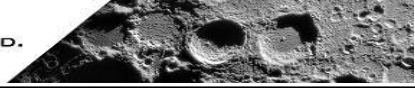# ZWO 相机固件升级参考手册

ZWO Camera Firmware Upgrade reference manual

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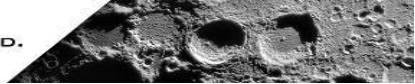Web: http://www.zwoptical.com

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Note

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Chapter 1: Firmwareintroduction

Firmware: It is a read-only program stored inside the camera. It is an important part of the camera, taking on the most basic work. It should work well before the driver works.

Our firmware has2 parts. one part is responsible for the communication of the camera. another part is responsible for the data collection and sending of instructions and some simple processing.These two parts can be upgraded independently.

Chapter 2: How to upgrade it

2.1 Run the FWUpdate tool.

The FWUpdate tool is a small application that doesn't need to be installed.Just double-click to run.

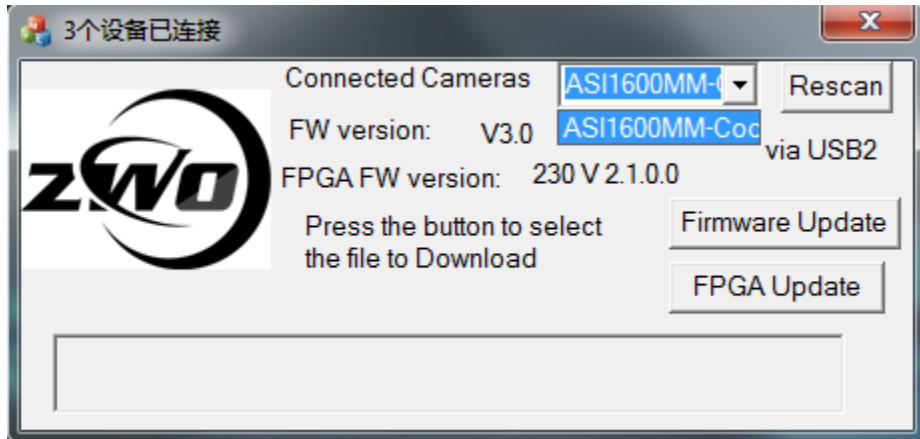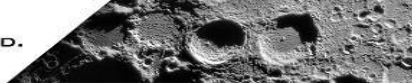If it can not run, and prompts:

The application has failed to start because its side-by-side configuration is incorrect. Please see the application event log or use the command-line sxstrace.exe tool for more detail.

Please install this software first:

https://www.microsoft.com/en-us/download/details.aspx?id=26368
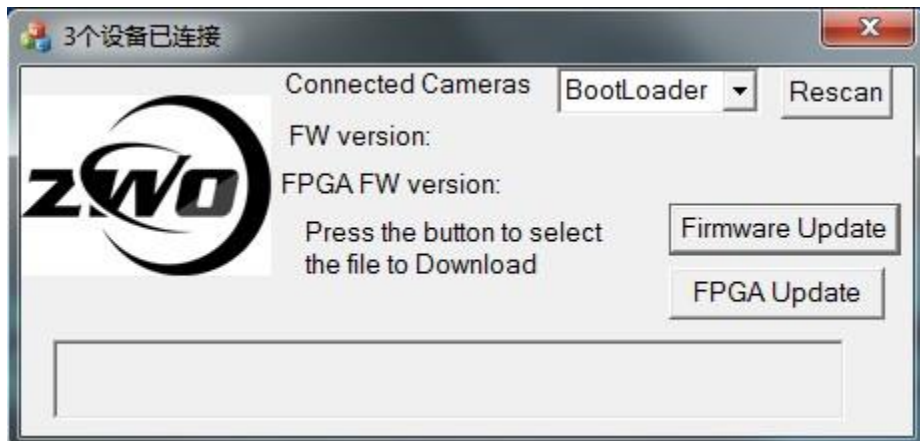
2.2 Get the current camera firmware version.

