

ZWO ASI 行星相机

快速指南

V4.0



非常感谢购买ZWO ASI系列相机。该快速指南是一个简短的操作指导，可以让您快速运行起相机。

如果想了解更多关于相机使用的知识，请访问ZWO官网。

如何在电脑上连接相机（以Windows系统为例）

1. 打开官方网站 <https://www.zwoastro.cn/>，选择【软件下载】。



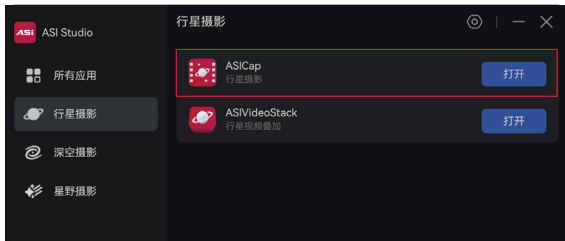
2. 点击下载【ASISudio】和【ASI 相机驱动】。


*根据电脑的系统，如果是64位系统请直接点击下载按钮，如果是32位系统请选择：其他版本X86。



3.下载完成后, 双击文件, 安装ASI相机驱动和ASISudio软件, 根据提示操作完成即可。

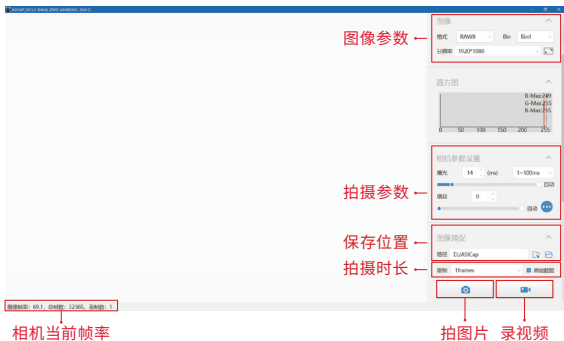
4.打开ASISudio, 选择行星摄影软件【ASICap】, 点击打开。



5. 用标配的USB3.0数据线连接在相机和电脑的USB3.0接口上, 软件里点击开始按钮 , 打开相机。



6. 设置好相关参数，即可进行拍摄。

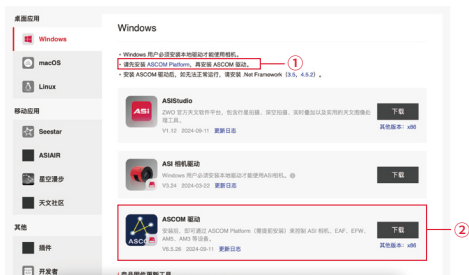


7. 若您不使用ZWO官方软件，可以下载第三方软件，则需安装ASCOM平台和对应的驱动。

7.1 进入ZWO官网，选择【软件下载】安装ASCOM Platform ①，

7.2 然后再安装ASCOM驱动 ②。

7.3 安装完成后就可以打开第三方软件使用ASI相机了，比如PHD2导星软件。

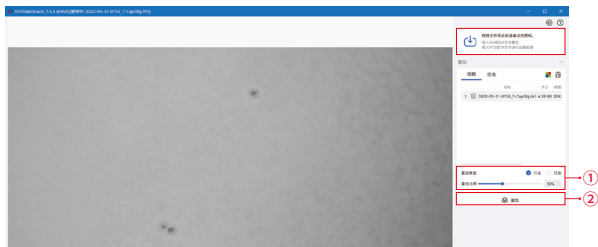


后期处理

1. 打开ASIStudio, 选择【行星视频叠加】【ASIVideoStack】, 单击打开。



2. 点击图标 , 选择需要叠加的视频文件, 也可以将视频文件拖入到图标  位置

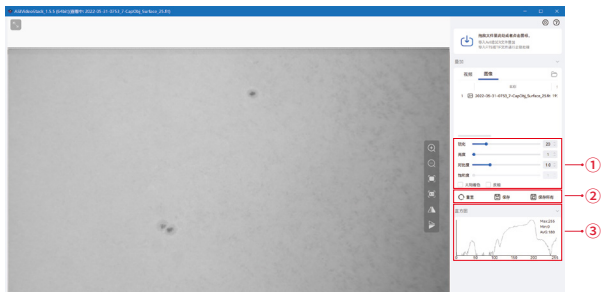


3. ①设置叠加参数, 根据拍摄目标选择叠加类型, 根据视频整体画质选择叠加比例, 整体画质越好, 画面越稳定可以增加比例。

