Avid Configuration Guidelines
HP XW8600 Dual Quad-Core CPU Workstation
Media Composer 6.0, Symphony 6.0, NewsCutter 10 and later
(To configure an XW8600 for prior versions of Avid software see the earlier version XW8600 guide posted on the Avid KB)

1.) HP XW8600 AVID Qualified System Specification:

XW8600 / AVID Qualified Operating System:
- Microsoft® Windows 7 Professional 64-bit Edition with Service Pack 1

XW8600 Hardware Configuration

Formally Supported CPU
- Dual Intel® Quad-Core Xeon® X5450 Processors @ 3GHz

- Video Card: NVIDIA Quadro FX 3700 PCI-e video board

- 250GB SATA-II 3Gb/s 7200RPM System Disk Drive (minimum recommendation)

Supported / recommended memory configurations

   Minimum AVID memory configuration: 4GB DDR2-667 Fully Buffered memory

   a) Four 1GB DIMMs, (4 x 1GB) installed in DIMM slots 1, 3, 5, 7
   b) Eight 512MB DIMMs, (8 x 512MB) installed in DIMM slots 1 - 8

   Preferred AVID memory configuration: 8GB DDR2-667 Fully Buffered memory

   a) Eight 1GB DIMMs, (8 x 1GB) installed in DIMM slots 1 - 8
   b) Four 2GB DIMMs, (4 x 2GB) installed in DIMM slots 1, 3, 5, 7

2.) Qualified Operating Systems for Avid Client Editing Applications, Hardware and Shared-Storage connectivity for the HP XW8600 with Media Composer / Symphony 6.0 , NewsCutter 10 or later:

- **Supported: Only Microsoft® Windows 7 Professional 64-bit Edition with SP1 (SP1 required)**

- **Not Supported - Microsoft® Windows XP 32-bit, 64-bit (any version)**
- **Not Supported - Microsoft® Windows Vista 32-bit, 64-bit (any version)**
- **Not Supported - Microsoft® Windows 7 – any 32-bit version, or any version of Home, Ultimate or Enterprise editions.**

Note regarding Service packs:
As of this writing Service Pack 1 is the current Service Pack release for Win7. SP1 is required for Media Composer 6.0, Symphony 6.0 and NewsCutter 10. As future Service Packs are released Avid will evaluate and announce formal support when testing is completed.

3.) Qualified Hardware and shared storage supported:

AVID qualified Hardware / Shared Storage

	Qualified / Supported
Mojo DX	Yes
Nitris DX	Yes
3rd Party Qualified Hardware	See release notes and Avid website for information regarding supported 3rd party hardware (vendor qualified)
Unity ISIS System Infrastructure	ISIS 1.4 Infrastructure
Unity ISIS 1 Gbit Ethernet Client	ISIS 2.03 Client
Unity ISIS Hi-res (10 Gbit) client	**N/A Not Supported**
Unity MediaNet Infrastructure	MediaNet 4.2.4 Infrastructure
Unity MediaNet Fibre	MediaNet 5.1.2 Client
Unity MediaNet AECIFs	MediaNet 5.1.2 Client
1394 Adrenaline DNA	**N/A Not Supported**
1394 Mojo-SDI DNA	**N/A Not Supported**
1394 Mojo-Analog DNA	**N/A Not Supported**

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AVID qualified HBA info

AVID qualified HBA	AVID Part Number	Slot Location	Function
Avid HIB, DX Interface HBA**	Active: 7030-30048-01 Active: 7030-20084-01 Passive: 7030-30021-01	#4	Avid DX Hardware Interface HBA
Vendor Qualified 3rd party hardware interface	Not stocked by AVID	#4	See release notes and Avid website for information regarding supported 3rd party hardware (Vendor Qualified)
Atto R380	7030-20166-01	#5	Local SAS Storage Support – Avid VideoRAID ST (5-bay) Xtore StudioRAID 5Ti (5-bay)
Atto UL5D	7030-20002-01	#5	Local u320 SCSI Storage – VideoRAID RTR & Legacy Avid u320 SCSI storage *(The UL5D BIOS should be disabled)*Shared
Intel PRO 1000 PT	7030-20139-01	#6	Shared Storage: ISIS Copper Gb-Ethernet
Intel PRO 1000 PF - ISIS	Not stocked by AVID	#6	Shared Storage: Unity ISIS Optical Gb-Ethernet
Atto FC-41ES	7030-20004-01	#6	Shared Storage: Unity MediaNet Fibre

Specific Important qualified HBA Support Notes

**** *Avid DX Interface HBA Support Note: (See reference pictures on page 6 of this guide).*

All 3 versions of the DX interface HBA are supported with the Media Composer / Symphony 6.x and NewsCutter 10.x

1) Active DX interface HBA 7030-30048-01
2) Active DX interface HBA 7030-20084-01
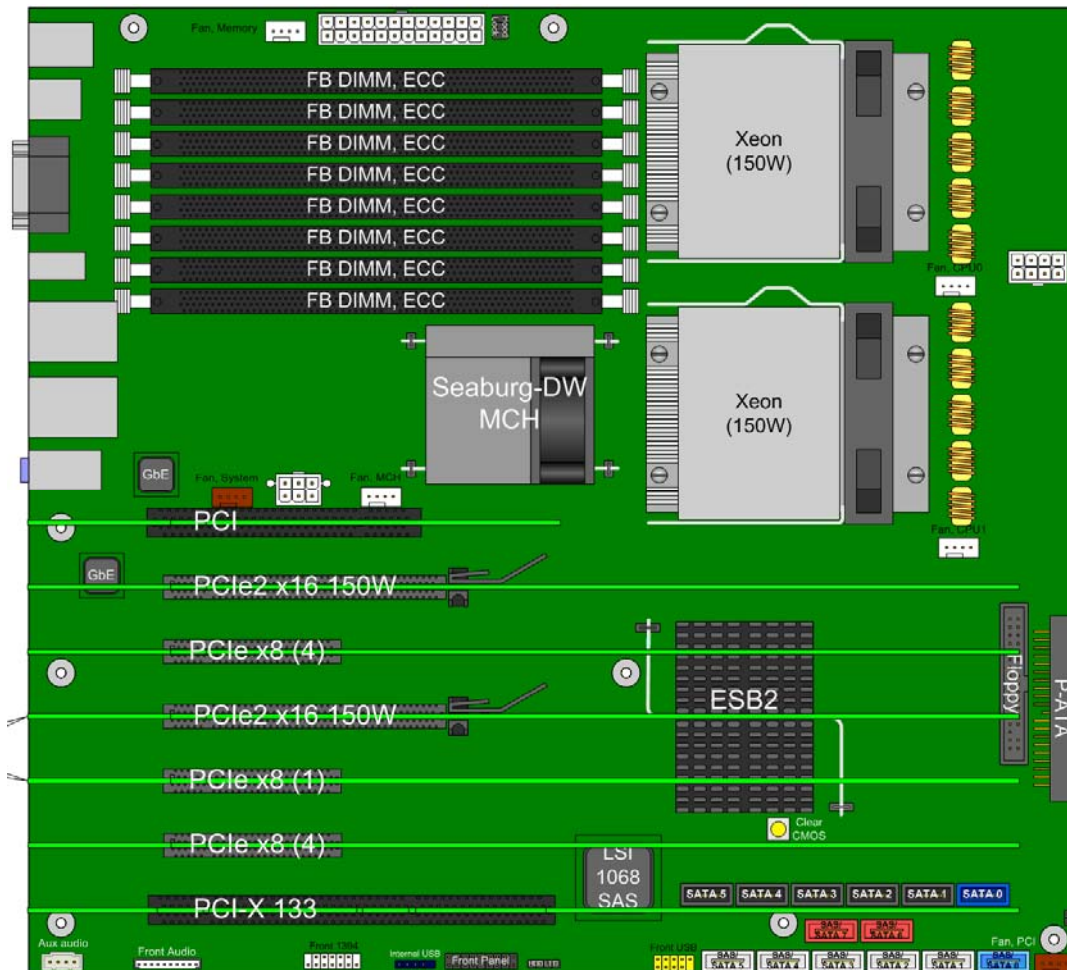3) Passive DX interface HBA 7030-30021-01

