# ZWO ASI Planetary Cameras Quick Guide

V4.0

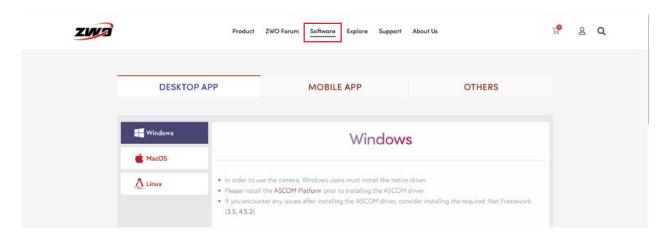


Thank you very much for purchasing the ZWO ASI camera. This instruction is a brief summary of the installation procedure to get you up and running with your new camera. Please be sure to read it before use.

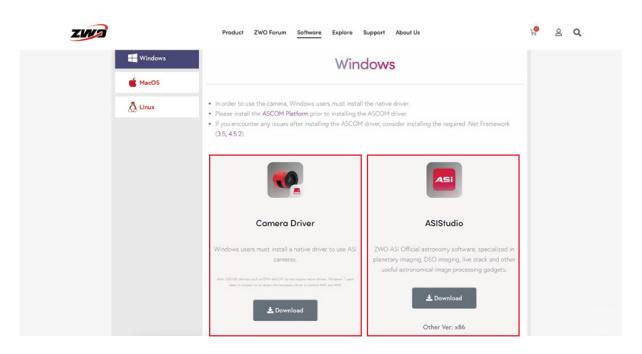
Please head over to the ZWO website if you want more detailed information on the camera.

## **How to connect to the computer?** (For Windows users)

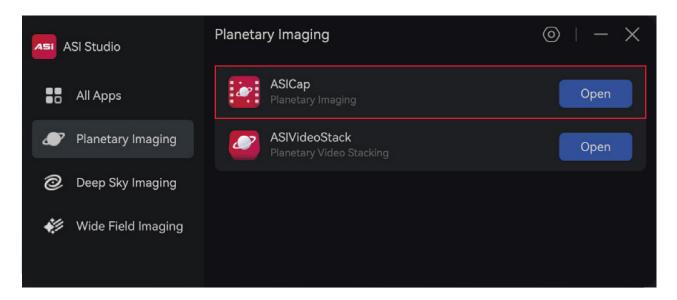
1. Move towards the ZWO site (https://www.zwoastro.com/), click [Software].



2. Download [ASIStudio] and [Camera Driver].

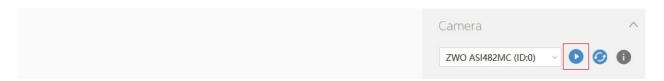


- 3. Double click the files to install ASI Camera driver and ASIStudio. Follow the prompts to complete the installation process.
- 4. Open ASIStudio, and then choose the planetary imaging software [ASICap].

