

LI-ION TAMER GEN 3 HUB / SENSOR FIRMWARE UPDATE PROCEDURE USER GUIDE



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Preface

This Guide details how to update the Li-ion Tamer GEN 3 Hub and Sensor firmware using an Apache server. For firmware version release notes, please see their respective firmware release product bulletin's and contact an Li-ion Tamer representative to acquire the necessary firmware files.

Related Products

Li-ion Tamer GEN 3

1 Introduction

The Li-ion Tamer GEN 3 Hubs (261003 and 261004) and Sensors (261001 and 261002) will periodically have new firmware released for the purposes of addressing field issues or modifying sensitivity of the system based on site-specific parameters. The following sections detail the required materials and how to update firmware on the hubs and sensors.

2 Apache Server Setup

The firmware update process requires the installation of XAMPP, which is a third-party software that runs an Apache server for hosting firmware files.

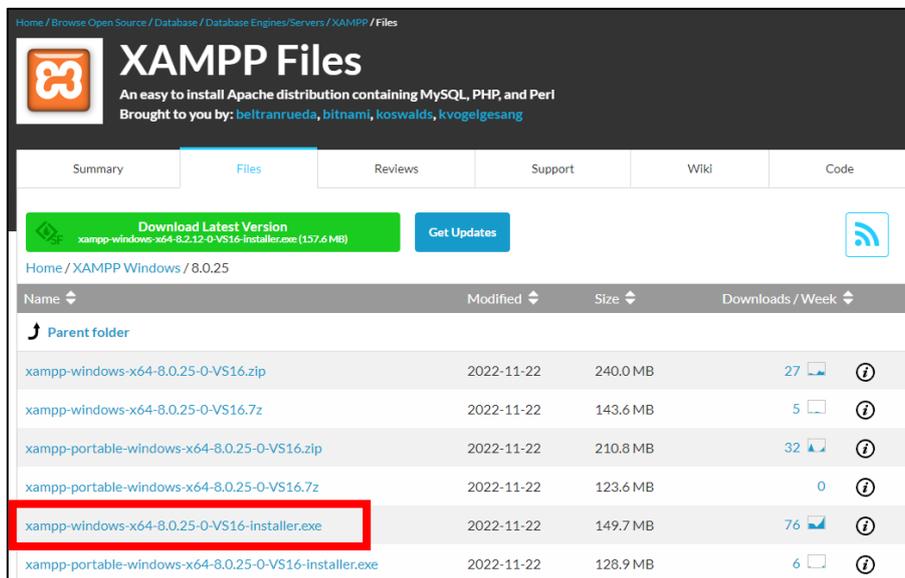


Note!

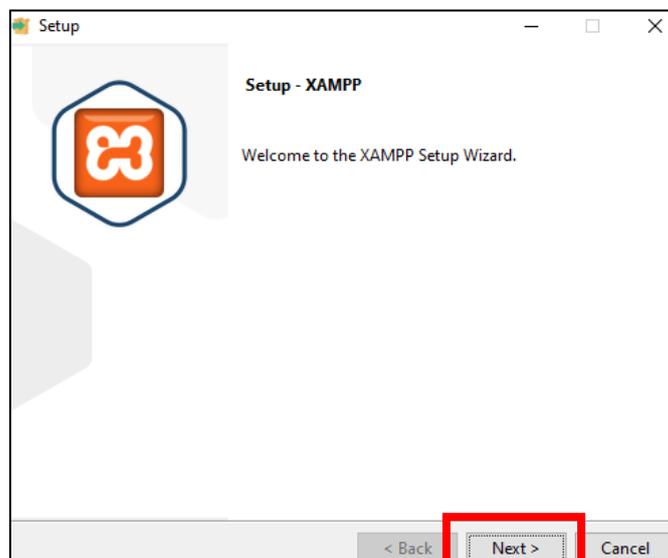
The XAMPP software has only been verified on Windows. Mac OS and Linux versions are available but this guide pertains to the Windows version.

The steps below detail how to download, install, and set up this software.