4.) Slot Configuration:

Slot Configuration Information			
Slot #	Electrical	Mechanical	
1	PCI 32bit /33MHz	PCI 32/33	**Do Not Use.** Will cause PCI BUS contention with embedded 1394 controller ports (front-panel / rear-panel ports) because it shares the same PCI bus.
2	x16 PCI-E	x16	Quadro FX 3700
3	x4 PCI-E	x8	*Not Used*
4	x16 or x8 PCI-E (Set to x8 electrical via system BIOS)	x16	Avid HIB, DX Interface HBA Active: 7030-30048-01 & 7030-20084-01 Passive: 7030-30021-01 **OR** Vendor Qualified 3rd Party Hardware PCI-e Interface *See release notes and Avid website for information regarding supported 3rd party hardware*
5	X8 or x1 PCI-E (Set to x8 electrical via system BIOS)	x8	Local Storage Controllers: Atto R380 – Avid VideoRAID ST (5-bay) SAS support Atto R380 – Xtore StudioRAID 5Ti (5-bay) SAS support Atto UL5D - Legacy u320 SCSI support *(The UL5D BIOS should be disabled)*
6	x4 PCI-E	x8	Shared Storage Controllers: Atto FC-41ES – MediaNet LAN Share Intel PRO 1000 PT – ISIS 5000 / 7000 Intel PRO 1000 PF – ISIS 5000 / 7000
7	PCI-X 133MHz	PCI-X 64-bit	*** Important – This slot shares the same bus as the embedded SAS 1068 controller. This is particularly important for users utilizing the embedded SAS ports to interface to a local storage array such as the Avid VideoRAID SR. Installation of any non-specified HBA into this slot (in particular a PCI 32- bit/33MHz HBA) will result in severely degraded performance of the embedded SAS controller and associated storage. This slot should not be used if the embedded SAS controller / external SAS ports of the XW8600 are utilized.*

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5.) Utilization of the XW8600 embedded (on-board) 1394 ports for Camera / Deck / Disk Drive support

Media Composer / Symphony 6.0 and NewsCutter 10 do not support Avid 1394 hardware such as Adrenaline and 1394 Mojo-SDI. This simplifies utilization of the XW8600 embedded 1394 ports. The embedded 1394 ports can and should be used for all 1394 Camera / Deck / Disk Drive connectivity for all configurations running Media Composer / Symphony 6.0 and NewsCutter 10.

Configuration	Embedded 1394 utilization for Camera / Deck / Disk Drive support
Avid DX Hardware	**Yes** - Supports 1394 Deck / Camera / Disk Drive (1394 disk drives are recommended only for file transfers)
Software Only	**Yes** - Supports 1394 Deck / Camera / Disk Drive (1394 disk drives are recommended only for file transfers)
Vendor Qualified 3rd Party PCIe Hardware	**Yes** - Supports 1394 Deck / Camera / Disk Drive **However 3rd party hardware and a 1394 Camera or Deck cannot be simultaneously connected.** (1394 disk drives are recommended only for file transfers)

HP XW8600 Slot Layout

Joe Conforti – Avid Technology – May 2nd , 2013

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9.) <u>Various Configuration Issues:</u>

A.) <u>D/X hardware configs</u> –

All 3 versions of the DX interface HBA are supported with the Media Composer / Symphony 6.x and NewsCutter 10.x

1) Active DX interface HBA 7030-30048-01
2) Active DX interface HBA 7030-20084-01
3) Passive DX interface HBA 7030-30021-01

Active DX interface HBA 7030-30048-01   *Active DX interface HBA 7030-20084-01*

Passive DX interface HBA (7030-30021-01)

B.) **Qualified Avid system BIOS version(s):** (As of this writing):

BIOS Ver 1.36 _required_ **for systems running 64-bit Win7 O.S.**

Current Avid qualified XW8600 BIOS information and installers are maintained at the following Avid KB link:

http://avid.force.com/pkb/articles/en_US/troubleshooting/en267609

Required system BIOS change to set PCI-E speeds for slots #4 and #5

During boot up press **F10** at the white HP screen, for **Set Up**.

Select **English**. **<Enter>**

Select the **Advanced** tab

Select **Chipset / Memory <Enter>**

Select **PCIe Lane Allocation (SLOT4: SLOT5)**

Default setting is **AUTO**

Change this setting from **AUTO** to **x8:x8**

Press **F10** to **Save**

Save Changes and Exit

C.) **Nvidia Qualified Driver:**

Nvidia qualified drivers

AVID Software	Version(s)	Nvidia GPU	Nvidia Driver Required
Media Composer / Symphony NewsCutter	6.0 and later 10.0 and later	Quadro FX 3700	275.89
Media Composer / Symphony NewsCutter	6.0.3.4 and later 6.5.2.1 and later 10.0.3.4 and later 10.5.2.1 and later	Quadro FX 3700	310.90

