



# User Manual

## 1 Introduction

The Trulifi 6013 PoE Blue Access Points and End Points provide a wireless LiFi connection between two points with speeds up to 250 Mbit/s and a maximum operating distance up to 8 meters. The device is equipped with a 100/1000 RJ45 Ethernet port to connect to the network. The device is powered using the same Ethernet port using PoE and is compliant with PoE standard IEEE 802.3af. The device can be connected directly to a PoE enabled Ethernet switch or using a PoE injector.



## 2 Laser Class safety notice

The Trulifi 6013 PoE Blue complies with Laser Class 2 safety regulations. Please observe the corresponding safety notes.

Laser Class 2 Safety notes

### Warning!

- Technical properties: These LEDs are considered to be harmless but have a Maximum Permissible Exposure (MPE) time of up to 0.25 seconds for direct eye contact.
- Safety measures: Close your eyes immediately and turn away if the beam strikes your eye. Special precautions are not required.



### 3 Application notice

The Trulifi 6013 is designed to offer a (temporary) data connection between machines, devices and/or network systems at a maximum distance of 8 meter in an indoor application. The Trulifi 6013 is not designed for safety critical applications. Line of sight between two devices is necessary, therefore blocking the line of sight will limit or cut connectivity.

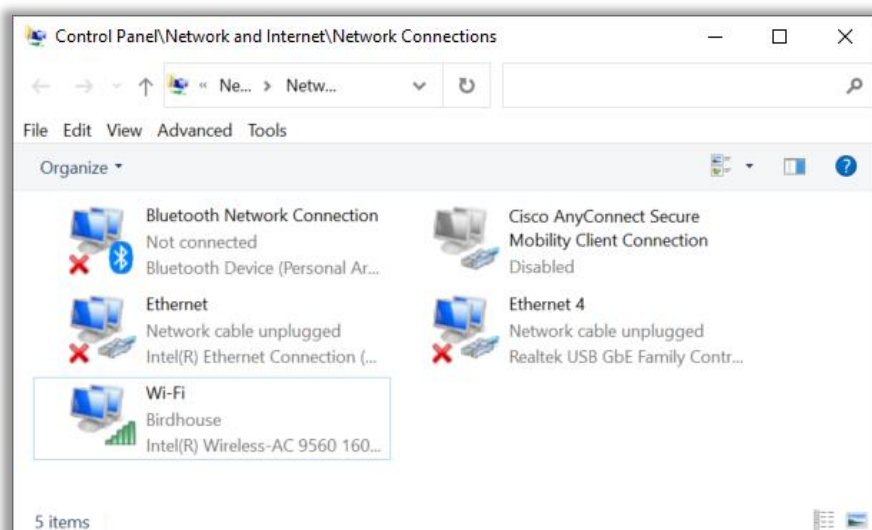
- Ambient temperature -10°C to +40°C
- For Canada only: Innovation, Science, and Economic Development Canada ICES -003 Compliance label: CAN ICES-3 (B)/NMB-3(B)

### 4 Getting started

Make sure the Trulifi 6013 is correctly connected to your network switch and powered using a PoE connection. The device should emit blue light.

