

ZWO ASI Camera Quick Guide



苏州振旺光电有限公司

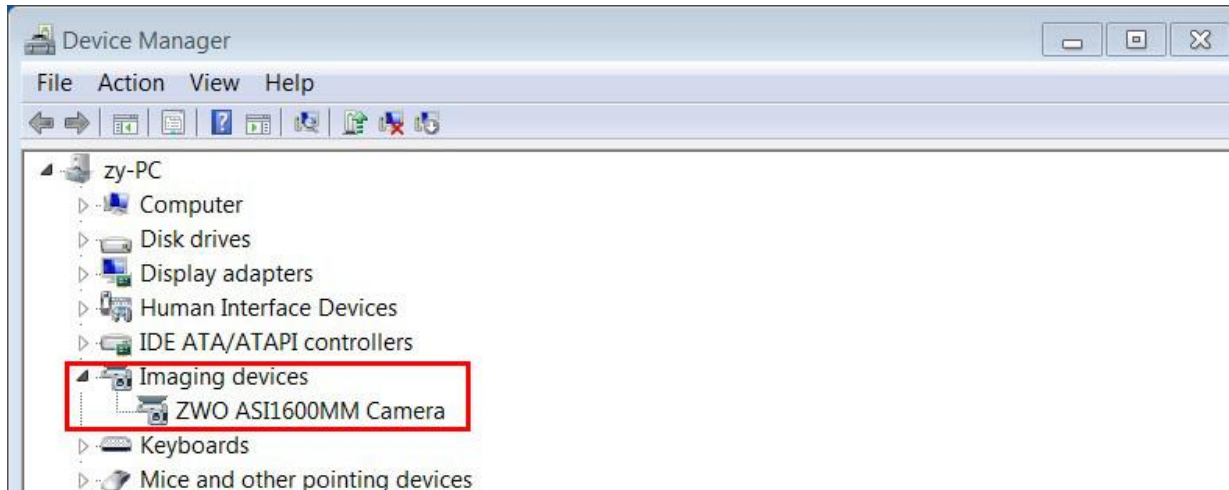
Suzhou ZWO Co.,Ltd.

Thank you for purchasing a ZWO ASI camera. This guide is brief summary of the installation procedure to get you up and running with your new camera. Please be sure to read the user manual for more complete instructions.

