PTZOptics Firmware Upgrade Instructions

Please read through the entire procedure. If you are uncertain of any of these steps, contact PTZOptics prior to beginning the update process.

- support@ptzoptics.com
- https://help.ptzoptics.com/

Double check you have the correct firmware for the camera you are currently working on. You can download the latest firmware files from ptzoptics.com/latest-firmware-files/.

These instructions go over the Firmware Upgrading process for the network and USB firmware updates.

Important - Information before getting started

- Upgrade Tools
  - There are multiple versions of the Upgrade Tool available. Whenever possible, you should use the Windows v2.8C Upgrade Tool.
  - The Mac v2.7C Upgrade Tool is unable to Backup / Restore the camera. It's also unable to perform the Search function in Mac OS Big Sur.
  - The computer running the Upgrade Tool needs to be on the same Local Area Network that the cameras are on.
- MAC Address
  - Before starting the firmware upgrade process, you should confirm each camera's MAC address to determine which Upgrade Tool to use. The Windows v2.8C Upgrade Tool comes in "**D4**" and "**DC**" variations.
  - The Mac v2.7C Upgrade Tool is only available in "**D4**".
- Firmware Files
  - Be wary when downloading the same firmware file multiple times. If a file has " (1)" on the end of the file name, you will need to delete the " (1)" in order to update the camera.
- Backup Files
  - The Windows v2.8C Upgrade Tool allows you to name the Backup file each camera produces. For best results, give each camera's Backup file a unique name to make it clear which camera it pertains to.

Using the incorrect Upgrade Tool will result in your camera's MAC Address changing.

Applying a Backup file to the wrong camera will result in two cameras having the same MAC Address.

You should take note of each camera's Serial Number, MAC Address, & IP Address before starting the firmware update process.

Determining the Correct Windows Upgrade Tool

1. Confirm the MAC Address of the camera you intend to firmware upgrade.

You can confirm the camera's MAC Address by looking underneath the camera, or by doing a search in the Upgrade Tool.
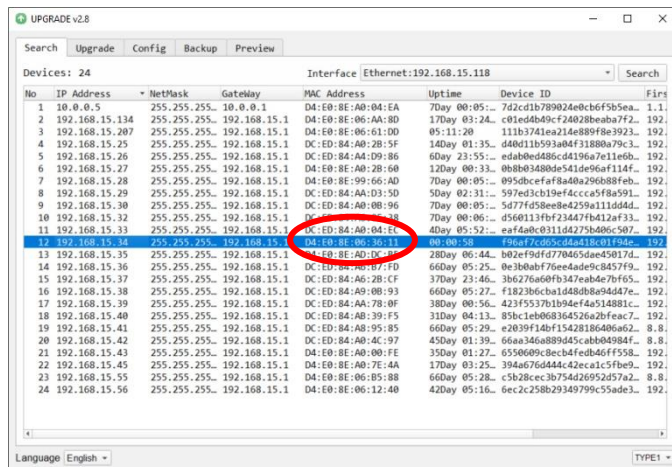See Fig. 1 and Fig. 2 below.

Fig. 1

Fig. 2

2. Once confirmed, use the corresponding Upgrade Tool for the camera.

You may find that you have a combination of **D4** & **DC** cameras in your setup. If this is the case, you should take note of which Upgrade Tools to use with each camera.

3. Use Fig. 3 below to determine which upgrade instructions to follow for your camera.

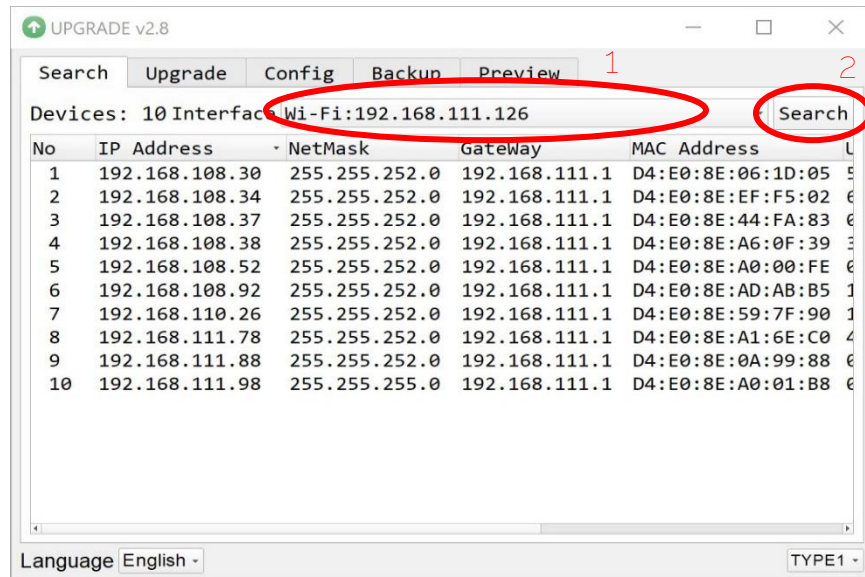| Network only		USB only	Both
PT12X-NDI-xx	PT12X-SDI-xx-G2	PT-WEBCAM-80	PT12X-USB-xx-G2
PT12X-NDI-ZCAM	PT12X-ZCAM	PT-WEBCAM-80-v2	PT20X-USB-xx-G2
PT20X-NDI-xx	PT20X-SDI-xx-G2		
PT20X-NDI-ZCAM	PT20X-ZCAM		
PT30X-NDI-xx	PT30X-SDI-xx-G2		
PTVL-NDI-ZCAM	PTVL-ZCAM		
PTEPTZ-NDI-ZCAM-G2	PTEPTZ-ZCAM-G2		

