1. **How to test if the camera can achieve the ideal environmental temperature difference?**
   1. Download and install EZCap_QT. For cameras that can support SharpCap, you can also run the test on SharpCap. But with the temperature graph, EZCap_QT makes the change of temperature more intuitive.
   2. Connect the camera to your PC with USB cable and DON'T connect it with 12V power supply.
   3. Run EZCap_QT, wait for half of a minute so that the firmware can be loaded. Click "Connect" in the "Camera" tab.
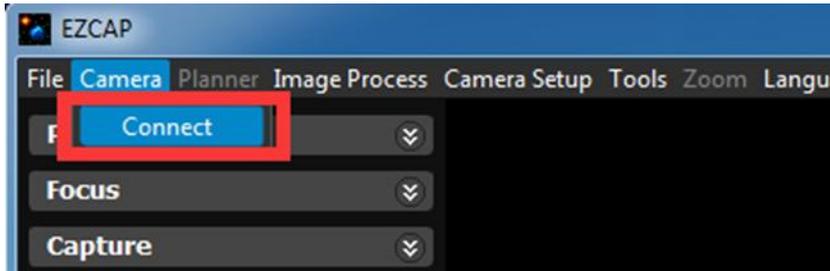
   4. Click "Temp Control" in the "Camera Setup" tab.
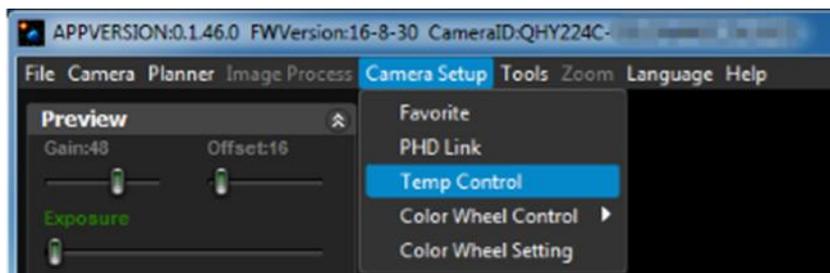
   5. You can see the current environmental temperature is 23℃ in the popup window as shown in the picture below.
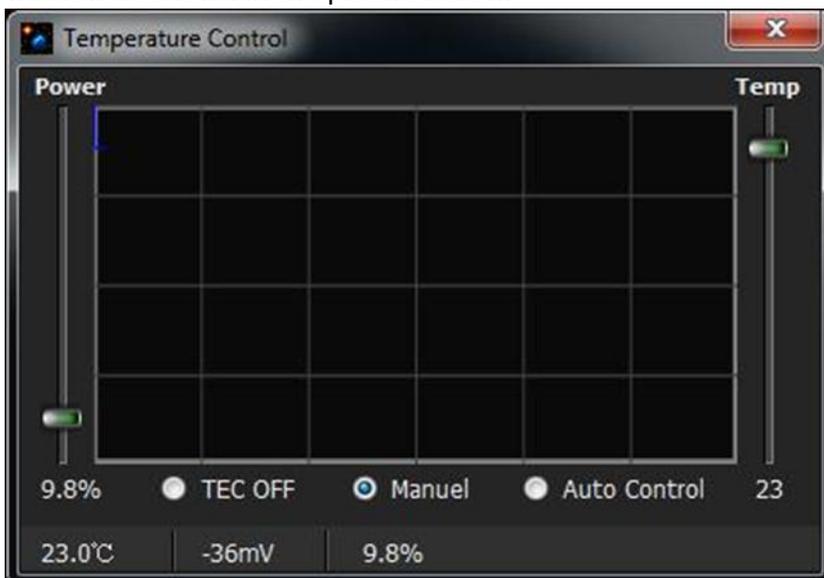
   6. Connect the camera with 12V power supply. Click "Auto Control" and drag the temp bar on the right side down to -50. Then the cooler will try to cool the CMOS down to the lowest temperature possible.