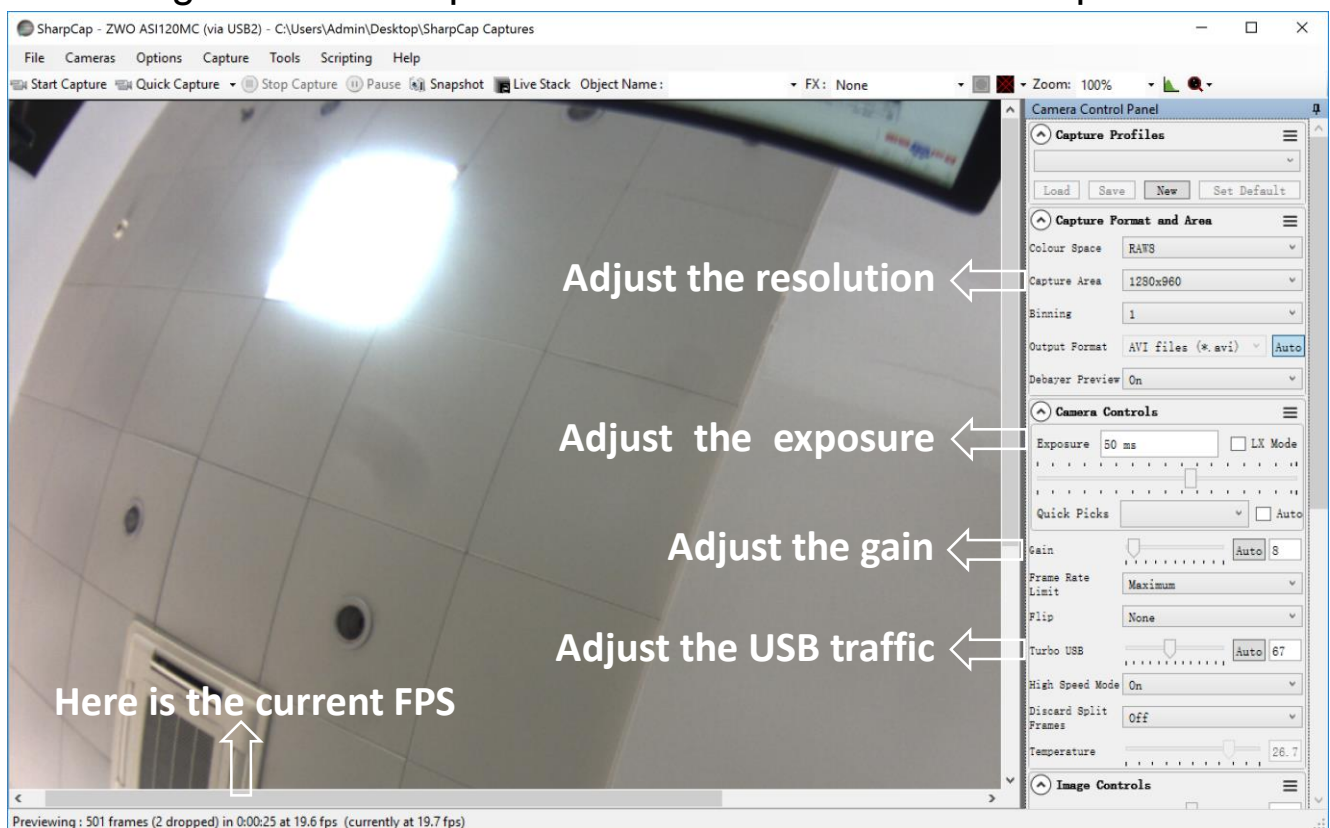
Driver and software installation (Windows)

1. Download and install “**ASI Cameras driver**” from our website <https://astronomy-imaging-camera.com/software/> or CD-ROM.

After plugging in the camera, you will see your ZWO camera model listed under the “imaging devices” category of the Device Manager if the driver is installed successfully.



2. Download and install SharpCap (image capture software) from our website or CD-ROM. Choose your camera model from the camera menu. Then you can see the preview video. Keep in mind that you will only see some brightness in the preview video without lens or scope.



More detailed user manual can be found at our website: <https://astronomy-imaging-camera.com/manuals/>

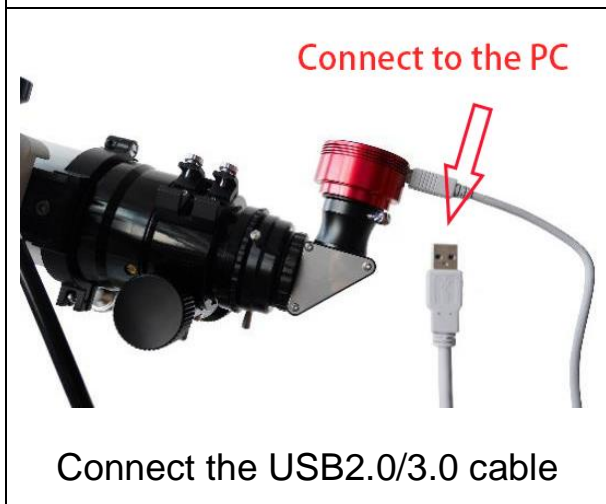
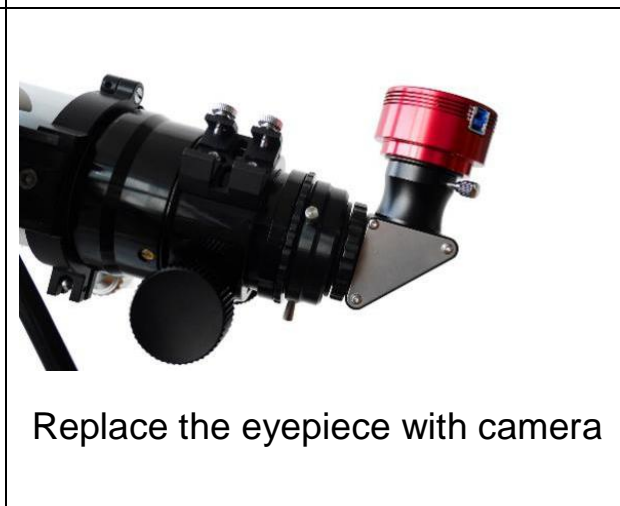
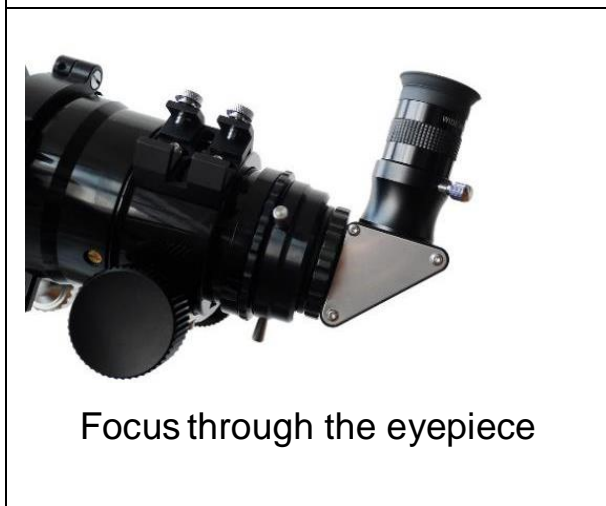
Connecting the camera to the telescope