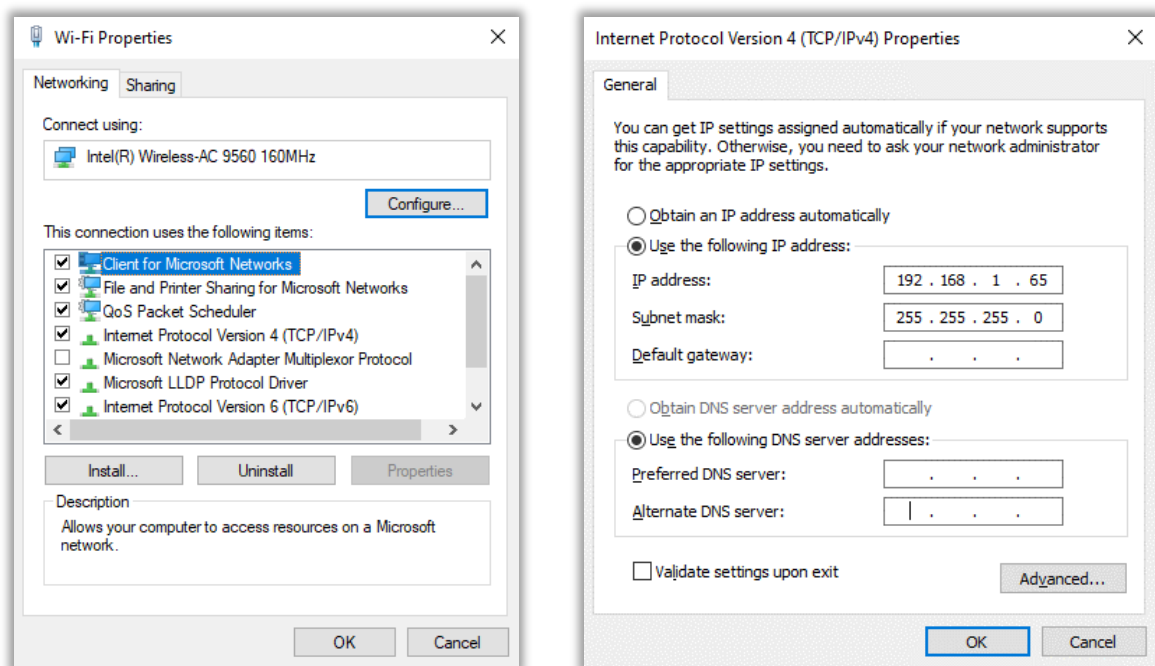
For the first-time setup, you will have to use the web configuration system of the Trulifi 6013. On Windows 10 systems:

1. Open the Setting window and select Network and Internet.
2. Select Ethernet or Wi-Fi, depending on how your computer is connected to the network and select Change Adapter Options



The network adaptor of your computer needs to be configured to be in the same IP subnet as your Trulifi 6013.

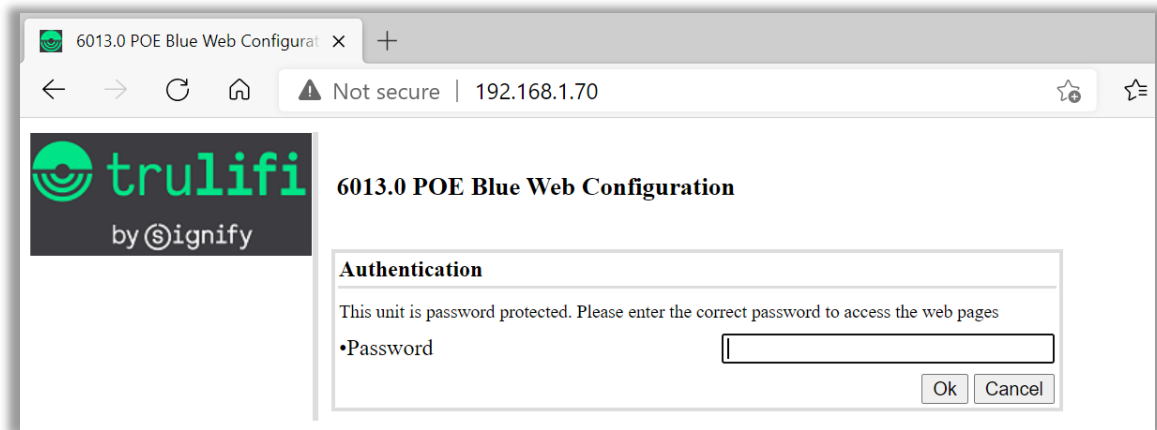
3. To do this, select correct Ethernet or Wi-Fi adaptor and select Properties using the right mouse button.
4. Select the Internet Protocol 4 (TCP/IPv4) and select Properties.
5. Assign an IP address to your computer and make sure that it is within the correct network subnet that the Trulifi 6013 is also connected to (default: 255.255.255.0). Check that the IP address of your computer is different from that of the Trulifi 6013 (default: 192.168.1.70).
6. Close the window and save the configuration by clicking the OK tab.