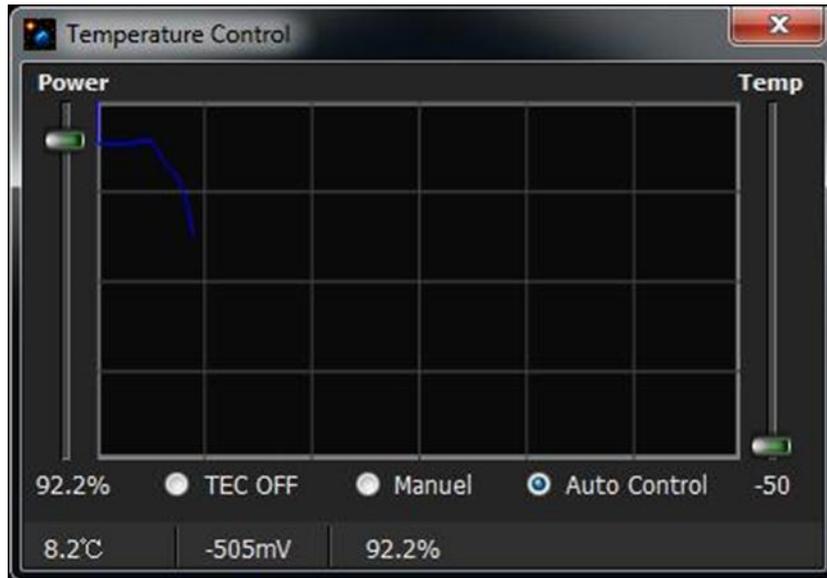
7. Soon, you can see the temperature is falling quickly as shown in the picture below;
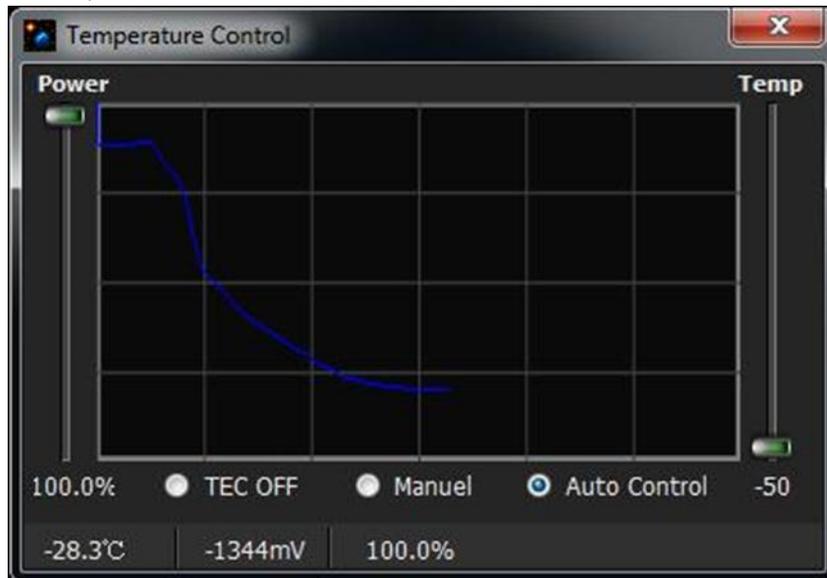
8. Finally the temperature will be pretty steady at some temperature(-21℃ in this case). So the temperature difference is 23 - (-21) = 44℃ and it meets our need. Note that the biggest temperature differences vary with different models of cameras, for detailed information about the biggest temperature difference, please see its corresponding webpage.
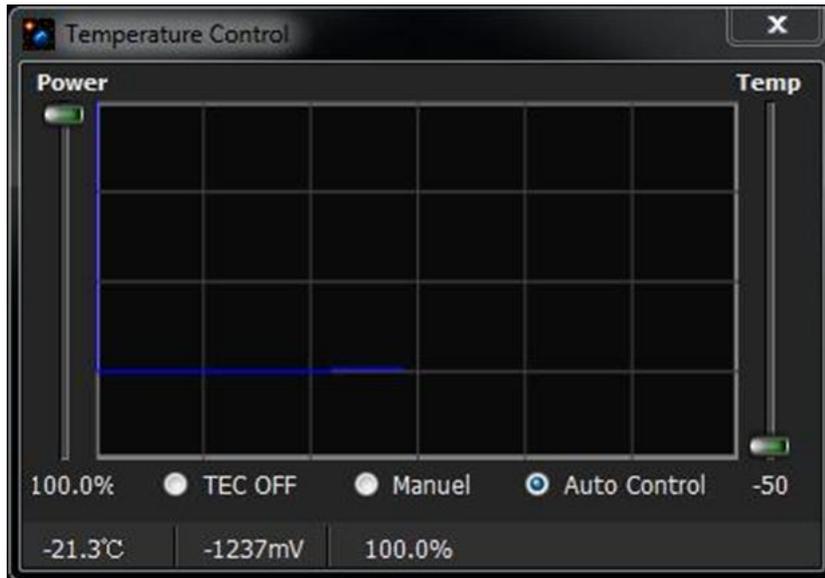
9. You may notice that the power of the cooler is almost always 100%, don't worry about the issue of thermal shock since it works in Auto Control mode. The camera won't be damaged.

2. The frame rate of my camera is very low, and the software often hangs during recording. How to solve this problem?

Windows Power Manager will reduce some performance when using battery. It will reduce the USB performance also so it maybe use the camera work not good in this conditions. The video is easy to be hang, or frame rate very low, or cause the software hang, or cause there is no refresh in image display.

