

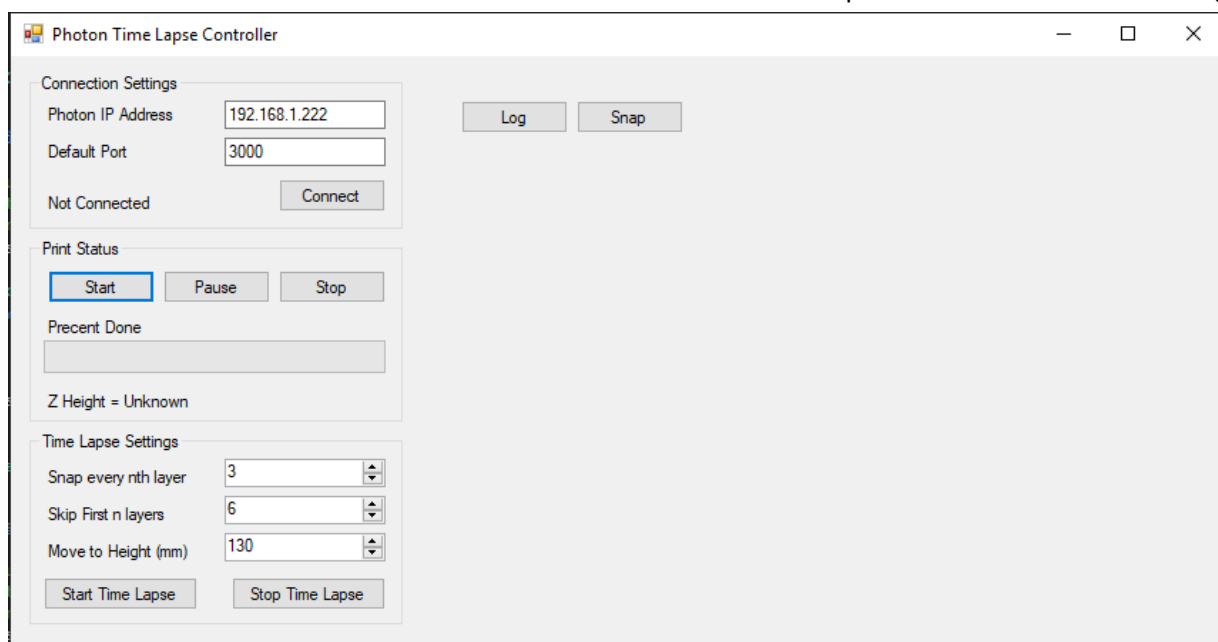
Anycubic Photon time lapse

Required

1. Anycubic Photon with ethernet capability
2. Cannon Camera
3. Photon Controller by LP

Procedure

1. Connect the Cannon camera to computer
2. Connect Anycubic Photon To computer using the ethernet port. Look in photonster website to learn how to enable the built-in ethernet port.
3. Run PhotonController program. The program is written very quickly and dirtily. So be prepared for snafus. It refuses to run if it cannot find a Cannon camera connected to the computer. You will see the following screen