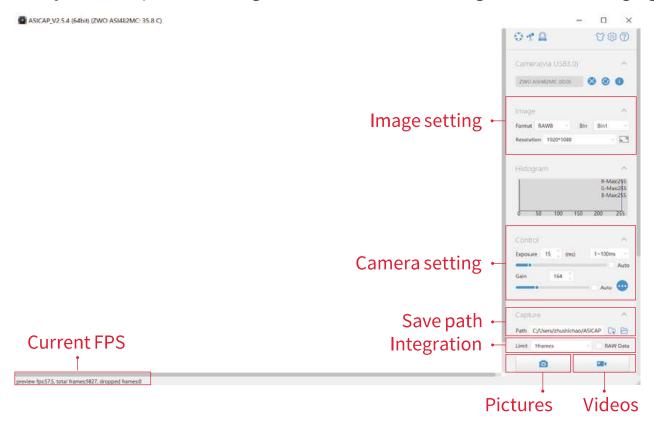


5. Connect the camera to the USB 3.0 port of your computer via the USB 3.0 cable in the camera package.

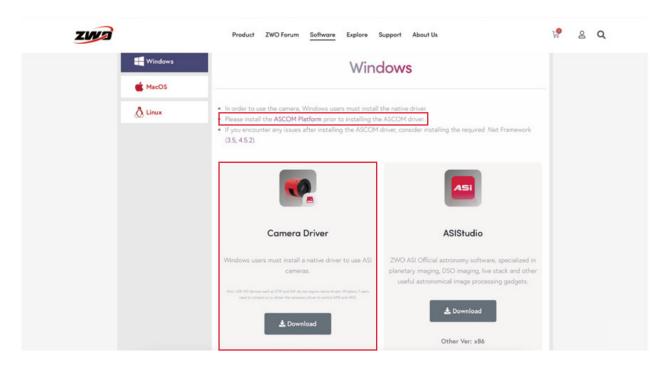
Click the play button 🕟 to turn on the camera.



6. Adjust the exposure time, gain value and other settings, then start imaging

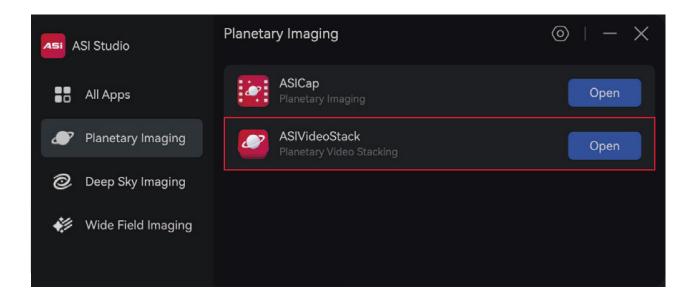


7. If you use the third-party software, the [ASCOM driver] is needed. You will need to download and install ASCOM Platform first and then ASICOM Driver. Then you may be able to use the third-party software like PHD2.

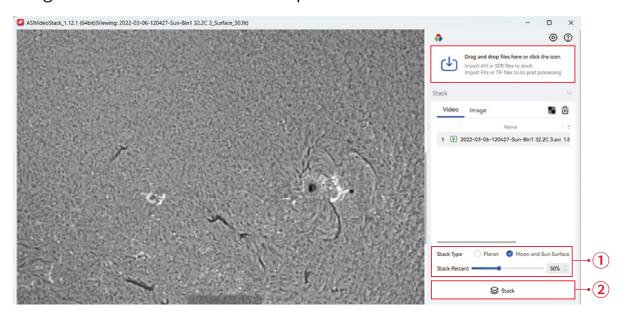


# How to do post processing?

1. Open ASIStudio, choose the stacking software for planetary imaging – ASIVideoStack and open it.

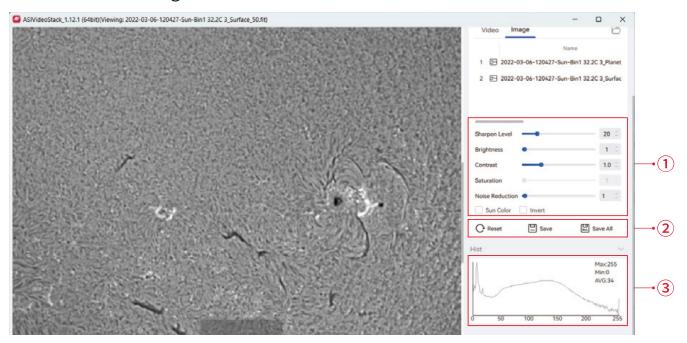


2. Click the button , choose the video file that you want to stack. Or directly drag the file in the folder into this position.



- 3. ① Adjust the shooting setting, choose the target type and percentage frames to stack. The higher quality the video has and the more stable it is, the larger percentage you can set.
- ② One click to start stacking.

- 4. ASIVideoStack will automatically jump to the image area once the stacking process is completed. You are now able to do following things:
- ① Adjust image settings, including sharpness, brightness, contrast and saturation.
- ② Reset the settings, or save the processed image.
- ③ Stretch the histogram.