Fig. 3
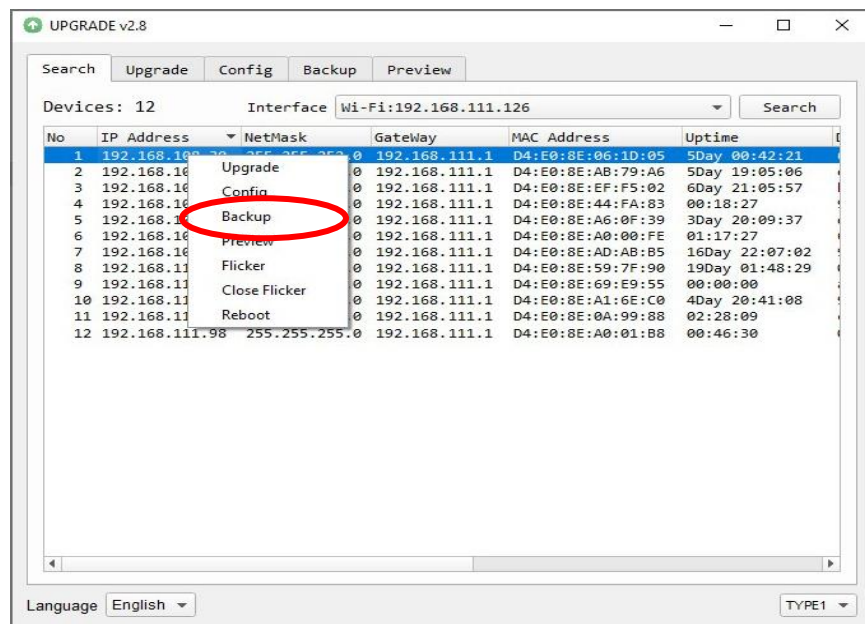
Network Firmware Update

Windows

To perform a network firmware update, you will need an active network connection from the computer to the camera. From there, open the Upgrade Tool to begin the Network Update process.
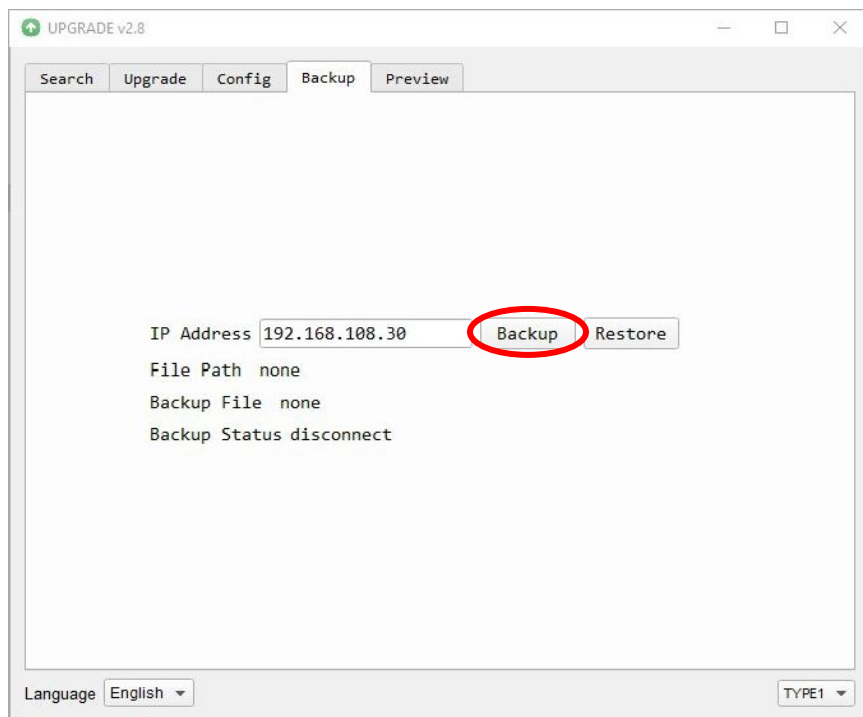
1. From the Search Tab, click the Interface dropdown and select your network connection type. From there, click the Search button to find the network cameras.