The following cameras include an all sky lens:

ASI120MM/MC ASI120MM-S/MC-S ASI178MM/MC

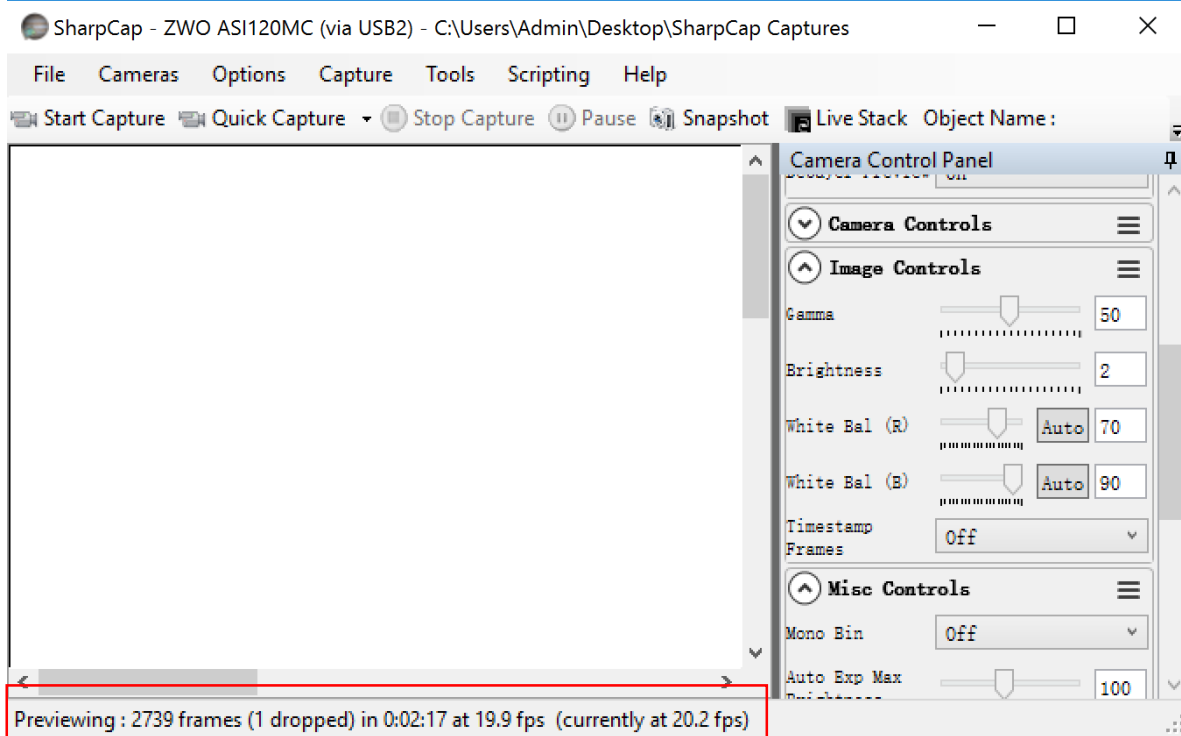
ASI290MM/MC ASI185MC ASI224MC

Please remove the lens before attaching the camera to your telescope.



