

PTZ Optics Firmware Upgrade Instructions

Please read through the entire procedure. If you are uncertain of any of these steps, contact PTZ Optics 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/firmware-finder/.

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

Important - Information before getting started

- The Upgrade Tool is available for Windows and Mac OS. Whenever possible, use the latest Upgrade Tool v2.8 available for Windows OS.
 - The Mac Upgrade Tool v2.7 is incapable of the Backup or Restore feature.
 - The Mac Upgrade Tool v2.7 (running Mac OS Big Sur) is incapable of searching for cameras. You will need to manually type in the IP address to the applicable fields.
- Ensure your PC is on the same Local Area Network (LAN) as the camera(s) you are firmware updating.
- After a firmware update your camera may not focus properly and will require a Focus Calibration. For information on how to perform the Focus Calibration, follow this [Knowledge Base article](#).
- 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.
- There are two (2) Upgrade Tool v2.8 tools ("Old MAC (D4)" & "New MAC (DC)"). Before firmware upgrading your camera, you will need to confirm which Upgrade Tool is applicable to that camera.
 - Upgrade Tool v2.8C Old MAC Address – **D4 : E0 : 8E : xx : xx : xx**
 - Upgrade Tool v2.8C New MAC Address – **DC : ED : 84 : xx : xx : xx**



Using the incorrect Upgrade Tool **will result** in your camera's MAC Address being changed!

- Backup files **can not** be shared amongst multiple cameras. These files contain specific information to the camera you "Backed Up" and could damage a camera if "Restored" to the wrong camera.
 - The Windows Upgrade Tool v2.8 allows you to name your camera's Backup files. For best results, name each file something specific to that camera (such as the serial number) and store them in the Camera Backups folder.
- The "Backup" procedure contains files pertaining to focus, camera presets, MAC address, serial number, IP address, and more. If a file isn't "Restored" properly, "Restore" the Backup file again to re-initialize the connection.



It is useful to know your camera's information. Before starting the firmware update process, you may wish to write down each camera's Serial Number, MAC Address, IP Address, and video settings.

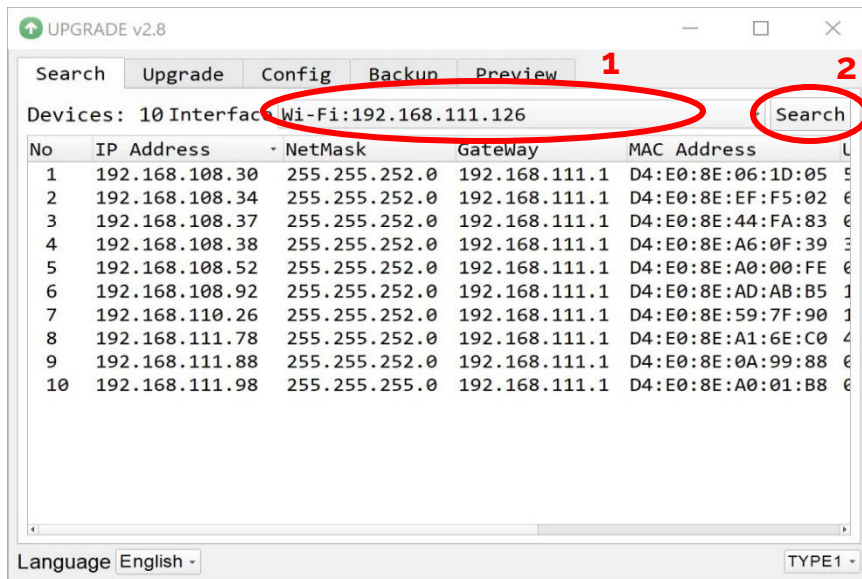
Network only		USB only	Both
PT12X-NDI-xx	PT12X-SDI-xx-G2	PT-WEBCAM-80	PT12X-USB-xx-G2
PT12X-NDI-ZCAM	PT12X-ZCAM	PT-WEBCAM-80-v2	PT20X-USB-xx-G2
PT20X-NDI-xx	PT20X-SDI-xx-G2		
PT20X-NDI-ZCAM	PT20X-ZCAM		
PT30X-NDI-xx /	PT30X-SDI-xx-G2		
PTVL-NDI-ZCAM	PTVL-ZCAM		
PTEPTZ-NDI-ZCAM-G2	PTEPTZ-ZCAM-G2		

Network Firmware Update

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.