2. Locate the camera you wish to firmware update from the newly found list. Right-Click that camera and select "Backup".

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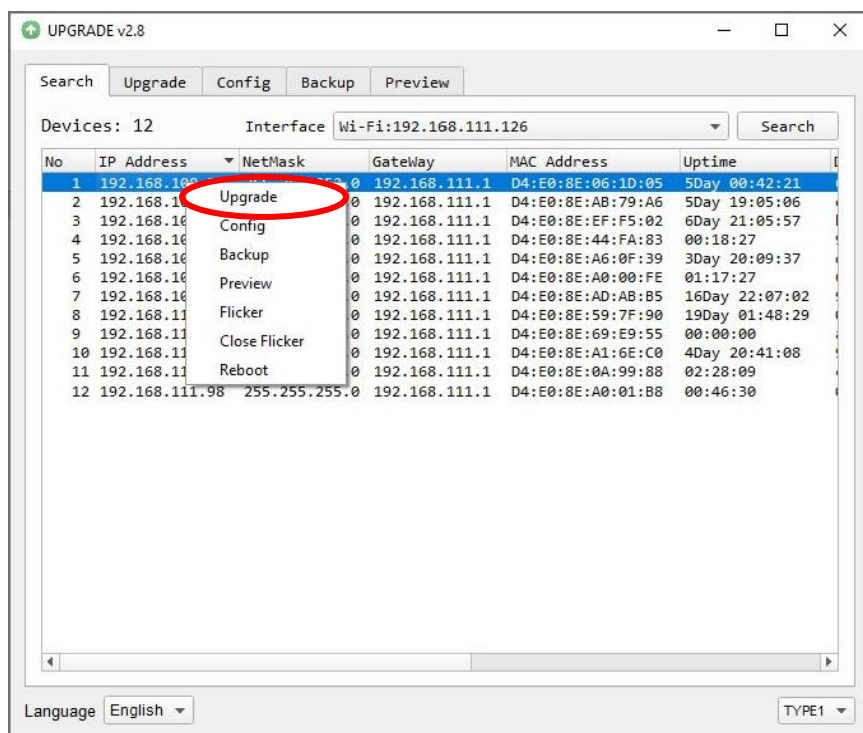3. From the Backup Tab, click the "Backup" button to begin the Backup process.

a. Occasionally, the Backup process will fail. When this happens, simply click "Backup" again to begin the process.
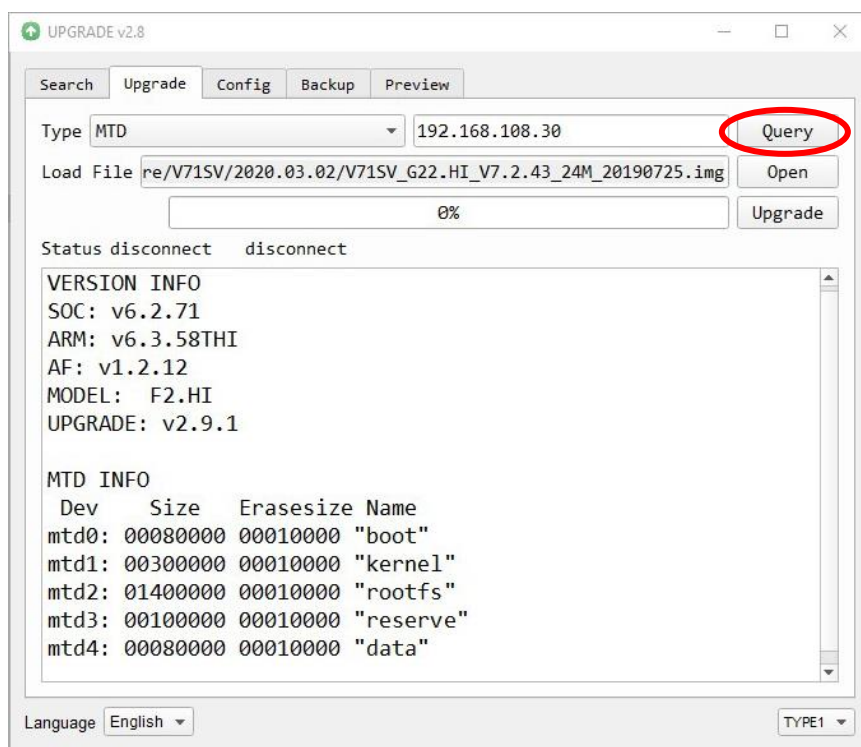
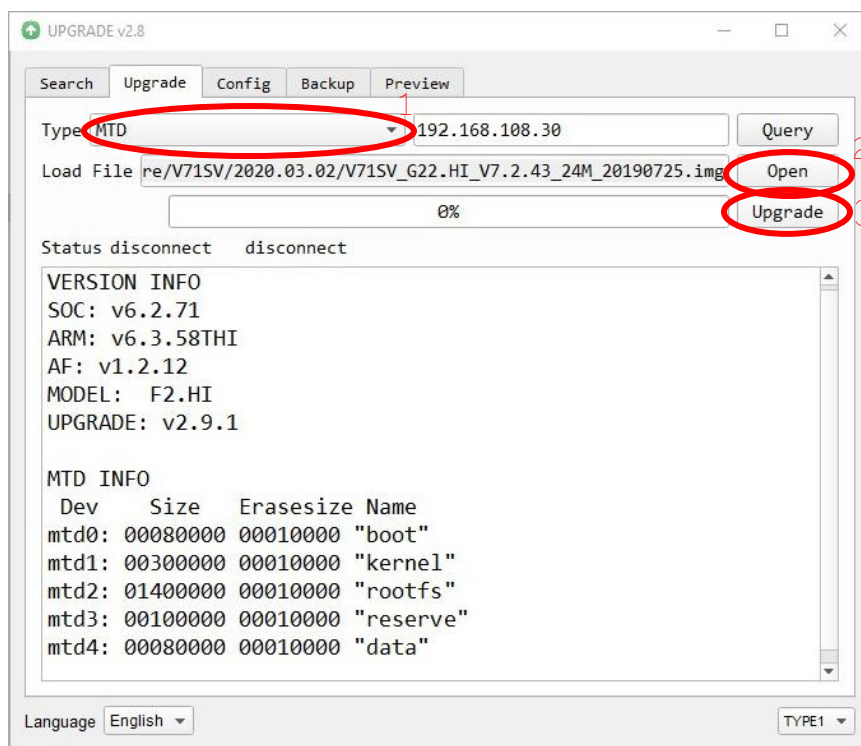💡 The Upgrade Tool v2.7 for Windows can not name backup files.

