OCEAN SONICS
Giving Our Oceans A Voice

Launch Box User Guide

BL-B5-GPS-NC
Version 1.0



11-2026

Phone: +1-902-655-3000
Email: support@oceansonics.com

Table of Contents

Table of Contents **1**
Introduction **2**
Important Notes **2**
Specifications 2
Features 2
Ocean Sonics Launch Box Quick Start **3**
Assemble Launch Box Configuration 3
Connect to Launch Box Wi-Fi 3
Setup Hydrophone 4
GPS Position Recording 6
Deployment 7
Recovery 7
Charging the Battery 7
GPS Position Data Retrieval 8
FTP Client (FileZilla) 8
Clearing Log Files 8
Contact Ocean Sonics Ltd. **10**
Appendix A. Troubleshooting the Wi-Fi Connection **11**
Optimizing the PC Wi-Fi settings 11
Appendix B. Wi-fi Network Settings **14**
Changing Network Settings 14
Changing Wi-Fi name and Password 15
Appendix C. Power Management and System Settings **17**
Firmware Update 17
Changing the Web Interface Password 17
Managing both the GPS Time Sync and Wi-Fi module power 18
Factory Reset 19
Appendix D. Marco Settings - DHCP **20**
Appendix E. Reset Wi-Fi Using Paper Clip **21**

Introduction

The **Ocean Sonics Launch Box** provides an easy way to deploy one or more synchronised **icListen Smart Hydrophones** in the field, with Wi-Fi connectivity to a computer or tablet.

Compact and lightweight, the Launch Box combines battery power, Wi-Fi, GPS positioning and time synchronisation. Users can configure hydrophones, check deployment settings and stream data for real-time processing over Wi-Fi.

The Launch Box also records GPS position data through NMEA messages, allowing users to track its coordinates during deployments, particularly useful for vessel-based monitoring.

Important Notes

- Water resistant when Launch Box case is closed and sealed.
- Launch Box Battery endurance will depend on set-up of deployment [Number of hydrophones powered, Wi-Fi, GPS]
- The distance of the Wi-Fi connection is based on obstructions, interference & devices.
- Turn the Launch Box OFF when not in use and recharge after each deployment. Ensure the Launch Box is fully charged and in the OFF position before each use.

Specifications

WEIGHT	1.6 kg
DIMENSIONS	231 mm x 173 mm x 97 mm

Features

• Built-in Rechargeable Battery	• 22.2 V, 4400 mAh $LiCoO_2$ Battery
• LED Battery Level Indicator	• 5 hours to charge from 0-100%
• GPS Time Synchronisation	• Hydrophone Synchronisation within 1 µs
• Recorded GPS Positioning	• NMEA messages logged in Launch Box memory
• 2.4G Wi-Fi	• Real-time Set Up, Status, and Display Data
• Water Resistant when lid is closed and sealed	• IP67 rated case
• Selectable cable lengths	• Deploy multiple hydrophones with **Smart Cable**
• Input Voltage	• 30-45 V • 25 W minimum for battery charging • 50 W maximum for battery charging, while also supplying maximum 25 W system load on cable
• Lithium Battery Operating Temperature	• 0° C to 45° C Charging • -20° C to 60° C Discharging
• Wi-fi Range	• Approximately 30 M
• Internal Battery Life	• Approximately 48 hours (supplying power to the icListen only. Wi-fi and GPS powered off) • Approximately 29 hours (all features enabled)

Ocean Sonics Launch Box Quick Start

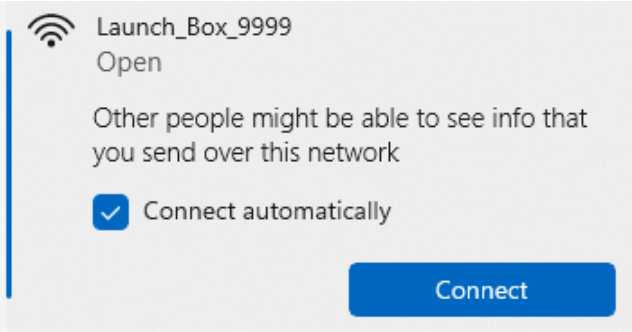
OSL Tip For a quick setup, install **Ocean Sonics**' Software Programs *Marco* and *Lucy II* on your PC prior to setting up your **Launch Box**

Assemble Launch Box Configuration

1. Turn Power switch to ON position and wait at least 2 minutes to allow Wi-Fi to stabilize.
2. Attach cable(s) and hydrophone(s) in configuration for deployment.

Connect to Launch Box Wi-Fi

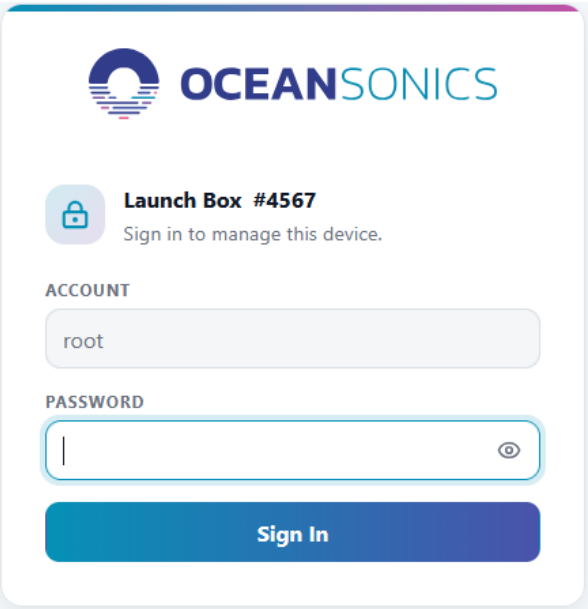
1. Use a PC, Laptop, Tablet, or Phone to connect to the Launch Box Wi-Fi (for troubleshooting Wi-Fi see Appendix A).
    a. Go to Wi-Fi settings on computer.
    b. Ensure Wi-Fi is turned on.
    c. Show available networks.
    d. Select **Launch_Box_[SerialNumber]** to connect



For Launch Box Wi-Fi settings see Appendix B.

    e. Once connected to the Launch Box, open your browser of choice and type the Launch Box default IP address [192.168.1.1]

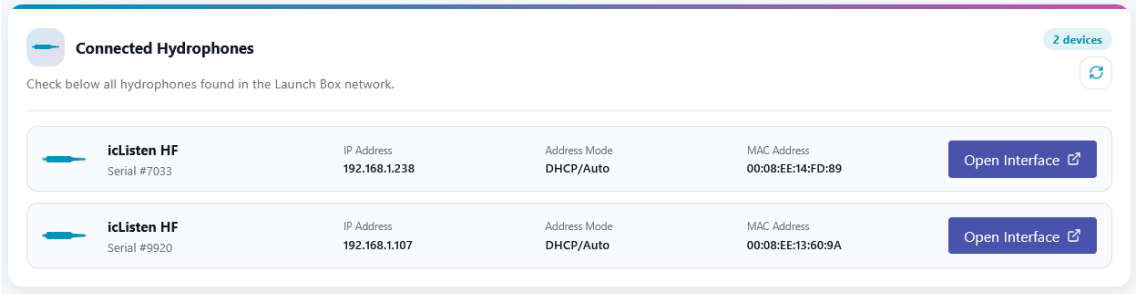
f. You should be able to see the Launch Box web interface



