OPTICSTAR PX-126
Video Camera for Imaging and Auto-Guiding

SOFTWARE INSTALLATION GUIDE

Software Compatibility: with Microsoft Windows (64-bit & 32-bit) 7/8/10/11.

CAUTION

1. Do not drop your camera as this can result in serious damage.
2. Do not point the camera to a bright light source like the Sun without the appropriate filters as this will damage the sensor.
3. Disconnect the camera from the computer when not in use.
4. Treat the camera glass window with the same care as you would of a photographic

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Manufacturer's Warranty
This product has a 1 year back to base warranty. For after sales support, please contact Opticstar at: info@opticstar.com

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Overview

The PX-126 series of video cameras include the PX-126C (colour model) and the PX-126M (monochrome model). The PX-126 is suitable for imaging the planets, the Moon and the Sun. It can also be used as an auto-guide camera and it is suitable for microscopy when fitted with an appropriate attachment.

Please note that for solar photography, the camera should be used only with an appropriate solar telescope and/or solar filters.

Software Support

The camera is bundled with the **OpticstarSky** application software for capturing and storing images and video. The software also includes some image processing functionality such as image stacking. Optionally, the camera can be used with some third-party application software that support Microsoft's DirectShow standard. Support is also included for the TWAIN communication protocol that allows third party application software to import images from digital devices such as the PX-126.

In addition, **PHD Guiding** software is bundled with the camera that allows the PX-126 to be used as an auto-guider. Auto-guiding is supported through the ASCOM software standard ensuring wide support with third party applications.

Package contents:

- Opticstar PX-126 video camera.
- C to 1.25" telescope adapter (nosepiece).
- USB cable.
- Auto-guide cable.
- Software CD.
- Setup Guide (this document) and User Manual on CD.

Software Installation

The minimum computer system requirements are the following:

- Microsoft Windows (32-bit or 64-bit) 7/8/10/11 with the latest update.
- USB 2.0 / USB 3.0 port for the camera.

Please ensure that the camera is **not** connected to the computer yet.

The installation of the software should be carried out by a user with *Windows administrator permissions.* Otherwise, the installation may fail.

Insert the CD into the drive and open the **OpticstarskySetup.exe** file. This program will install two pieces of software:

1. Windows driver software for PX-126.
2. **OpticstarSky** application software.
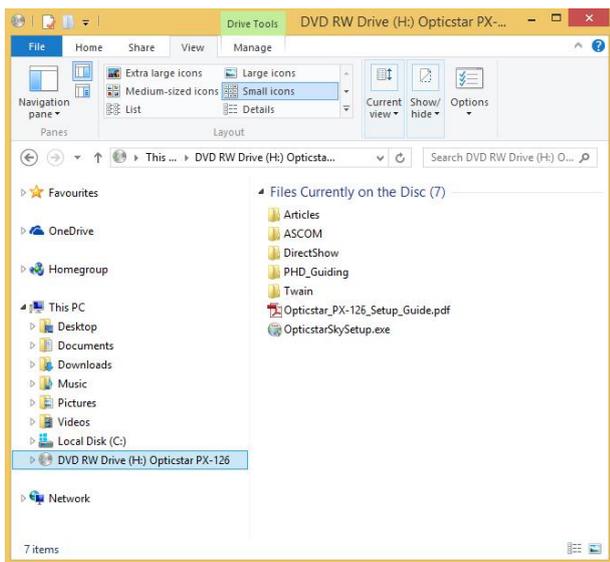
Anti-virus software may attempt to block the software installation. In such cases the anti-virus software should be temporarily disabled. Otherwise, when prompted, add the installation files to the trusted list.

The camera does not incorporate any optics and therefore it cannot reach focus by itself. A C-mounted lens must be used with the camera or it must be attached to a telescope with the nosepiece adapter that is included with the camera. To attach it to a microscope, please use an appropriate attachment.

Plug the camera to a USB port of your computer. The camera will be identified as PX-126 in Windows Device Manager and in **OpticstarSky**. To run **OpticstarSky** click the program icon on the Windows Desktop.

In some cases, the camera may not be identified by Windows or **OpticstarSky** immediately after the installation. In such cases, unplug the camera and restart the computer before continuing. Once Windows has restarted, plug the camera to the computer and open **OpticstarSky**. The following sections outline how to capture images and video. Please refer to the camera's user manual on the CD for more information.