4. Once the Backup process is finished, head back to the Search Tab and locate that same camera. Right-Click the camera and select "Upgrade".

5. From the Upgrade Tab, click the "Query" button to ensure the camera is properly connected to the Upgrade Tool. The information section will be filled with the camera's information upon success.

6. Click the "Type" dropdown and select "MTD". Next, click the "Open" button to begin searching your computer for the upgrade file. Once located, click the "Upgrade" button to apply the firmware.
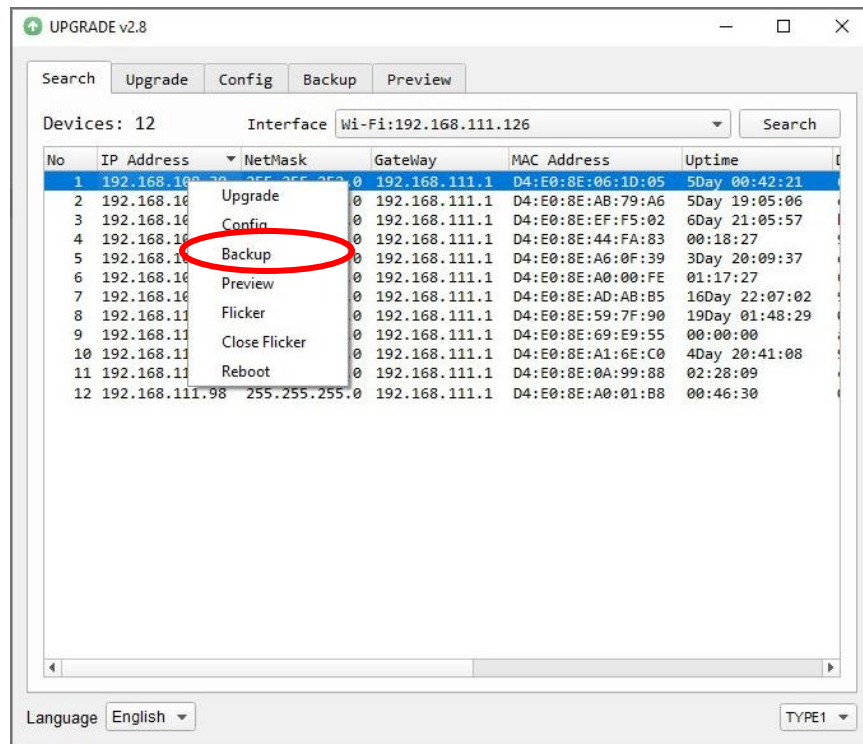

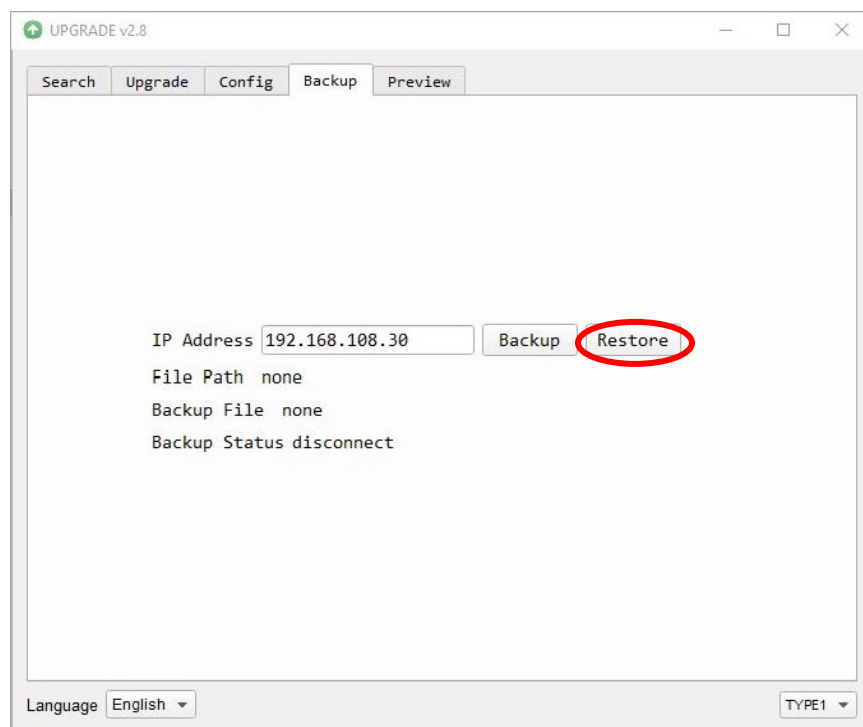7. Do not power off the camera while it is firmware updating.