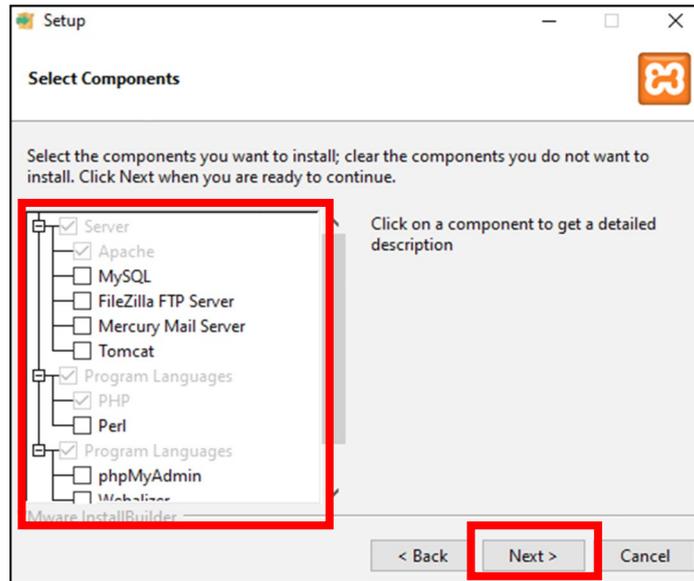
1. Download XAMPP version 8.0.25 for Windows with the following link:
<https://sourceforge.net/projects/xampp/files/XAMPP%20Windows/8.0.25/>



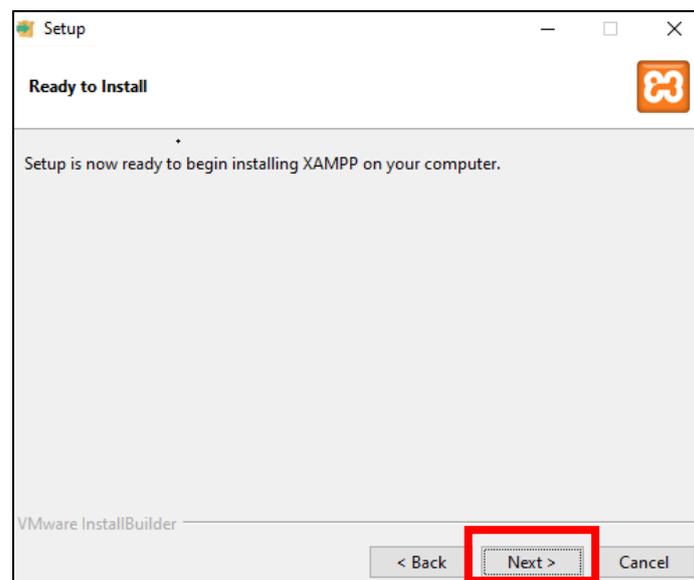
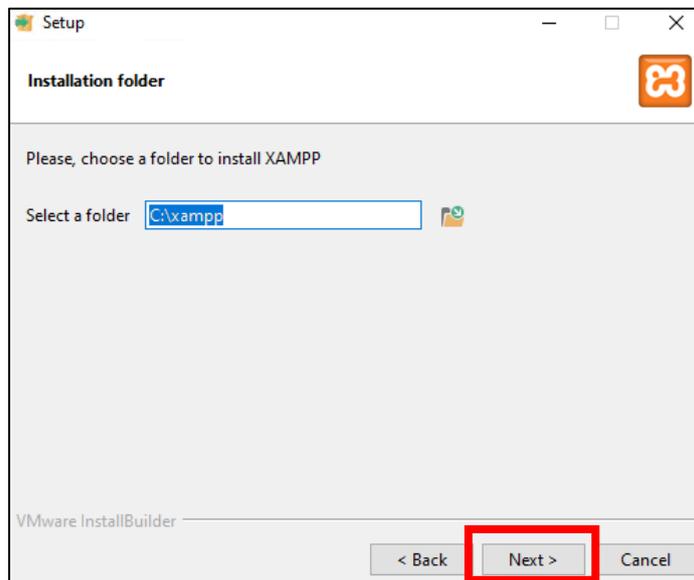
2. Run the executable to install XAMPP.
3. Select "Next" to proceed with the install.

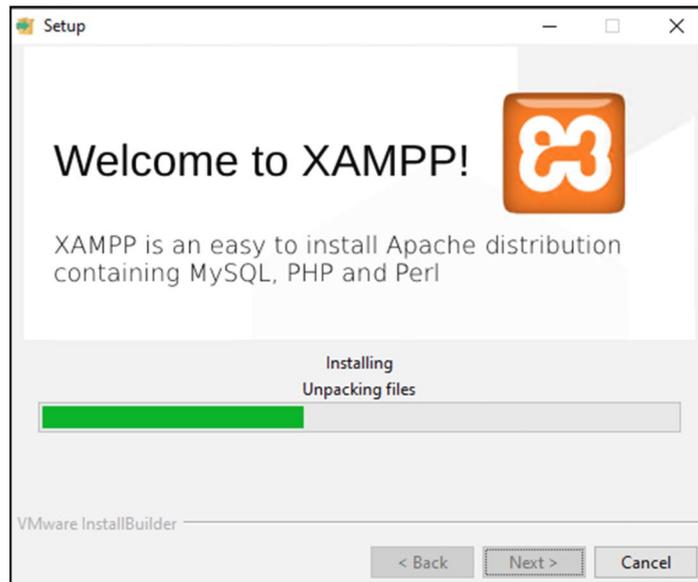


- 4. Uncheck all optional tools and select "Next".