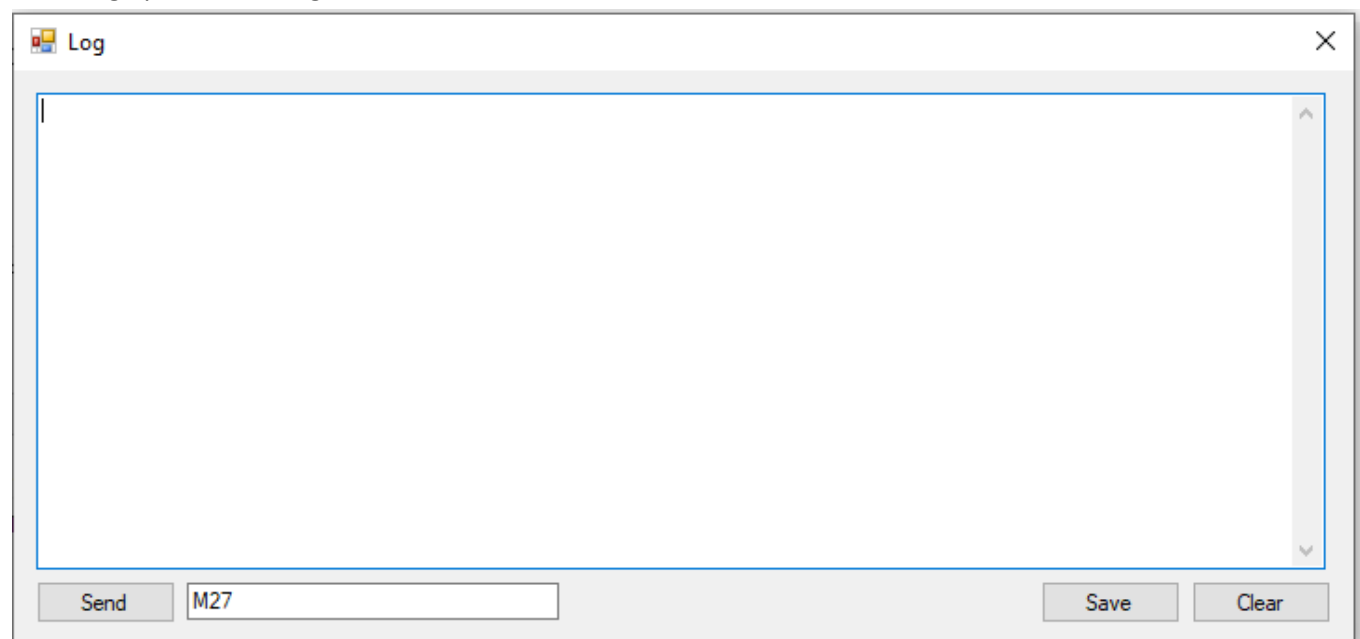
4. Make sure the IP address is correct for the connected Photon Printer. The program has the default photon IP address (192.168.1.222) in the textbox. You can check the IP address by going to system->Net in the printer's menu system
5. Click Connect and the not connected message to the left of the connect button should change to "Connected". If the program cannot connect to the printer then it will just hang, in which case terminate the program using task manager and retry. You can also click on the button labeled "Snap" and it will take a picture using the camera. The pictures are saved in the same folder as the program
6. Ignore the "Start", "Pause", and "Stop" buttons. Only thing that is important is the "Time Lapse Settings". Below is the description of each option.
"Snap every nth layer" -> Take picture every nth frame. i.e. if this number is set to 5 then the timelapse program will take picture of every 5th frame. Don't worry about this number being a perfect integer divisor of the number of frames. The program will automatically take picture of the last frame if the last frame doesn't happen to be included.

“Skip First n layers” -> Quite self-explanatory. Since the first few frames are crucial for bed adhesion and usually not significant enough they can be skipped from the time lapse. Eg. A number 6 in this field will just skip first 6 frames and start counting from the 7th frame onwards.

“Move to Height (mm)” -> This setting is very important. A wrong value here can damage your print and/or the printer. The value in this field is the height to which the build plate is moved before taking a picture. Make sure this height is greater than the total height of the model or else you risk jamming the model onto the LCD and damage it in the process. Also, the height has to be smaller than 150mm which is the max z travel of Anycubic Photon. I don’t perform any validation so it’s completely up to the user to make sure this value is correct.

The next two buttons don’t need any explanation as one is to start the time lapse and the other is to end it if needed. The timelapse anyway stops when the print finishes.

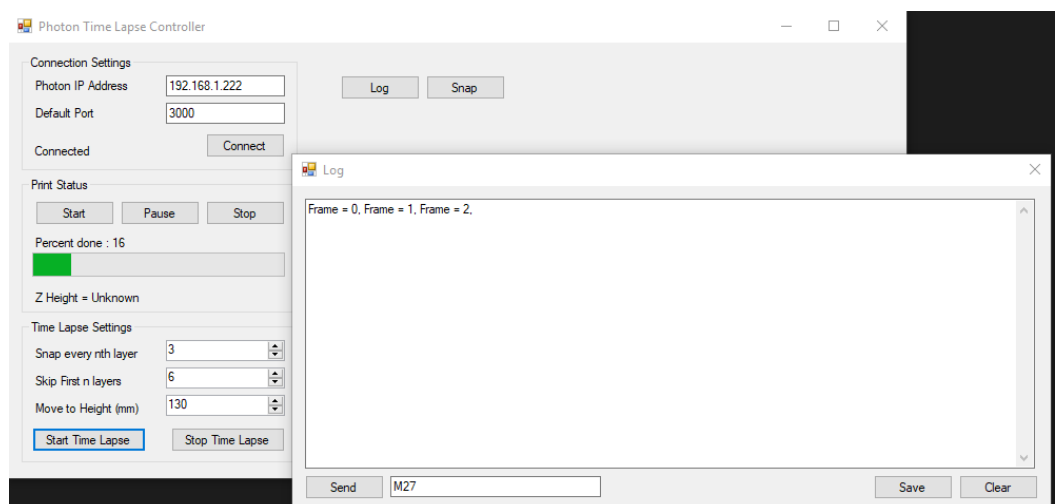
The button “Log” is usefull if you want to see more details of the operation of the program. Clicking this button will bring up the following window