g. If necessary to perform a Wi-Fi reset using a paper clip, see Appendix E

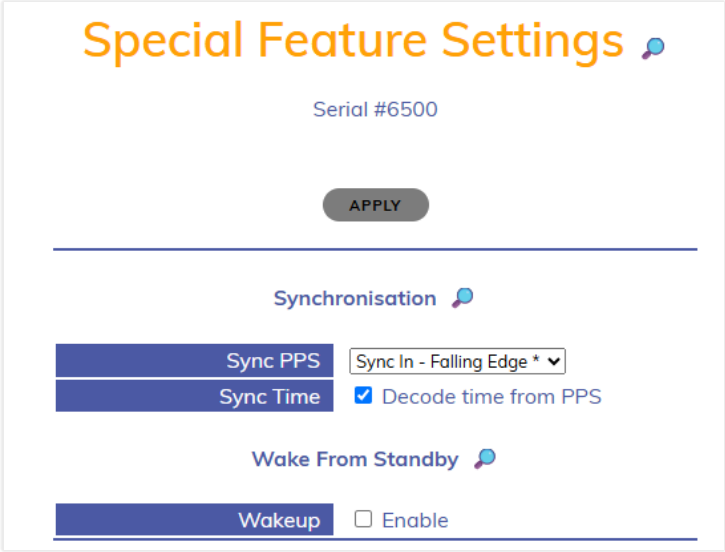
Setup Hydrophone

1. You can identify any icListen connected to your Launch Box with a valid IP address listed in the "Connected Hydrophones" card

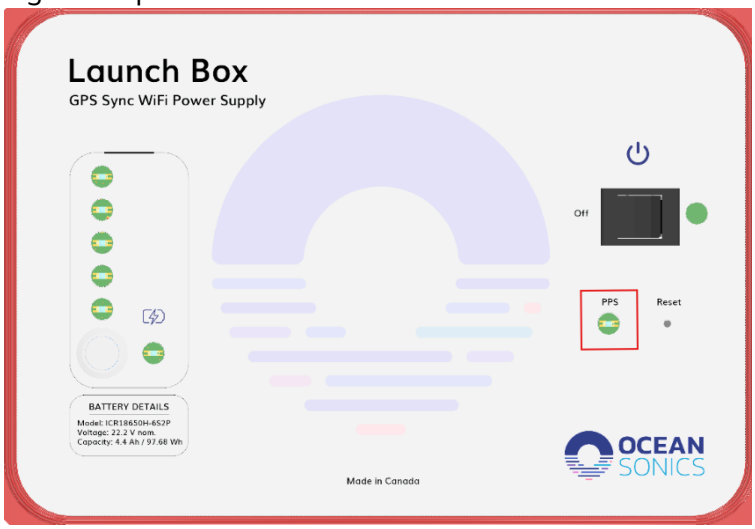


2. If you can't see a hydrophone that is connected to your Launch Box, please follow the instructions below.
3. Open ***Marco*** on PC [Ocean Sonics' Software Program found on icListen USB drive or in the Ocean Sonics website].
    a. Click Refresh to view hydrophone(s) connected to the Launch Box.
    b. All units on ***Marco*** should be set to DHCP (See Appendix D for ***Marco*** Help).
    c. Using Marco open the icListen in a Web Browser (double click on serial #).
4. Configure hydrophone for deployment.
    a. Set icListen to Synchronise to GPS generated PPS time signal.

i. Under Special Features ensure **Sync In – Falling Edge** is selected and **Decode Time from PPS** is checked.



ii. If the Launch Box is in a location where it can receive a GPS signal, the PPS light will begin flashing green, indicating the generation of a PPS signal acquired from a satellite lock.



iii. You can also check if the icListen is synced by PPS through the icListen web interface



iv. When it has a GPS sync, the time will indicate it was set by PPS. Ensure the correct date and time are being displayed properly in the icListen web interface (The GPS synchronisation may take 2-10 minutes depending on several factors, i.e. where the Launch Box is located, if there are satellites available for a signal lock, etc.)



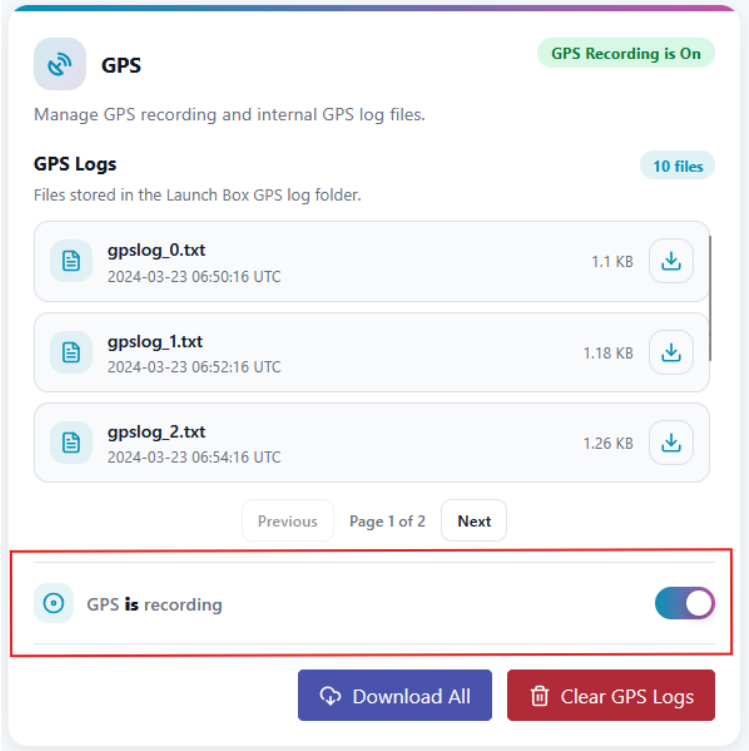
b. Set up Sampling Rates for icListen.

i. Under Settings Tab → Data Collection, select the settings for deployment - Sampling rates of WAV and FFT data.
ii. Set the icListen to record data if necessary

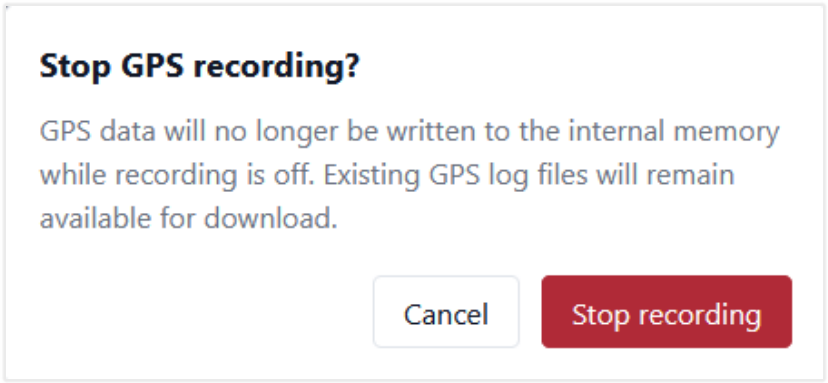
GPS Position Recording

The GPS recording will start automatically after turning on your Launch Box or when toggling the Time Sync module on. You will be able to see fully populated NMEA messages after a complete satellite lock. Check Appendix C to know more about toggling power to the Time Sync module

1. Toggle the GPS switch as indicated in the image below.



2. When toggling GPS recording to off, you will be asked to confirm this action. Click **Stop Recording.**



Each time recordings are turned on and off a new log file will be created. A new log file will also be created after 1 hour of recording.

