Application Notes

Firmware Upgrade with LDU2

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Document Information

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Contact Us

1.1. Introduction

Lightware Device Updater v2 (LDU2) software is the second generation of the LFP-based (Lightware Firmware Package) firmware upgrade process.

DIFFERENCE: The software can be used for uploading the packages with LFP2 extension only. LDU2 is not suitable for using LFP files, please use the LDU software for that firmware upgrade.

1.2. Preparation

Most Lightware devices can be controlled over more interfaces (e.g. Ethernet, USB, RS-232). But the firmware can be upgraded usually over one dedicated interface, which is the Ethernet in most cases.

If you want to upgrade the firmware of one or more devices you need the following:

- **LFP2 file**,
- **LDU2 software** installed on your PC or Mac.

Both can be downloaded from www.lightware.com.

Optionally, you can download the **release notes** file in HTML format.

1.2.1. About the Firmware Package (LFP2 File)

All the necessary tools and binary files are packed into the LFP2 package file. You need only this file to do the upgrade on your device.

- This allows the use of the same LFP2 package for different devices.
- The package contains all the necessary components, binary, and other files.
- The release notes is included in the LFP2 file which is displayed in the window where you select the firmware package file in LDU2.

1.2.2. LDU2 Installation

ATTENTION! Minimum system requirement: 2 GB RAM.

INFO: The Windows and the Mac application has the same look and functionality.

Download the software from https://www.lightware.com/en/products/Software/lightware-device-updater-2.

Installation in case of Windows OS

Run the installer. If the User Account Control displays a pop-up message click **Yes**.

Installation Modes

Normal install	Snapshot install
Available for Windows and MacOS	Available for Windows
The installer can update only this instance	Cannot be updated
One updateable instance may exist for all users	Many different versions can be installed for all users

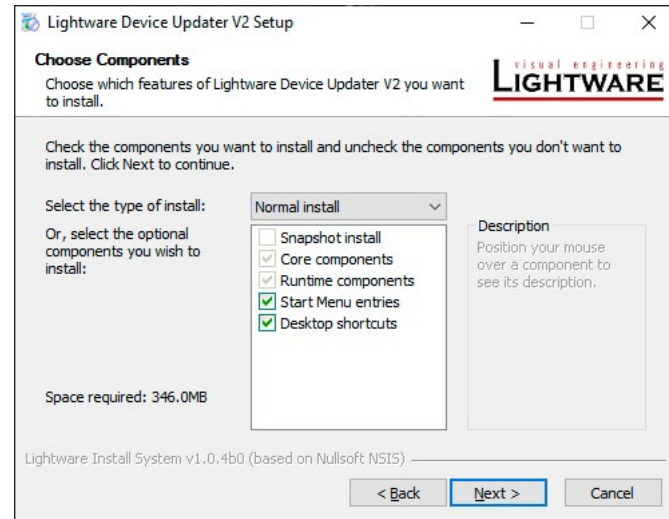**ATTENTION!** Using the default Normal install is highly recommended.
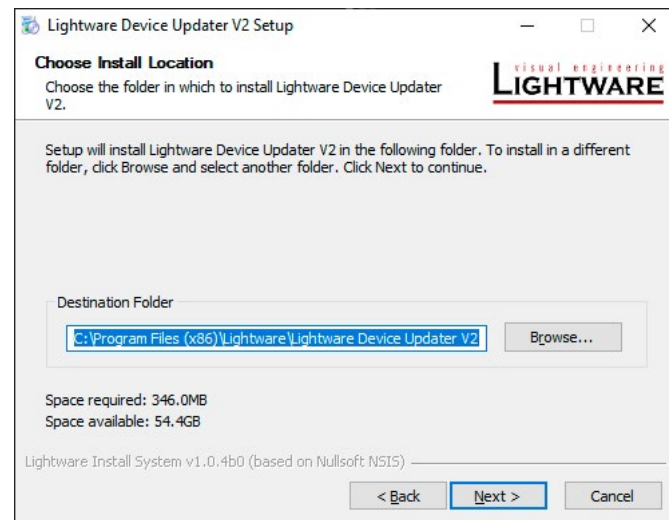
Running the Installer

INFO: If you have a previously installed version you will be prompted to remove the old version before installing the new one.