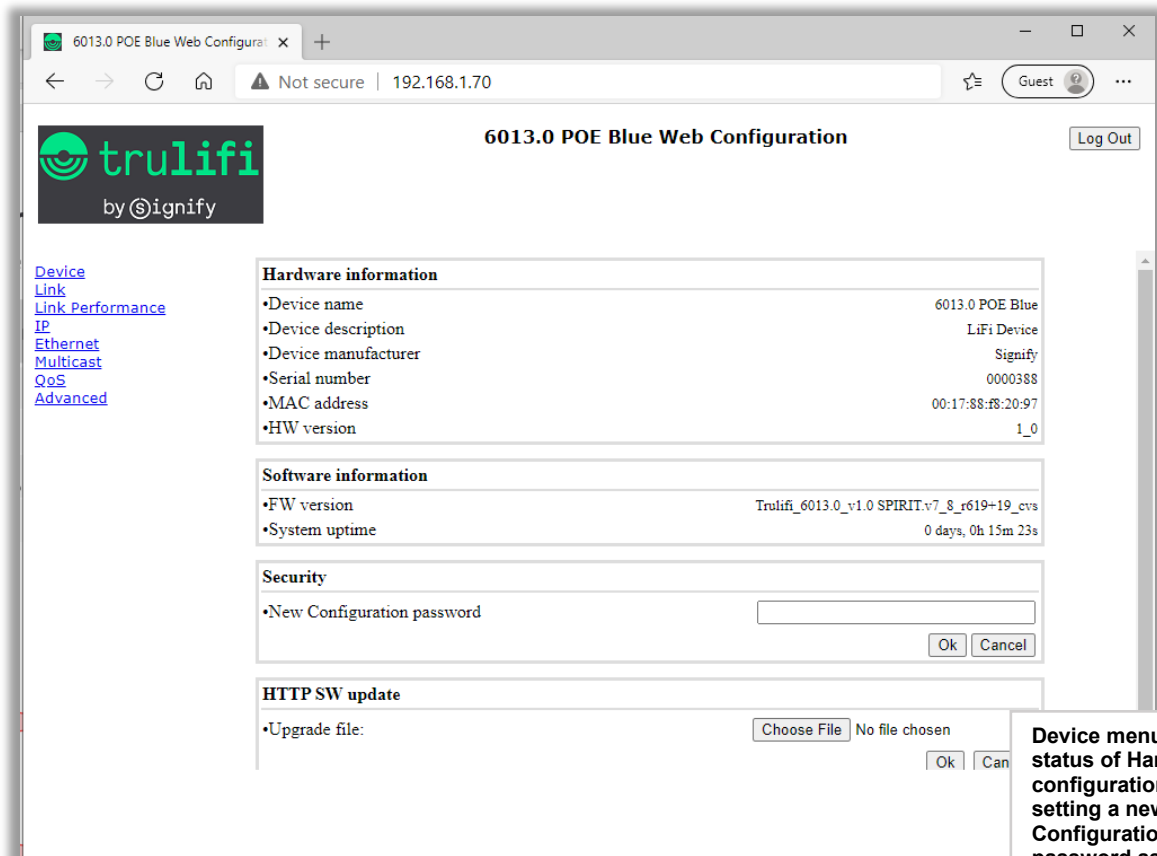
## 5 Web Configuration system

You can use the Trulifi 6013 web configuration system to configure specific operating parameters. To access the web configuration system, open a standard web browser and enter the default system IP address [192.168.1.70](http://192.168.1.70) into the navigation tab.

In the Authentication tab enter the Configuration/Security password (default: admin) and click ok.



After entering the password, the main configuration window opens. On the left side of this window there are several menu tabs to view and change system configuration parameters.