Deployment

1. Secure Launch Box to vessel or dock prior to deploying hydrophone(s) on the cable attached, so the Launch Box cannot be pulled into the water.
2. If deploying on a vessel, the vessel should be stopped during deployment.
3. Connect to Launch Box Wi-Fi, then to hydrophone's web interface or Lucy II to ensure the hydrophone is recording and/or streaming.
4. Slowly feed the hydrophone and cable into the water.
5. Collect Data.
    a. While collecting data, the Wi-Fi connection can continue streaming hydrophone data to the PC while the Launch Box is within range.

Recovery

1. Retrieve hydrophone and cable from water.

If the Launch Box has power:

2. Connect to Wi-Fi on Launch Box.
3. Turn off hydrophone recording.
4. Place Hydrophones into Standby Mode.
5. Move the toggle switch completely to the left "OFF" position. This will shut down the icListen's connected to it, and power off the Launch Box
6. Rinse hydrophone and cable with fresh water.

If the Launch Box does not have power to turn off your hydrophone, use the supplied test cable by following the instructions below:

a. Attach test cable.
b. Put hydrophone in standby mode.
c. Insert -9v battery hardware reset tool into the power barrel connector on the test cable.

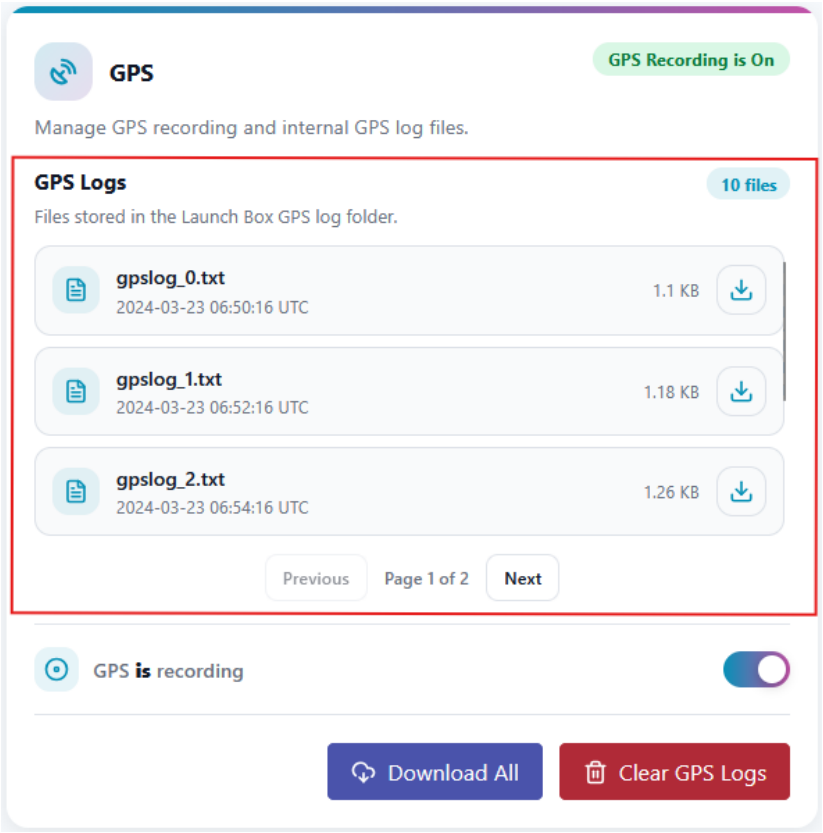
Charging the Battery

1. Ensure the Launch Box is in a secure, dry location for charging.
2. Insert the power cord into a wall outlet.
3. Mate the DC barrel plug of the charger to the DC barrel jack on the Launch Box.
4. Charging should take approximately 5 hours, depending on the discharge state of the battery.

GPS Position Data Retrieval

Position data recorded by the GPS can be retrieved either by logging into the Launch Box web interface or using an FTP client such as FileZilla (SFTP protocol only).

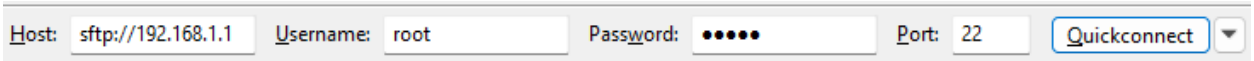
1. The GPS section will display log files individually where you can download each one separately or use the **Download All** button.



2. Pagination buttons will show in case the Launch Box has more than 5 GPS log files recorded

FTP Client (FileZilla)