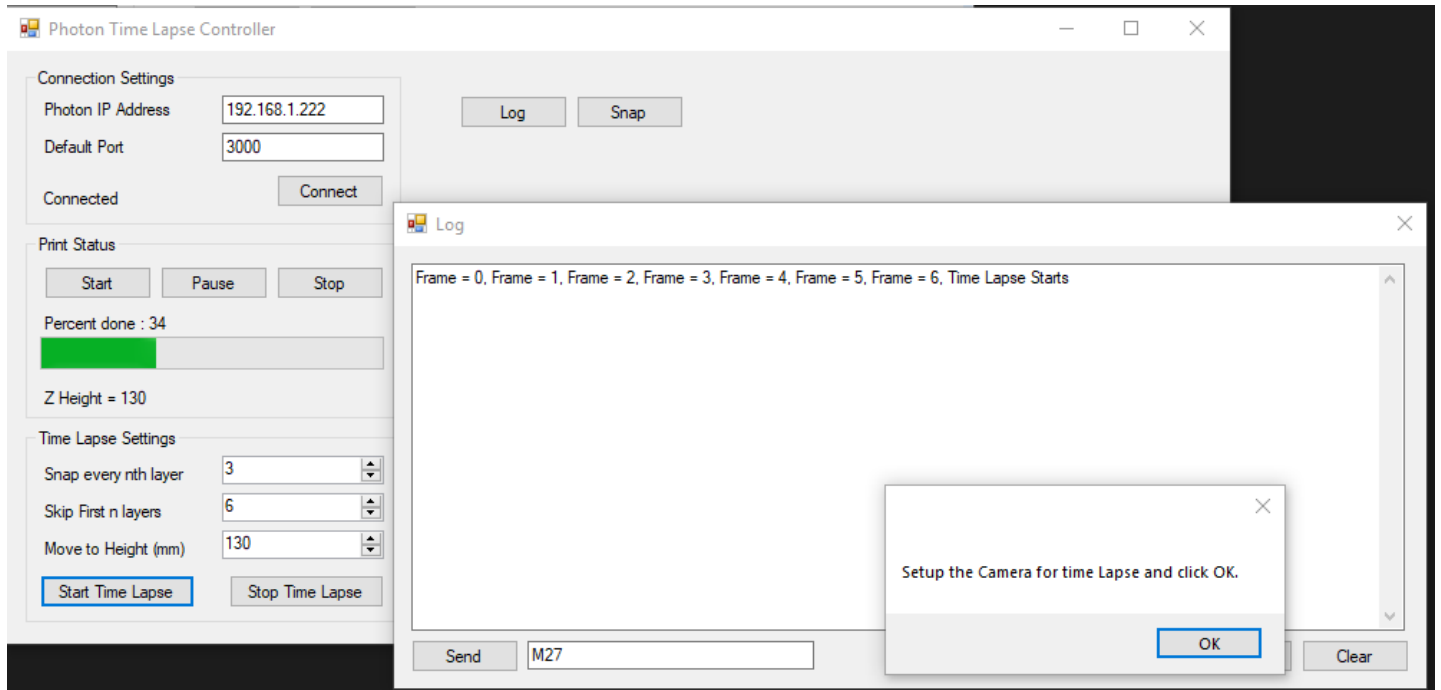
Don’t worry about the buttons and textbox. If you must then the only useful one is the clear button which clears the logbox.

