may be significantly reduced.

WMM Mode	☑

Where Wi-Fi Multimedia (WMM) Mode QoS is disabled, clients may be limited to 802.11a/802.11g rates.

Dismiss | Save

In the Interface Configuration section select General Setup, then click Save.

ALFA NETWORK   Dashboard   Status ▾   System ▾   Services ▾   Network ▾   Statistics ▾   Logout   REFRESHING UNSAVED CHANGES: 1

No password set!
There is no password set on this router. Please configure a root password to protect the web interface.

Wireless Overview

📶 radio0	**Qualcomm Atheros QCA9530 802.11bgn** Channel: 11 (2.462 GHz) | Bitrate: 72.2 Mbit/s		Restart	Scan	Add
📶 -43/-95 dBm	**SSID: Tube-2HQ | Mode: Master** Interface has 1 pending changes		Disable	Edit	Remove

Associated Stations

Network	MAC address	Host	Signal / Noise	RX Rate / TX Rate	
Master "Tube-2HQ" (wlan0)	D8:12:65:36:15:B1	LAPTOP-QPNOR78J.lan (192.168.1.137, fd2c:679e:96d8:0:8566:215a:ea92:79f7)	📶 -43/-95 dBm	65.0 Mbit/s, 20 MHz, MCS 7, 72.2 Mbit/s, 20 MHz, MCS 7, Short GI	Disconnect

Save & Apply ▾ | Save | Reset

Click Save & Apply to apply the changes.

Click Enable to start broadcasting the SSID.

Continue to the Post-Configuration hardware setup.

Power

**ALFA 802.3af/at
Gigabit PoE Adapter**

P+D/OUT

Data IN

ALFA Tube-2HQP

**Router/Switch/Modem
with Network Access**
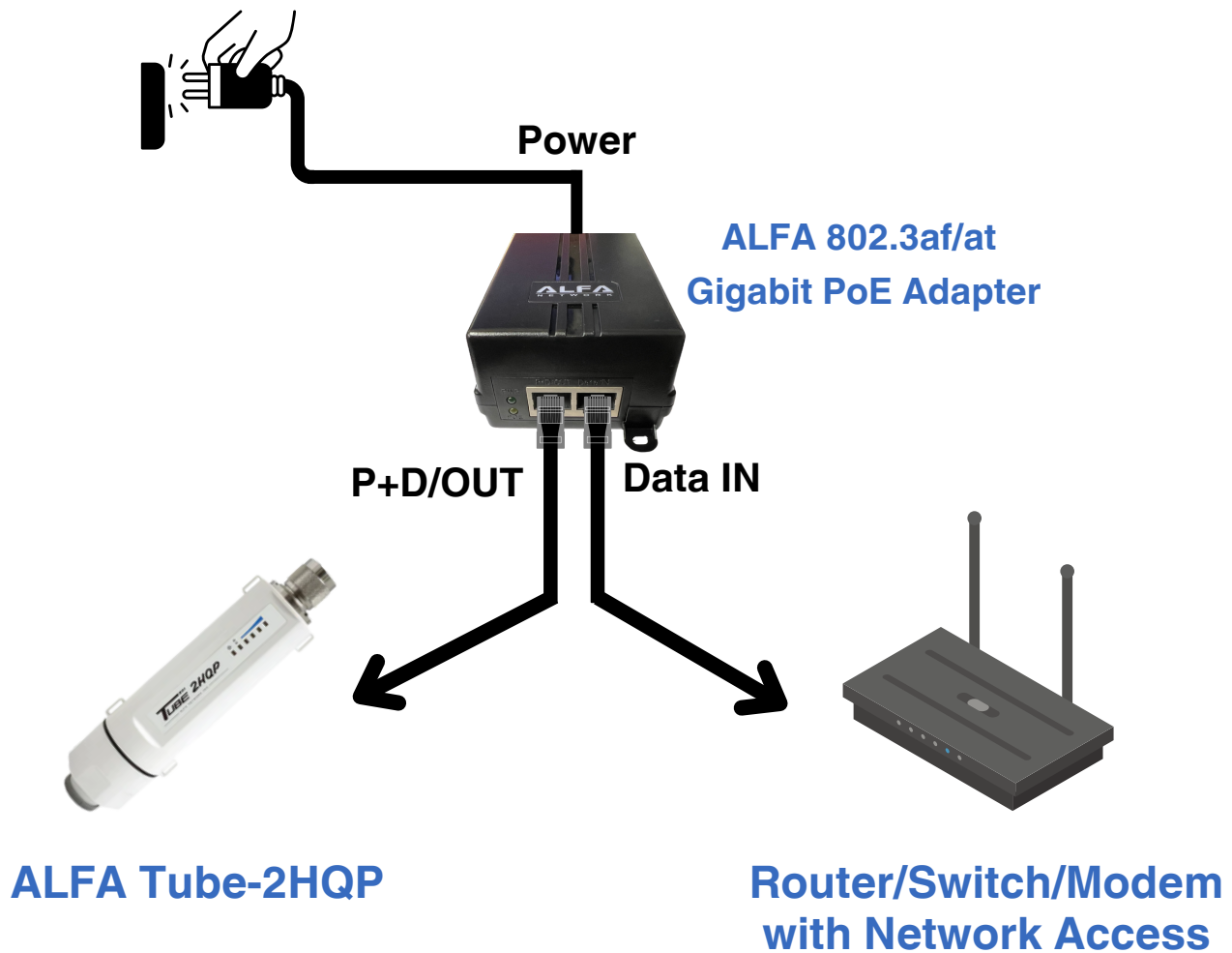
Tube-2HQP Post-Configuration Hardware Setup

- Using a PoE compatible ethernet cables connect the Tube-2HQP to the P+D/OUT port and an Ethernet port with network access(Router/Switch/Modem/Wall Jack) to the Data IN port on the on the PoE Adapter.
- Connect the ALFA 802.3af/at Gigabit PoE Adapter to a power source.
- After a few moments the SSID should start broadcasting allowing you to connect devices to the network.