PW513 — Optimize Image Quality

Troubleshooting guides (noise, video frame drop)

Checking the PC system specification

Desktop
CPU: Intel® Core® i5-6000 series or above
GPU: NVIDIA® GeForce® GTX 1060 or above
RAM: 8 GB (dual-channel) or more
Laptop
Operating system: Windows® 10
CPU: Intel® Core™ i7-7700HQ or above
GPU: NVIDIA® GeForce® GTX 1050 Ti or above
RAM: 8 GB (dual-channel) or more

Notes:
If you are using a new X570 motherboard with a standalone graphics card RTX 30XX, you can try adjusting BIOS setting from PCIE4 to PCIE3 and plug your PW513 on the USB3.2 Gen 2 port. Also, please ensure the driver of RTX 30XX and BIOS are up to date.

Using our type C to A Cable

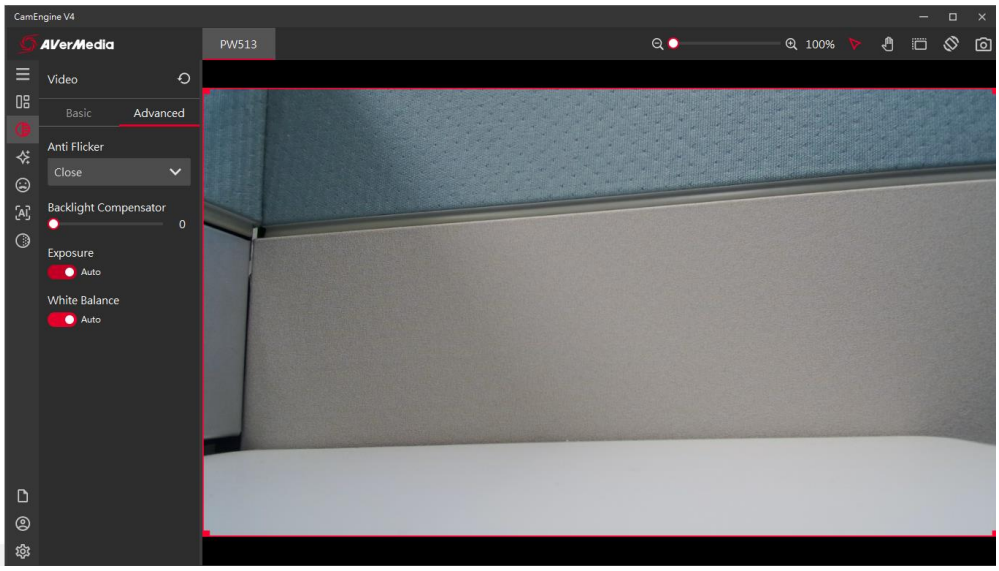
Using our type c to a cable, or use the type c to c cable with transmission speed up to 5 or 10Gbps/sec. We do not recommend using an extension cable. When you use an extension cable, it can severely degrade the signal integrity and affect the overall performance of your PW513 webcam.

Fine tune Manual Exposure and gain value

Please ensure your PW513 firmware is up to date (V46) when you start to use PW513. You can install from the below page and follow the below tutorial video

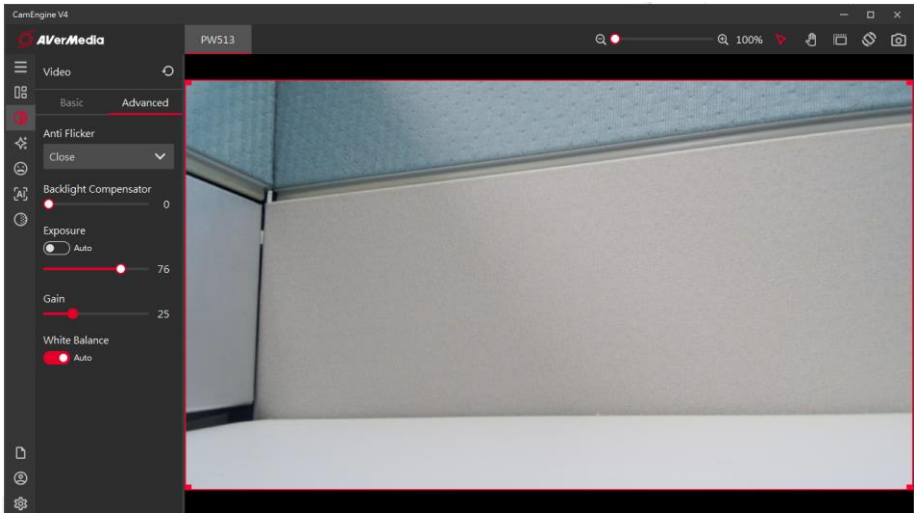
[How can I update the firmware on PW513 - YouTube]

In most situation, automatic Exposure can perform the good video quality.



If you are located in low light environment, setting the exposure mode to manual

Next, please fine-tune the gain value.