8. Once the firmware update process is complete, head back to the Search tab and locate that same camera. Right-Click the camera and select "Backup".

9. From the Backup Tab, click the "Restore" button to begin searching your computer for the Backup file you made in step 3.

10. Occasionally, the Restore process will fail. When this happens, simply click "Restore" again to begin the process.
11. Congratulations! You have successfully network firmware upgraded your PTZOptics camera! If you are firmware updating a USB camera, please continue through these instructions to the USB Firmware Update section.

Mac

To perform a network firmware update, the first thing you will need to do is open the Upgrade tool. Because the tool is unverified within the Apple store, it requires a few extra steps to fully open for the first time.

The first time you try to open the tool, you will likely be greeted with Fig. 1 below. To bypass this message, open a new Finder window and locate the Upgrade tool. Right-click or CTRL + click the icon and select "Open", at which point you will see Fig. 2 below.
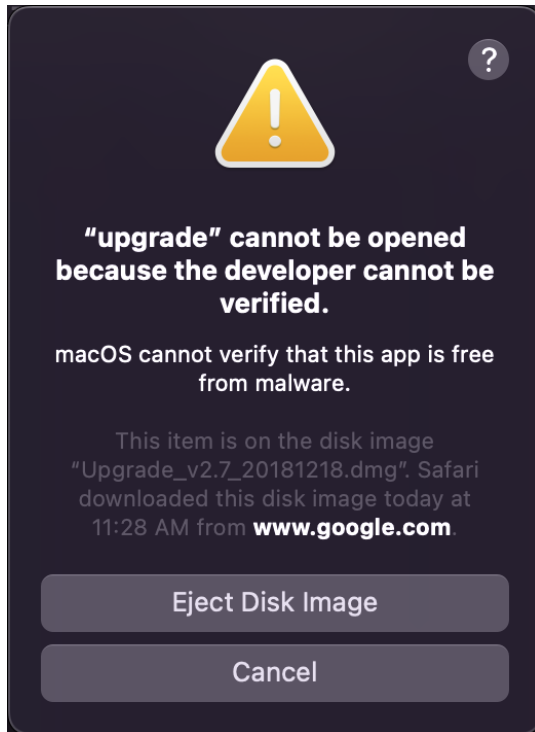

⚠️

"upgrade" cannot be opened because the developer cannot be verified.

macOS cannot verify that this app is free from malware.

This item is on the disk image "Upgrade_v2.7_20181218.dmg". Safari downloaded this disk image today at 11:28 AM from **www.google.com**.

Eject Disk Image

Cancel

Fig. 1

⚠️

macOS cannot verify the developer of "upgrade". Are you sure you want to open it?

By opening this app, you will be overriding system security which can expose your computer and personal information to malware that may harm your Mac or compromise your privacy.

