Carl Zeiss Microscopy

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Suggested BIOS Settings / IRQ Conflict Avoidance

for Stabilizing AxioCam & AxioVision

BIOS SETTINGS

In Many PC systems (including the new i3, i5, i7 processors) we identified some key parameters in the systems' BIOS settings (Enhanced SpeedStep™ and Enhanced Idle Power State, and TurboBoost) that can result in problems with AxioCam live modes (faulty images or system crashes with blue screen). Disabling the two parameters (Advanced Processor Options) solves many of the problems.

Optional-an additional setting, the ACPI suspend type can help stabilize the system as well.

ENTER BIOS AT STARTUP (Key depends on manufacturer)
Typically Del, F1 or F2, and more rarely (Ctrl-Alt-Esc or Ctrl-Alt-Enter)

Navigate to Advanced BIOS Configuration* --> CPU Information

   1.) **Strongly Suggested to Change**
      Disable the following features: (The default setting is Enabled)
   a.) Enhanced Speed Step - Intel SpeedStep™
   b.) Enhanced Idle Power State - Intel C-State tech

   2.) **Disable TurboBoost for any Core i3, i5, or i7** processor-based system.

   3.) **Optional**
   a.) Power Management the ACPI Suspend Type should be set to S1 (Default: S3)

Save settings before exiting the systems BIOS, then reboot the system.

*The menu options will differ based on BIOS manufacturer and version

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IRQ Confict Avoidance

Cameras have very busy data streams and require dedicated Memory Interrupt Requests (IRQ's)
To avoid the camera sharing resources with other devices go to the Device Manger>View menu> Resources by Connection
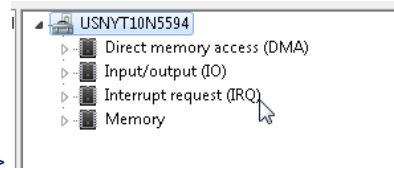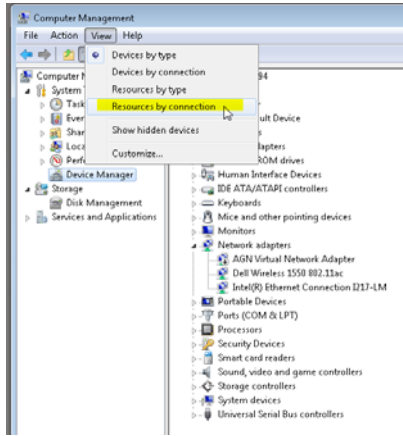
Expand the IRQ subsection   >>

Scroll towards the bottom.
PCI cards are often assigned to an IRQ range of 15-22 so look for the the Firewire card (IEEE1394 controller) there
The number in (parenthesis) is the IRQ #.
Ensure that NO other enabled device has the same number in (XX) as the IEEE 1394 Controller(s).
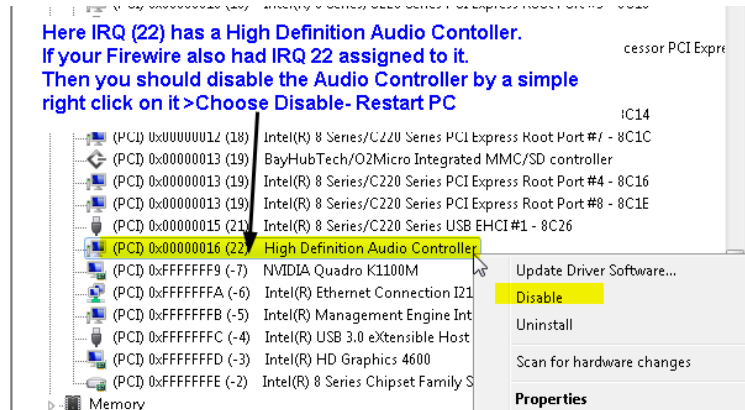**Determine what is a vital vs non-vital system resource***
        Examples of Vital- Processer / PCI bus / some USB (hence keyboard + mouse control lost)
        Examples of possibly Non-vital Audio controller / secondary graphic card / Unused Network card
*Consult your local IT if you have a PC not sold by Zeiss for guidance.

1.) **If it is a non-vita, Disable the device** sharing the IRQ in device manager **Or physically remove the device.**

Here IRQ (22) has a High Definition Audio Contoller.
If your Firewire also had IRQ 22 assigned to it.
Then you should disable the Audio Controller by a simple
right click on it >Choose Disable- Restart PC

2.) **If the Device is a Vital or if you simply want to keep using it: Move one device's PCI card** by plugging them it into a different slot which will hopefully reassign the IRQ- repeat procedure to hopefully see new IRQ assignments.

Restart the PC
See if you now have a more stable camera operation when no IRQ is common between the IEEE1394 and any other device.

For further AxioVision, AxioCam and third party driver issues please contact us at:
1-800-509-3905
Mon-Fri 10 AM-6 PM ET

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