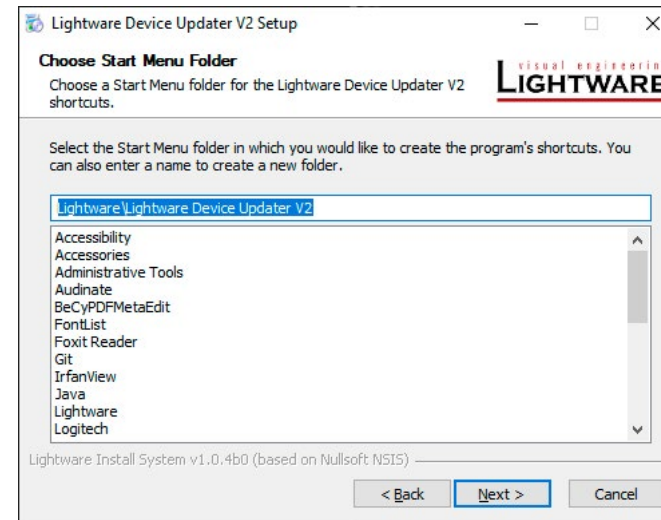### Selecting the Type of the Installation

Using the **Normal install** (default setting) is highly recommended.
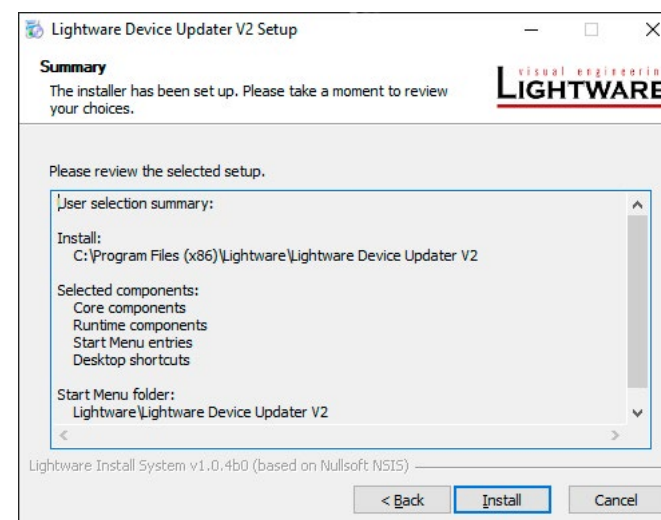