7. Once you have set up the timelapse settings click the button “Start Time Lapse”. This will put the program in time lapse mode but it won’t do anything until an actual print is started on the printer.

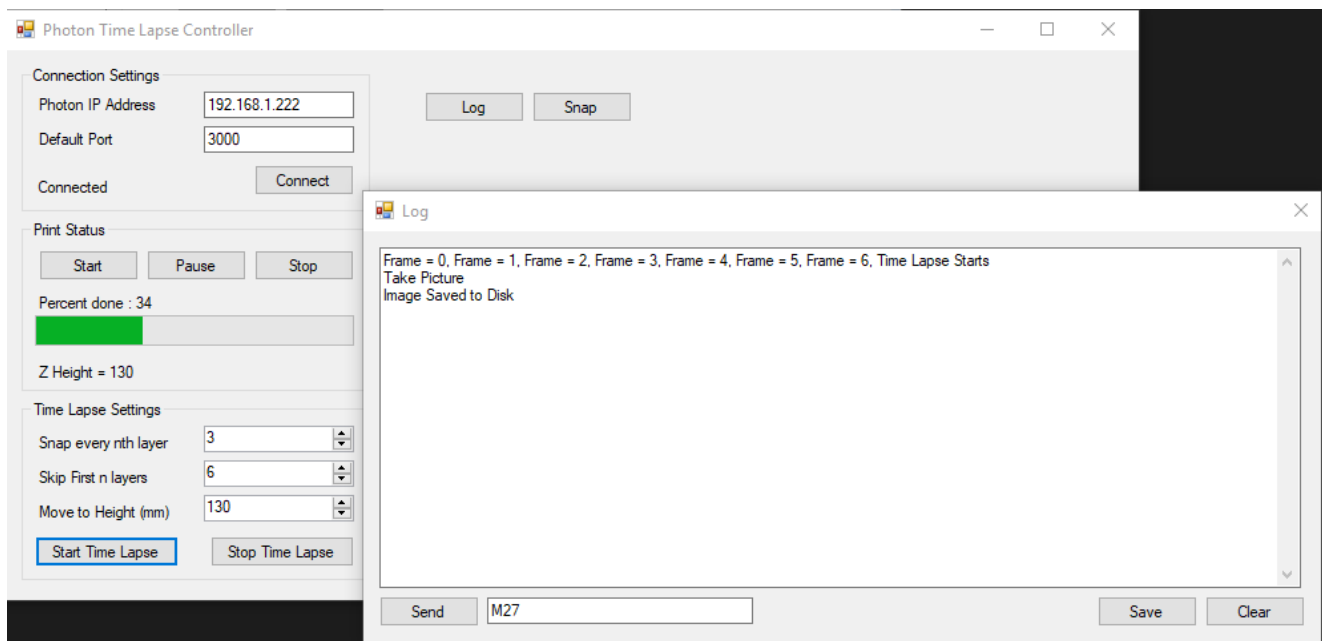
8. Go to the printer and start a print. If you have the Log window open you will see the current frame being printed and the progress bar will start to increase showing the print progress. It should look like the screenshot shown here.