After installation of the AVID software the supported Nvidia driver can be found in the following directory:
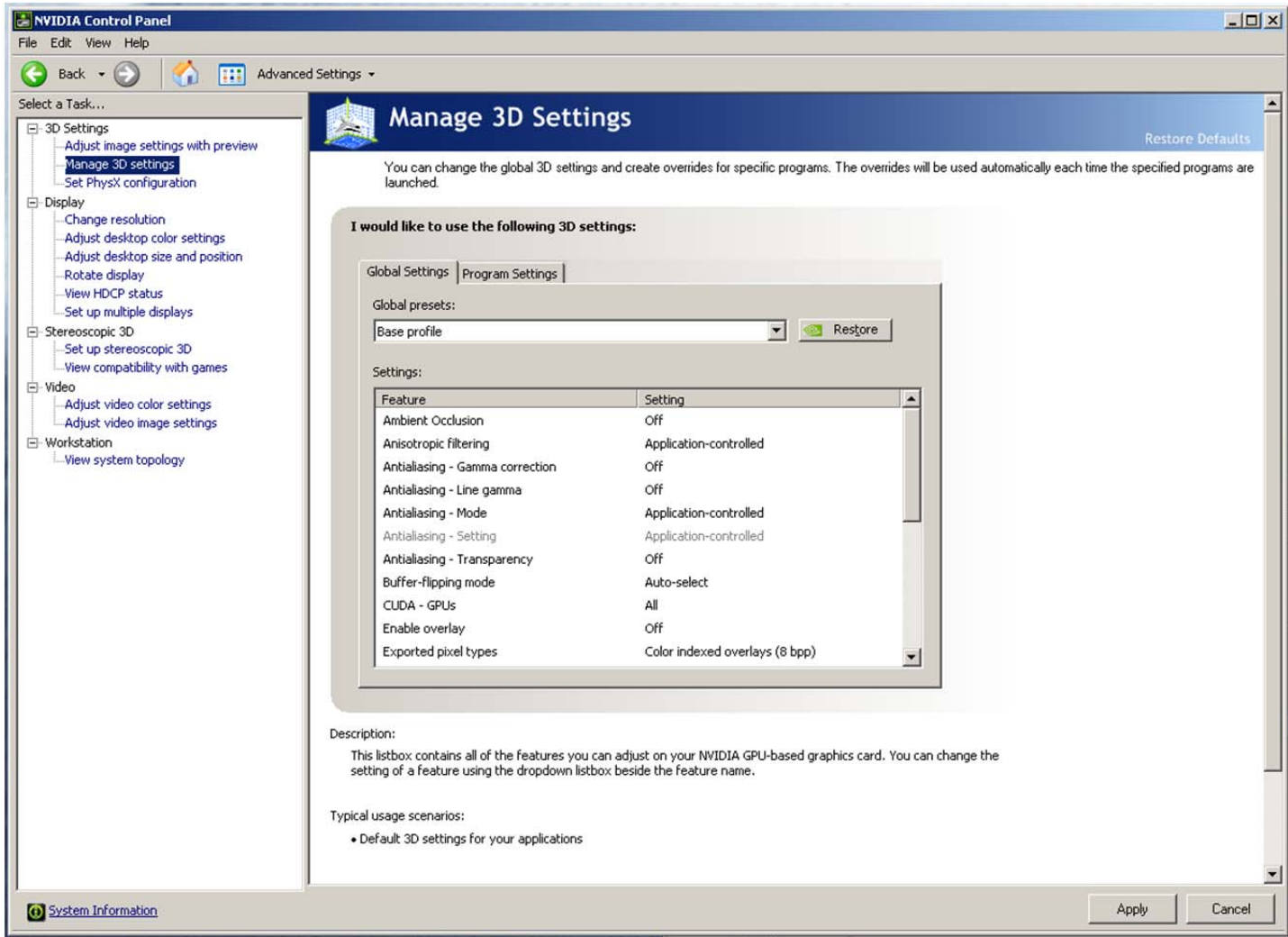Program Files / Avid / Utilities / Nvidia

Please Note: If the Nvidia driver ver 310.90 is not included with the Avid s/w version being installed, the Nvidia driver ver 310.90 can be found on the Avid Knowledge Base.

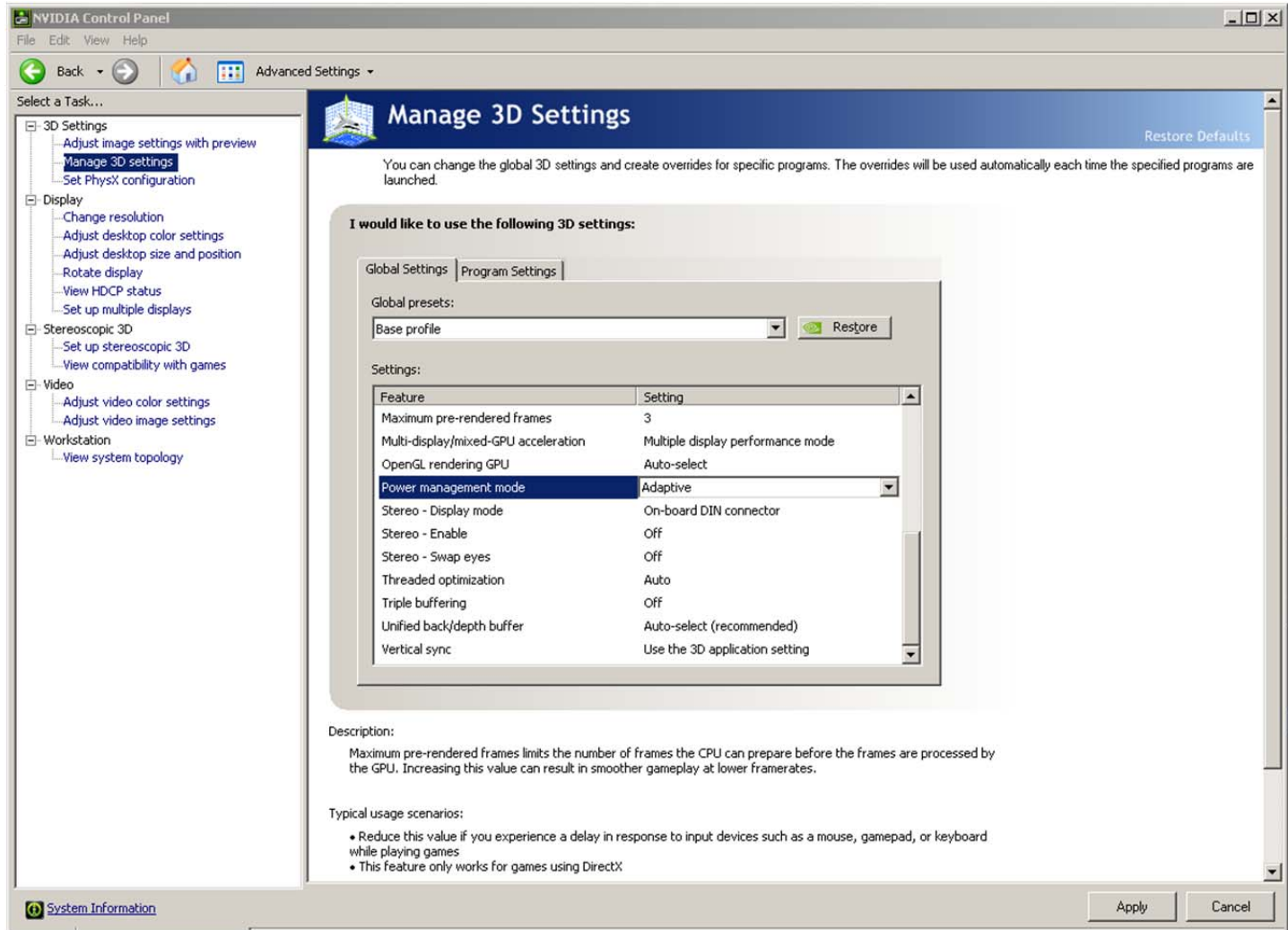**Set optimized Nvidia driver settings for Avid editing environments:**