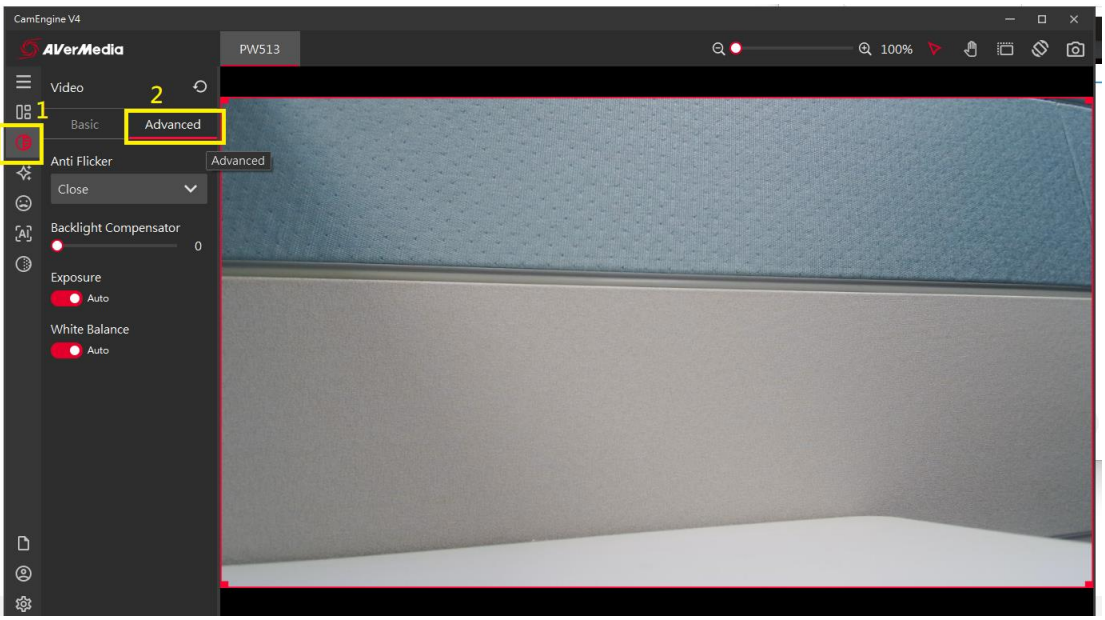


Please note setting PW513 to a higher exposure value will result in slower shutter speed. That means the shutter stays open for longer and lets in more light at the expense of frame rate. That's the side effect if you drag exposure value too high (over 80). If you can fine tune the gain value and set up sufficient light source scenario, it can help you reducing sensor sensitivity which in turn reduces graininess and maintain the high fluency when you are using PW513.

Steps:

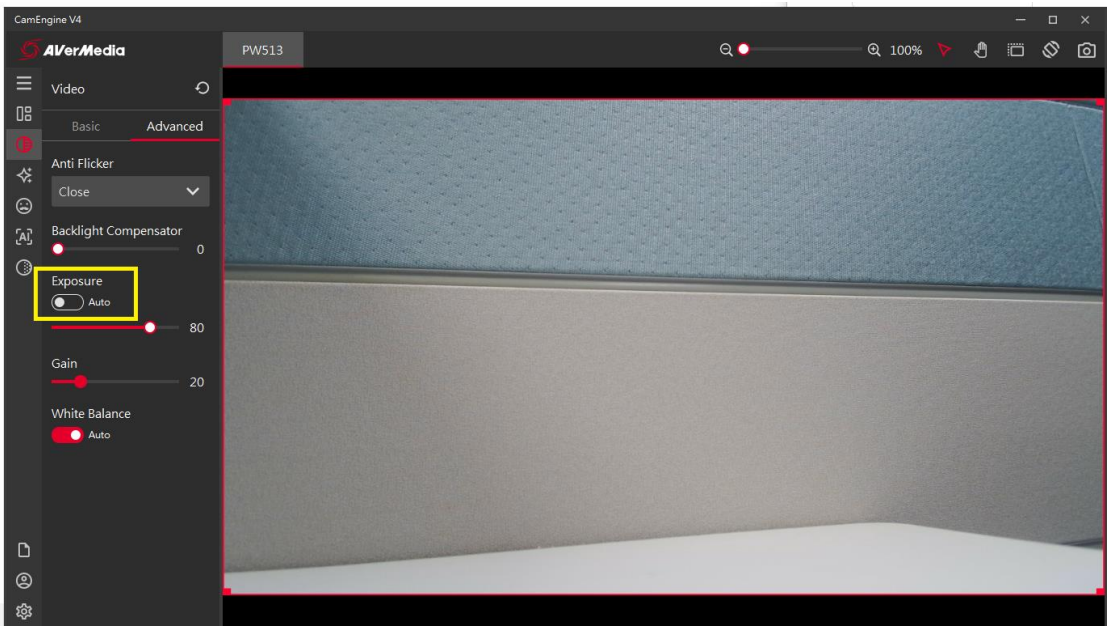
1) Open CamEngine

2) Click on the Video tab in the left-hand settings



3) Toggle off Automatic exposure

4) Set the gain value around 20 to achieve your desired brightness level with minimal noise



Utilizing effective and lighting source

Examples include:

1. Turn on overhead or room lights

Open curtains that may be blocking natural light from a window

2. Adjust The Lighting Condition

Start to set up and gather a couple of lamps from your studio or house, and use them to light up your scene. It can improve the image quality significantly. Lighting doesn't have to be sophisticated, but it is necessary.

3. Ensure that you have a good source of light like a lamp placed on the monitor.

4. Background matters

Make sure to clear out any item that makes the background appear cluttered or unkempt. You should be on the lookout for windows that may let in some light or reflect on the screen. It may be a good idea to set a plain wall for a background to eliminate this problem.