Setting the Install Location
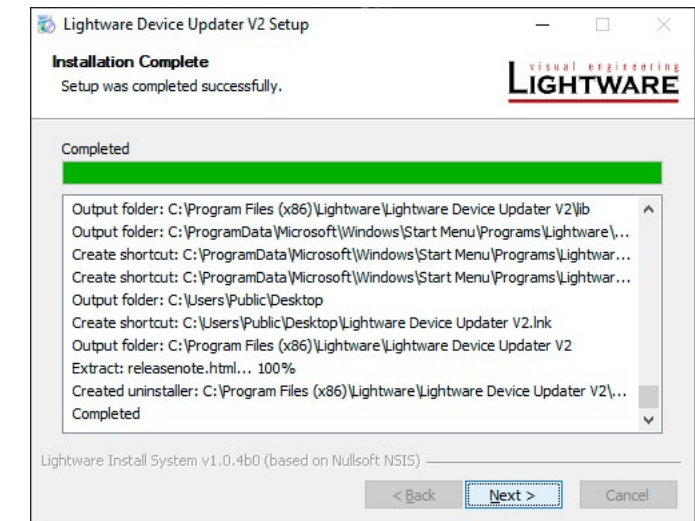

Setting the Start Menu Folder

Summary

Click **Install** to continue.
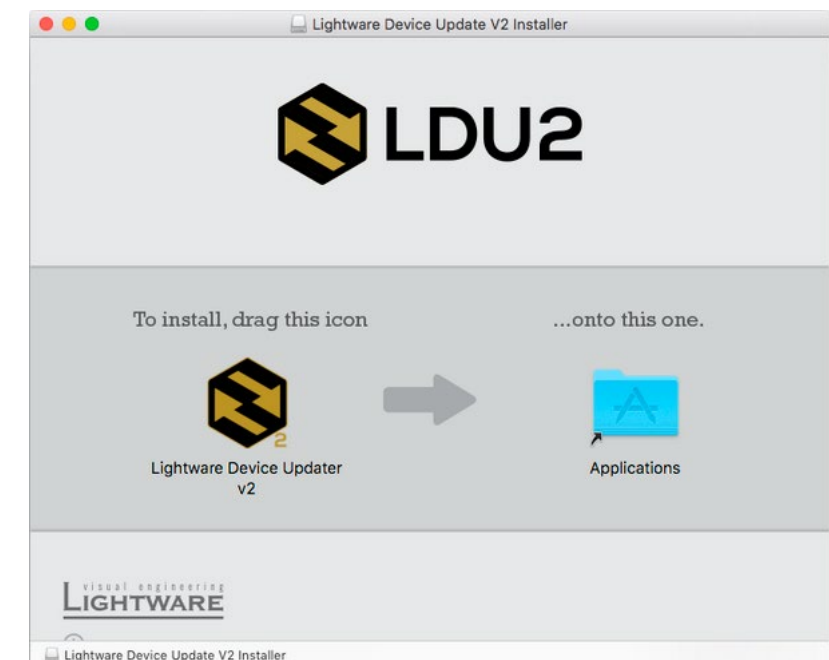

Completing the Installation

Click **Next** to jump to the following screen where you can set to start the software and/or view the release notes HTML file.

Installation in case of macOS X

Mount the DMG file with double clicking on it and drag the LDU2 icon over the Applications icon to copy the program into the Applications folder. If you want to copy LDU2 into another location just drag the icon over the desired folder.

INFO: This type of installer is equal with the **Normal install** of Windows.
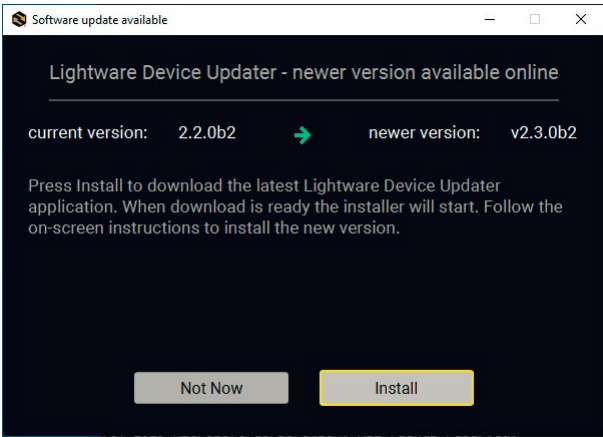
1.3. Running the Software

You have two options:

- **Starting the LDU2** by double-clicking on the shortcut/program file, or
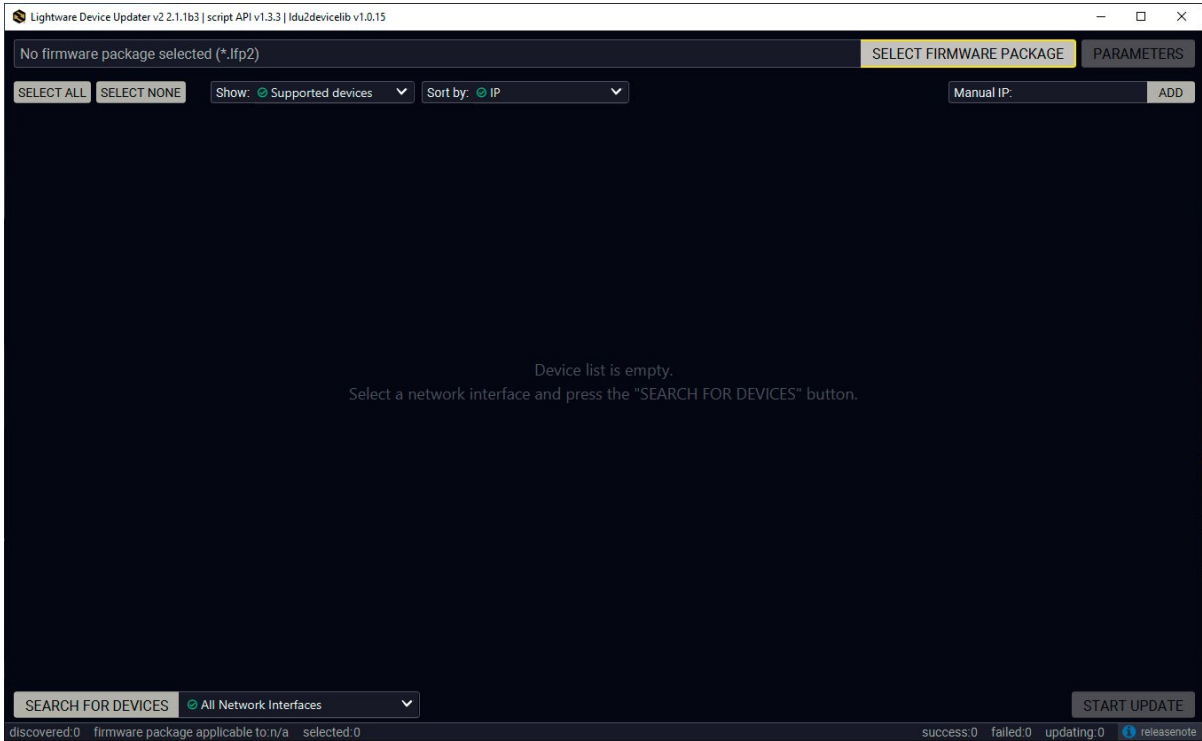
- Double-clicking on an **LFP2 file**.

LDU2 Auto-Update

At startup, the software checks if a newer version is available on the web.

Main Screen

When the software is started by the shortcut, the device discovery screen appears. Press the **Search for devices** button to start finding the Lightware devices:

If you start the software by double-clicking on the LFP2 file, the firmware will be loaded. Press the **Search for devices** button; all the devices will be listed which are compatible with the selected firmware pack.

> INFO: If you press the **Select firmware package** button, the release notes of the LFP2 file will be displayed in the right panel; see the Step 1. Select the Firmware Package. section.

Device List

When the discovery has completed, the devices available on the network are listed in the application.

Legend of the Icons

	IP address editor	The IP address of the device can be changed in the pop-up window.
	Identify me	Clicking on the icon results the front panel LEDs blink for 10 seconds which helps to identify the device phisically.
	Favorite device	The device has been marked, thus the IP address is stored. When a device is connected with that IP address, the star will highlighted in that line.
	Further information available	Device is unreachable. Change the IP address using the front panel LCD menu or the IP address editor of the LDU2.

1.4. The Upgrading Steps

> **ATTENTION!** While the firmware is being upgraded, the normal operation mode is suspended as the device is switched to bootload mode. Signal processing is not performed. Do not interrupt the firmware upgrade. If any problem occurs, reboot the unit and restart the process.

Keeping the Configuration Settings

By default, device configuration settings are restored when firmware upgrade is finished. If factory reset has been chosen in the parameters window, all device settings will be erased. In the case of factory reset, you can save the settings of the device in the Lightware Device Controller software and restore it later.

The following flow chart demonstrates how this function works in the background.

1. **Create a backup**

   The current configuration of the device is being saved into a configuration backup file on your computer.

2. **Start the Upgrade**

   The device reboots and starts in bootload mode (firmware upgrade mode).

3. **Upgrade**

   The CPU firmware is changed to the new one.

4. **Factory reset**

   All configuration settings are restored to the factory default values.