1. Fill out the fields as shown below with the password being root.

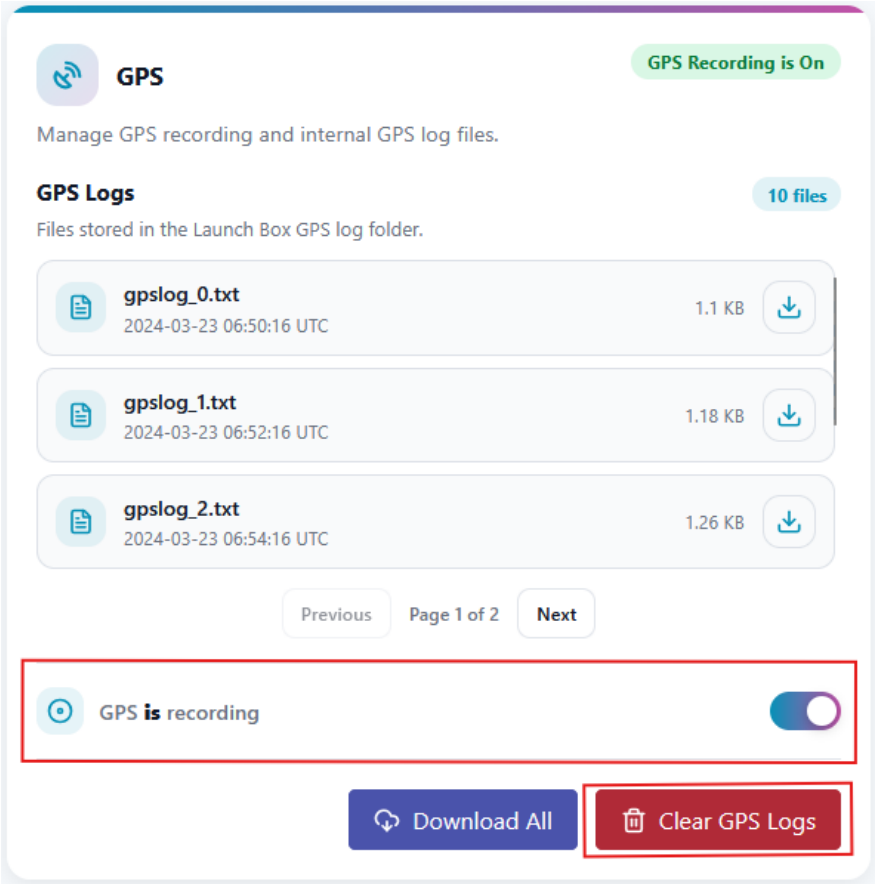


2. Choose a destination folder on your computer to copy over the recorded log to your computer.

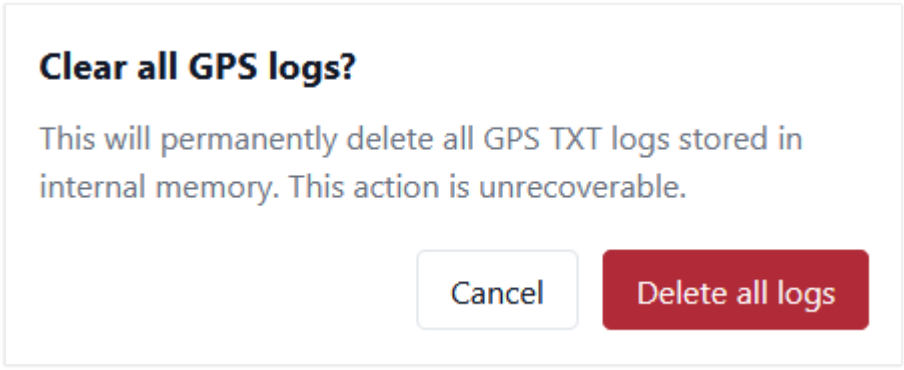
Clearing Log Files

To delete all recorded GPS files.

1. Disable GPS logging in the Launch Box web browser by flipping the GPS record switch.
2. Click **Clear GPS Logs.**



3. You will be asked to confirm this action. You will not be able to recover these logs after confirmation



Contact Ocean Sonics Ltd.

To download Ocean Sonics Software please visit:

https://oceansonics.com/users-software/

Service

To request an RMA or technical support
Email: support@oceansonics.com
Phone: 1-902-655-3000

Sales

For general sales inquiries
Email: sales@oceansonics.com
Phone: 1-902-655-3000

Website

https://OceanSonics.com

Mailing and Shipping Address

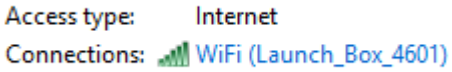
Ocean Sonics
110 Parkway Dr.
Truro Heights, NS Canada
B6L 1N8

Appendix A. Troubleshooting the Wi-Fi Connection

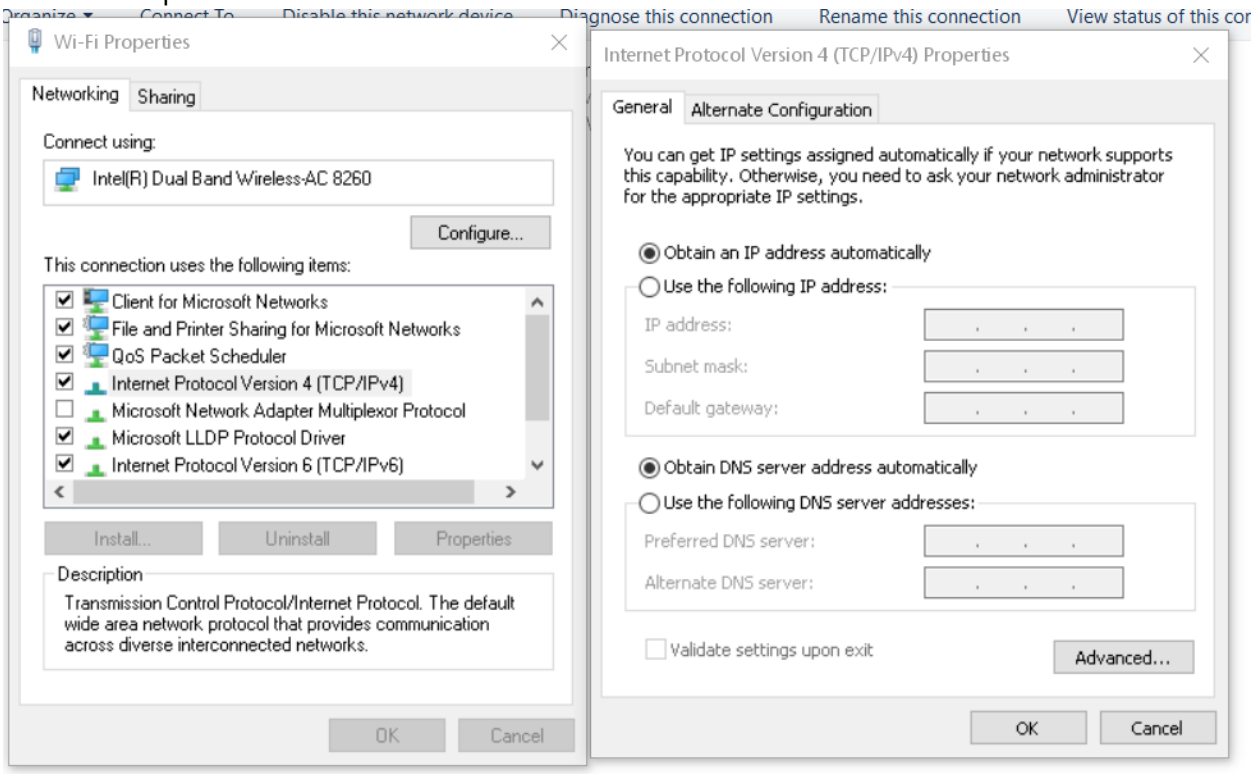
If advanced Network Settings have been changed in a computer, it may be necessary to turn on Automatic DHCP. To learn more about the Launch Box Wi-Fi configuration, see Appendix B.

Windows:

1. Go to Network Connections: Control Panel→Network and Sharing Centre and click on the Launch Box Wi-Fi.



2. Choose Properties.
3. Click on Internet Protocol Version 4 (TCP/IPv4).
4. Click on Properties.



5. Ensure **Obtain an IP address automatically** and **Obtain DNS server address automatically** are chosen.

Optimizing the PC Wi-Fi settings

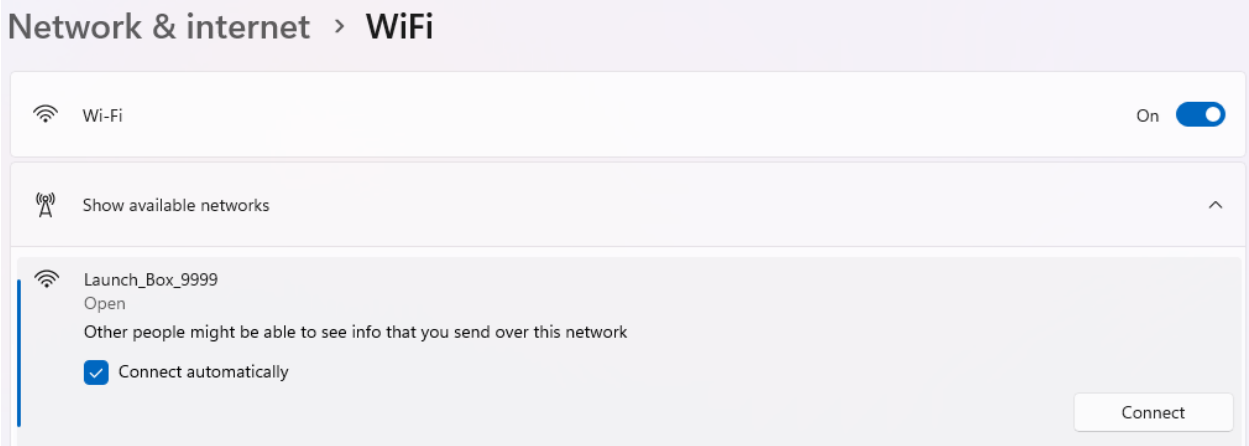
If you're experiencing poor Wi-Fi connectivity between your PC and the Launch Box, this explains how to optimize Wi-Fi settings in Windows 11 to ensure automatic connectivity, improve wireless performance, and minimize connection interruptions.