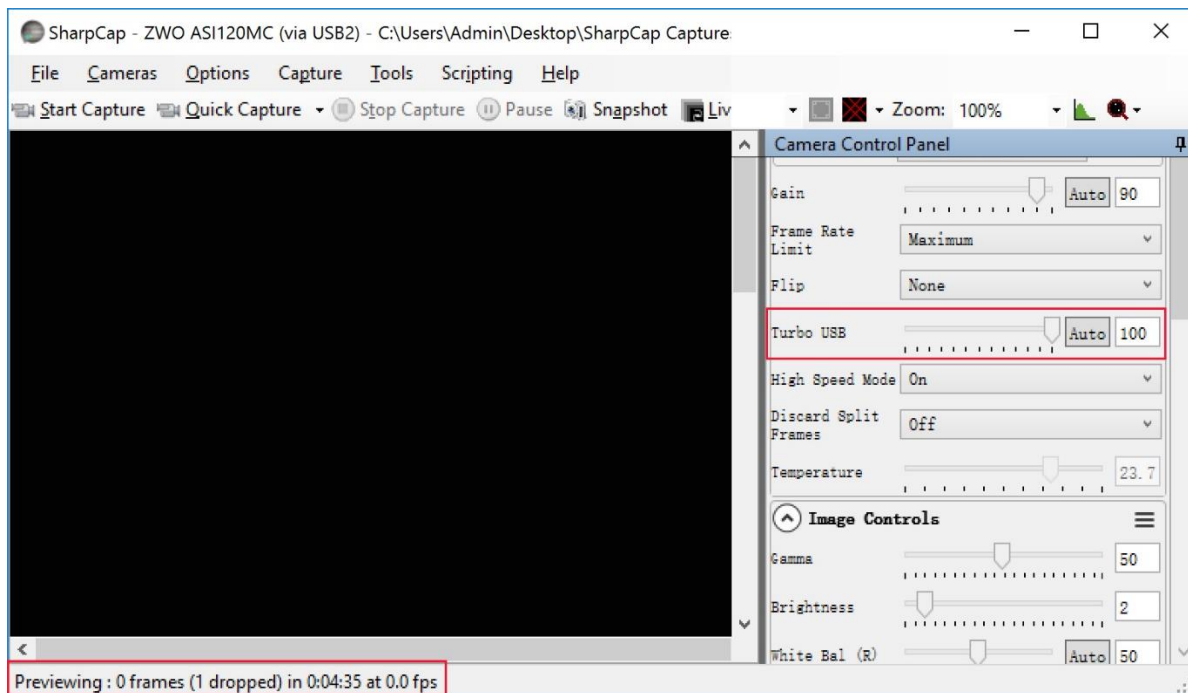
Trouble shooting:

1. The preview image is completely white but the fps is normal.



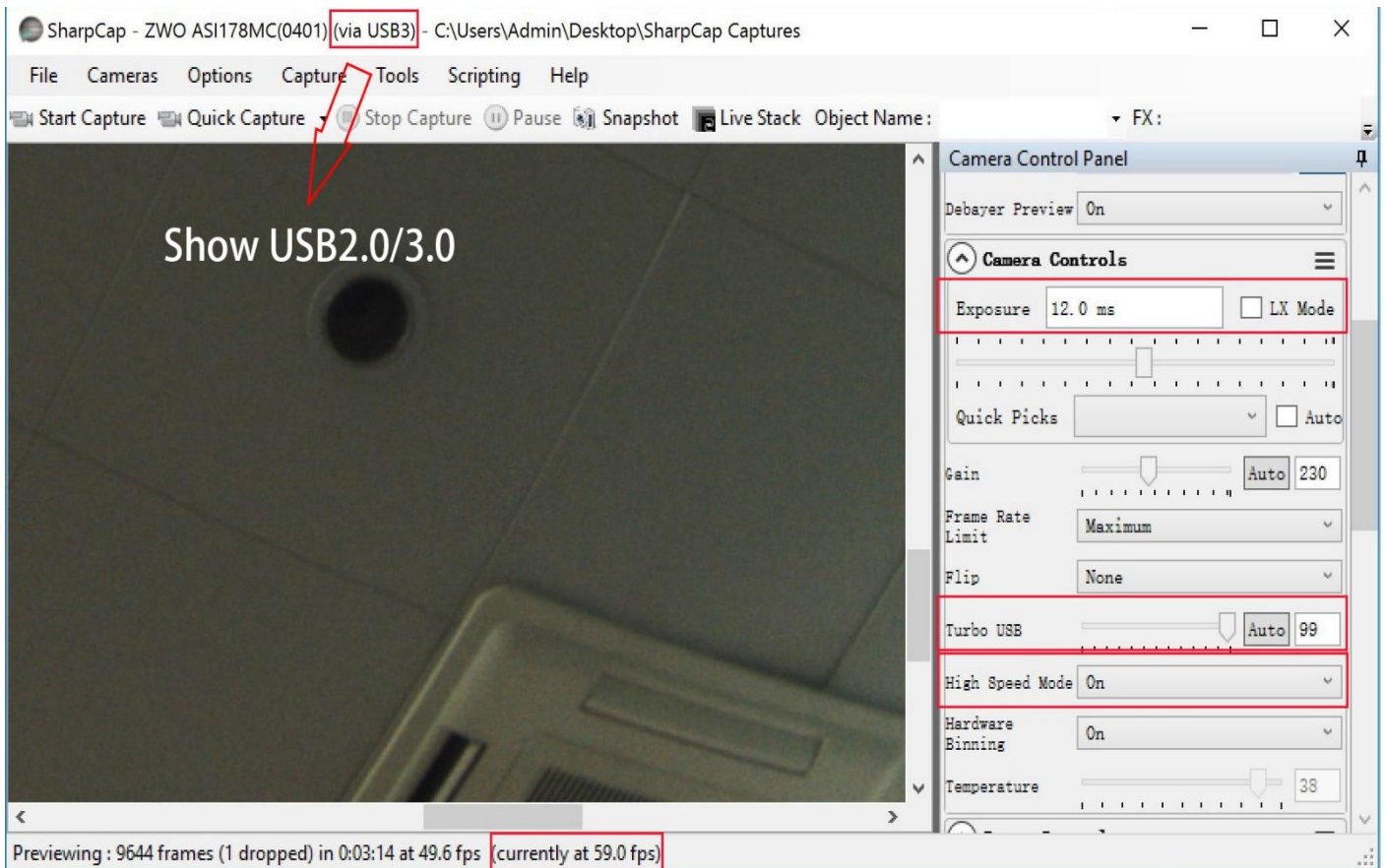
The camera is over exposed, please reduce the exposure and/or gain. Keep in mind that you can only see brightness without lens or scope

2. The preview screen is black and the fps is "0".



Please try to slow down the capture speed by reducing the "Turbo USB". Also try connecting the camera to your PC directly without a USB hub or extender if reducing "Turbo USB" still does not work.