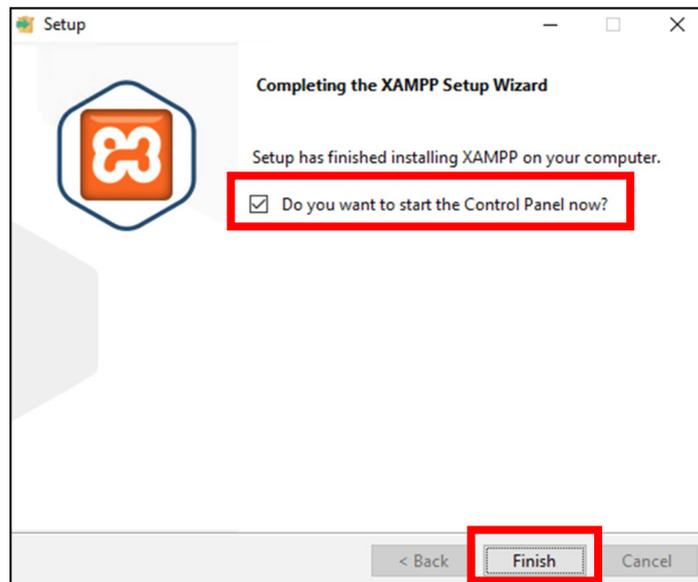


- 5. Leave the default installation location and select "Next" on the following screens.