To make your Wi-Fi connection automatically connect to the Launch Box:

1. Open Settings → Network & internet → Wi-Fi.
2. Select “Show available networks” and choose your preferred Wi-Fi network.
3. Check the Connect automatically option.
4. Click Connect.

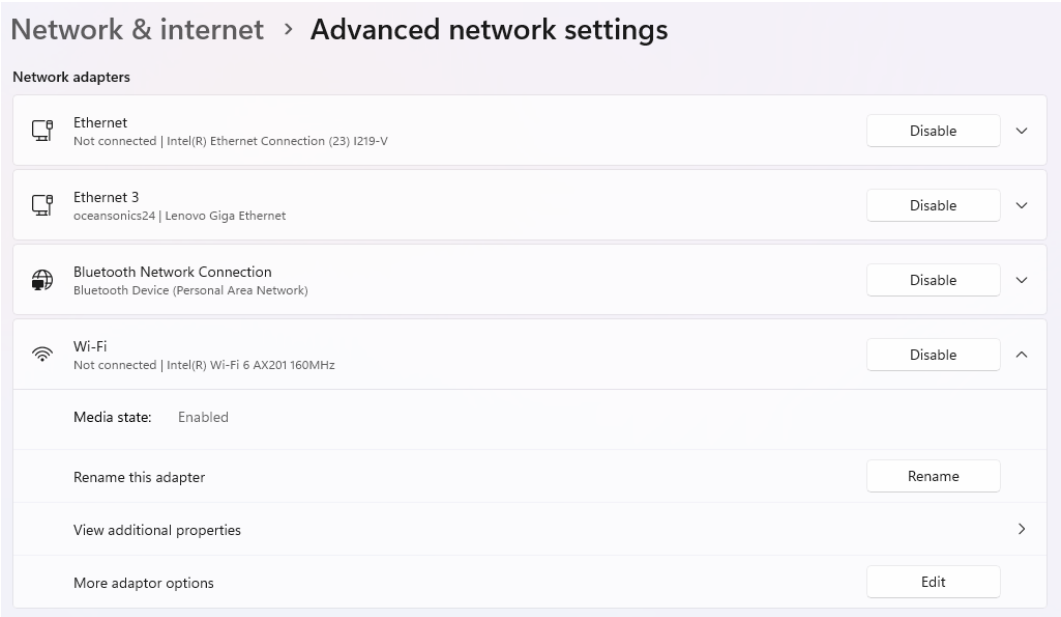
If the network is already saved:

1. Go to Settings → Network & internet → Wi-Fi → Manage known networks.
2. Select your preferred Wi-Fi network.
3. Enable Connect automatically when in range, if available.



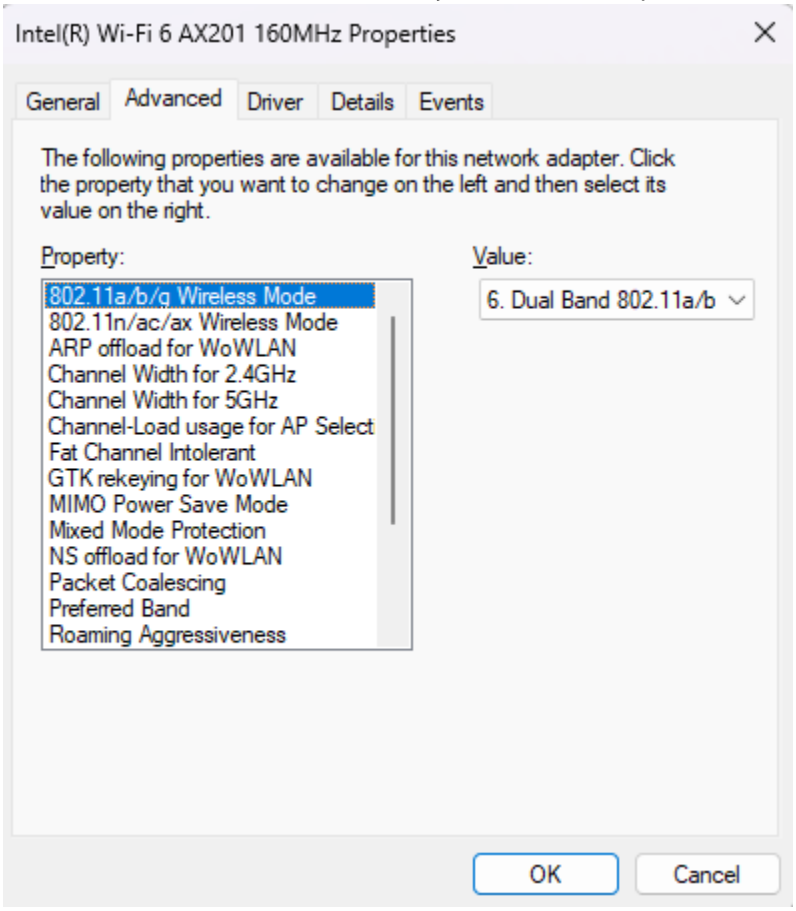
To configure the Wi-Fi adapter in your PC for maximum performance (optional, where available):

1. Open Settings → Network & internet → Advanced Network Settings → Expand Wi-Fi → Expand Adaptor Options → Edit



2. Click on “Configure”

3. Select the “Advanced” tab from your Wi-Fi adapter



4. Configure the following settings, where available:

Setting	**Recommended Value**
Transmit Power	Highest (e.g., 5. Highest)
Wireless Mode	Highest supported mode (802.11ax/be, if supported)
802.11n/ac/ax Wireless Mode	Highest supported mode
MIMO Power Save Mode	No SMPS

5. Click “Ok” to save your settings

Note: Available options may vary by Wi-Fi adapter and driver. Some settings may not be available to you.

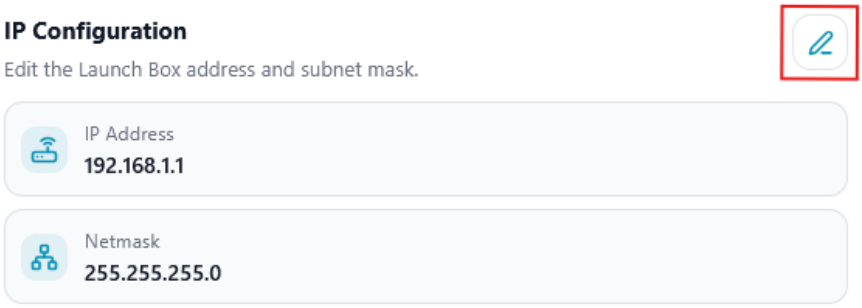
Appendix B. Wi-fi Network Settings

All Wi-Fi configuration settings from the Launch Box can be managed in this section.