5. **Conversion / Restore**

   The firmware package checks the backup data before the restore procedure, and if it is necessary, a conversion is applied to avoid incompatibility problems between the firmware versions. All configuration settings are restored to the device after the conversion.
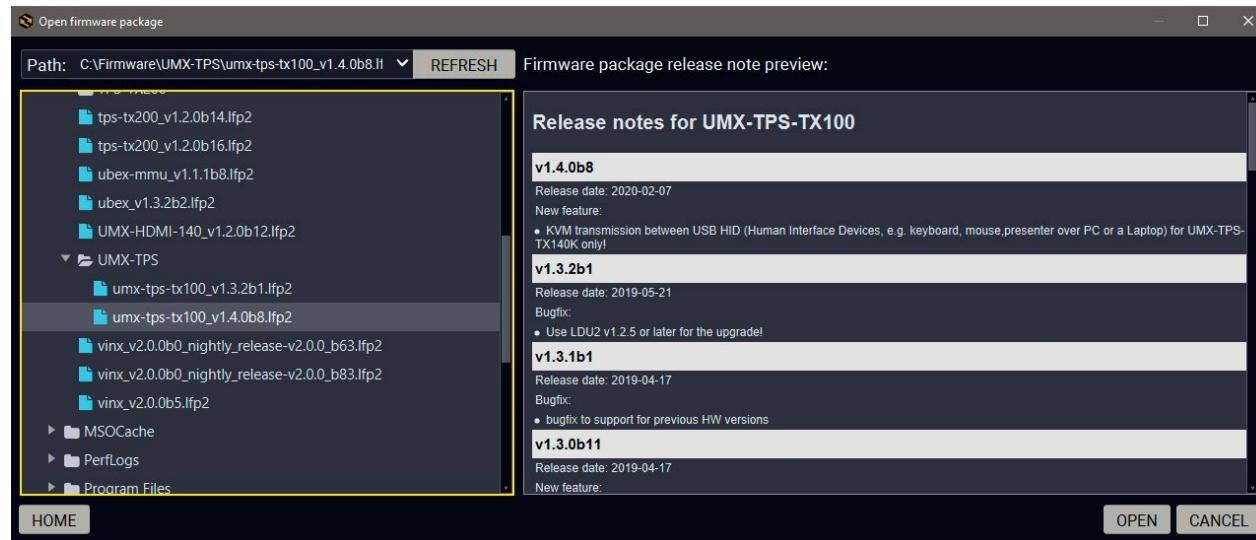
   If the factory default option is selected in the Parameters window, the conversion / restore procedure will not be performed!

6. **Finish**

   Once the firmware upgrade procedure is finished, the device reboots and is ready to use.
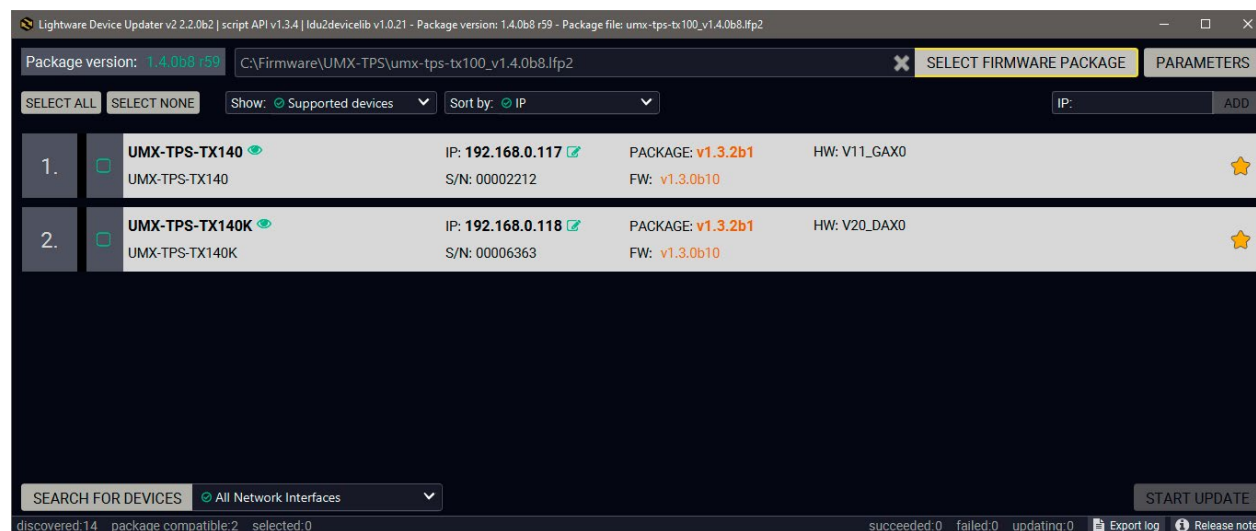
Step 1. Select the Firmware Package.