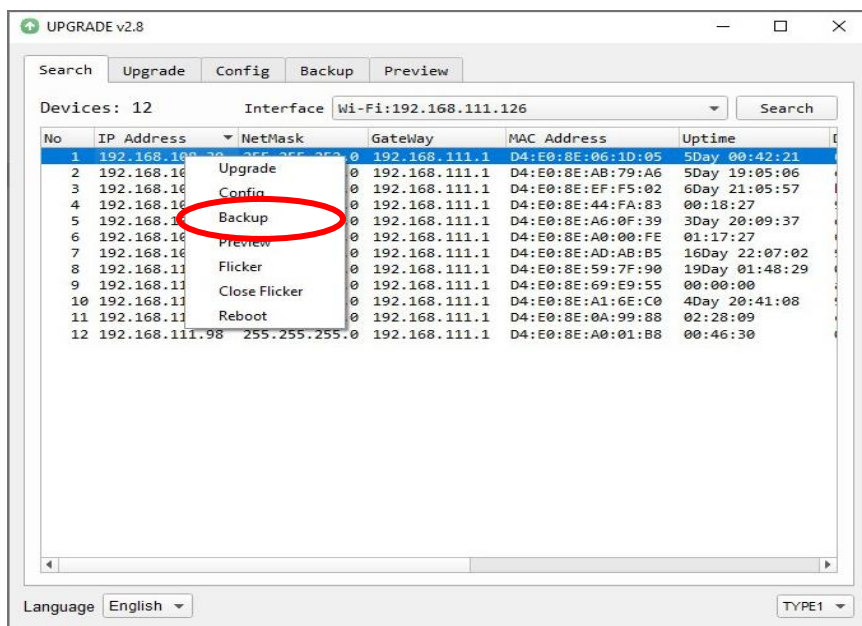
These instructions walk you through the network firmware update process using the Upgrade v2.8C tool. If you are using the Upgrade Tool v2.7 for Windows or Mac, the process will be identical other than the Backup & Restore step.

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.

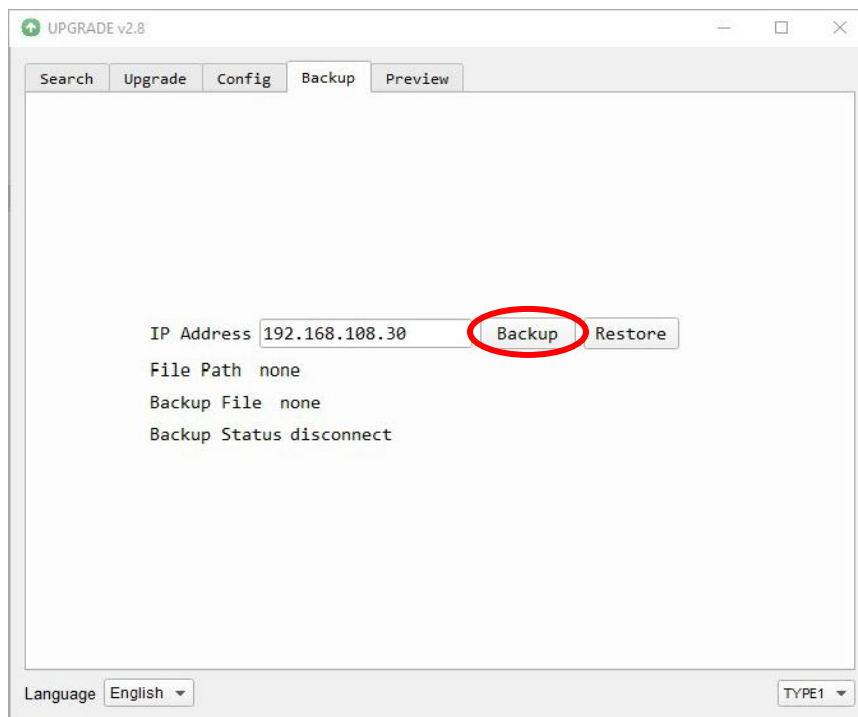


Mac Big Sur OS users can not perform the Search function. Each step will require you to manually type in the camera's IP address