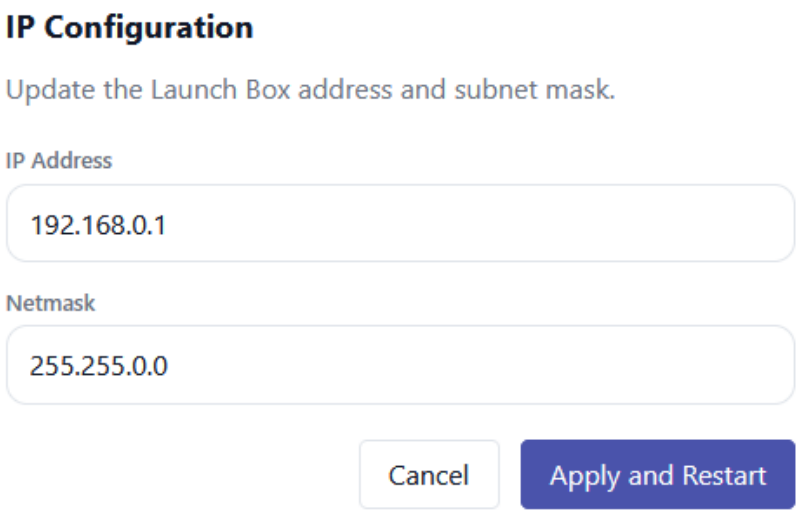
Changing Network Settings

By default, the Launch Box IP address is 192.168.1.1 and netmask is 255.255.255.0, but you can change this information if necessary.

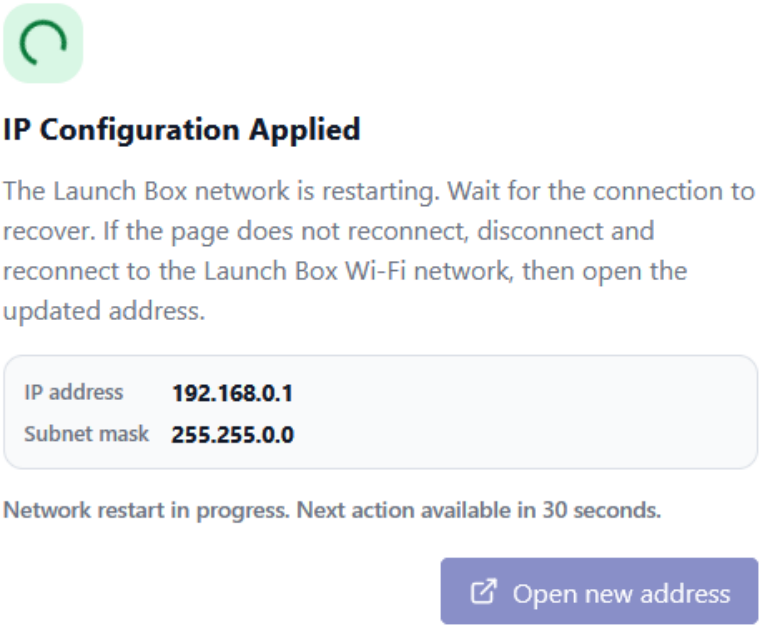
1. Under the Network section, click on the IP Configuration edit icon



2. Define a new IP address and/or subnet mask for your Launch Box and click on **Apply and Restart**



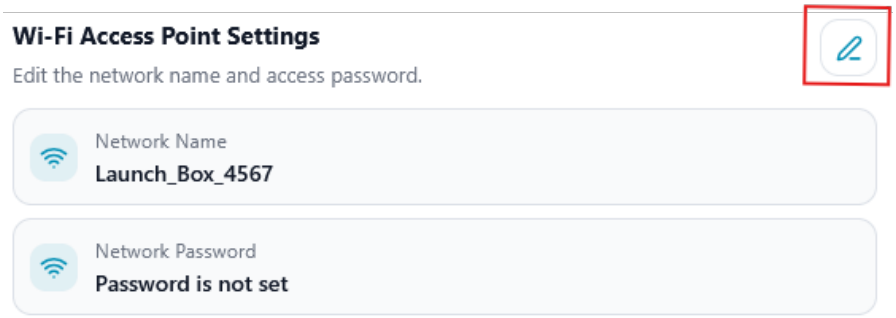
3. Wait 30 seconds for Launch Box network to restart. The Launch Box web interface will be available at the new address you just configured.



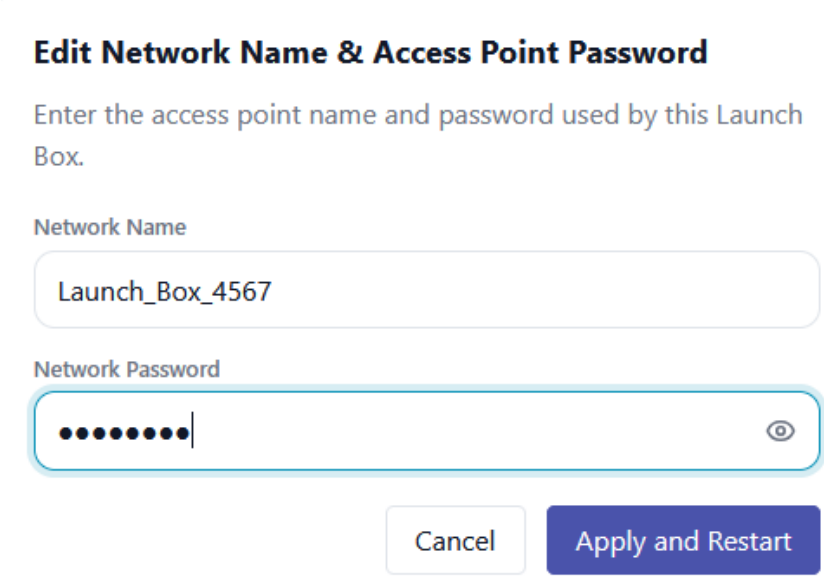
Changing Wi-Fi name and Password

By default, the Launch Box Wi-Fi name matches its serial number following a pattern like Launch_Box_[serialNumber]. There is no password set for the Wi-Fi network by default, but you can define and set a new password if necessary

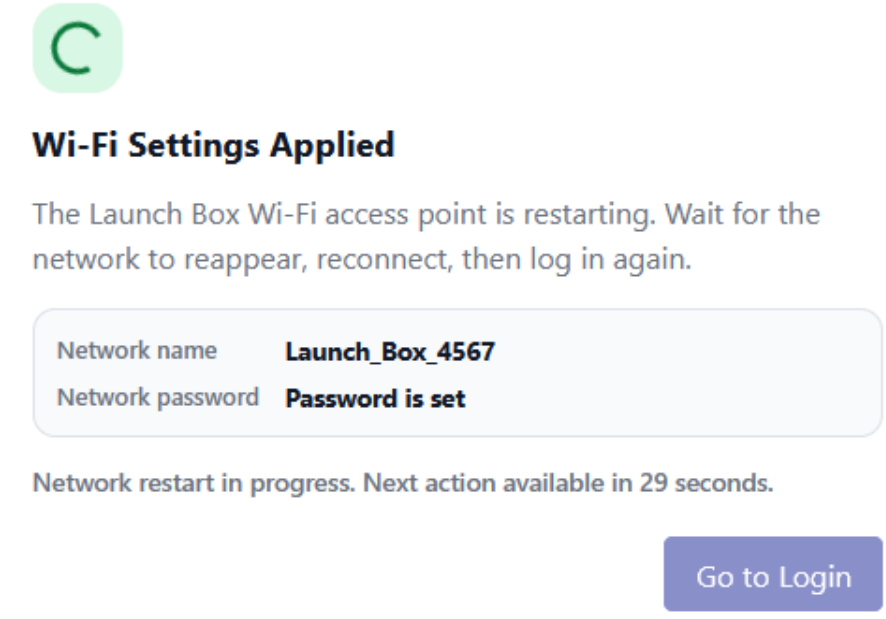
1. Under the Network section, click on the Wi-Fi Access Point edit icon



