# **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 °C 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.

Power						Temp
÷						
						<b>i</b>   ,
2.2%	TEC OFF		Manuel	O Auto	Control	-50
		. inti				

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°C in this case). So the temperature difference is 23 - (-21) = 44°C 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.

🙆 Temper	rature Control			×
Power				Temp
100.0%	TEC OFF	Manuel	O Auto Control	-50
-21.3°C	-1237mV	100.0%		

FAQ

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.

- Cypress
   E
   Embarcadero InterBase XE3
   Embarcadero RAD Studio XE7
   F
   FastReports
   Search Windows
- 1. Enter this settings by click windows icon->setting

### 2. In power & sleep, click Additional power settings

I = Apps & features

÷	Default apps	Sleep
$\Box$	Notifications & actions	On battery power, PC goes to sleep after
Ċ	Power & sleep	30 minutes V
	Battery	When plugged in, PC goes to sleep after
<u> </u>	Storage	
₩.	Offline maps	Related settings
균	Tablet mode	Additional power settings
[]]	Multitasking	

#### 3. Now we are here .Click Change plan settings



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FAQ
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4. Click Change advanced power settings

🍞 Edit Plan Settings				
$\leftarrow \rightarrow \vee \uparrow$	ontrol Panel > Hardware and S	Sound > Power Options > Ed	it Plan Settings 🔷 🗸	Search Control
C	hange settings for the p	lan: Balancod		
C	hoose the sleep and display set	tings that you want your compu	ter to use	
choose the sleep and display settings that you want your computer to use.				
		On battery	🛷 Plugged in	
e	Turn off the display:	5 minutes ~	5 minutes	/
	Put the computer to sleep:	30 minutes V	Never	/
÷¢	🕻 Adjust plan brightness:	•	•	×
<u>C</u> t	hange advanced power settings	>		
<u>R</u> e	estore default settings for this p	lan		
			Save changes	Cancel

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.

Power Options	?	$\times$
Advanced settings		
Select the power plan that you want to co and then choose settings that reflect how your computer to manage power.	ustomiz 7 you wa	e, ant
Balanced [Active]		
<ul> <li>Desktop background settings</li> <li>Wireless Adapter Settings</li> <li>Sleep</li> <li>USB settings</li> <li>USB selective suspend setting</li> <li>Plugged in: Enabled</li> <li>Intel(R) Graphics Settings</li> <li>Power buttons and lid</li> <li>PCI Express</li> <li>Processor power management</li> </ul>		*
Restore plan	defaults	;
OK Cancel	Ap	ply

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

Power Options	?	$\times$
Advanced settings		
Select the power plan that you want to co and then choose settings that reflect how your computer to manage power.	ustomiz v you w	ze, vant
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