This item is on the disk image "Upgrade_v2.7_20181218.dmg". Safari downloaded this disk image
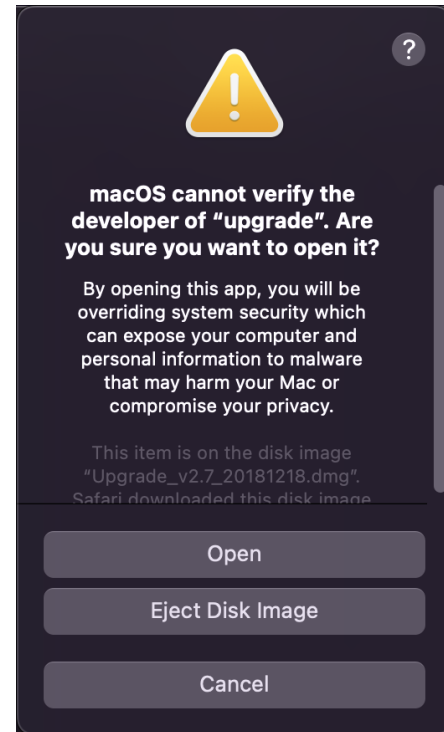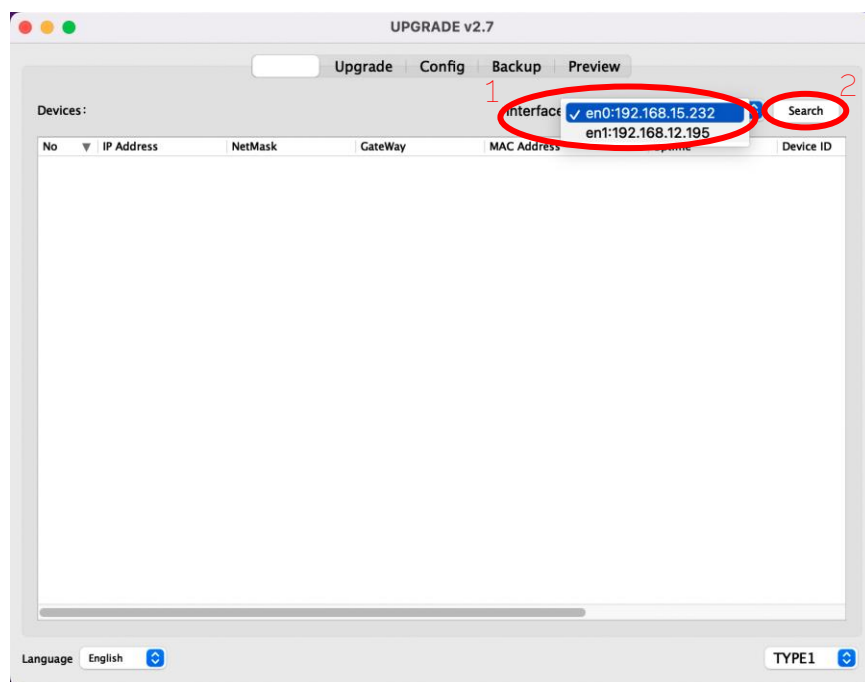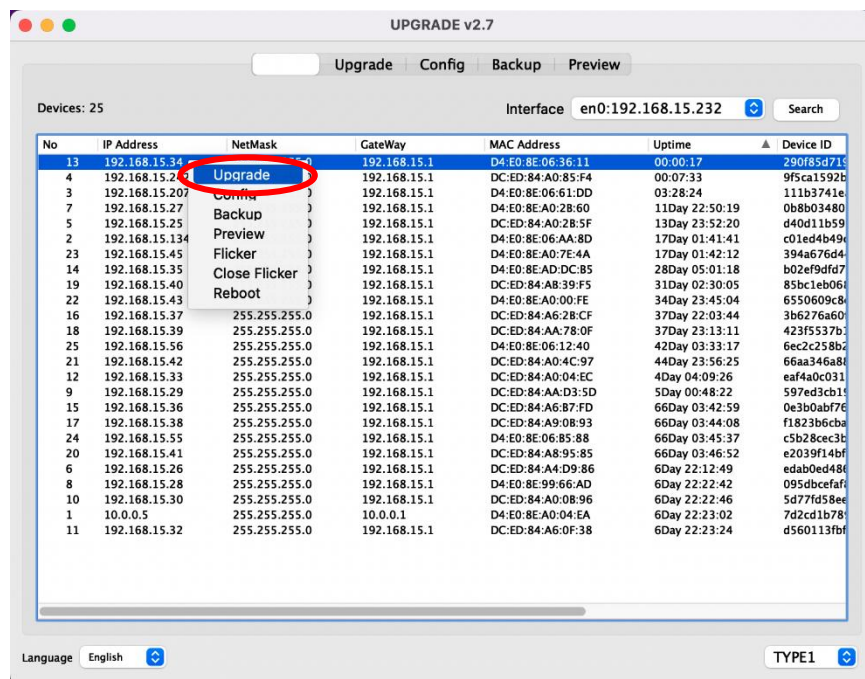
Open

Eject Disk Image

Cancel

Fig. 2

Now that the tool can be opened, you will need an active network connection from the computer to the camera to start the update process.

1. From the Search Tab, click the Interface dropdown and select your network's IP scheme. Then click the Search button to find the network cameras.
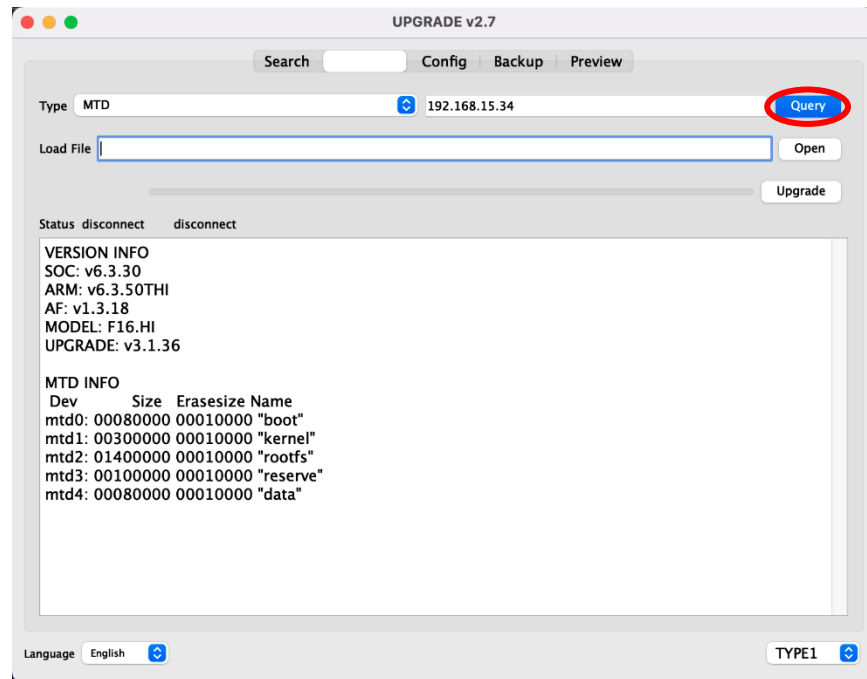