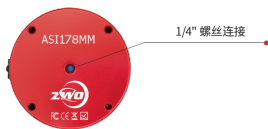
②单击  开始叠加。

4. 叠加完成，会自动跳转到图像页面。

- ①对图片进行参数调整
- ②对图片参数进行重置，或者保存图片。
- ③当前图片直方图，可以结合直方图来调整参数。



连接外部设备



如何连接望远镜



1. 拧下相机前端的镜头和黑色环（如有），或打开相机盖子



2. 安装配套的T筒接环



3. 取下天顶镜上的目镜，装上相机



4. 用配套的USB 3.0数据线连接相机和电脑



5. 打开ASICap拍摄软件，调出相机画面，设置参数



6. 转动调焦轮，使画面里的目标清晰

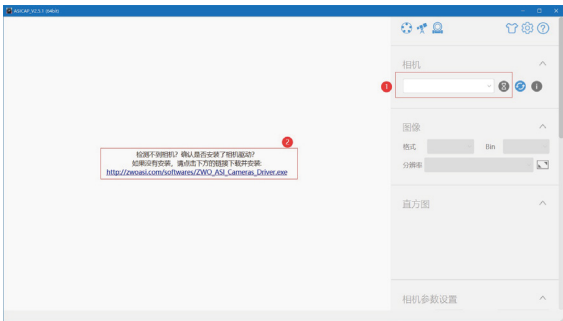
常见问题

1. 打开软件找不到相机？

1.1 确认相机是否正确连接电脑，尝试切换USB接口，检查线缆接口是否损坏。

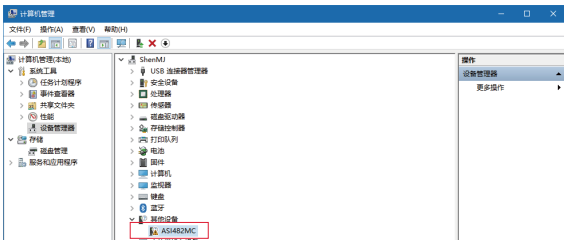
1.2 检测驱动是否安装。如未安装，可以点击链接进行下载和安装。

<https://www.zwoastro.cn/>



2. 驱动安装后仍找不到相机？

请查看设备管理器，如显示问号【?】和叹号【!】，请卸载删除驱动，并关闭杀毒软件或者防火墙，重新安装驱动，重启电脑。



3. 相机的帧率没有达到官方给出的最高帧率？

3.1 确保相机连接电脑的 USB 3.0 接口，如图所示：



如果当前端口显示 USB2.0，请检测是否使用的是 USB 3.0 数据线，同时检查并确认电脑端口为 USB 3.0。

3.2 在【更多设置参数】的选项里勾选【高速模式】。

如下图中 ① 所示。**行星摄影我们不推荐使用高速模式。**

3.3 调节USB带宽，如下图中 ② 所示。我们推荐80%-90%，可以根据电脑性能调整。更高的带宽，对电脑的性能要求也越高。



3.4 曝光时间对帧率的影响。帧率就是每秒输出多少幅图像,常用fps表示。分辨率不变的情况下, 帧率=1s/曝光时间 (s) , 即曝光时间为1秒时候, 帧率为1 fps。



扫码查看快速指南教程



扫码关注公众号



ZWO 官方网址

苏州振旺光电有限公司 Suzhou ZWO Co., Ltd.