Click on the **Select Firmware Package** button and navigate to the location where the LFP2 file was saved. When you click on the name of package, the preview of the release notes are displayed in the right panel.

SELECT FIRMWARE PACKAGE

After the package file is loaded, the list is filtered to show the compatible devices only. The current firmware version of the device is highlighted in orange if it is different from the version of the package loaded.

INFO: If you start the upgrade by double-clicking on the LFP file, above screen will be loaded right away.

The Meaning of the Symbols

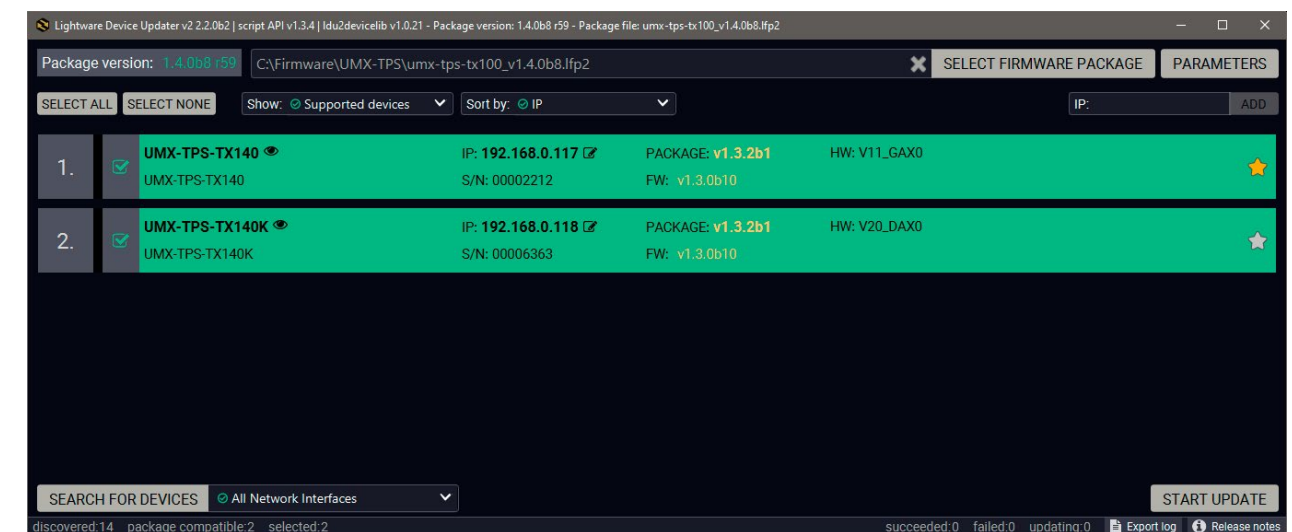|		
📄	Show details	The log about the upgrading process of the device can be displayed in a new window.
🛠	Service mode	The device is in bootload mode. Backup and restore cannot be performed in this case.

Step 2. Select the desired devices for upgrading.

Select the devices for upgrading; the selected line will be highlighted in green.

If you are not sure which device to select, press the **Identify me** 👁 button. It makes the front panel LEDs blink for 10 seconds. The feature helps to find the device physically.

Step 3. Check the upgrade parameters.

DIFFERENCE: The appearing settings are device-dependent and can be different device by device.

