



ASI CAMERAS TROUBLE SHOOTING

REVISION 1.0

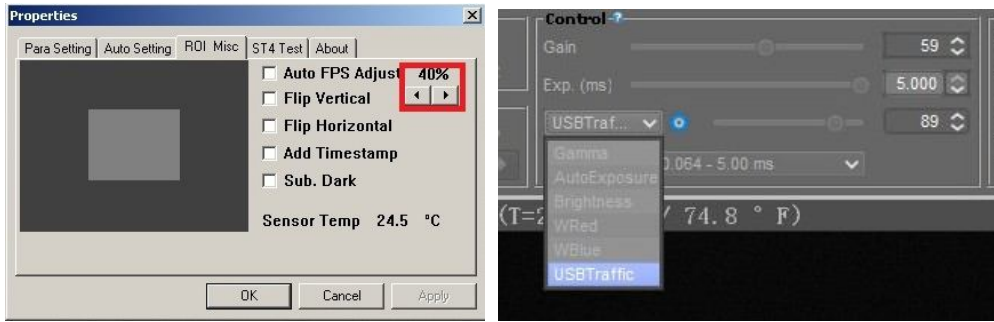
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1. Why can't my ASI120MM/MC run up to 30fps at 1280X960?



Firstly make sure the value of “Auto FPS Adjust” value is correct, this is called “USBTraffic” under Firecapture. 86% corresponds to 30fps, this value of different computers differs slightly, you can try to turn up slowly by yourself. Fluent images and no broken frame indicate that your computer have enough bandwidth for current FPS. Most computers can run steadily at 30fps, some computers can reach to 34-35fps.

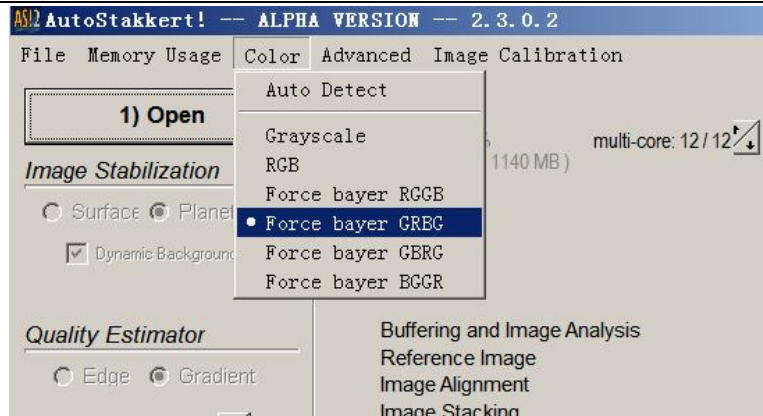
Secondly, ensure that the exposure is less than 1/30 second. The exposure time will limit FPS, for example, the FPS will decrease to 1FPS when exposure time is as long as 1 second.

2. My ASI120MC can preview up to 30fps at 1280X960, but it becomes 15fps when recording. It drops frames like crazy?

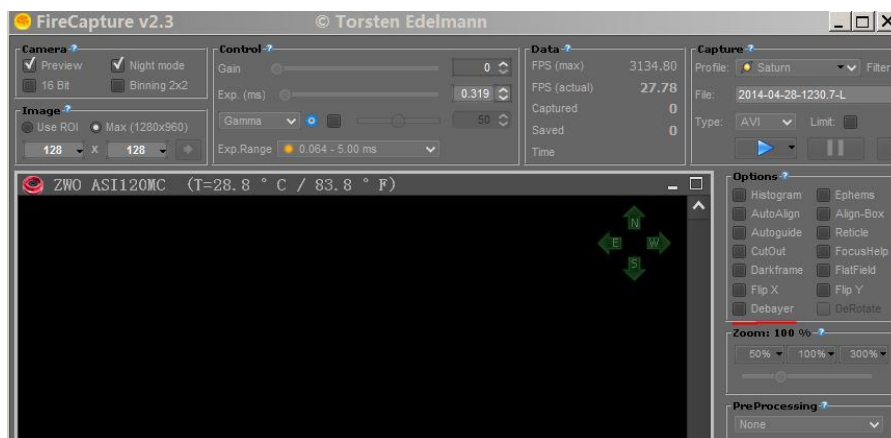
It's good to hear that your computer can preview up to 30fps, this means your computer's USB bandwidth is wide enough to run ASI camera. The fps drops when saving is because the low speed of your harddisk. It always happens in laptop which usually comes with a low speed harddisk.