电话: +86 0512 65923102

官网: <https://zwoasi.com>

QQ群: 875338271

新浪微博: <https://weibo.com/wenjha>



Scan to watch
operating video



Facebook Page



ZWO WEB

SuZhou ZWO Co., Ltd.

Tel: +86 0512 65923102

Facebook: <https://www.facebook.com/zwoastro/>

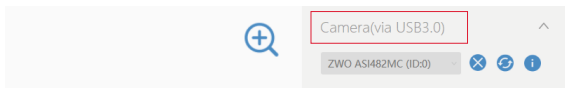
Instagram: <https://www.instagram.com/zwoastro/>

Twitter: <https://twitter.com/zwoastro>

Web: <https://www.zwoastro.com>

3. Why my camera can't reach the max FPS that ZWO claims?

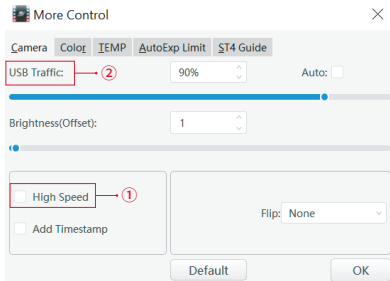
3.1 Please make sure it is the USB 3.0 port of the computer that the camera is connecting to. See the figure below.



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 = $1s/\text{exposure time (s)}$. If the exposure time is 1s, then the fps in this case is 1fps.

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.

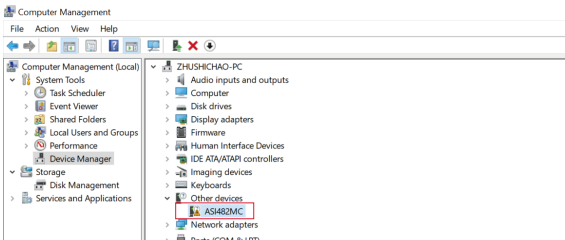
1.2 Check if the driver has been installed properly. If not installed, you may click the link below to download:

<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.



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 a USB 3.0 cable.



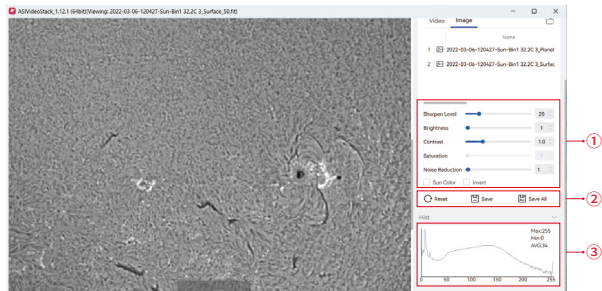
5. Open ASICap to bring the image, adjusting the shooting setting.



6. Do focusing.

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?



Connection with
the 1/4" screw



ST4 guide cable

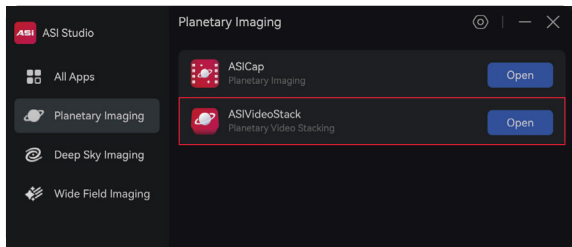



USB 2.0 &
USB 3.0 cable

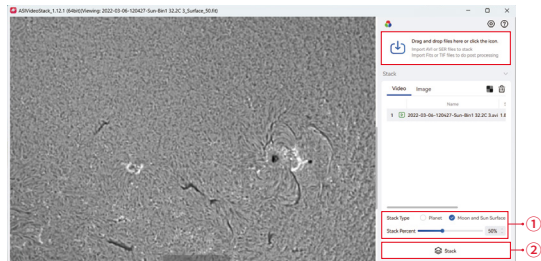


How to do post processing?

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.