Getting Started with OpticstarSky

Once **OpticstarSky** is running, it will list any connected cameras on the left-hand panel as <u>PX-126C</u> or <u>PX-126M</u> (**A**). Click on the listed camera to activate it. The camera will display video on the main pane (**D**). A tab (**B**) will also appear as "Video [PX-126]" to access video pane easily during the imaging session.
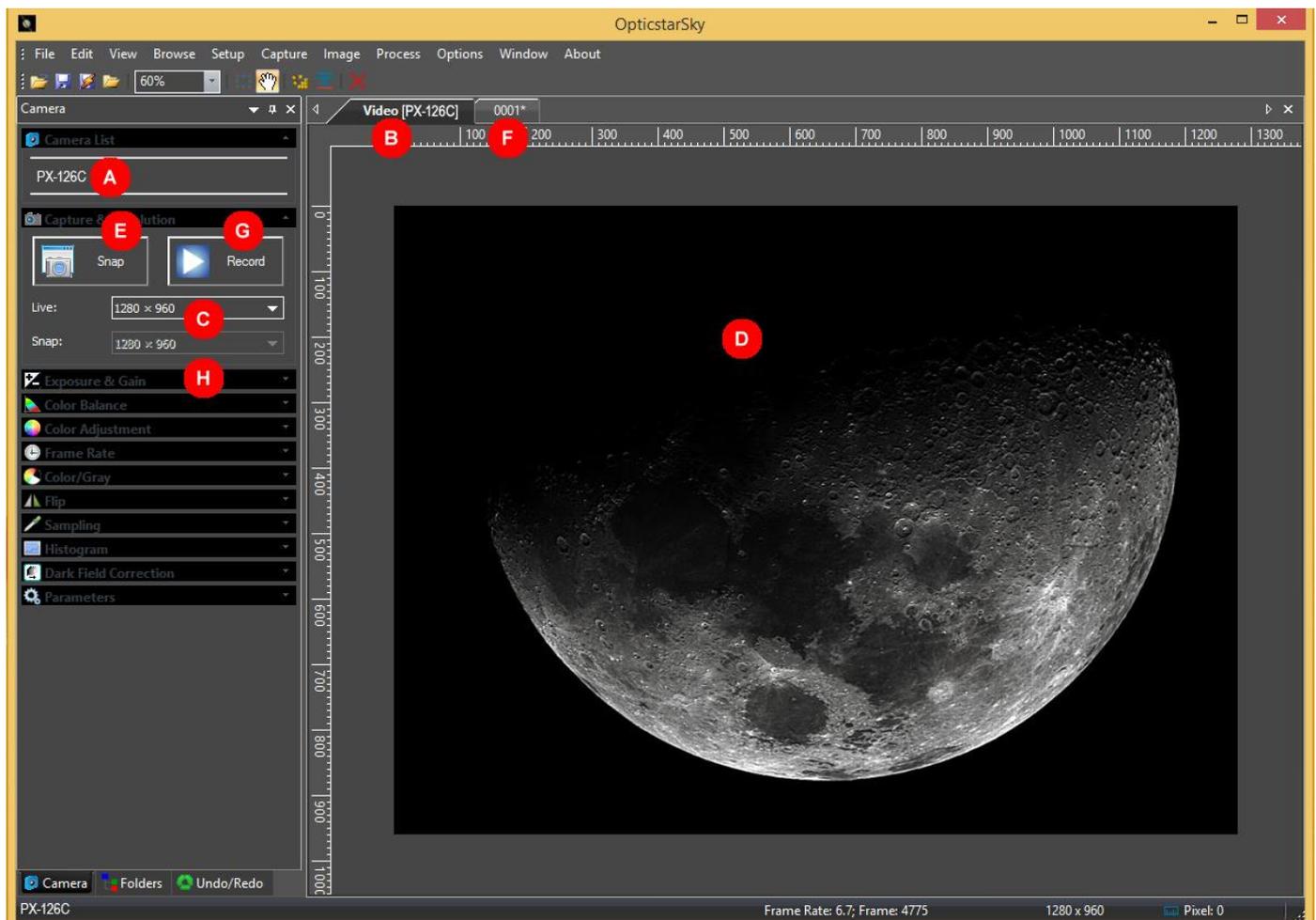
Capturing Images

Single-shot images can be captured by clicking the **Snap** button (**E**) and can be accessed from the new tab titled **0001*** at the top of the image pane (**F**). Images are displayed and captured at the selected resolution (**C**). Captured images can be saved to disk from the **File** menu.