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



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

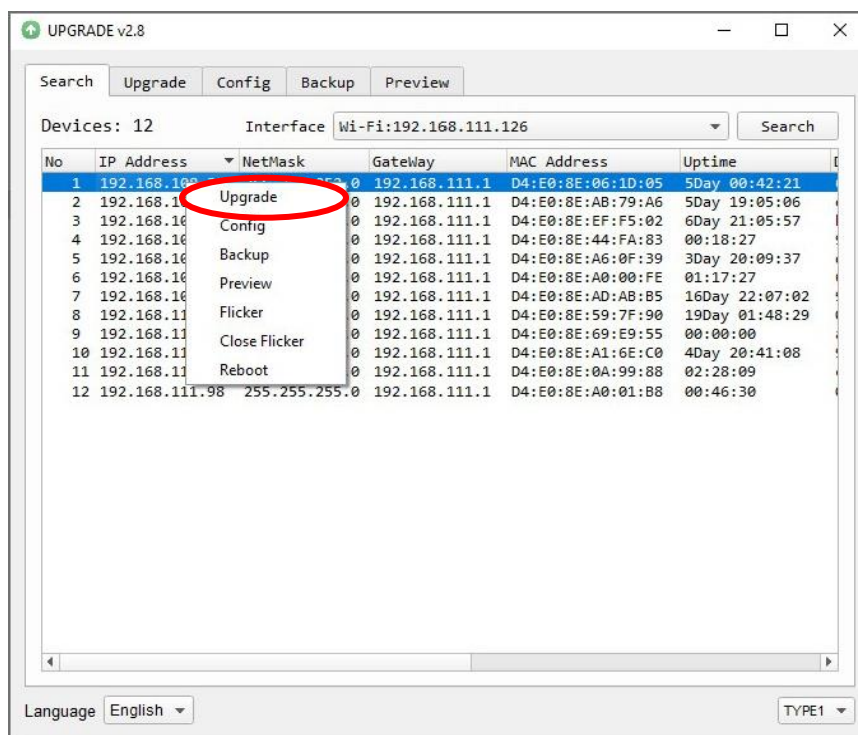


a. Occasionally, the Backup process will fail. When this happens, simply click "Backup" again to begin the process.

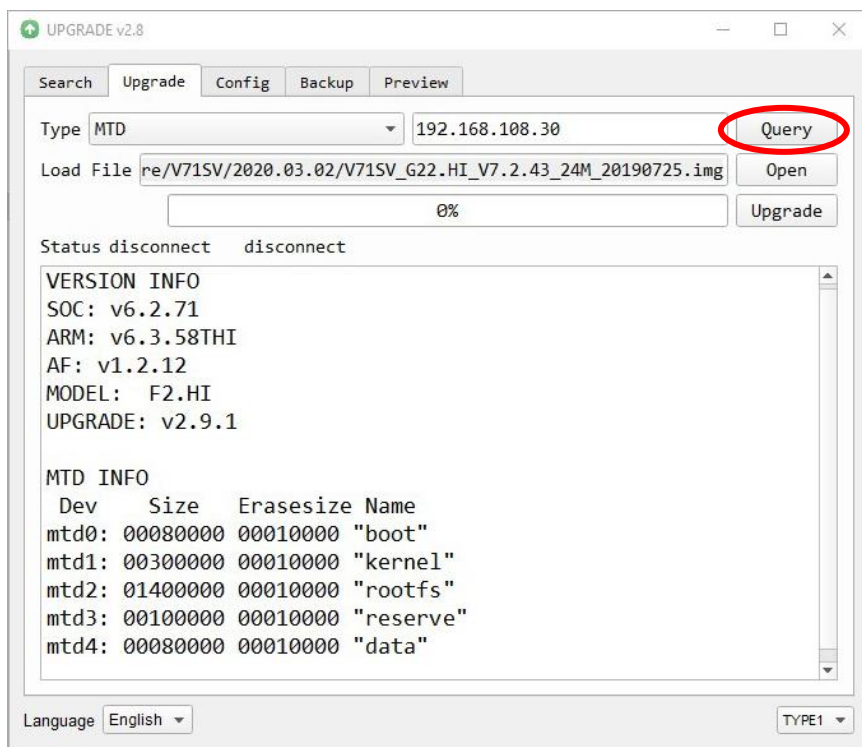


The Upgrade Tool v2.7 for Windows can not name backup files.
The Upgrade Tool v2.7 for Mac is incapable of storing backup files.