1. See picture below
2. Right-Click on the desktop and select Nvidia Control Panel
3. Select the "Desktop" menu selection in the control panel menu bar.
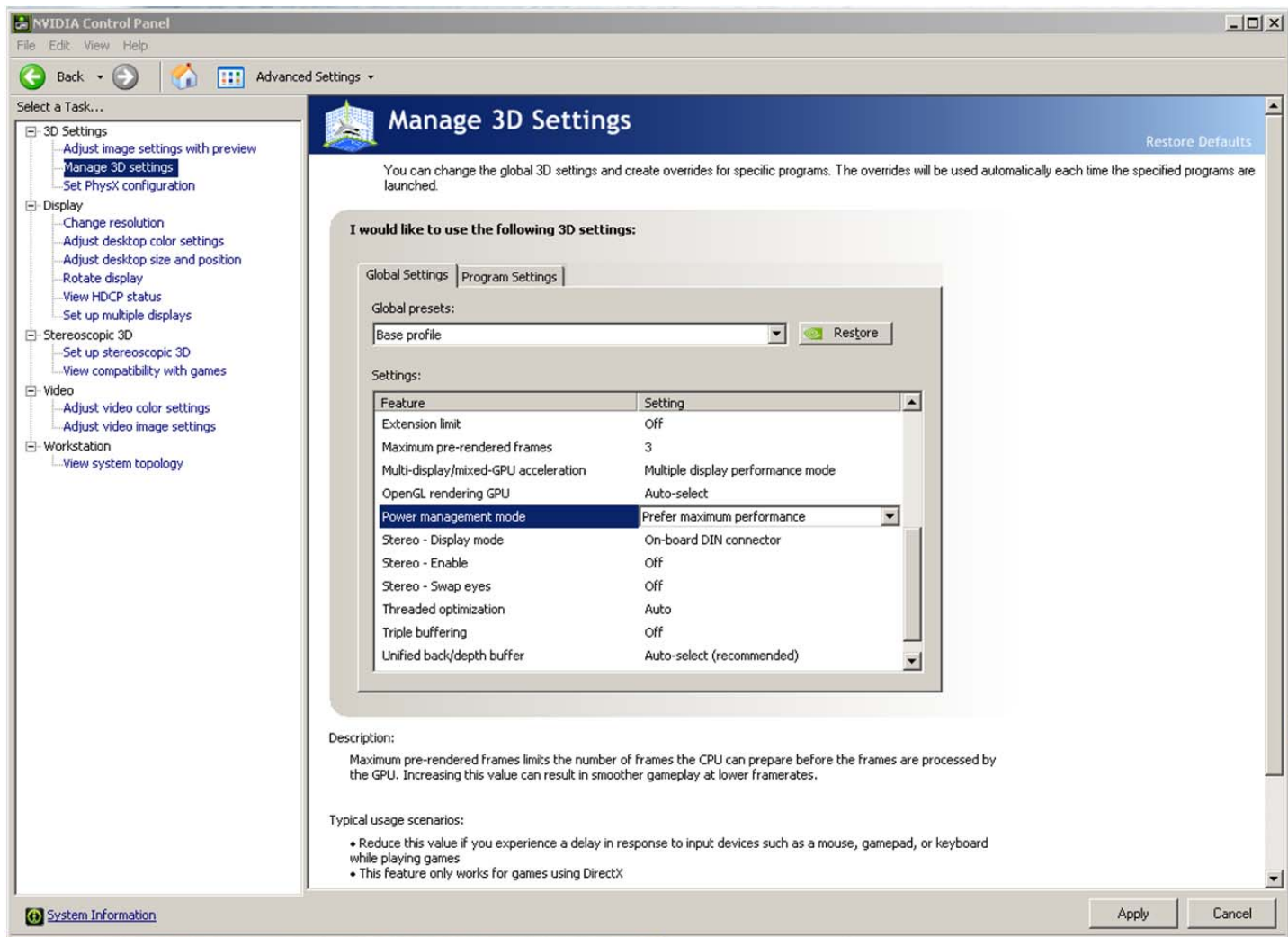4. Enable "Desktop -> Video Editing Mode

5. Select Manage 3D Settings
6. Select "Global Settings" Tab
7. Under the "Global Settings" tab select "Base Profile" as shown in the picture below:

8. Scroll down and locate the "Power Management Mode" feature. The default setting is "Adaptive" as shown in the picture below.

9. For the "Power management mode" feature, select "Prefer maximum performance" as shown in the picture below.
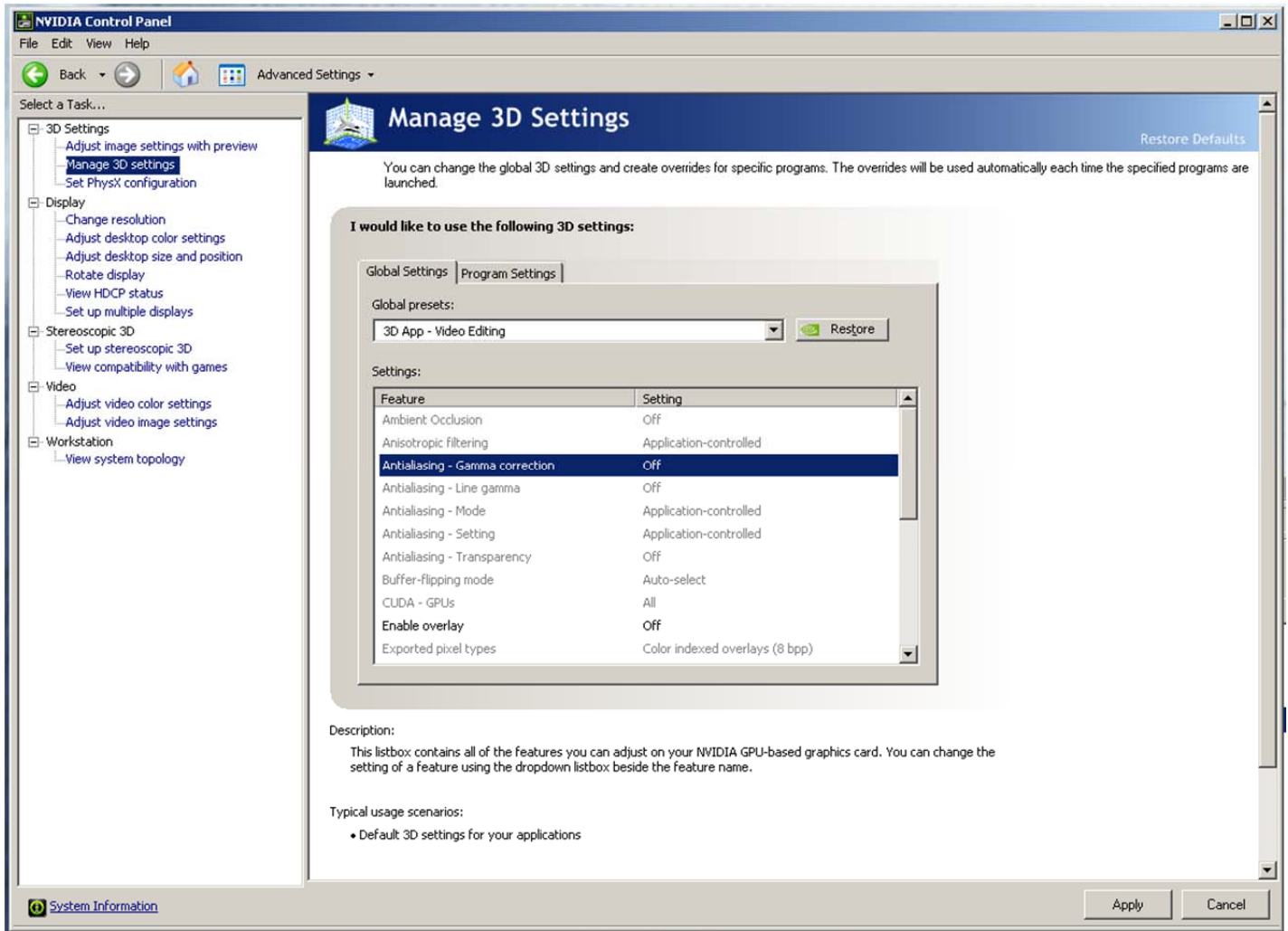

10. Depress the "Apply" button.

Make the following setting for "Multi-display/mixed-GPU acceleration"

11. Stay in the "Manage 3D Settings" and "Base Profile" area

12. Select "Global Settings" Tab

13. Scroll down and locate the "Multi-display/mixed-GPU acceleration" feature. See picture below. The setting should be set to "Multiple display performance mode". If not set properly, select Multiple display performance mode and depress the "Apply" button. (The other settings are "Single display performance mode" and "Compatibility performance mode". These settings are not recommended for Avid editing environments).