Let's calculate the data size transferred to harddisk every second. A color video's each pixel contains 3 byte which correspond to R, G and B, so 15fps corresponds to disc writing speed of $1.2M \times 3 \times 15 = 54M/s$. The writing speed of general hard disc is 30-50M/s. We recommend high speed SSD solid hard disc if you require the fast recording speed, for its writing speed can reach upwards of 100M/s.

We recommend you can try to record the video data in RAW format which is only 1/3 size of color video. Then debayer the raw data in stack software like AS!2.



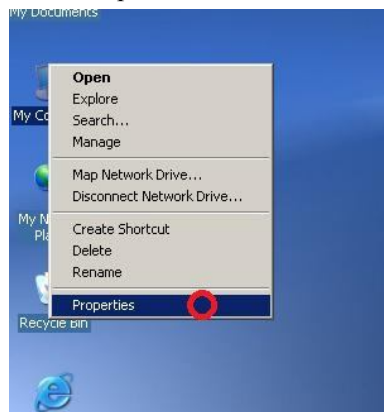
Raw output is the default Option under Firecapture. You can enable “Debayer” if you want to preview or capture in color. You can also enable Raw output under SharpCap. Please reference our FAQ document how to enable RAW output under SharpCap.



3. This error dialog pop up after SharpCap or AmCap is launched.



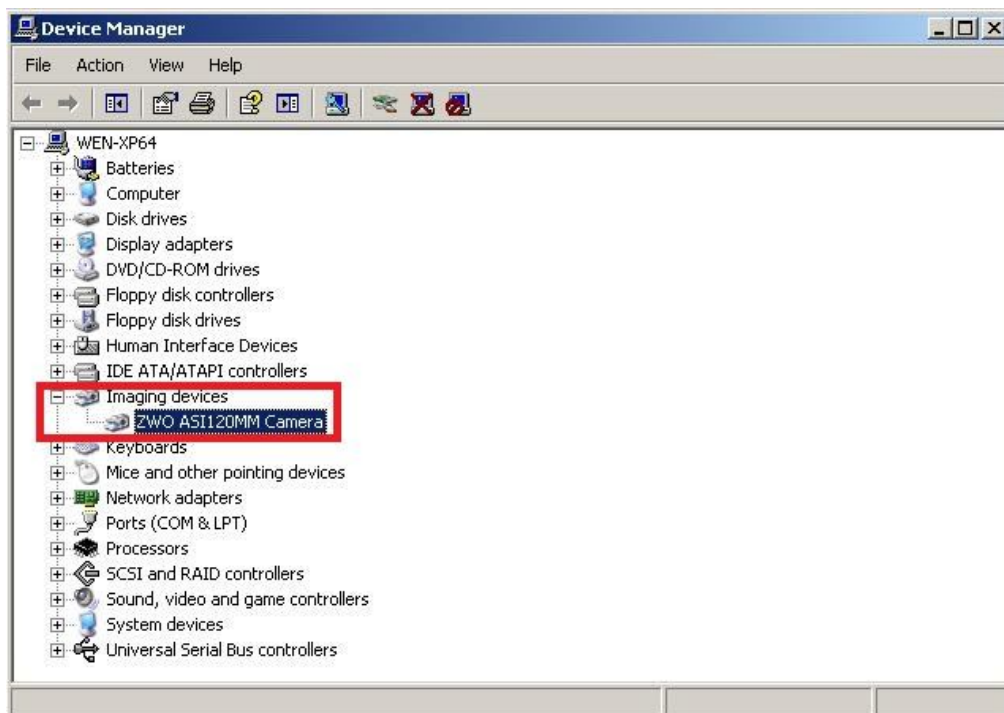
This error message means the camera is not found or not installed correctly in your computer, please do as below steps to find out the problem.