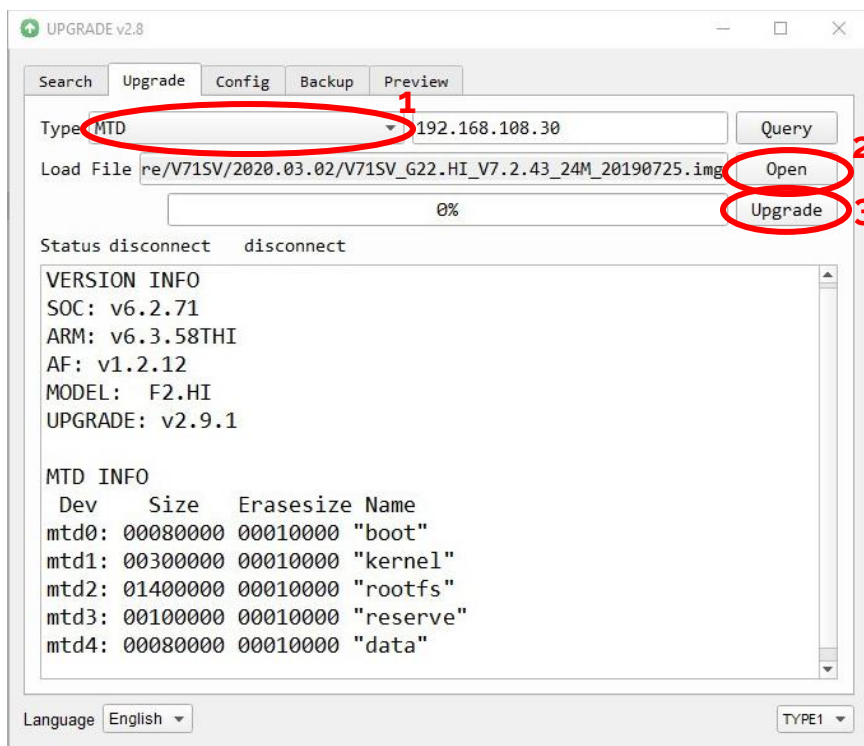
4. Once the Backup process is finished, head back to the Search Tab and locate that same camera. Right-Click the camera and select "Upgrade".



- 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.

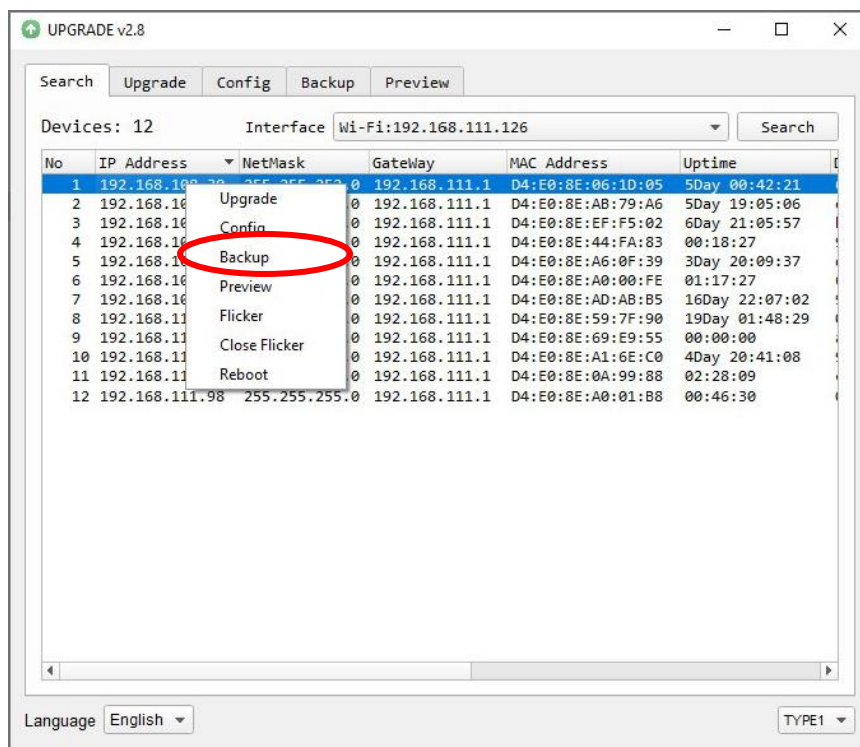


- Click the "Type" dropdown and select "MTD". From there, click the "Open" button to begin searching your computer for the upgrade file. Once located, click the "Upgrade" button to apply the firmware.