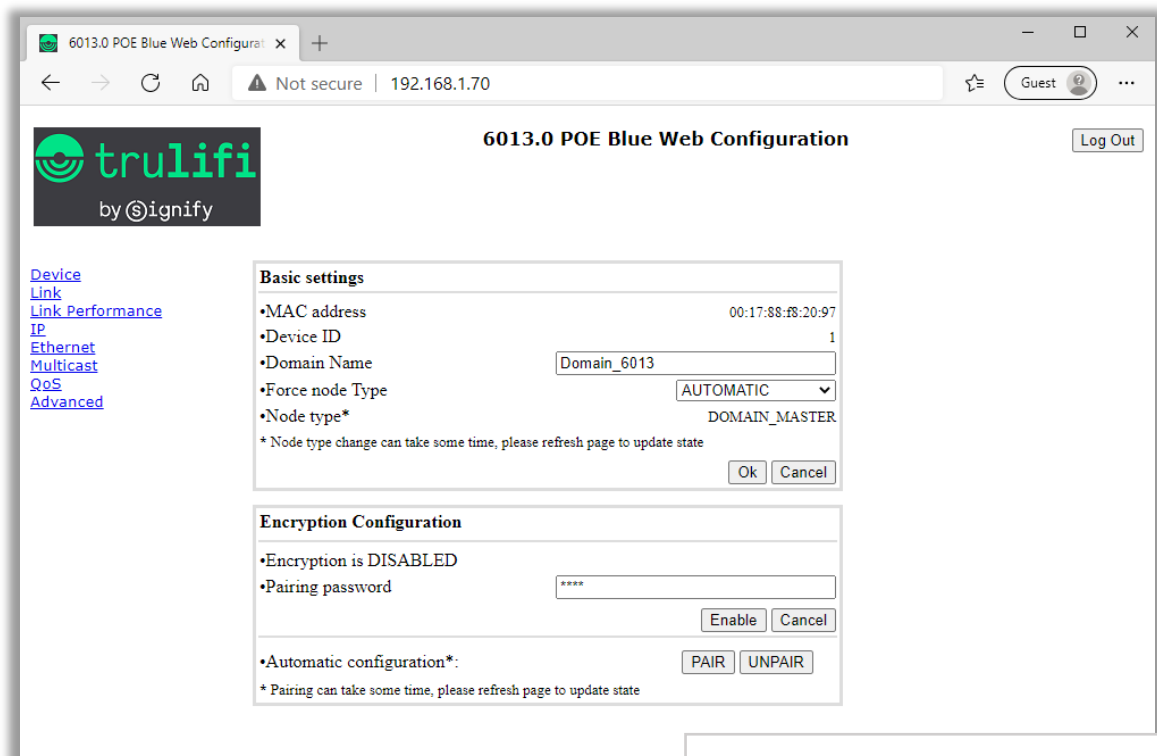
**Device menu:** Shows the status of Hardware/Software configuration and allows for setting a new Configuration/Security password as well as uploading new firmware as it becomes available.

## 5.1 Link Menu

Displays the MAC address, device ID and Node Type. This menu allows you to change the Domain Name and Node Type (Access\_Point/Master, Client/End\_Point, default: Automatic).

To establish an encrypted connection, please click the PAIR button at one side of the link to be encrypted. You will be logged out of the web browser and after logging in again, you will see a

changed domain name and an auto-generated pairing password. Now click PAIR at the opposite side, and encryption will be enabled. This might take more than one attempt. To stop communicating via the encrypted connection, please click UNPAIR.



**Link menu: Shows basic hardware settings and allows to enable encryption of network traffic between 6013 units.**

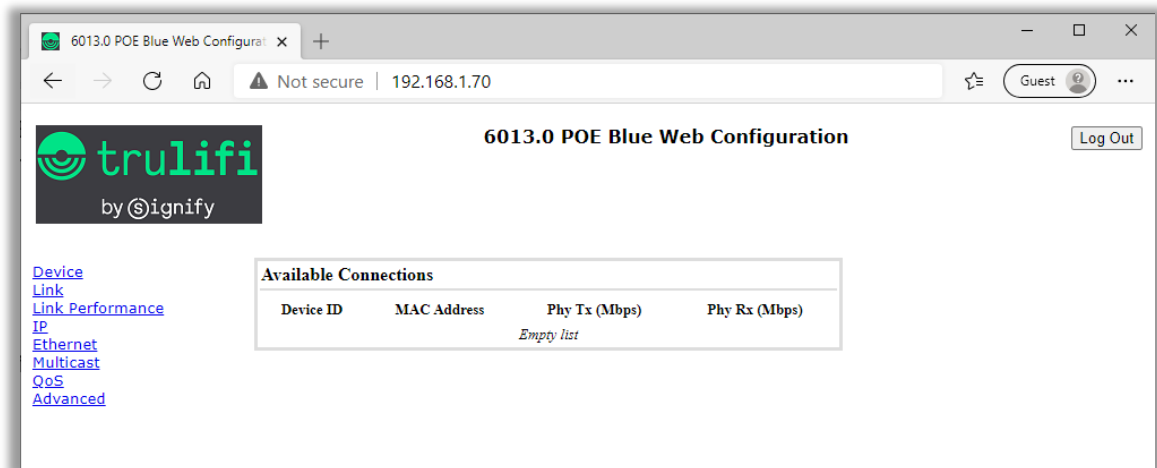
## 5.2 Link Performance Menu

The Link Performance menu reports connection status information and corresponding transmit and receive throughput values.