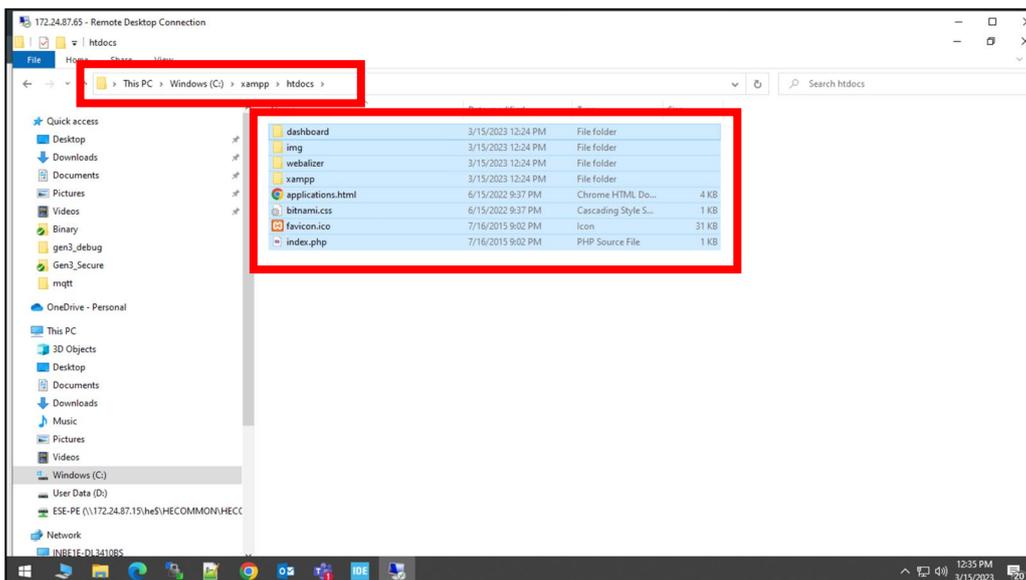




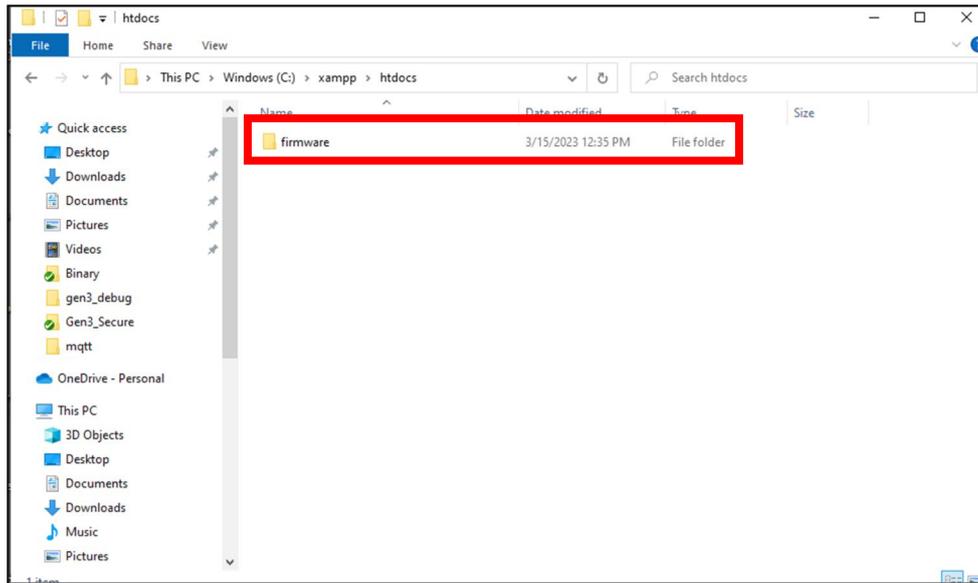
6. Select the option to open the Control Panel now and select "Finish".



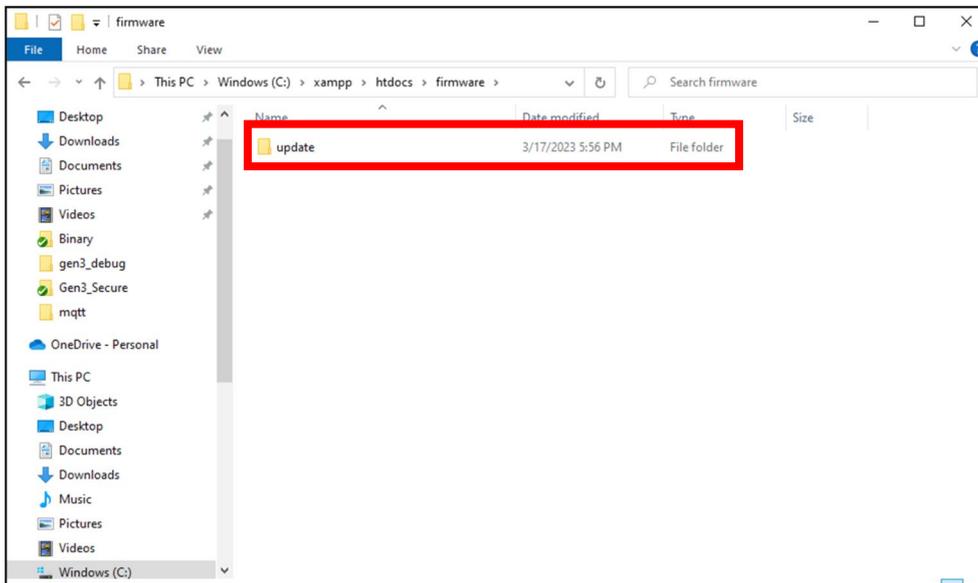
7. Open the folder C://xampp/htdocs and delete the following files.



8. Create a new folder in C://xampp/htdocs and name it "firmware".



9. Open the "firmware" folder and create a new folder named "update".



10. Setup of the XAMPP software is now complete.

3 Running the Apache Server

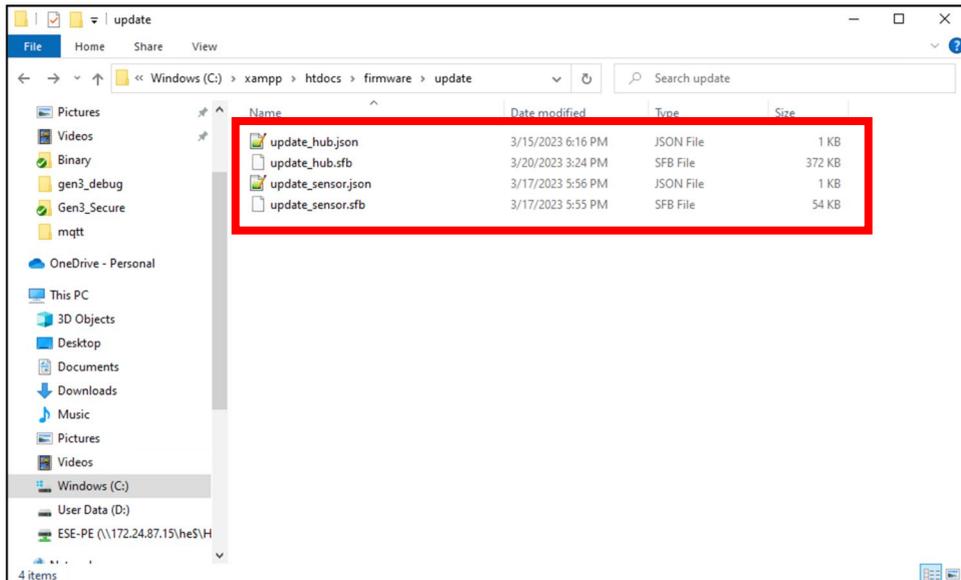
The procedure for running the Apache server, which was set up in the previous section, is as follows:

1. Copy the firmware update files to C://xampp/htdocs/firmware/update as shown below. There are two files for the sensor firmware (.sfb and .json) and another two files for the hub firmware.

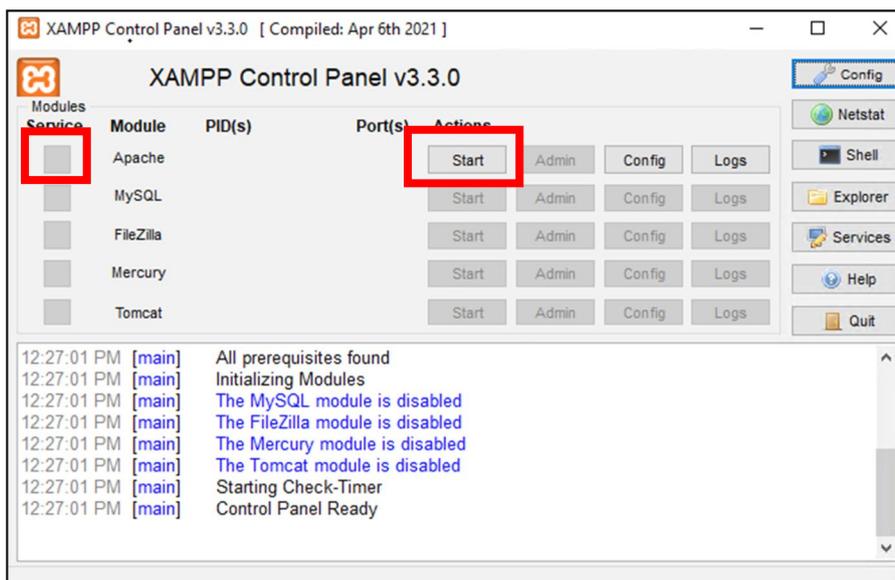


Note!

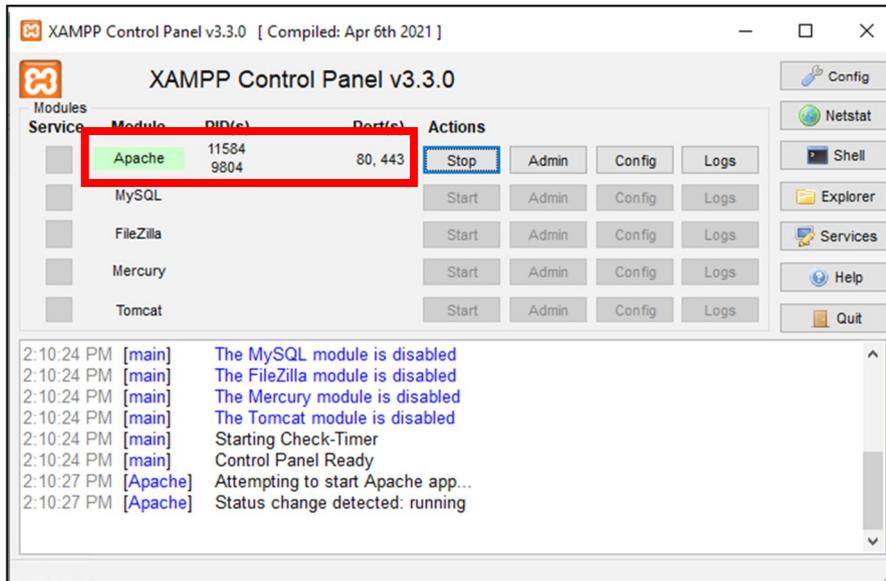
To update either the hub or the sensor, only move that device's files to the update folder. For example, to only update the sensor firmware, only copy the sensor's .sfb and .json files to the update folder.