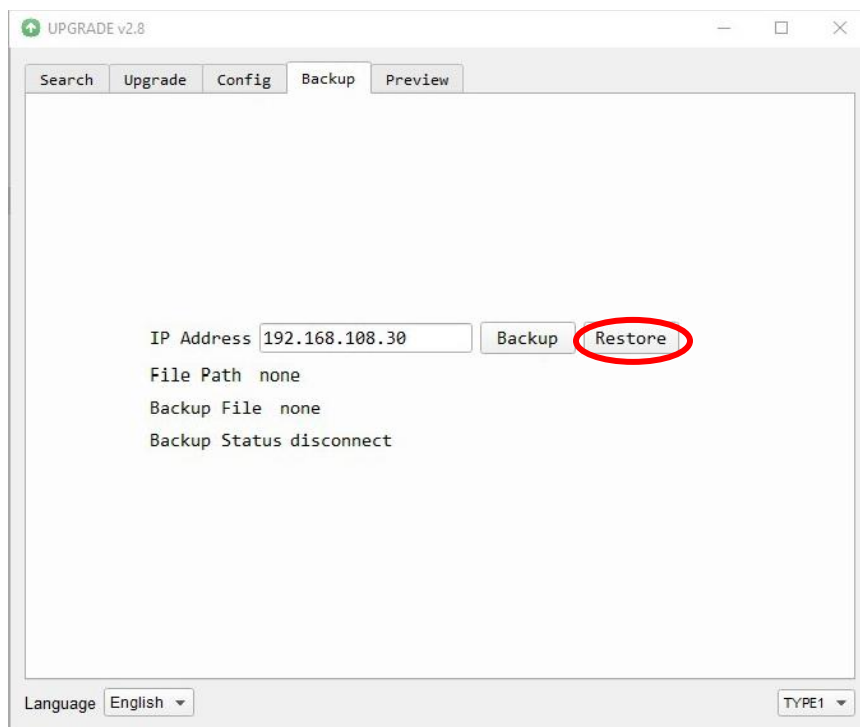


- Do not power off the camera while it is firmware updating.

- 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".



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

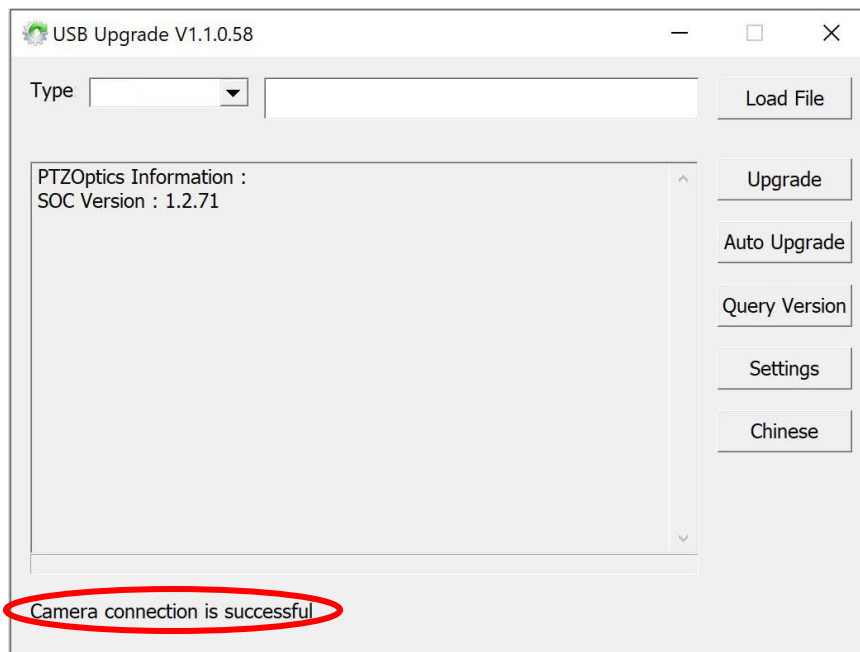


- Occasionally, the Restore process will fail. When this happens, simply click "Restore" again to begin the process.
- Congratulations! You have successfully network firmware upgraded your PTZOptics camera! If you are firmware updating a USB camera, please continue through these instructions to the USB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