3. The camera can't preview at the FPS declared in the specifications.

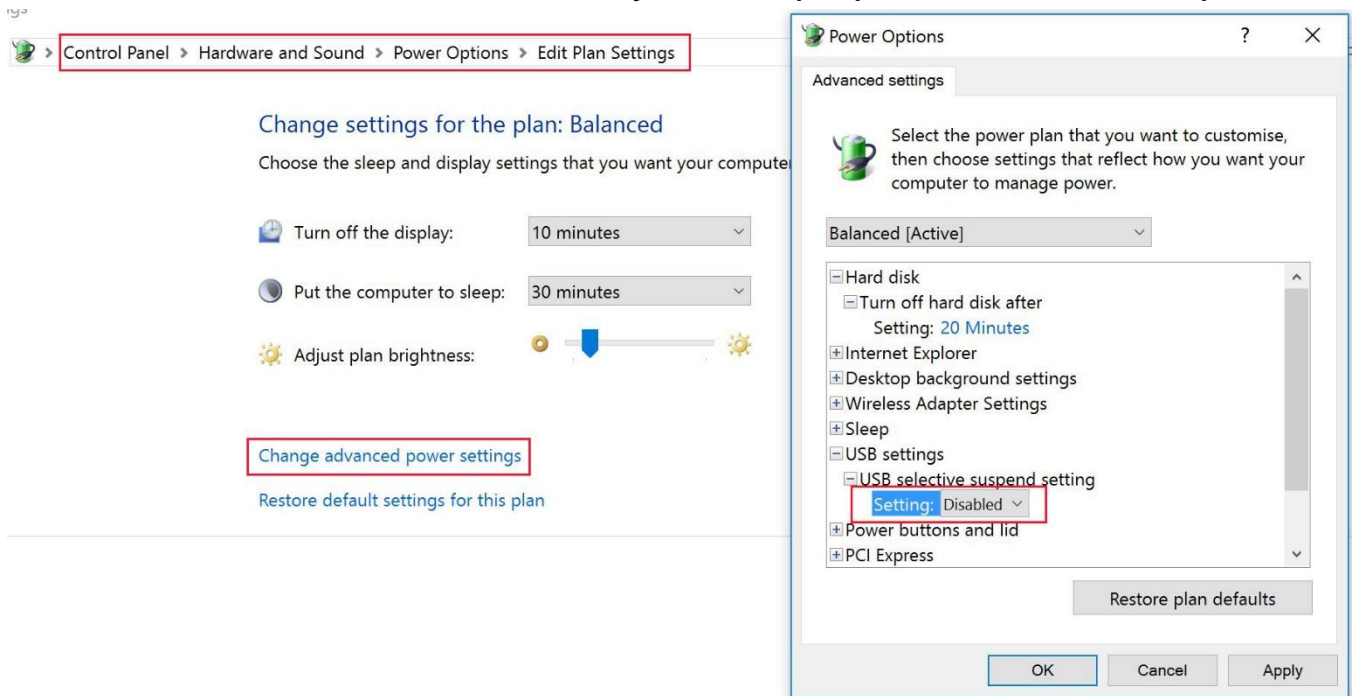


- 1) Please make sure the camera is connected to USB3.0 host if it's a USB3.0 camera. Check that the camera is recognized as "via USB3.0". Please try to update the computer's USB Host Controller driver if not.
- 2) Make sure that the "High Speed Mode" is On.
- 3) Adjust "Turbo USB", we recommend 80-90%. This value depends on your computer, higher means faster.
- 4) Don't forget the exposure time affects FPS too. In general your exposure time needs to be shorter than $1/\text{FPS}$ rate. For example, the FPS will decrease to 1FPS when the exposure time is 1 second.