If the device is programmed/auto-assigned to be a CLIENT/END\_POINT, the device ID, MAC address and transmit/receive bandwidth of the associated ACCESS\_POINT is shown.

If the device is programmed/auto-assigned to be an ACCESS\_POINT, the device IDs, MAC addresses and transmit/receive bandwidth of the associated CLIENTS/END\_POINTS are shown.

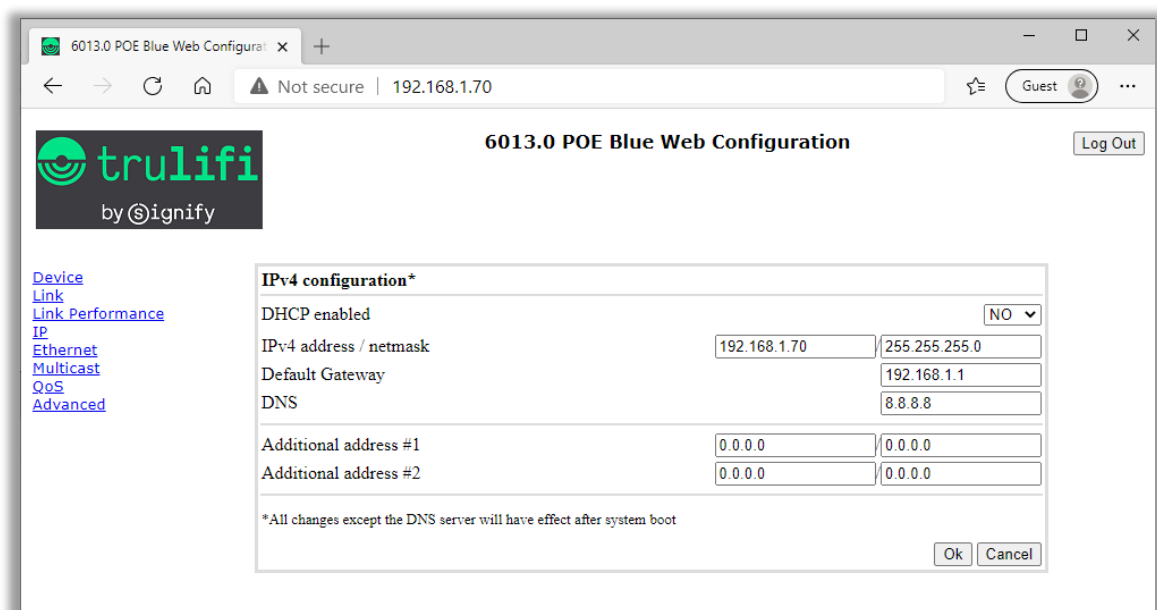
Please verify this setting in the LINK MENU of the web browser (see section 5.1). In case the Node type is set to "AUTO", the system configures these Node type settings automatically.



### 5.3 IP Menu

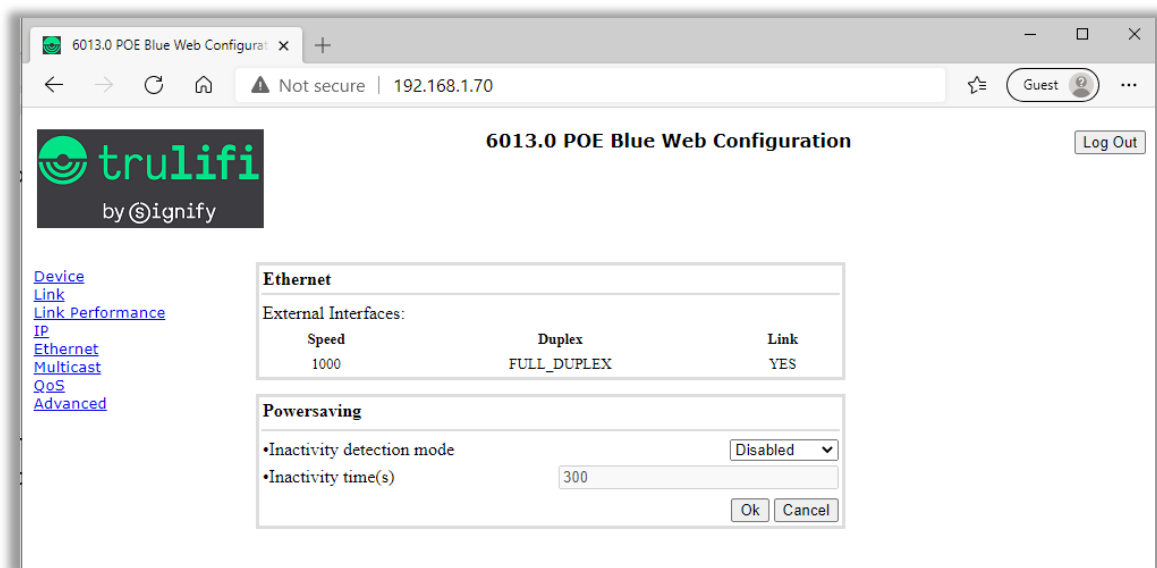
The IP menu allows you to change the following parameters of the Trulifi 6013:

- DHCP ON/OFF
- IP Address
- Subnet Mask
- Gateway IP Address
- DNS IP Address



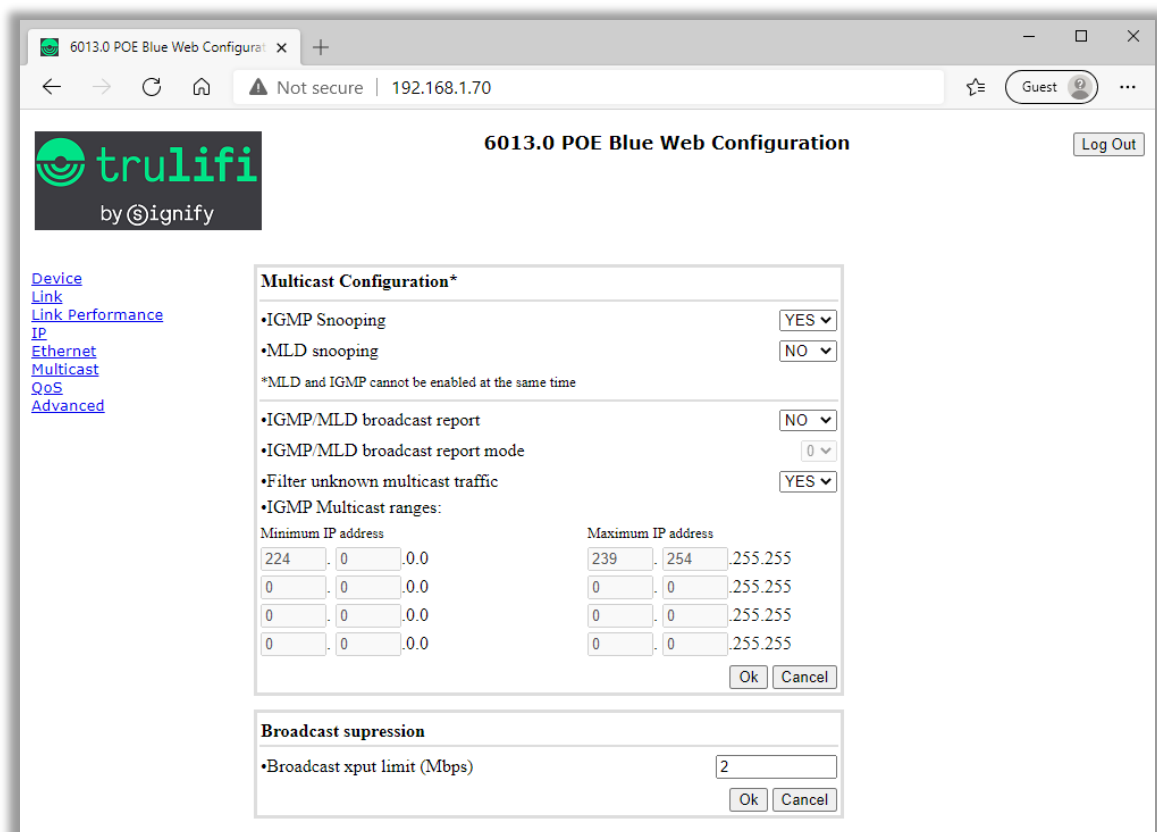
### 5.4 Ethernet Menu

The Ethernet menu shows the status of the Ethernet Port and allows to enable/disable power saving modes.



## 5.5 Multicast Menu

The Multicast menu allows for configuring Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) snooping parameters.