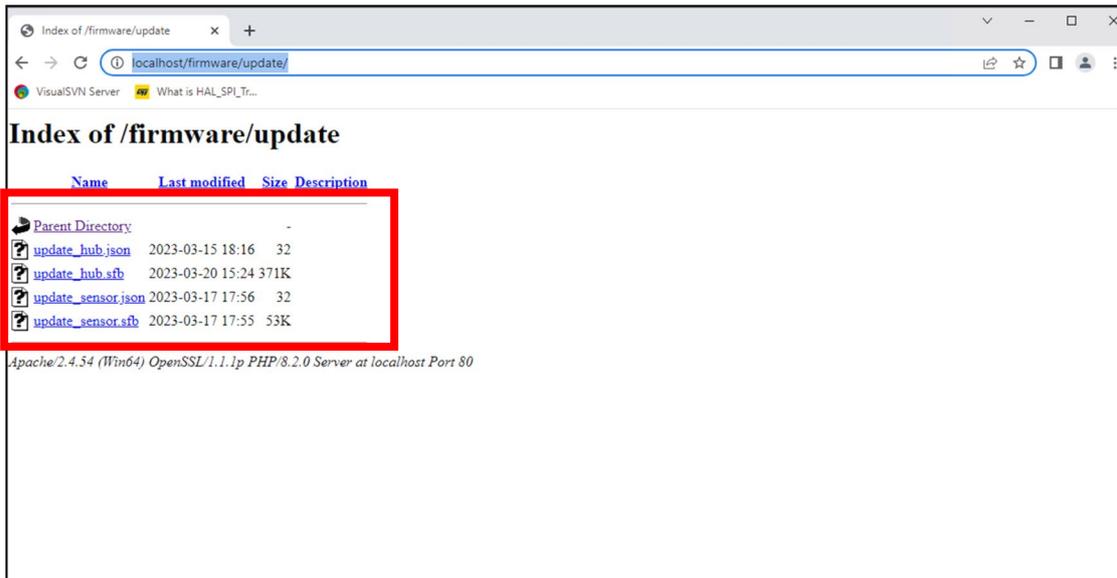
2. On the XAMPP software control panel, select "Start". If there is a red "X" in the box next to the Apache service module, select that box and follow the prompts to enable the Apache service module. The Apache service box should either be empty, as shown below, or populated by a green check-mark before proceeding.



3. After starting the Apache server, the control panel should appear as shown below.



4. Open the following link in a browser, confirming that the screen below appears with the update files listed: <http://localhost/firmware/update>



4 Firmware Update Procedure

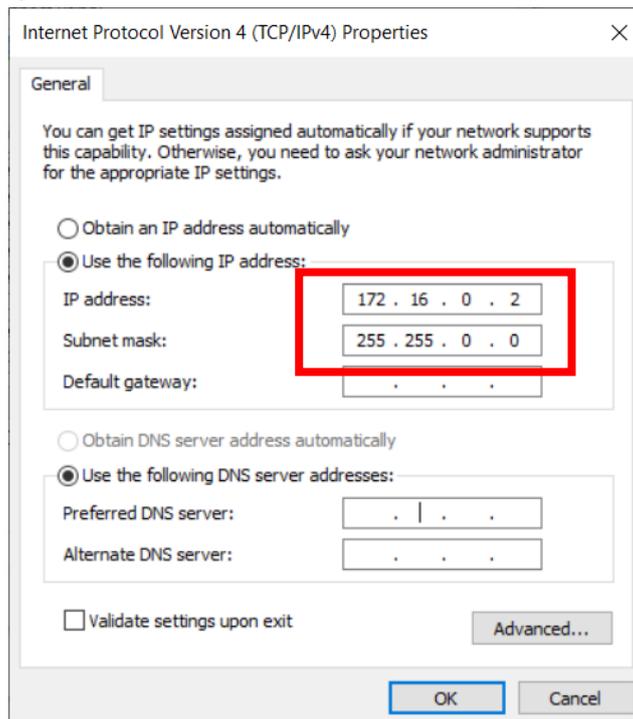
Follow the procedure below to update sensor and hub firmware.

Required Materials for Testing:

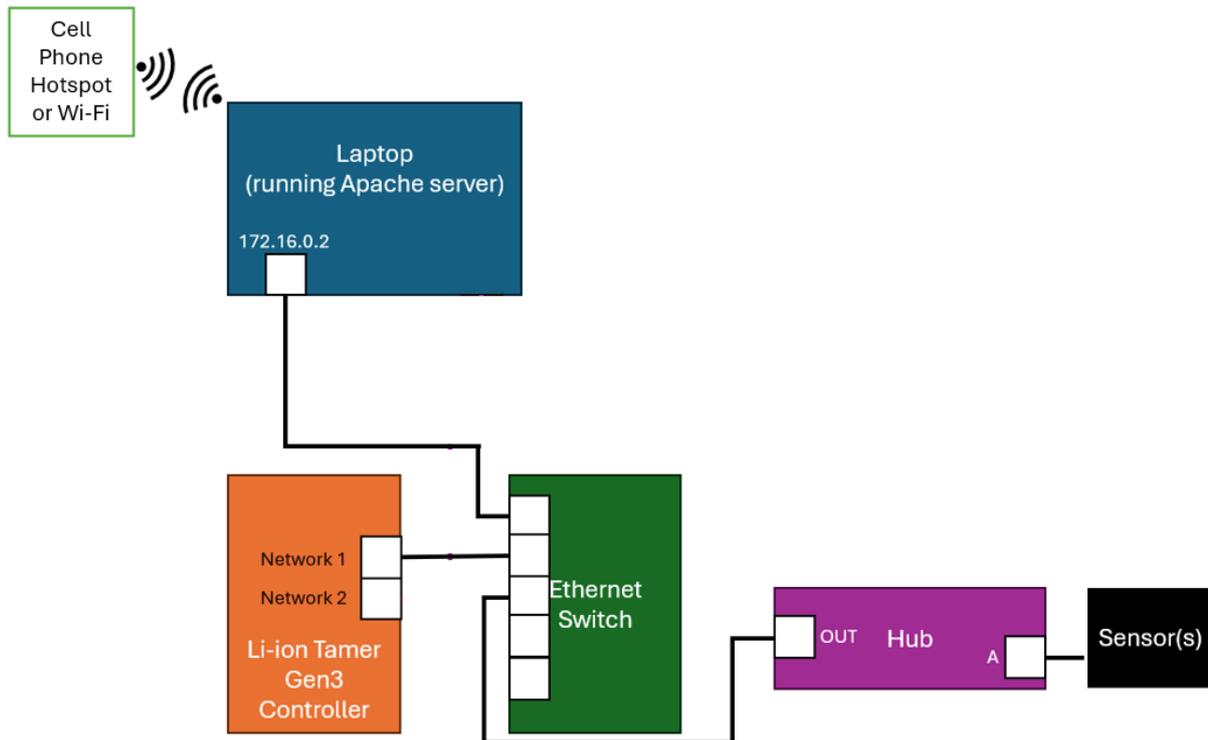
- Laptop with ethernet port or adapter
- WiFi (from local network or cellphone hotspot) or LAN connection
- Li-ion Tamer Gen3 system, setup as typical

Option A (WiFi):

1. Power OFF the hub and sensor chains that require the firmware update. Multiple hub and sensor chains can be updated simultaneously.
2. Set the laptop ethernet port to a static IP address of 172.16.0.2, as shown below.



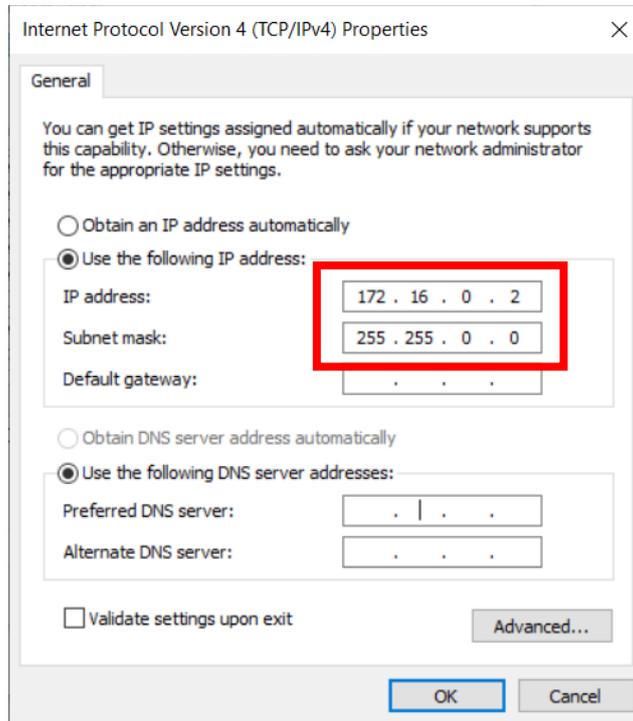
3. Setup the system as shown below.
 - Connect laptop to WiFi from either a local network or cellphone hotspot.
 - Connect the laptop ethernet port (set to a static IP from Step 1) to the ethernet switch that is connected to the Network 1 port of the Li-ion Tamer Controller.
 - Hubs and sensors are powered OFF and connected as typical to the ethernet switch. PoE hubs will be unplugged from the PoE switch so they are powered OFF.