2. Define a new Wi-Fi name and/or set a password.



3. Type in the new Wi-Fi name (up to 32 characters) using English letters, numbers, spaces, hyphens, or underscores.
4. Enter a password (8 to 63 characters) using English letters, numbers, spaces, hyphens, or underscores.
5. Click **Apply and Restart**.
6. Wait 30 seconds for the Launch Box to restart its network and sign back in



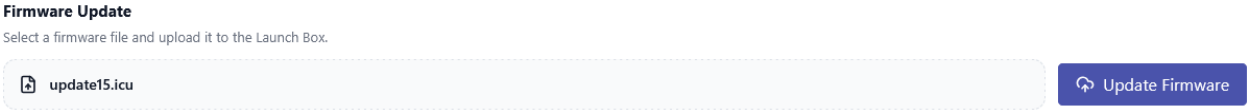
7. To delete password protection on Wi-Fi, leave Password field blank and click **Apply and Restart**.

Appendix C. Power Management and System Settings

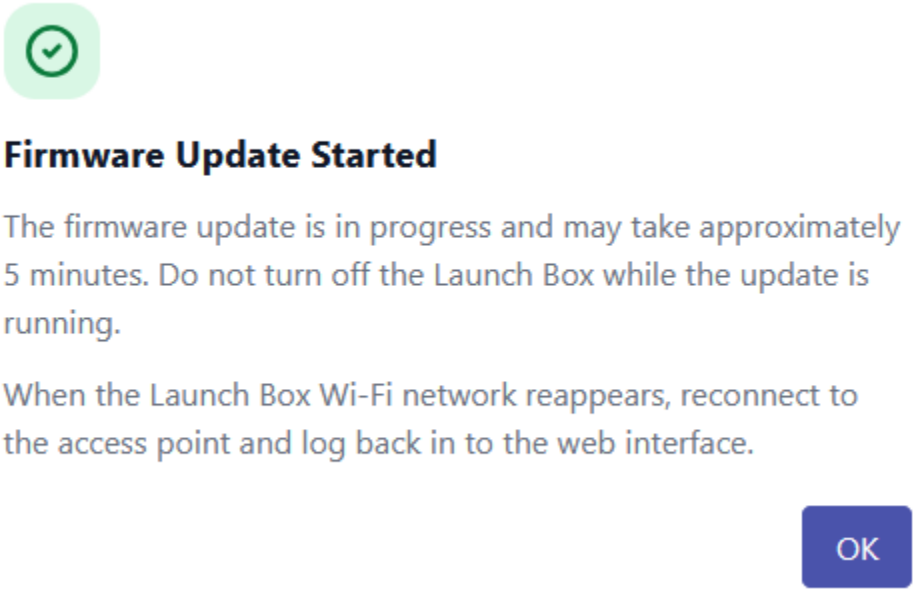
It's possible to switch power from both the GPS time sync and Wi-Fi modules to save battery on the Launch Box. It's also possible to change the local user's password and perform a factory reset.

Firmware Update

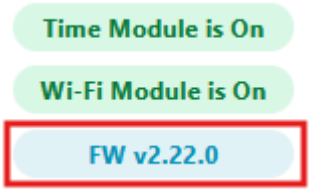
1. To perform a system update, under the Power & System management card find the Firmware Update section and click on "**Choose Firmware File**". The system only allows .icu files to perform this operation.



2. Once you load the .icu file, the "**Update Firmware**" button will enable. The firmware update can take up to 5 minutes. After that you will be able to reconnect to the Launch Box Wi-Fi and use the device.



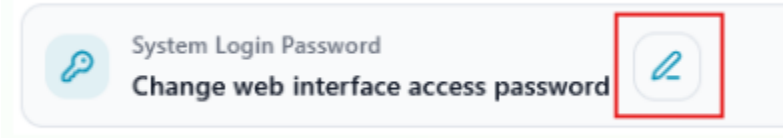
3. You can confirm your firmware has been updated by checking the firmware version on the badge located at the top-right corner of the Power & System management card



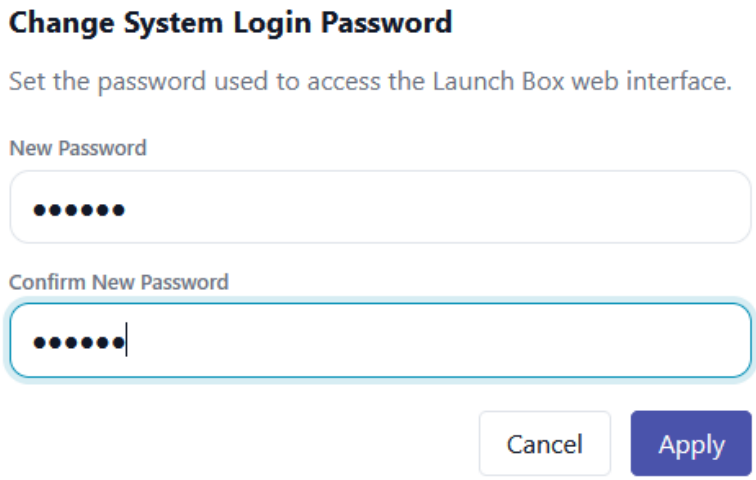
Changing the Web Interface Password

It is possible to change the default user password to sign in the Launch Box web interface.

1. At the Power & System section, find and click on the System Login Password edit icon



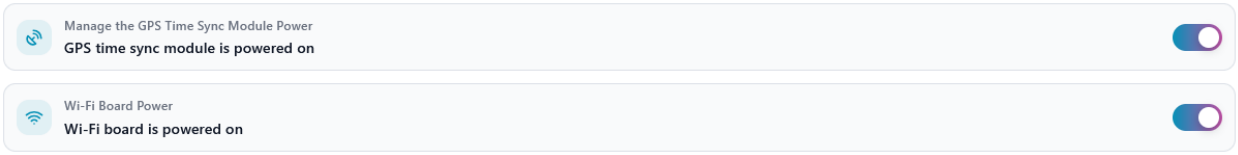
2. Define a new password (8 to 63 characters) using English letters, numbers, special characters, and/or underscores. Password cannot be blank.