Make the following additional setting for "3D App-Video Editing"

14. Stay in the "Manage 3D Settings" area

15. Select "Global Settings" Tab

16. Under "Global Settings" tab select "3D App-Video Editing" setting as shown in picture below:

17. Depress the "Apply" button
18. Nvidia driver optimization settings for Avid environments are complete.

D.) Serial Port Deck Control:

Serial Port Deck Control:

The HP XW8600 workstation does have an embedded serial port. The embedded serial-port has been qualified by Avid and will maintain frame accuracy in Avid environments. Primary or secondary / additional serial port deck control can be established via two methods (both of which have been qualified by Avid and will maintain frame accuracy in Avid environments)

1. Addenda model **RS-USB / 4** direct USB-to-RS422 serial adapter. This is a simple device which connects directly from a USB port of the XW8600 directly to the RS422 port of a deck.
   http://www.addenda.com/addenda-elect/products/rsUSB4.php

2. Combination of a Keyspan (Tripp-Lite) Model USA-19HS USB-to-serial-port adapter with Addenda Rosetta Stone model RS – 2/8 RS232-to-RS422 converter

   - Keyspan (Tripp-Lite) Model USA-19HS (AVID P/N 7080-20013-01)
     http://www.tripplite.com/en/products/model.cfm?txtSeriesID=518&EID=13384&txtModelID=3914

   - Addenda Rosetta Stone (or equivalent) model RS – 2/8 RS232-to-RS422 converter (AVID P/N 7070-00507-01)
     http://www.addenda.com/addenda-elect/products/rs28.php

To connect the Keyspan 19HS / Addenda RS -2/8 combination:
- Install the Keyspan 19HS driver before plugging the device into a XW8600 USB port.
- Once the Keyspan 19HS driver is installed then plug the Keyspan 19HS into a XW8600 USB port.
- The Keyspan 19HS will now show up in device driver.
- Using a serial cable, connect the 9-pin serial port of the Keyspan 19HS USB adapter to the port of the Addenda marked RS232 from PC
- Using a 2nd serial port cable connect the port of the Addenda marked "RS422 to VTR" to the deck control serial port of the deck.

E.) O.S. setting recommendations for optimum performance with Avid Editing applications:

The following links provide O.S. setting suggestions for ensuring optimum performance when working with your Avid editing application with a Windows operating system.

- Optimizations for Video Editors - Windows 7

  http://avid.custkb.com/avid/app/selfservice/search.jsp?DocId=390339

F.) Supported external local SAS storage connectivity via embedded SAS controller and ports:

<u>**Supported**</u>
- **AVID VideoRAID SR (16-bay)**
- **Xtore StudioRAID 16Re (16-bay) / 5Te (5-bay) chassis**

The XW8600 can support:

a. Up to two external AVID VideoRAID SR (16-bay) SAS local storage chassis
b. Mix and match of up to two external Xtore StudioRAID 16Re (16-bay) / 5Te (5-bay) chassis

Simultaneous connectivity of AVID VideoRAID and Xtore chassis is not formally qualified or recommended.

External SAS Port 2   **External SAS Port 1**

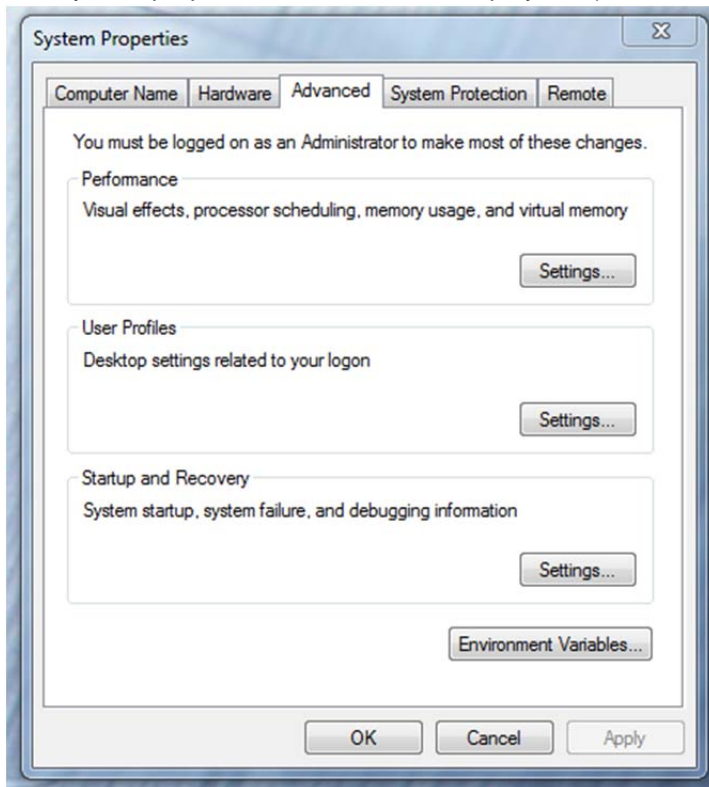## G.) Set Windows "Visual Effects" for "best performance":

(Please Note: Windows 7 screen shots shown for reference. WinXP and Vista screens will vary).

1. Right-Click on My Computer / Computer
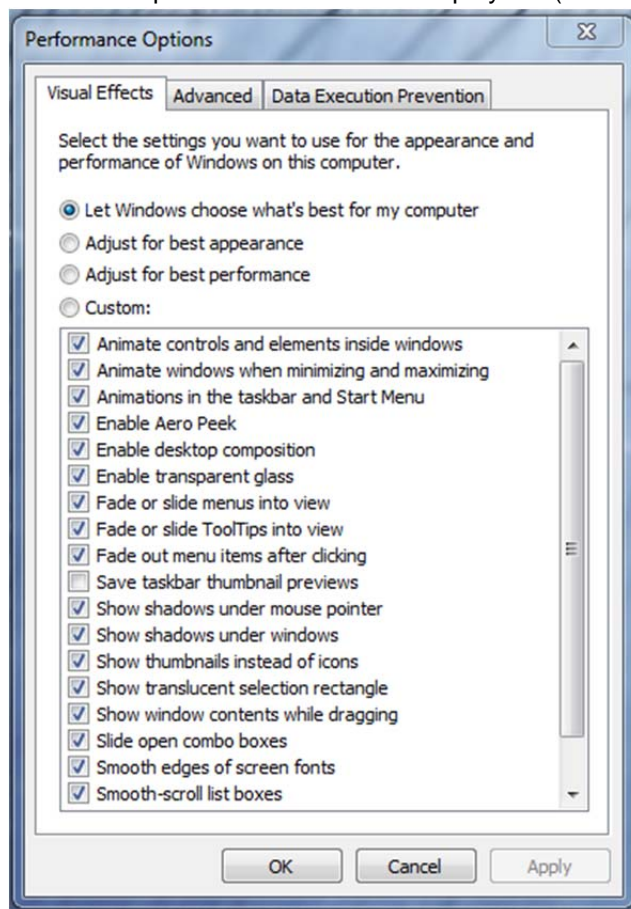2. Select Properties
3. The screen below will be displayed:

4. On the left side of the screen above, locate and select "Advanced system settings"
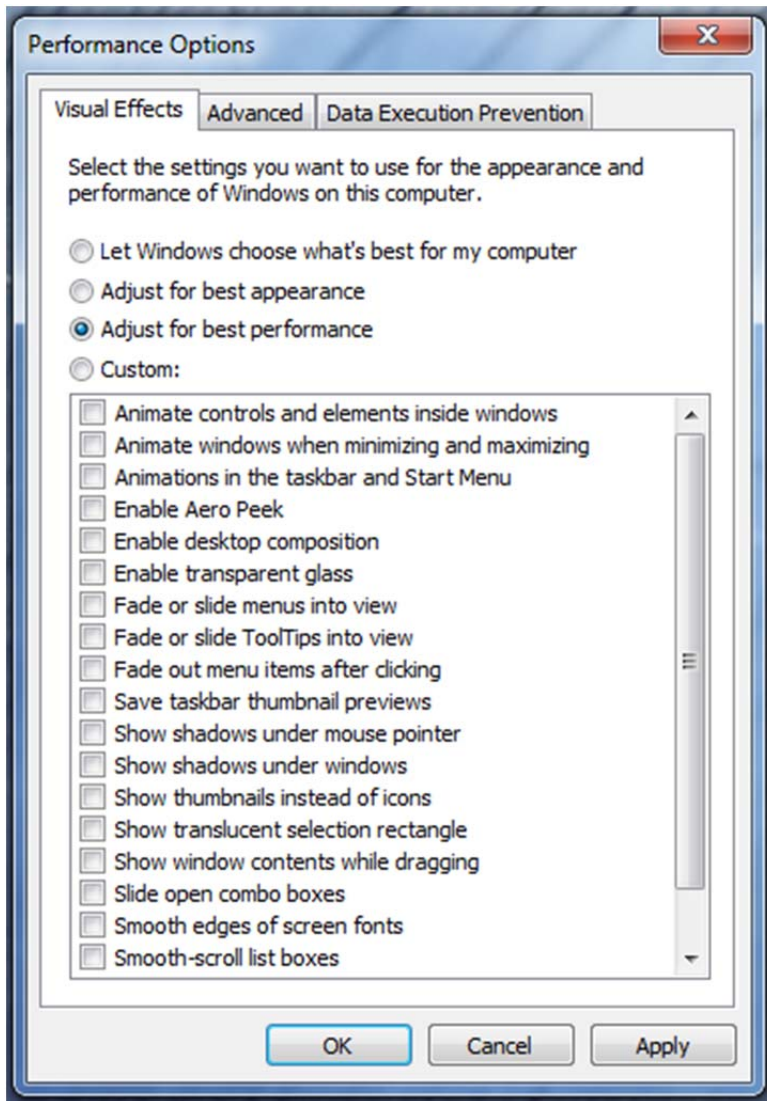
5. The System properties window will be displayed. (Picture below).

6. Under the "Advanced" tab depress the "Settings..." button for performance.
7. The "performance Options" window will be displayed. (Picture below).

8. Under the "Visual Effects" tab select the "Adjust for best performance" selection. (Picture below).

9. Depress the "Apply" button
10. Reboot Windows
11. Required Windows visual performance settings for Avid environments are now complete.

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H.) **ATTO UL5D issue:** When an ATTO UL5D PCI-E u320 SCSI controller is installed in slot #5, the UL5D BIOS must be disabled or the following warning may be reported during system boot: (Also the UL5D BIOS must be disabled for proper operation when connected to an AVID VideoRAID RTR u320 SCSI).

110 – Out of memory space for option ROMS.
The option ROM for the following device was unable to run due to memory constraints. If you choose to continue, one or more PCI devices may not work properly

To disable the UL5D BIOS and eliminate the above warning, perform one of the following:
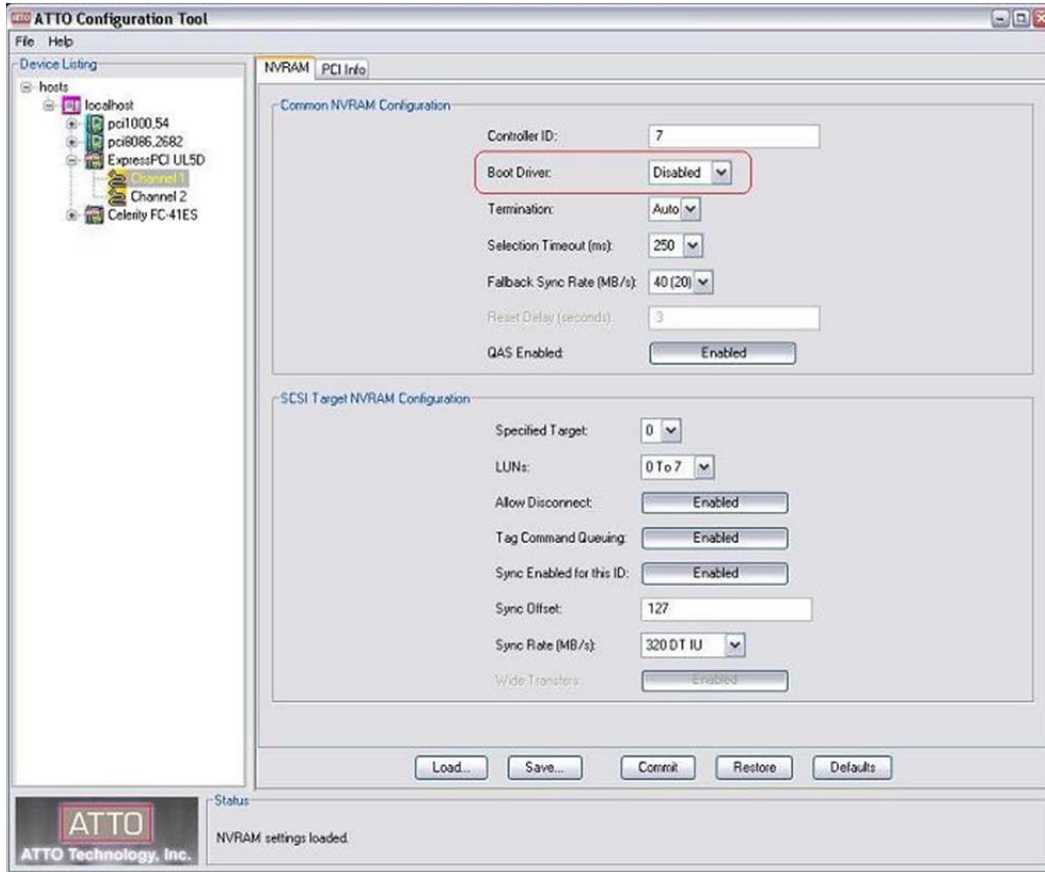   **A.** **AVID Knowledge Base article 273945,**
        http://avid.custkb.com/avid/app/selfservice/search.jsp?DocId=273945&Hilite=UL5D

        Install Atto UL5D configuration tool and launch the software.
        Expand the Express PCI UL5D menu, and click on Channel.
        The <u>**Boot Driver**</u> **has to be** <u>**disabled**</u> **on** <u>**both channels**</u> **of the UL5D.**
        Configure the UL5D per this screenshot, and do this for both Channel 1 and Channel 2