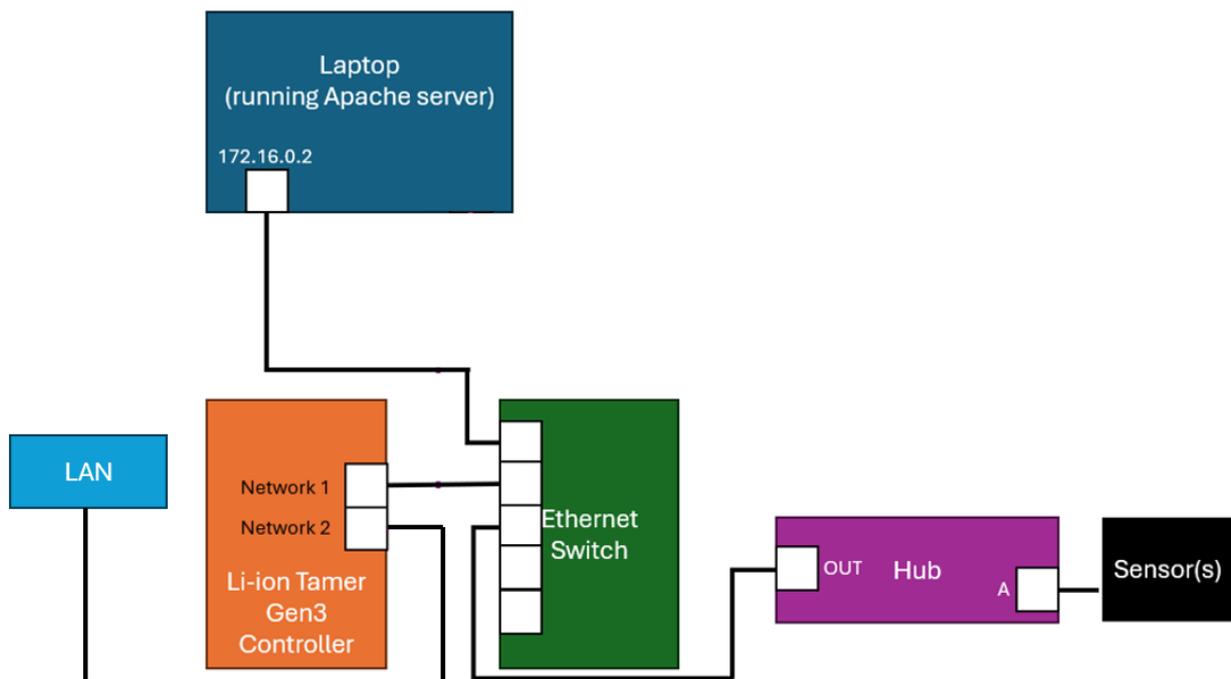
4. Verify that the controller and ethernet switch are powered ON.
5. Load the firmware files and run the Apache server according to Section 3.
6. Power ON all hubs and sensors that require the firmware update. The firmware update process will typically begin in about 1 minute after powering ON.
 - When the process is running, the devices receiving the firmware update will flash white LEDs.
 - Firmware update typically takes 5 minutes. If device LEDs flash white for more than 10 minutes, contact a Li-ion Tamer representative as further troubleshooting may be needed.
 - When sensor firmware update is complete, their LEDs will stop flashing white and will transition to a slow blue flash, followed by the green blip indicating normal operation.
 - When hub firmware update is complete, their LEDs will stop flashing white and will transition to a slow blue flash, followed by fast blue flashing indicating they are connecting to the sensors.
7. Once the sensor LEDs indicate a green blip and the hub LEDs indicate a fast blue flash, power OFF all hubs and sensors that received the firmware update.
8. Stop the Apache server.
9. Power the hubs and sensors ON and confirm that they have received the new firmware version via the controller's software interface dashboard.

Option B (LAN):

1. Power OFF the hub and sensor chains that require the firmware update. Multiple hub and sensor chains can be updated simultaneously.
2. Set the laptop ethernet port to a static IP address of 172.16.0.2, as shown below.



3. Setup the system as shown below.
 - Connect the laptop ethernet port (set to a static IP from Step 1) to the ethernet switch that is connected to the Network 1 port of the Li-ion Tamer Controller.
 - Connect Controller Network 2 port to a LAN.
 - Hubs and sensors are powered OFF and connected as typical to the ethernet switch. PoE hubs will be unplugged from the PoE switch so they are powered OFF.



4. Follow Steps 4 through 9 from Option A to update sensor and hub firmware.

5 Further Support

Contact a Li-ion Tamer representative for further information.