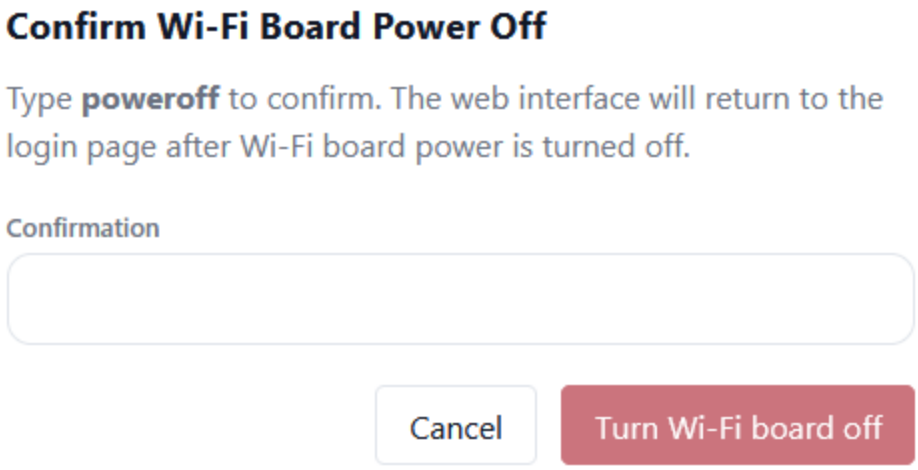
Managing both the GPS Time Sync and Wi-Fi module power

It's possible to toggle power from the Time Sync module and the Wi-Fi module to save battery in your Launch Box.

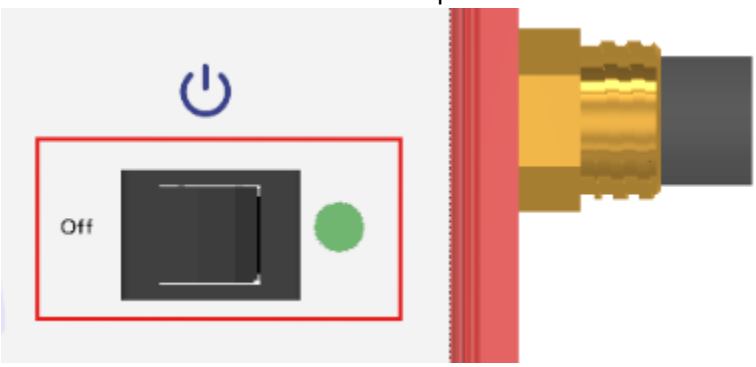
1. In the Power & System Management card you will find both buttons responsible to control power to the Time Sync and Wi-Fi modules.



2. When turning the GPS Time Sync module off, the Launch Box will not output a PPS time signal nor record GPS information. It's still possible to download previously recorded GPS data.
3. To turn the Wi-Fi module off, it will be required to confirm this action by typing "poweroff" in the input box. This action will disconnect your computer from the Launch Box Wi-Fi, and it will not be possible to reach the hydrophone(s) attached to it. Use this feature with care.



4. To restore access to the Launch Box, it will be required to manually switch the power switch on the Launch Box's faceplate



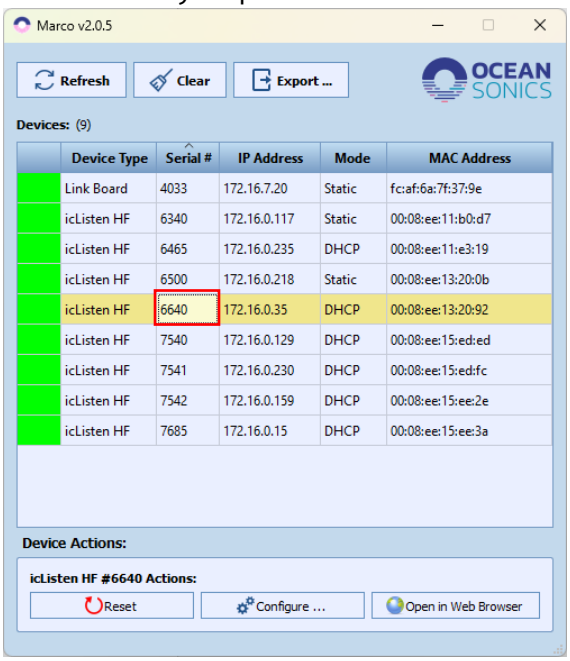
Factory Reset

If there are problems with the Wi-Fi settings or any other component in the Launch Box, you can perform a Factory reset that will reinstall its operating system and restore all settings to the default such as the IP address (192.168.1.1), password (root), and more.

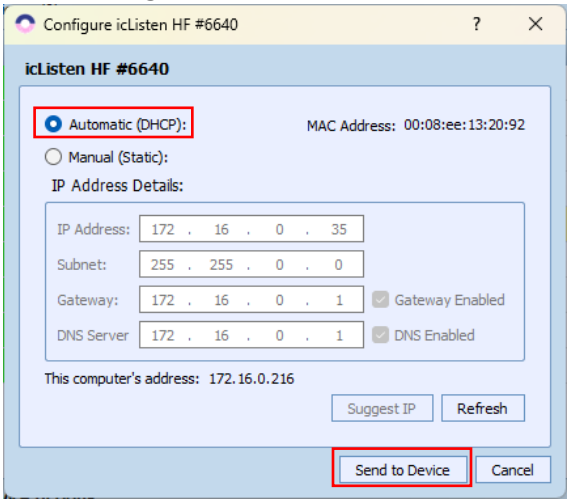
To reset only the Wi-Fi settings, see (Resetting Wi-Fi).

Appendix D. Marco Settings - DHCP

1. Click on the hydrophone serial number



2. Click **Configure ...**



3. Choose **Automatic (DHCP)**.
4. Click **Send to Device** and wait for settings to be successfully sent to the unit.
5. Continue this for each unit so they are all set to DHCP IP addresses.
6. Units should all show up green indicating they are ready.

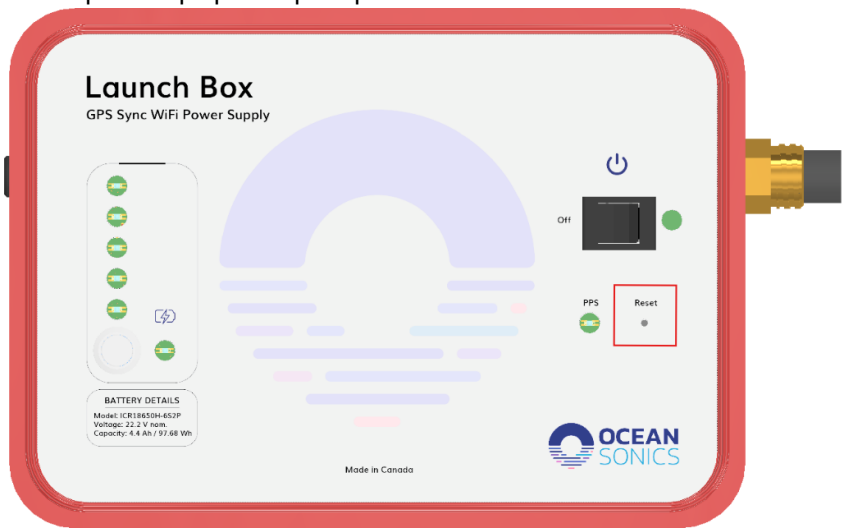
Appendix E. Reset Wi-Fi Using Paper Clip

A Wi-Fi reset can be done to recover the Wi-Fi network settings to the original configuration that was provided for the Launch Box. **All Wi-Fi settings will be lost and restored to default.**

A Reset would be necessary in the following states:

- The Wi-Fi network on the Launch Box was configured and caused the Wi-Fi to stop working and communications were lost.
- The Wi-Fi password for a Launch Box was set and forgotten.

1. Use a pen or paper clip to press and hold the Reset button for at least 5 seconds.



2. Wait for the Launch Box to completely reset and start up the Wi-Fi module. This process might take 5 minutes