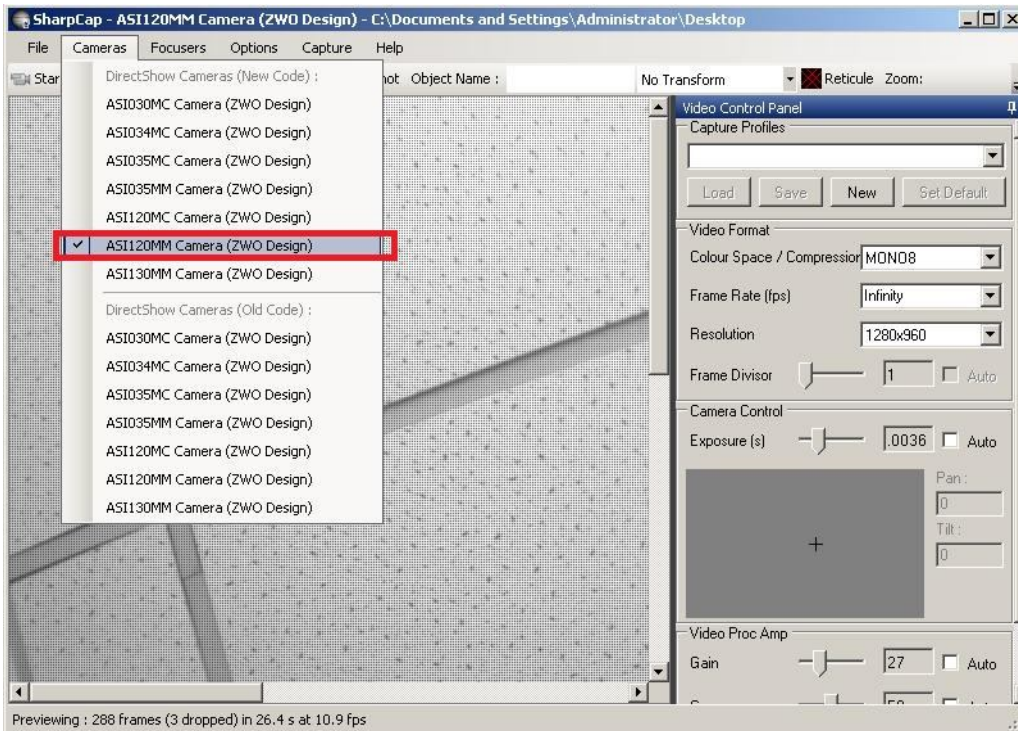
Open the device manager



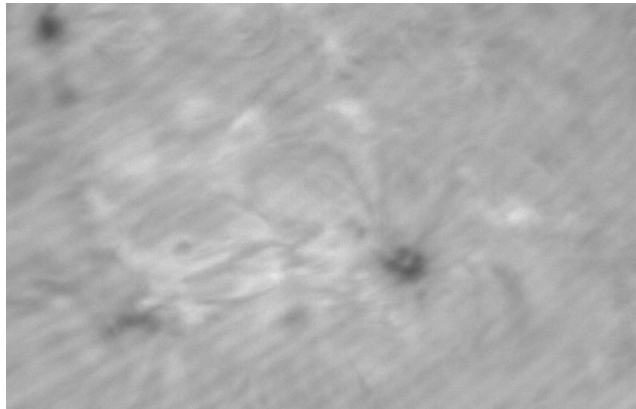
Check that whether there is ASI camera under image devices, if not, please make sure the camera is connected to your computer reliably, you can also change a computer or USB port and try again. If ASI exists there, it means device is connected correctly and the driver is installed correct.



After that, make sure you click the correct camera name.



4. Newton ring is there when I do ha-solar imaging.



This happens because the sensor is not parallel to the ha filter, there are 2 ways to solve it:

1. Use a M42 Tilter as this picture, so you can adjust the angle of the camera:



2. Take a flat frame and remove it in software. Here is a good tutorial:

<http://www.schurstrophotography.com/solar/Articles/solararticle5.html>

5. There is some horizontal short line jump around when I do solar prominence imaging, and it disappears when I shoot the solar body itself.

The camera need to over exposure when do prominence imaging. Over exposure will make the camera runs slower than normal mode and cause some broken frames. So you can try to turn down “USBTraffic” value to make the camera runs slower to solve it.