2. Locate the camera you wish to firmware update from the newly found list. Right-Click that camera and select "Upgrade".
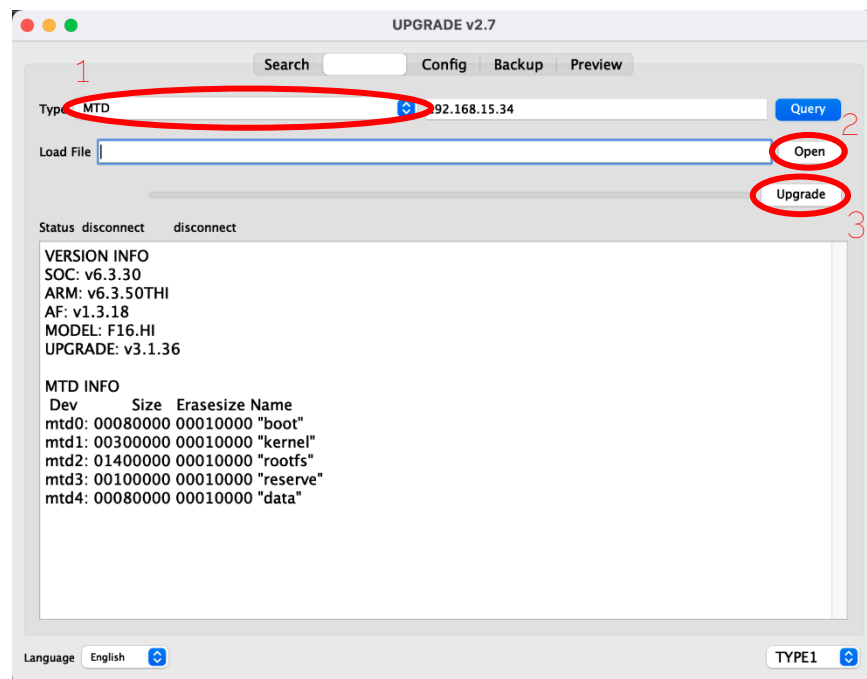
3. From the Upgrade Tab, click the "Query" button to ensure the camera is properly connected to the Upgrade Tool. The information section will be filled with the camera's information upon success.

4. Click the "Type" dropdown and select "MTD". Next, click the "Open" button to begin searching your computer for the upgrade file. Once located, click the "Upgrade" button to apply the firmware.
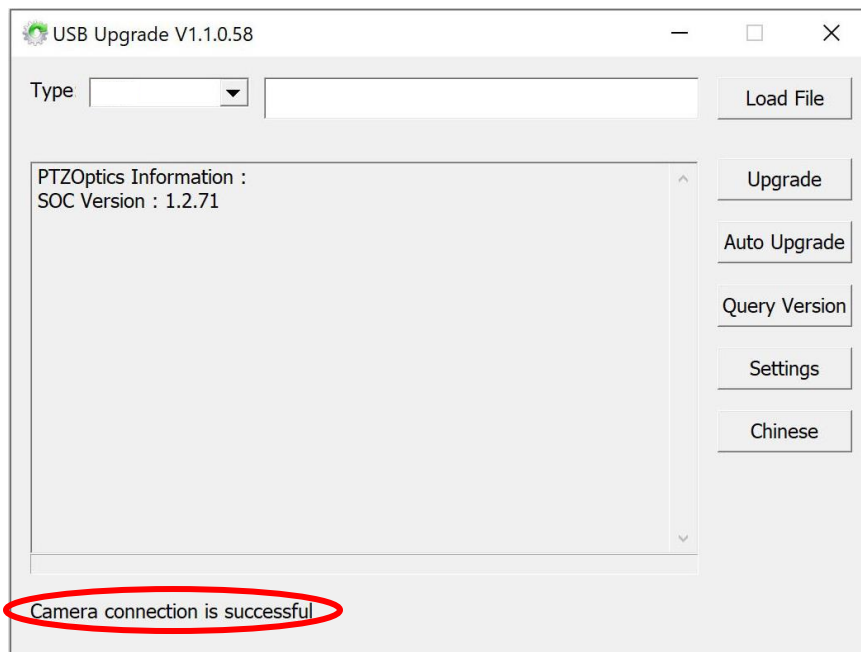

5. Do not power off the camera while it is firmware updating.
6. Congratulations! You have successfully network firmware upgraded your PTZOptics camera! If you are firmware updating a USB camera, please continue through these instructions to the USB Firmware Update section.
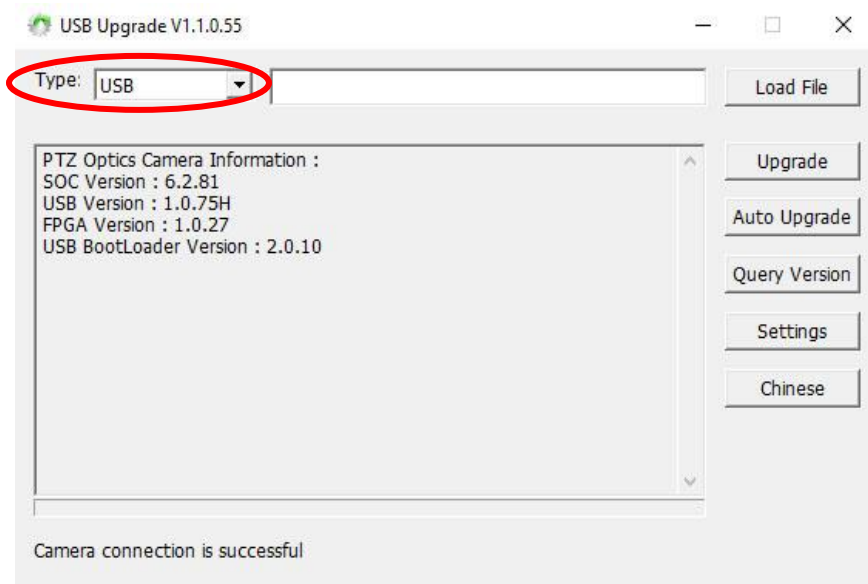
USB Firmware Update