    B. **Or during system boot perform the following:**
        1. Reboot the system
        2. Hit "Escape" to clear the HP splash screen
        3. Hit Ctrl-Z when the following Atto UL5D BIOS message prompts
                ****
                ** ATTO ExpressPCI ™ Version 2.10 **
                ***** Press [Ctrl + Z] for Setup Utility *****
        4. Select 1 - Adapter menu
        5. Select 2 - Configure Both Adapter Channels
        6. For ver 2.10 firmware
           - Select Host Adapter BIOS
           - Select "Disabled" using [Page Up] / [Page Down]
        7. For ver 2.27 firmware
           - Select Boot Driver
           - Select "Disabled" using [Page Up] / [Page Down]
        8. Press "ESC"
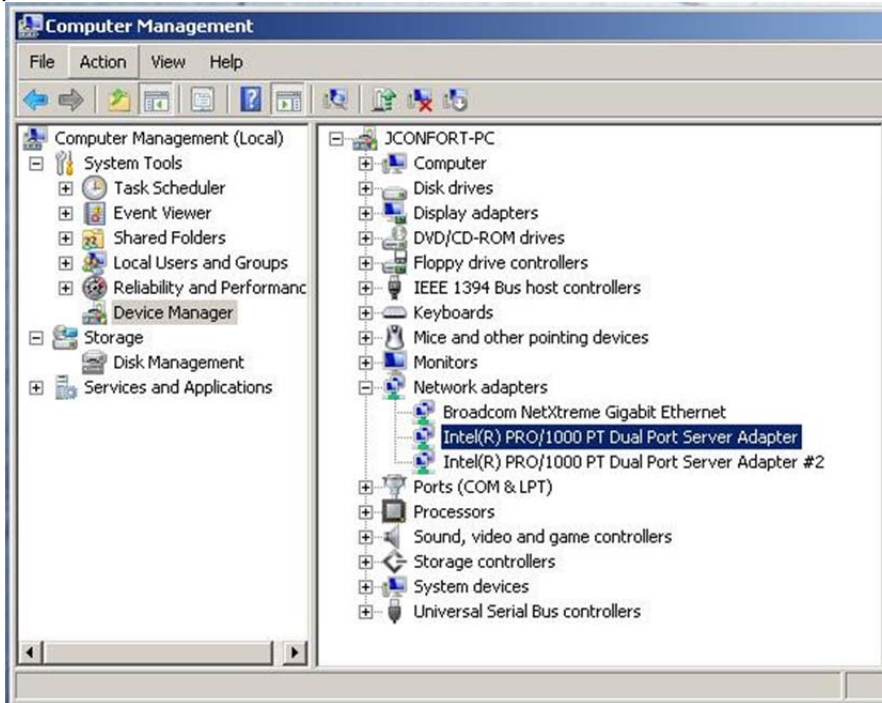   9. Press "ESC"
        10. Select 4 – Save Parameters and Exit

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I.) Intel PRO 1000 PT for ISIS connectivity: For proper operation and connectivity of the Intel PRO 1000 PT with ISIS the following are required:

1. For the Intel PRO 1000 PT driver, under the performance settings, change the following parameters:
    - Receive Buffers to 1024
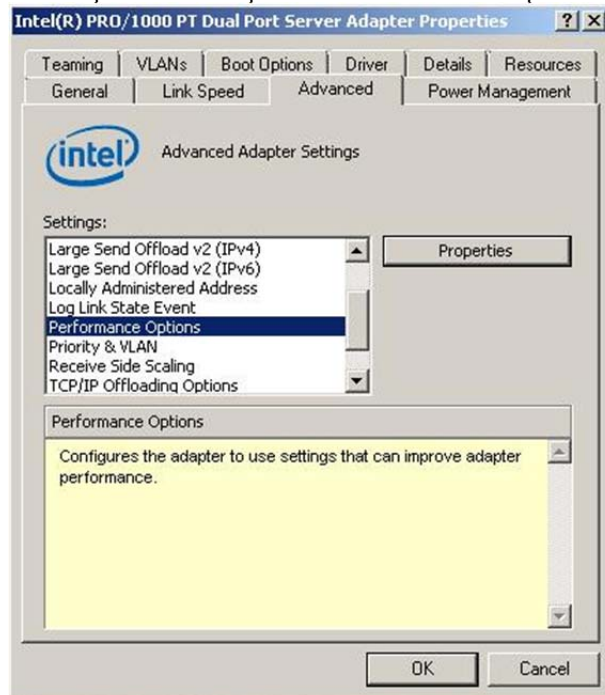   - Transmit Buffers to 1024

2. Disable the windows firewall.

Intel PRO 1000 PT Driver: The proper driver can be found in the ISIS software directory: Tools_3rdParty / Drivers_and_Firmware
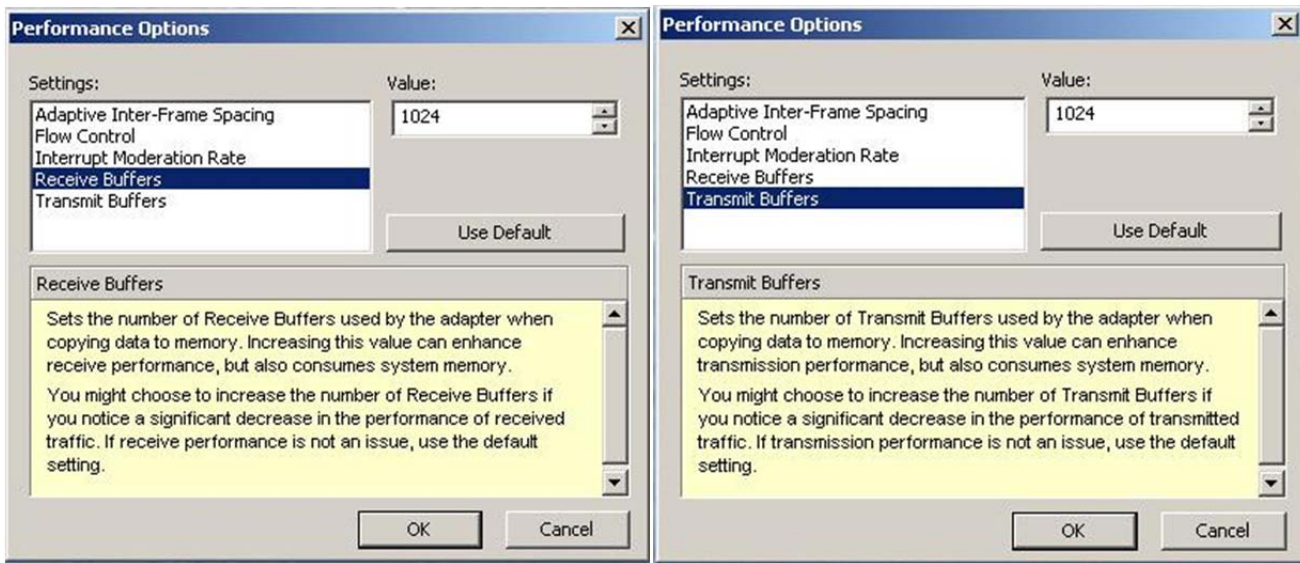
To set the Intel PRO 1000 PT Receive / Transmit buffers:
Go to device manager and select each instance of the device named Intel(R) PRO/1000 PT Dual Port Server Adapter which will be used for ISIS connectivity.