We can solve this problem by following these settings.

1. Enter this settings by click windows icon->setting

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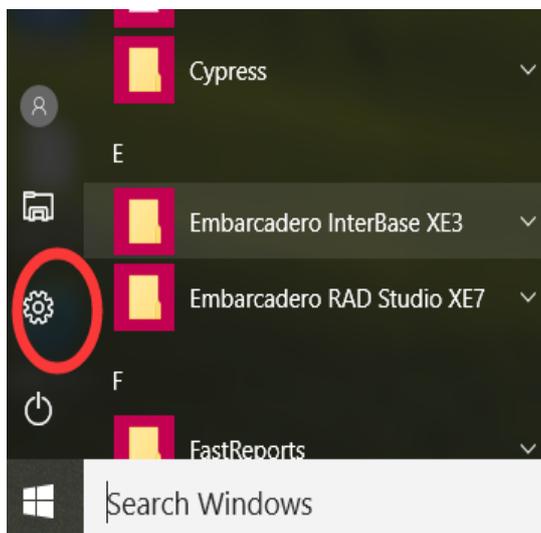
2. In power & sleep, click Additional power settings
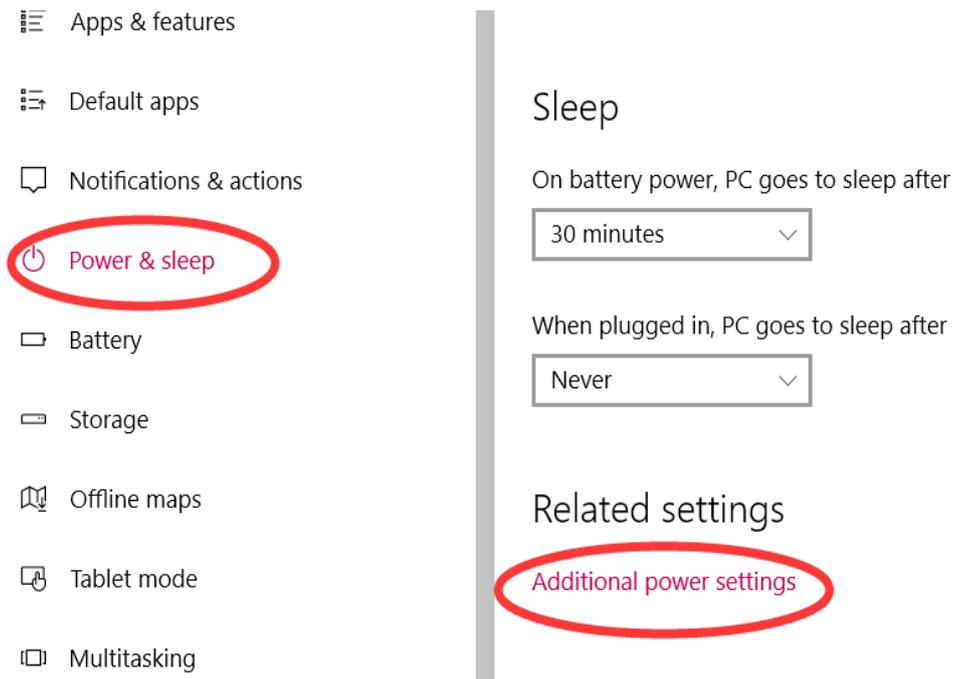
3. Now we are here .Click Change plan settings
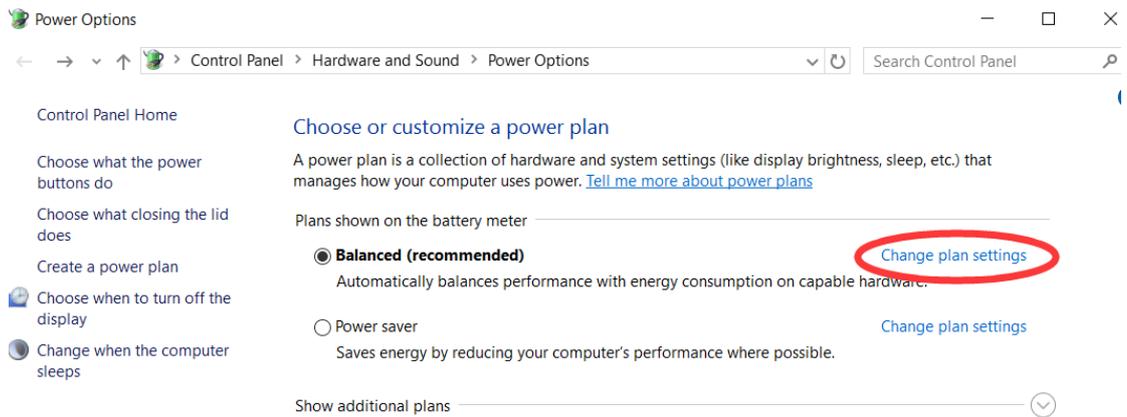
4. Click Change advanced power settings