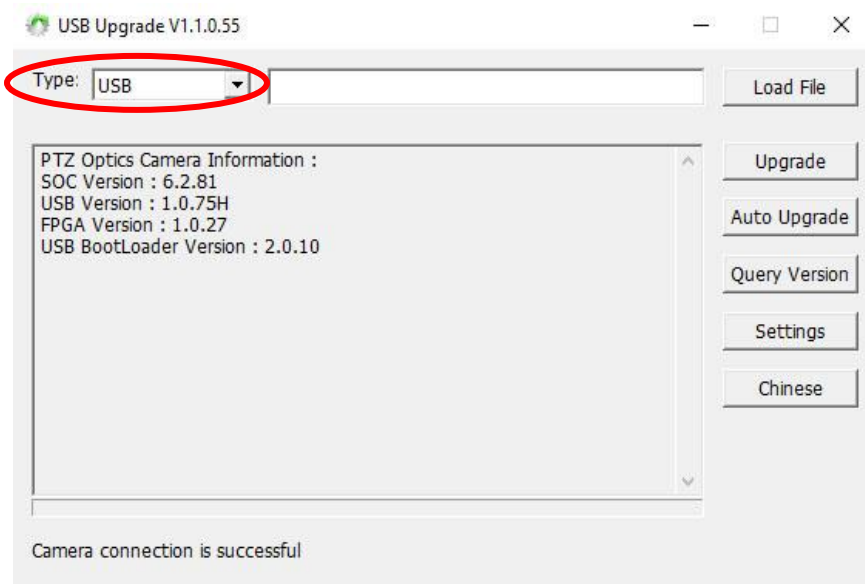
USB Firmware Update

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.

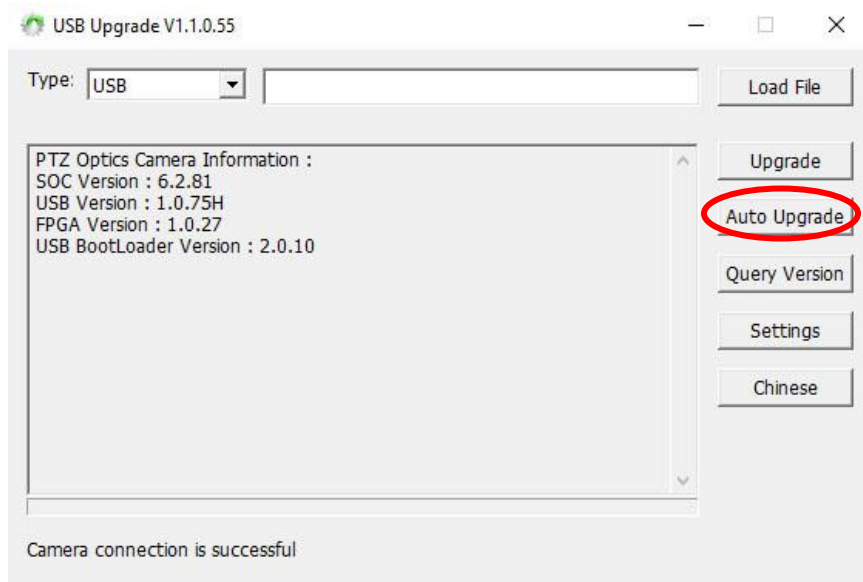
1. From the main interface, ensure the camera is properly connected by verifying the connection status in the bottom left.



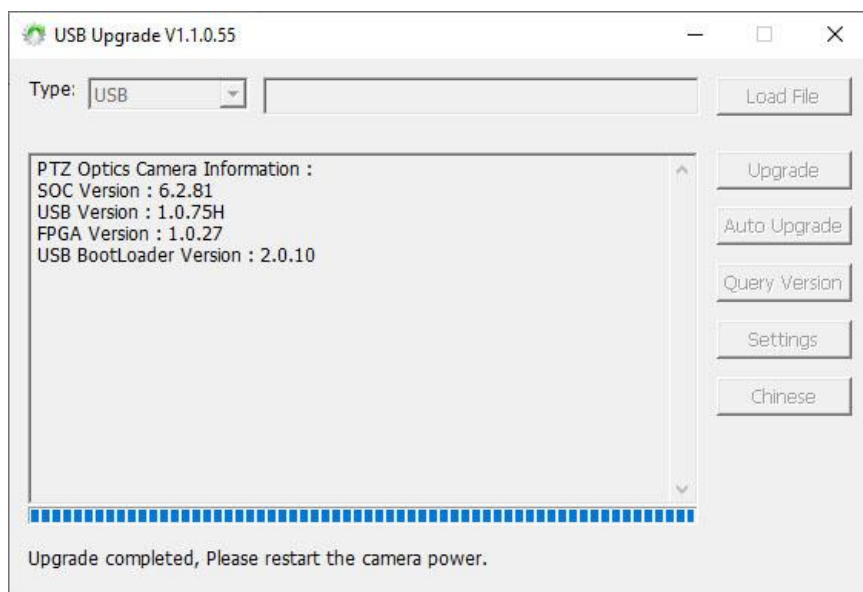
2. Click the "Type" dropdown and select "USB".



3. Click the "Auto Upgrade" button.



- a. 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!