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

ASICAP_V2 5.4 (64bit) (ZWO ASI483MC 35.8°C)

The screenshot shows the ASICAP software interface. On the left, a status bar displays 'Current FPS' with a value of 'Average fps: 27.5, 3064 Frames/0.017, dropped frames: 0'. On the right, the 'Camera via USB3.0' panel is visible, with several sections highlighted by red boxes and labels:

- Image setting:** Includes 'Formal: RAW8', 'Bin: Bin1', and 'Resolution: 1024*1380'.
- Camera setting:** Includes 'Exposure: 15', 'IMD: 1-130ms', and 'Gain: 164'.
- Save path Integration:** Includes 'Path: C:\Users\thuanh\OneDrive\ASICAP' and 'Link: Frames' and 'RAW Data'.
- Pictures:** A button with a camera icon.
- Videos:** A button with a video camera icon.

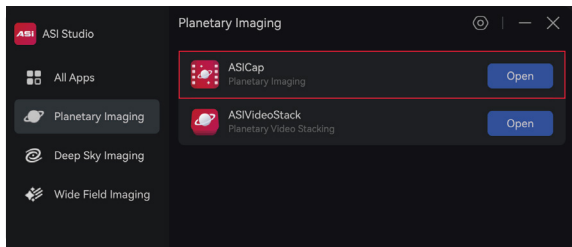
7. If you use the third-party software, the [ASCOM driver] is needed. You will need to download and install ASCOM Platform first and then ASCOM Driver. Then you may be able to use the third-party software like PHD2.

The screenshot shows the ZWO Software website. The navigation bar includes 'Product', 'ZWO Forum', 'Software', 'Explore', 'Support', and 'About Us'. The main content area is titled 'Windows' and contains the following information:

- A red box highlights the text: 'In order to use the camera, Windows users must install the native driver. Please install the ASCOM Platform prior to installing the ASCOM driver.'
- A red box highlights the text: 'If you encounter any issues after installing the ASCOM driver, consider installing the required .Net Framework (3.5, 4.5.2).'
- Two download buttons are visible: 'Camera Driver' and 'ASISStudio'.
- The 'Camera Driver' section includes the text: 'Windows users must install a native driver to use ASI camera.' and a 'Download' button.
- The 'ASISStudio' section includes the text: 'ZWO ASI Official astronomy software, specialized in planetary imaging, DSO imaging, live stack and other useful astronomical image processing gadgets.' and a 'Download' button.
- At the bottom right, it says 'Other Ver: x86'.

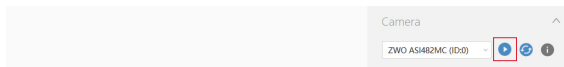
3. Double click the files to install ASI Camera driver and ASISStudio. Follow the prompts to complete the installation process.

4. Open ASISStudio, and then choose the planetary imaging software [ASICap].



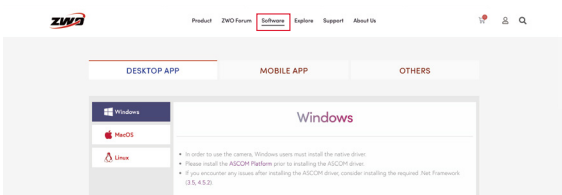
5. Connect the camera to the USB 3.0 port of your computer via the USB 3.0 cable in the camera package.

Click the play button  to turn on the camera.

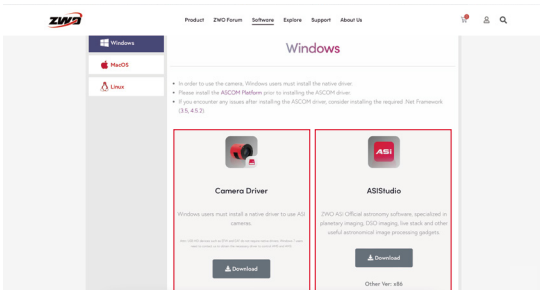


How to connect to the computer ? (For Windows users)

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



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



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.