Capturing Video

Video can be captured by clicking the **Record** button (**G**). A dialog window will appear asking to enter the file name and folder that the video file will be stored.
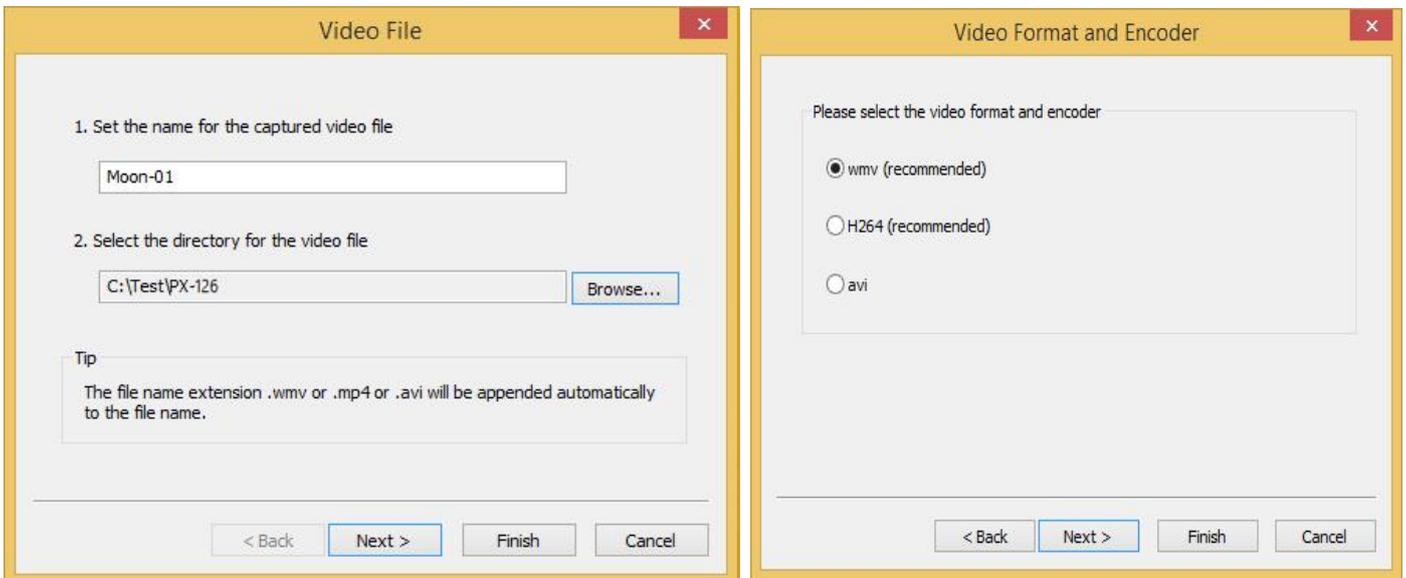
On the following page select the type of video compression to be used. If you are not sure what to select, just leave it at the default option which is usually the WMV format.

Exposure Time

In astronomy, the exposure time should be selected manually from pull down menu (**H**) on the left panel.

Un-tick the **Auto Exposure** option and set the exposure time from the sliding bar or by clicking on the time and typing the exposure time manually in milliseconds.

The valid exposure time range of the PX-126 is from
0.4 milliseconds up to 15,000 milliseconds (15 seconds).
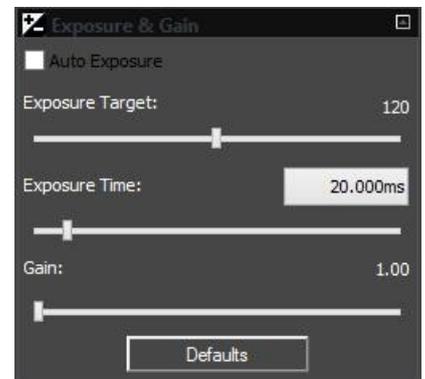
Gain

The **Gain** can be set from 1.00 up to 3.00. By increasing the **Gain** value, the light sensitivity of the camera increases significantly but the image quality degrades. As a general rule, using gain at lower values is beneficial because the exposure times may be shorter, hence minimising the side effects of the Earth's atmosphere whilst maintaining high image quality.

Further Reading

For more information on OpticstarSky, DirectShow support, TWAIN support, auto-guiding and troubleshooting please refer to the user manual on the CD.