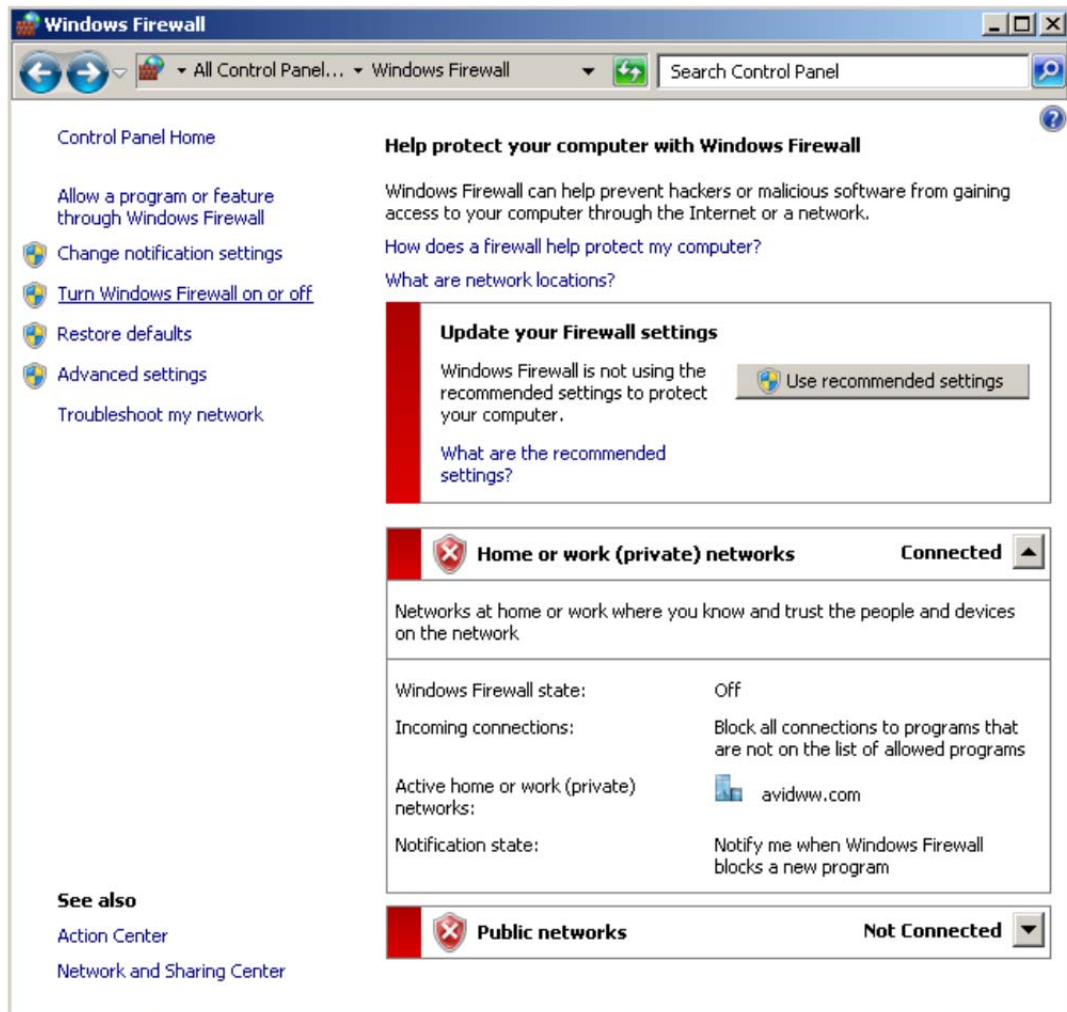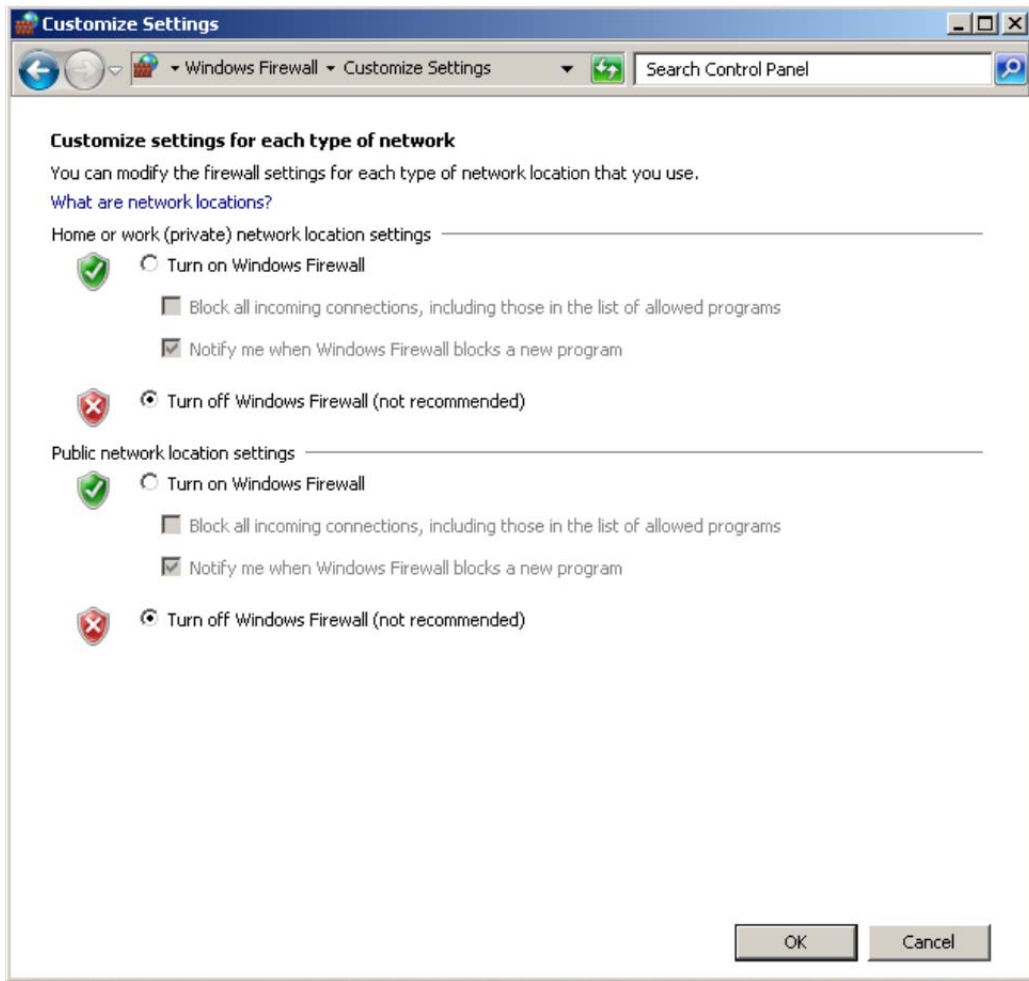Select performance options and then select Properties.

Set Receive Buffers to 1024   Set Transmit Buffers to 1024

Perform this for each instance of the device named "Intel(R) PRO/1000 PT Dual Port Server Adapter" which will be used for ISIS connectivity.

J.) <u>Disable the windows firewall</u>:
   Navigate to Control Panel / Windows Firewall -- Select Turn Windows Firewall on or off

Select Turn off windows firewall in both network locations, OK to save

Revision Update

Revision	Date	Name	Update
A	Oct 27th, 2011	Joe Conforti	Initial public release of the XW8600 configuration guide for support of Media Composer 6.0, Symphony 6.0 and NewsCutter 10
B	May 2nd , 2013	Joe Conforti	Added support for Nvidia driver ver 310.90, changed KB link for system BIOS info, misc corrections

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