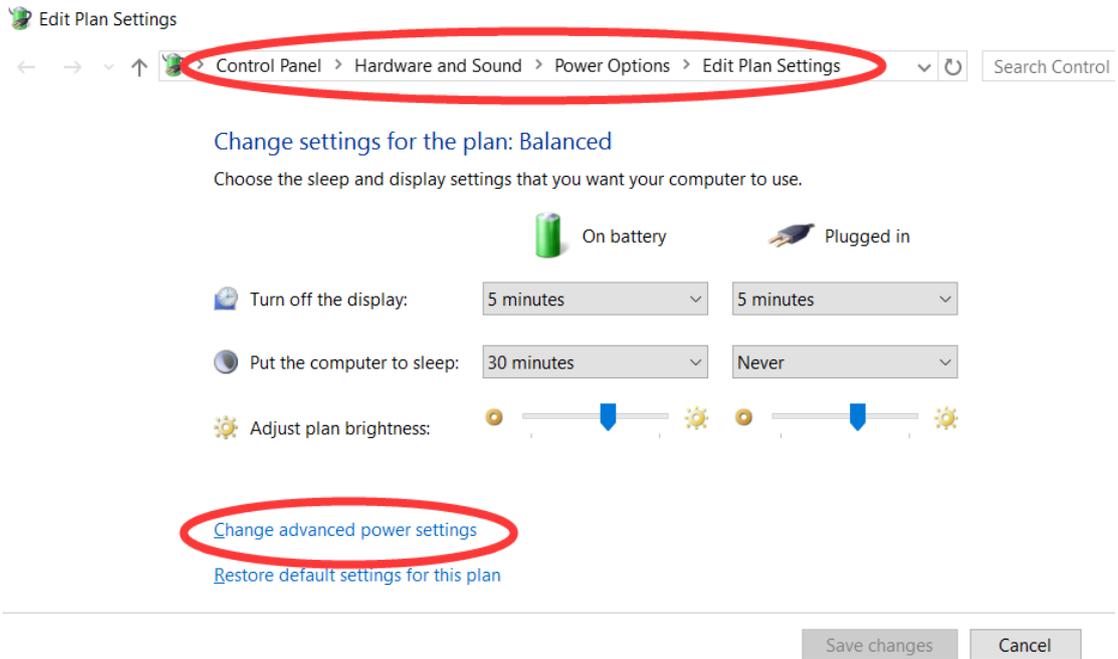
5. The default of USB selective suspend setting is enabled. This will cause the computer reduce the USB transfer performance and cause the image transfer failure or not in good speed. Now we need to disable it.

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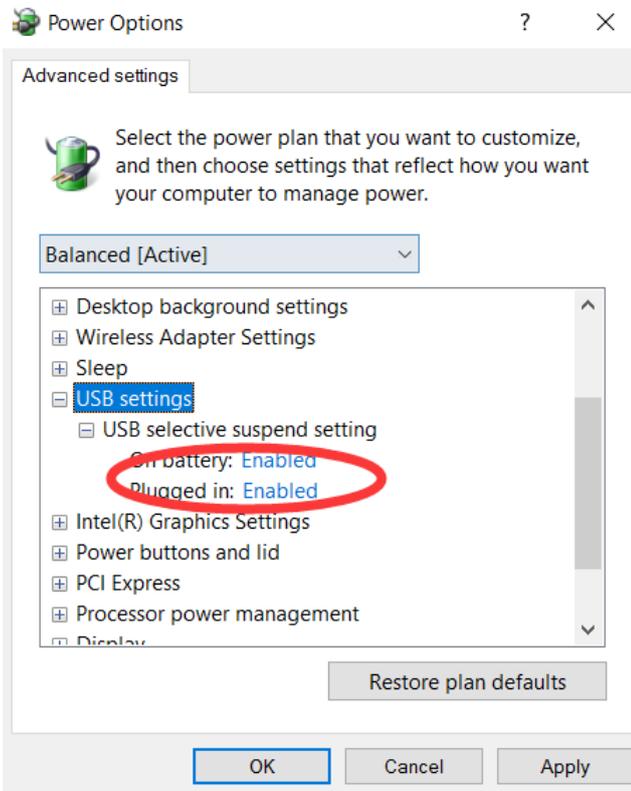
6. Now we disable them. It will fix the problem that camera work not good in battery mode