4. The camera can preview at 60fps but drops to 20fps when recording.

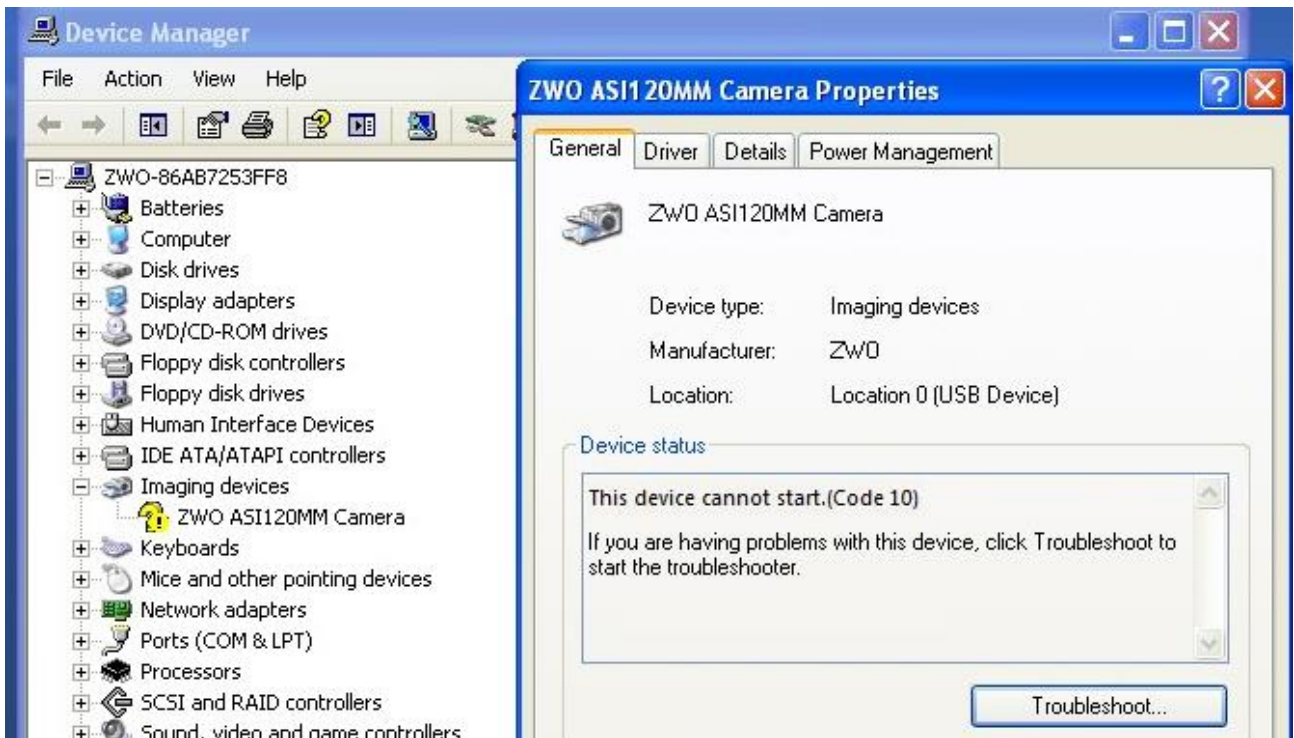
This is because your hard disk drive cannot match the speed of the camera. Most ASI cameras are very fast and require up to 400M/s data transfer speed. But most hard disk driver can only run at 40-50M/s. We recommend you can exchange your HDD with one fast SSD and try to capture the data in raw format instead of RGB24 if you use one color camera.

5. The camera cannot run continually on a laptop without external power



This is because of the power save mode of your laptop, you need to disable power saving of USB port.

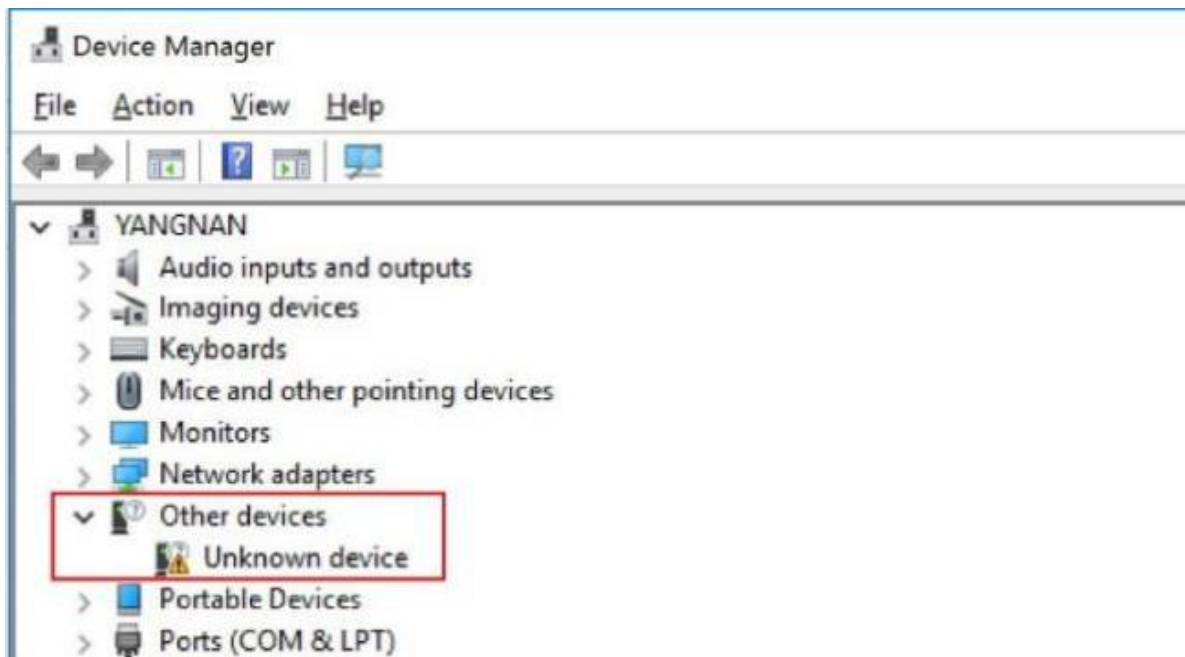
6. There is a yellow hint with the camera model name and error code 10.