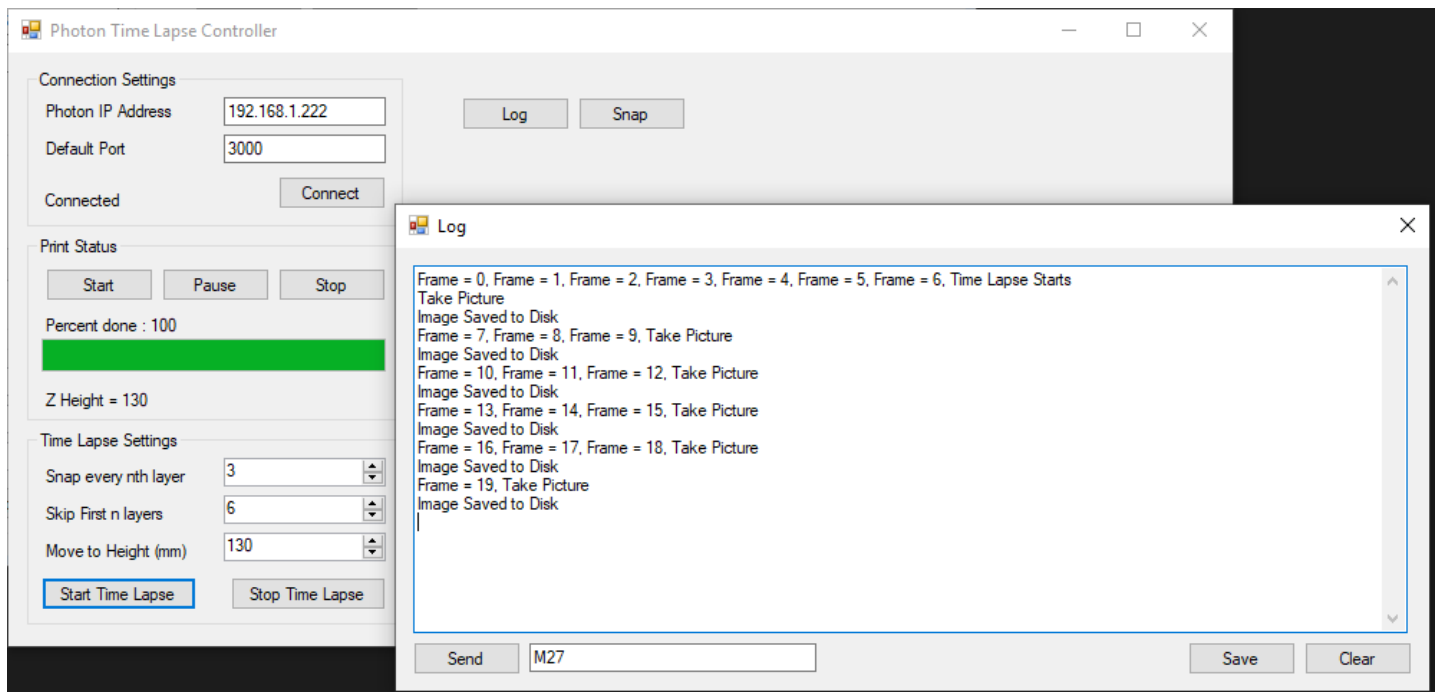
9. The program pauses the print at the first frame at the height specified in the “Move to Height (mm)” field. The timelapse is supposed to start from this place. Before starting the process it shows the following message.



This give the user to make final adjustments of the camera for the subsequent pictures. Please note that the photon unpauses itself and start printing after a time out period. I am not sure how much that time period is but it is in minutes probably about 3 to 4 minutes. So make sure the camera is setup and ready before hand and use this 3 to 4 minutes for fine adjustments. After you click the ok button you will see the following message in the log window and hear the camera click a picture.



10. From this point onwards the whole process runs automatically. In my example it pauses the print every 3rd frame moves to height 130mm and takes a picture. At the end of the print you will see the following in the Log window.



Note that in this case I has 19 frames and that is not divisible by 3 so the last frame was taken separately just to make sure that it is included.

11. You will have the pictures in the same folder as the program as shown below

Name	Date modified	Type	Size
EDSDK.dll	3/18/2019 11:49 PM	Application extens...	644 KB
EdsImage.dll	3/18/2019 11:49 PM	Application extens...	458 KB
IMG_0001.JPG	7/24/2019 9:30 PM	JPG File	1,205 KB
IMG_0002.JPG	7/24/2019 9:31 PM	JPG File	1,215 KB
IMG_0003.JPG	7/24/2019 9:33 PM	JPG File	1,212 KB
IMG_0004.JPG	7/24/2019 9:34 PM	JPG File	1,207 KB
IMG_0005.JPG	7/24/2019 9:36 PM	JPG File	1,232 KB
IMG_0006.JPG	7/24/2019 9:37 PM	JPG File	1,219 KB
photon time lapse.zip	6/20/2019 12:08 AM	WinRAR ZIP archive	482 KB
PhotonController.exe	7/24/2019 9:22 PM	Application	70 KB

In the last example I generated 6 pictures. Depending on the print and your settings you will have more or less than that.

12. You can use these files to make the timelapse video. Making a time lapse video from still images is out of the scope of this documents. You can find plenty of resources online for that process. However to make it easy I will include a small instruction. Use the opensource program virtualdub and open the first frame of the time lapse picture it will automatically open the rest of them as if it was a video file. Noe set the frame rate and save the file.