## 5.6 QoS Menu

The QoS menu you can change the following Trulifi 6013 parameters:

- QoS Criteria: 802.1p or custom
- Frame Type: Ethernet frame, 802.1q, 802.1ad
- Packet Detection Method: IPv4 or custom
- Packet Classification/Type-of-Service ToS)

The screenshot shows the '6013.0 POE Blue Web Configuration' interface. The top navigation bar includes links for 'Device', 'Link', 'Link Performance', 'IP', 'Ethernet', 'Multicast', 'QoS', and 'Advanced'. The 'QoS' link is highlighted. The main content area is divided into two sections: 'QoS Configuration' and 'Packet classification'.

**QoS Configuration**

|                    |                |
|--------------------|----------------|
| QoS criterion      | None           |
| Type of frame      | Ethernet frame |
| Packet detection 1 | None           |
| Offset             | 0              |
| Bitmask            | 0x0000         |
| Pattern            | 0x0000         |
| Packet detection 2 | None           |
| Offset             | 0              |
| Bitmask            | 0x0000         |
| Pattern            | 0x0000         |

**Packet classification**

•Default prio 0

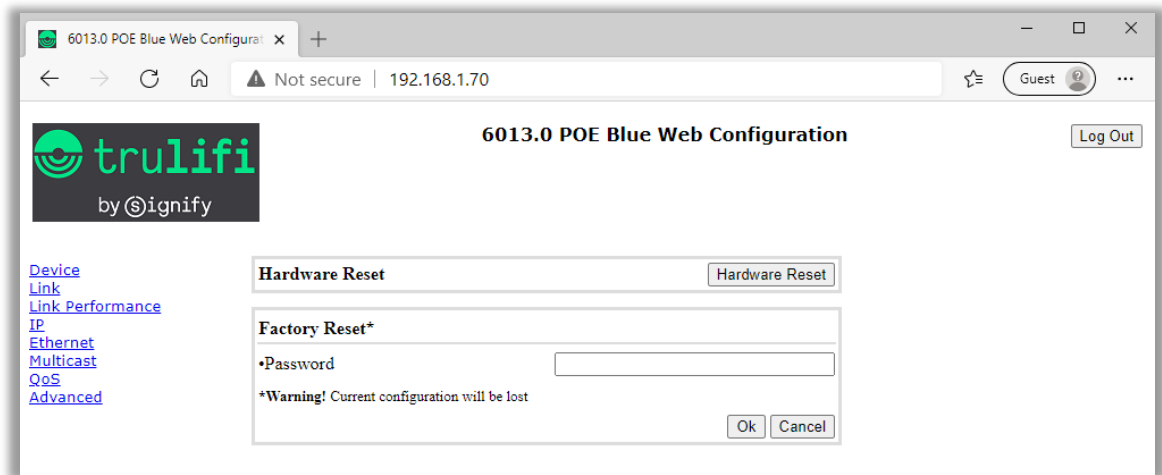
| PC     | Offset | Bitmask | Pattern | Priority |
|--------|--------|---------|---------|----------|
| Rule 1 | 0      | 0x0000  | 0x0000  | 0        |
| Rule 2 | 0      | 0x0000  | 0x0000  | 1        |
| Rule 3 | 0      | 0x0000  | 0x0000  | 2        |
| Rule 4 | 0      | 0x0000  | 0x0000  | 3        |
| Rule 5 | 0      | 0x0000  | 0x0000  | 4        |
| Rule 6 | 0      | 0x0000  | 0x0000  | 5        |
| Rule 7 | 0      | 0x0000  | 0x0000  | 6        |
| Rule 8 | 0      | 0x0000  | 0x0000  | 7        |

Ok Cancel

## 5.7 Advanced menu

The Advanced menu has provisions to perform a Hardware Reset and restore the initial factory setting at time of shipment. When using the factory reset option, all system configuration settings will be lost.





## 6 Installation

After the configuration of the Trulifi 6013 units is completed, the system is ready to be installed. Note that ceiling mounts for the Trulifi 6013 are sold separately.

After attaching the device to the ceiling/wall, connect it to a PoE enabled 100/1000-Base-TX network switch port. When the device is powered, the green power LED on the bottom panel is lit.

The final installation step is to align both Trulifi 6013 devices to establish a connection. Please make sure that the center of the blue spot emitted from one device is projected on the optical window of the other 6013 device. Repeat this step for the other device. When the units will start to communicate if are aligned correctly and LINK ACTIVITY LED will start blinking. The system is now ready to be used.