You may have this problem with our USB2.0 cameras, please try another USB Port or PC, then you can upgrade the firmware of this camera on the good PC. The original firmware is more stable and faster. Download this upgrade tool from our website

<http://astronomy-imaging-camera.com/software/FWTool.zip>

7. Unknown device shown under the device manager after plugging in the camera.

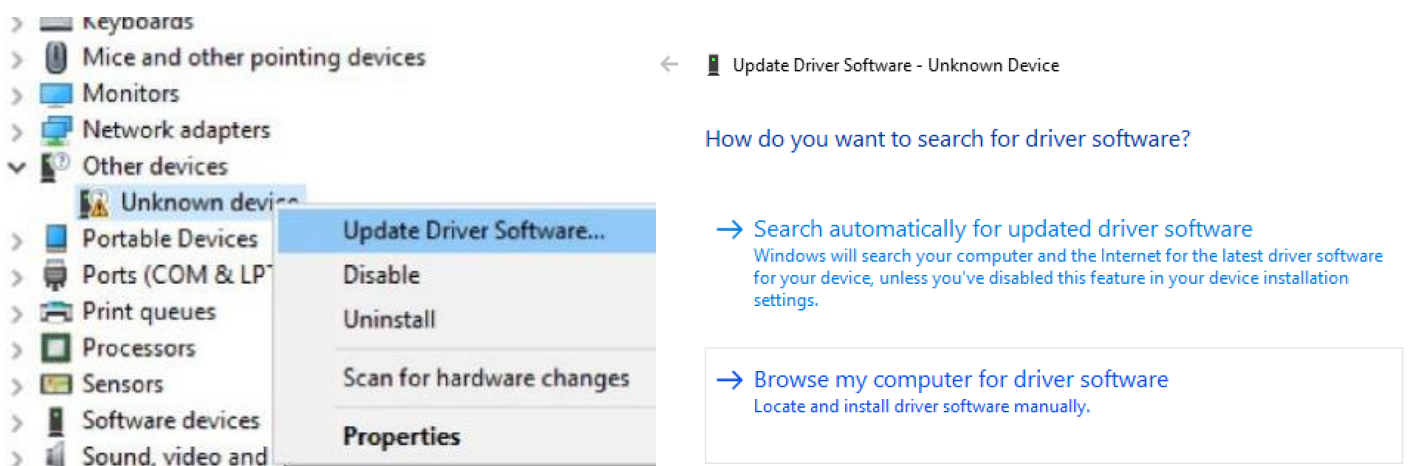


This is because the driver is not installed or installed properly, please try to close all anti-virus software and re-install the driver.

You can also update the driver manually if re-installation still does not work.

Right click the “Unknown device”, choose the “Update Driver Software” and point to the driver directory. Normally the driver directory is :

C:\Program Files (x86)\ZWO Design\ZWO_USB_Cameras_driver.





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