## How to connect to external devices?



## How to connect to telescope?



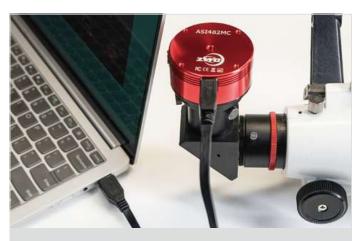
1. Screw off the fisheye lens and the black adapter of the camera (if any), or take off the dustproof cover



2. Mount the T2 extender on the camera.



3. Take off the eyepiece on the telescope and install the camera.



4. Connect your camera to your computer via an USB 3.0 cable.



5. Open ASICap to bring the image, adjusting the shooting setting.



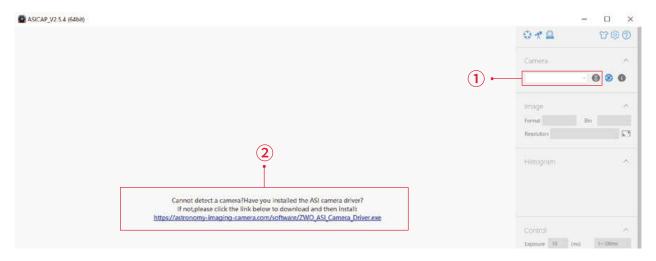
6. Do focusing.

#### **FAQ**

#### 1. Why I can't find the camera in the software?

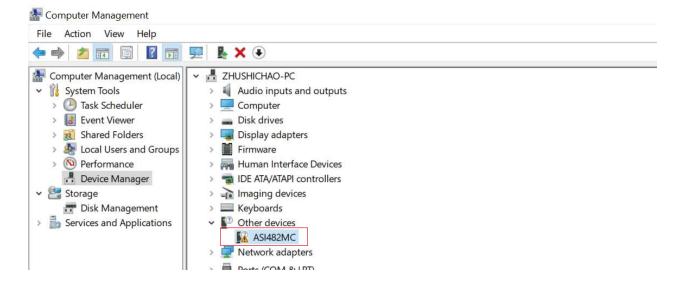
- 1.1 Please check the connection between your camera and laptop. Try to change another USB port of the laptop. Or check if the port has been broken.
- 1.2 Check if the driver has been installed properly. If not installed, you may click the link below to download:

https://astronomy-imaging-camera.com/software-drivers

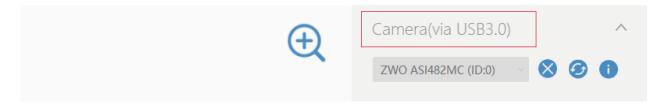


#### 2. Why I still cannot find the camera after installing the driver?

Please check the Device Manager -> Image Device to see whether it has the ZWO camera in the list. A question mark or exclamation mark normally indicates the driver is not installed properly. Please uninstall it and close your antivirus software or firewall, re-install the driver, then restart your computer.

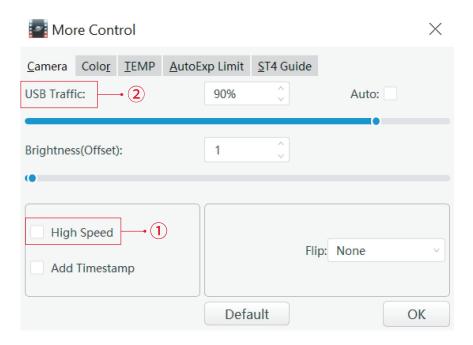


- 3. Why my camera can't reach the max FPS that ZWO claims?
- 3.1 Please make sure it is the USB 3.0 port of the computer that the camera is connecting to. See the figure below.



If it shows USB 2.0 here, then it means you probably are not USB 3.0 cable or not connecting the camera to the USB 3.0 port of the computer.

- 3.2 Click the ellipsis in the work area to get more camera parameter setting options. Tick [High Speed Mode] box ①. Please note that the High Speed Mode is not encouraged to use during imaging.
- 3.3 Adjust the USB bandwidth ②. We recommend you set 80%~90%. You may set the value based on your computer performance. The higher the USB bandwidth you set, the higher performance your computer needs to have.



3.4 The longer the exposure time is, the lower the FPS will be. FPS indicates the frequency (rate) at which consecutive images (frames) are captured or displayed per second. Given the resolution is unchanged, frame rate = 1s/exposure time (s). If the exposure time is 1s, then the fps in this case is 1fps.



Scan to watch operating video







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