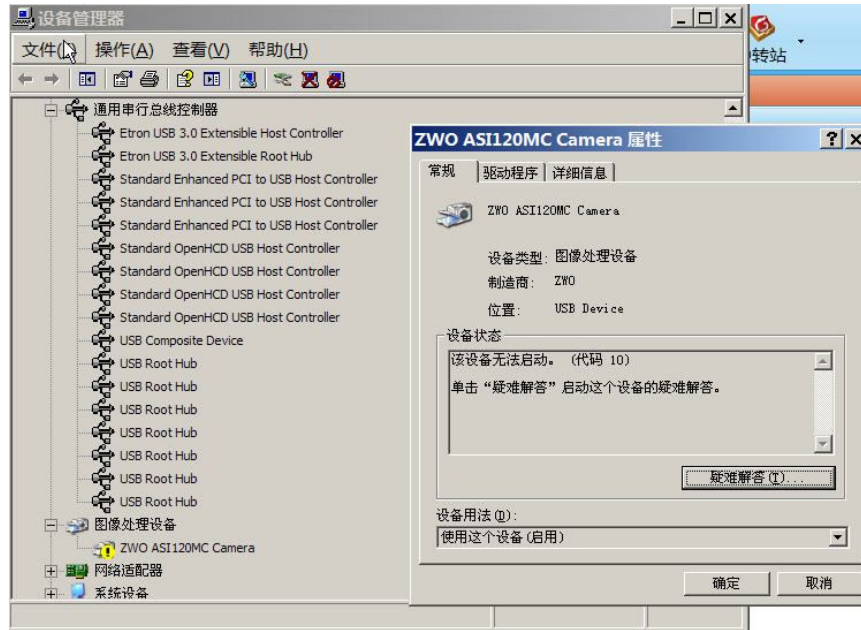
6. Driver installed corrected, and device can be found in device manager, but my camera preview blank, I use it in virtual machine on Mac OS?

There is some compatible problem between ASI camera and virtual machine, but we can solve it by upgrading camera's firmware, new firmware's speed may be slower on some computers.

Please reference article 9 about how to upgrade the firmware.

We also released our SDK on Mac OS, so you can use many software under Mac in the near future.

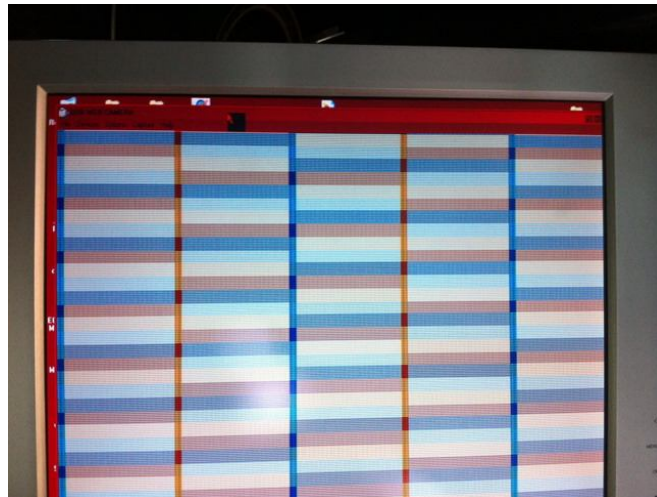
7. My camera's driver cannot be installed correctly, a exclamation exists on camera's icon in device manager, click property, it says "this device can not be started (error code 10)".



This problem probably happens when connecting camera with USB3.0 on some AMD PC or laptop. It can be solved by upgrading camera's firmware, but the speed may be slower on most computers.

Please reference article 9 about how to upgrade the firmware.

8. I get a very strange image with just columns of colored blocks in my old computer.



This is an incompatible problem between ASI cameras and some very old computers. It can be solved by upgrading camera's firmware, but the new firmware's speed may be slower on most computers.

Please reference article 9 about how to upgrade the firmware.

9. How to update camera's firmware?

Download our firmware upgrade tool for here: <http://www.zwoptical.com/Eng/software/index.asp>

Uncompress it to a folder, then launch FWupdate.exe



Please install Microsoft Visual C++ 2008 SP1 Redistributable Package first if it cannot start, X86 version: <http://www.microsoft.com/en-us/download/details.aspx?id=5582>

Then just click “Firmware Update” to choose the right firmware to upgrade. It will show successful message if it finished.