To perform a USB firmware update, you will need to connect the camera to the PC using a USB cable. The USB firmware upgrade process for the PTZ cameras is identical to the webcam firmware upgrade process.
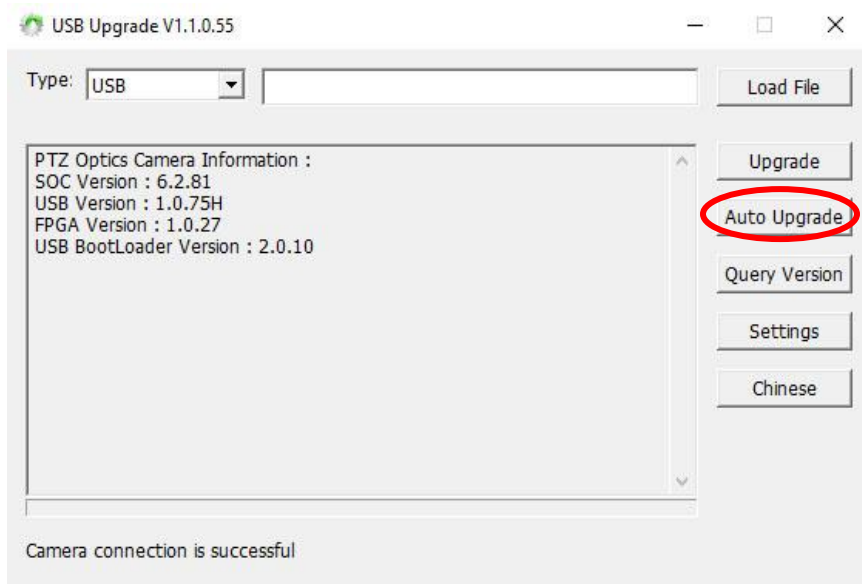
1. From the main interface, ensure the camera is properly connected by verifying the connection status in the bottom left.
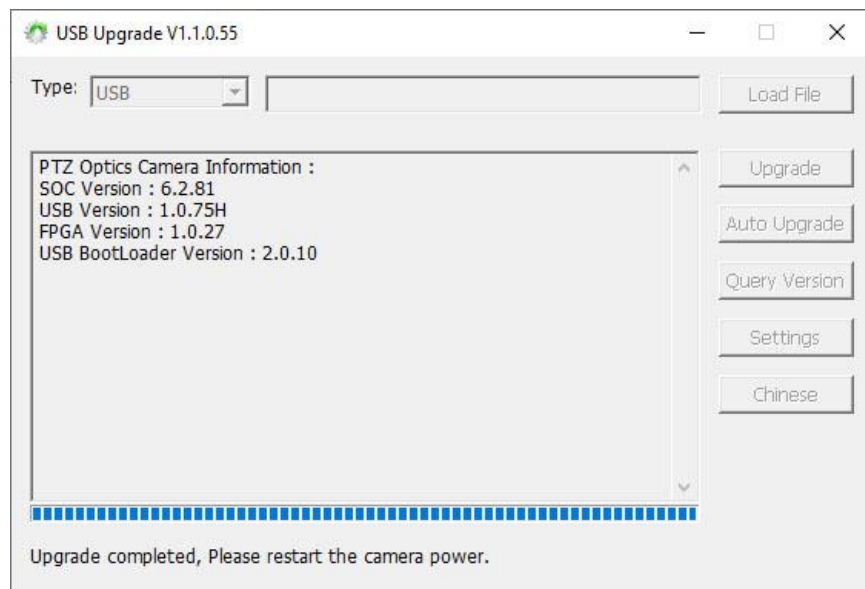

2. Click the "Type" dropdown and select "USB".

3. Click the "Auto Upgrade" button.
   a. If the "Auto Upgrade" button does not automatically locate the firmware files, move the firmware files to the same folder as the USB Upgrade V1.1.0.55 tool.

   b. A pop-up warning will display warning you not to power off or disconnect the camera while it's firmware updating. This window occasionally opens behind the USB Upgrade tool. Simply move the USB Upgrade tool to reveal this window to continue.

4. The camera will first update the USB version, then the FPGA, and lastly the USB BootLoader version. The process will take about 5 minutes.

5. Once all three firmware files have been applied to the camera, restart the camera for all the changes to take effect.
6. Congratulations! You have successfully USB firmware upgraded your PTZOptics camera!