2.2.1 Connect your camera to the PC. Usually it appears in the drop box automatically. If not, click the rescan button.If you connect multiple ZWO devices, please select the one you need to upgrade.

For example:

The above picture shows an ASI1600MM Cool Camera is connected via USB2.0, and its firmware contains two parts. Part 1: FW Version (V3.0). Part2: FGPA FW Version (230V2.1.0.0).
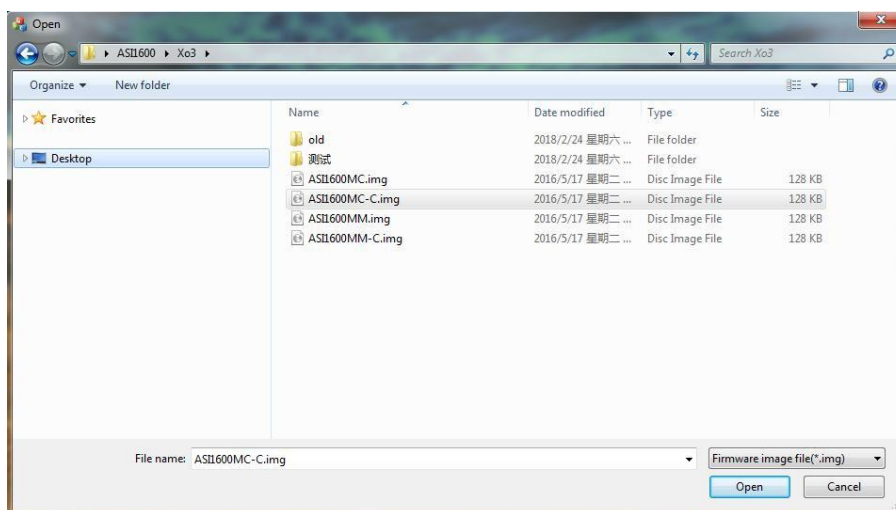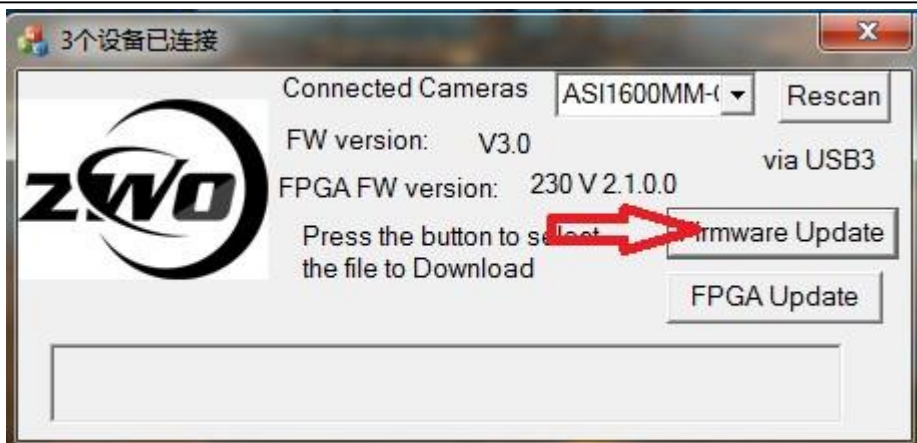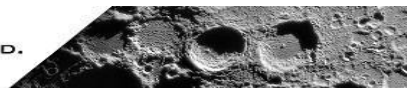
2.2.2 If your camera is connected, the bootloader appears. Like this:

Do not worry, it means that there is no FW is on your motherboard. So just move on to the next step.
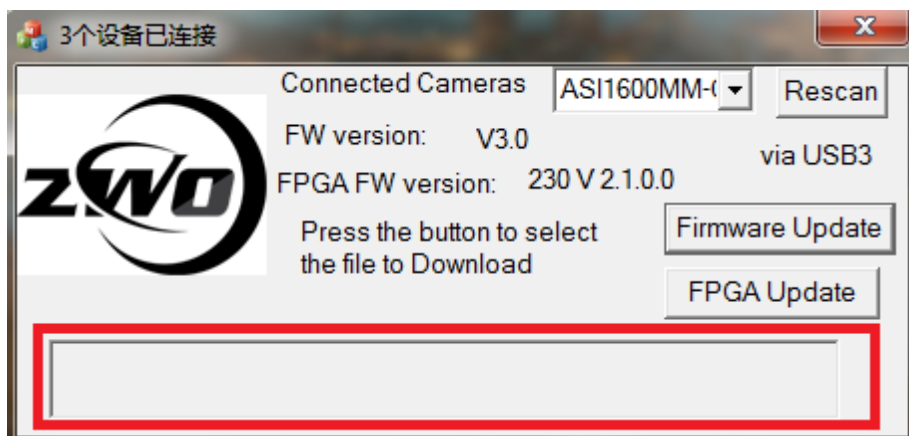
2.3 How to update the Firmware for Part 1

2.3.1 Click the Firmware Update button and select the correct file, then it will automatically start updating. The firmware file is the one that has an "img" suffix.

At the beginning of the download, the current process is displayed at the bottom of the window.

2.3.2 Download status and description.

This part of firmware will be downloaded to RAM first and then it will saved in Flash.

Correct Status A："DownLoading to RAM"**and**"Write RAM success"

These two tips can be ignored.

Error Status B: "Write RAM error"

If the file is not found, select the correct file and try it again. If the error

code shows up, please email us.

Correct Status C："DownLoading firmware to SPI flash"**and**" Firmware update success,please reconnect your camera "

These two tips can be ignored ,it can reconnect itself.

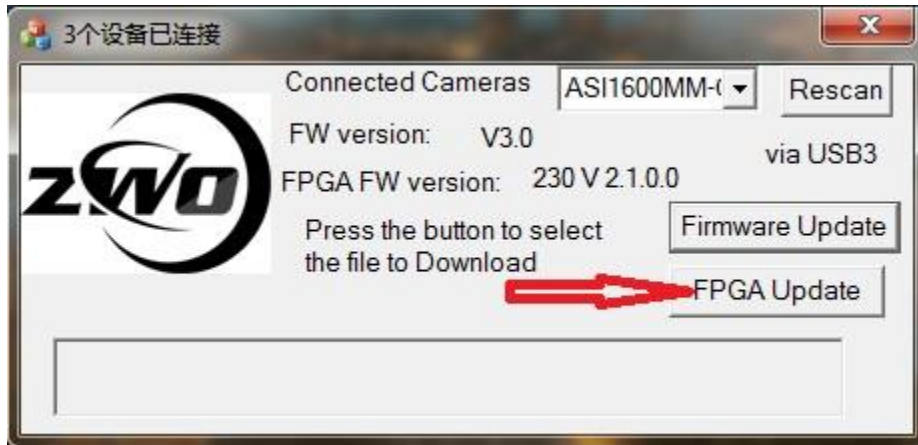**Error Status D:** " Firmware update error"

Please email us.

Notice:

Sometimes the state stays in "WriteRAM Success," and does not continue updating. Please email us at this time.

The upgrade process usually takes three to five seconds.

2.4 How to update the FPGA Firmware for Part 2

2.4.1 Click the FPGA Update button and select the correct file, then it will automatically start updating. The firmware file should be a file with a "vme" or "bit" suffix.

Like the upgrade Part1 of the FW, the progress status will be also shown below. And it needs to erase enough space in Flash before writing.

Correct Status A："erasing...","downloading..."and "success"

These3 tips can be ignored.

Error Status B: "...failed..."

If you have failed information, please email us the information.

Notice

This part of upgrade process takes about 30-35 seconds.

If each step indicates success, it means the upgrade is done. And the please re-connect your camera and then check the version again. They should be different from the previous version.

Please send email to info@zwoptical.com for more information.