Clicking on the **Parameters** button, special settings will be available like:

PARAMETERS

- Creating a backup about the configuration,
- Restore the configuration or reloading the factory default settings after the firmware upgrade,
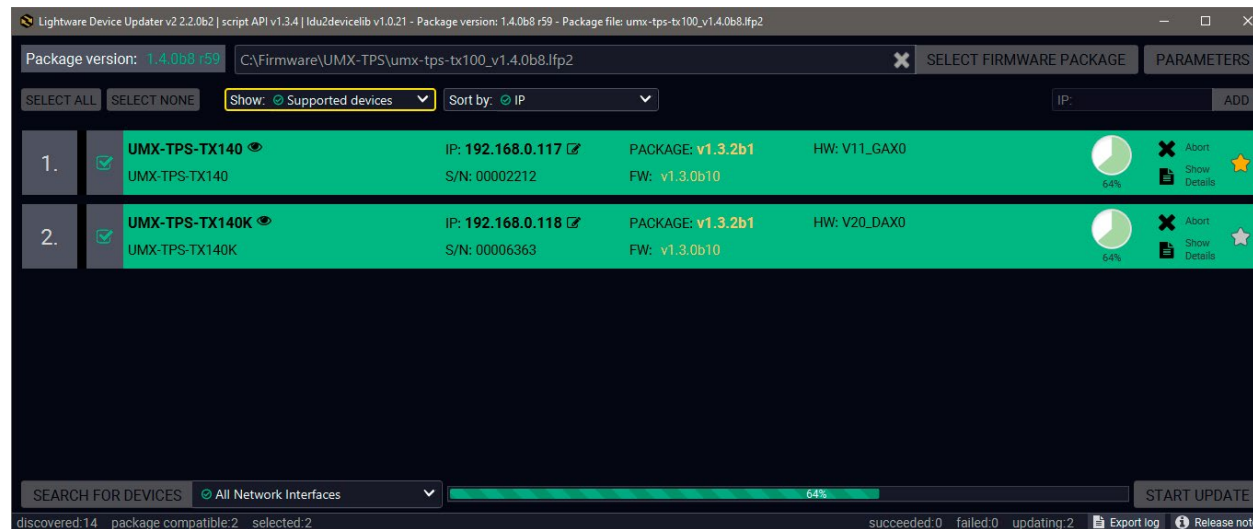- Uploading the default Miniweb (if available).

Please arrange the settings carefully.

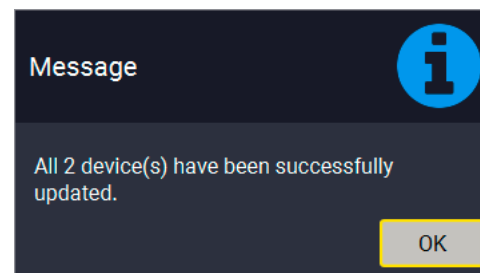**Step 4. Start the update and wait until it is finished.**

Click on the **Start Update** button to start the procedure. The status is shown in percent in the right side of the device line and the overall process in the bottom progress bar.

<div style="float:right">

START UPDATE

</div>

INFO: The device might reboot during the firmware upgrade procedure.

When the progress bar reaches 100% (**Done** is displayed at all devices), the upgrade of all devices are finished successfully and a message appears; you can close the software.

Step 5. Wait until the unit reboots with the new firmware.

Once the firmware upgrade procedure is completed, the device is rebooted with the new firmware. Shutting down and restarting the device is recommended.

1.5. If the Upgrade is not succesful

- Restart the process and try the upgrade again.
- If the device cannot be switched to bootload (firmware upgrade) mode, you can do that manually as written in the User's manual of the device. Please note that backup and restore cannot be performed in this case.
- If the backup cannot be created for some reason, you will get a message to continue the process without backup or stop the upgrade. A root cause can be that the desired device is already in bootload (firmware upgrade) mode, thus, the normal operation mode is suspended and backup cannot be made.
- If an upgrade is not succesful, the **Export log** button becomes red. If you press the button, you can download the log file as a ZIP package which can be sent to Lightware Support if needed. The log files contain useful information about the circumstances to find the root cause.