



Avid Configuration Guidelines
Dell Precision T3610 6-Core, CPU Workstation Media Composer
6.5.4 Symphony 6.5.4 NewsCutter 10.5.4 and later



1.) Dell T3610 AVID Qualified System Specification:

T3610 / AVID Qualified Operating System:

Microsoft® Windows 7 Professional 64-bit Edition with Service Pack 1
Microsoft® Windows 8 Professional 64-bit Edition
Microsoft® Windows 8.1 Professional 64-bit Edition

T3610 Hardware Configuration

Supported CPU

- Intel® 6-Core Xeon® E5-1650V2 Processors @ 3.5GHz 12MB cache / 1866MHz memory

Supported Video Card

Nvidia Quadro K2000 2GB PCI-e video board

System Disk Drive- 1TB (minimum recommended) SATA-II 3Gb/s 7200RPM

Standard AVID memory configuration: 8GB (4 x 2GB) DDR3 1866 ECC memory –
(Requires four 2GB DIMMs, **DIMM sizes cannot be mixed sizes**)
2GB memory modules must be installed in all 4 memory slots

Optional 16GB memory configuration:

Optional AVID memory configuration: 16GB (4 x 4GB) DDR3 1866 ECC memory –
(Requires four 4GB DIMMs, **DIMM sizes cannot be mixed sizes**)
4GB memory modules must be installed in all 4 memory slots

Memory configuration constraints

- No other memory configurations are formally supported in AVID environments. Only the 8GB (4 x 2GB), and 16GB (4 x 4GB) configurations are supported. Un-balanced memory configurations which mix and match memory module sizes and locations will result in a poor performing, non-optimal operating environment.

2.) Qualified Operating Systems, Avid Client Editing Applications, Hardware and Shared-Storage support for the Dell T3610:

- **Media Composer / Symphony 6.5.4 , NewsCutter 10.5.4 or later**
Microsoft® Windows 7 Professional 64-bit Edition with SP1 (SP1 required)
- **Media Composer / Symphony 7.x , NewsCutter 11.x or later**
Microsoft® Windows 7 Professional 64-bit Edition with SP1 (SP1 required)
Microsoft® Windows 8.x Professional 64-bit Edition
- **Not Supported – Any version of Microsoft® Windows XP or Vista**
- **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.x, Symphony 6.x and NewsCutter 10.x. As future Service Packs are released Avid will evaluate

3.) Qualified O.S., Hardware and shared storage supported:

	Qualified / Supported
Nitris DX / Mojo DX	Yes
3 rd Party Qualified Hardware	See release notes and Avid website for information regarding supported 3 rd party hardware (vendor qualified)
Unity ISIS 1Gb Ethernet Client	ISIS 5000 / 7000 V4.5
Unity ISIS Hi-res (10 Gbit) client	ISIS 5000 / 7000 V4.5
Qualified Operating System	Win 7 Pro 64-bit with SP1 Win 8.x Pro 64-bit
1394 Adrenaline DNA	N/A Not Supported
1394 Mojo-SDI DNA	N/A Not Supported
1394 Mojo-Analog DNA	N/A Not Supported

AVID qualified HBA info

AVID qualified HBA	AVID Part Number	Slot Location	Function
Atto R680	Not stocked by AVID	#1	Local SAS Storage Support – Avid VideoRAID ST (5-bay) Xtore StudioRAID 5Ti (5-bay)
LSI 9200-8e SAS controller	7030-30036-01	#1	Local SAS Storage Support – Xtore StudioRAID 16Re (16-bay) chassis Xtore StudioRAID 5Te (5-bay) chassis
Intel PRO 1000 PT	7030-20139-01	#4	Shared Storage: Unity ISIS Copper Gb-Ethernet Dual Gb ISIS Connectivity
Intel i350-T2 – Dual Gb NIC	Not stocked by AVID	#4	Shared Storage: Unity ISIS Copper Gb-Ethernet Dual Gb ISIS Connectivity
Intel PRO 1000 PF - ISIS	Not stocked by AVID	#4	Shared Storage: Unity ISIS Optical Gb-Ethernet
Myricom 10G-PCIE-8B-S	7030-30041-01	#4	Shared Storage: Unity ISIS 10Gb-Ethernet for Hi-Res client (ISIS 5000 / 7000)
Pro Tools HD h/w		#4	Pro-Tools h/w for Pro-Tools co-install
Red Rocket Accelerator	Not stocked by AVID	#4	Accelerator for RED files
Avid HIB, DX Interface HBA **	Active: 7030-30048-01 Active: 7030-20084-01 Passive: 7030-30021-01	#5	Avid DX Hardware Interface HBA
Vendor qualified 3rd party hardware interface requiring: x4 PCI-E or lesser interface	Not stocked by AVID	#5	Vendor qualified 3rd party hardware interface. See release notes and Avid website for information regarding supported 3rd party hardware

**** [Avid DX Interface HBA Support Note: \(See reference pictures on page 7 of this guide\).](#)**

All 3 versions of the DX interface HBA are supported on the T3610 with 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	x4 PCI-E Gen 3	x16	Local SAS Storage Controllers: Atto R680 LSI 9200-8e
2	x16 PCI-E Gen 3 (225Watts)	x16	Graphics Card: Nvidia K2000
3	X1 PCI-E Gen 2	X1	
4	x16 PCI-E Gen 3 (225Watts)	x16	Shared Storage Controllers ISIS 5000 / 7000: Intel PRO 1000 PT Intel PRO 1000 PF Intel i350-T2 Myricom 10G-PCIE-8B-S or Pro Tools HD h/w or Red Rocket
5	x4 PCI-E Gen 2	x16	Vendor Qualified 3 rd Party Hardware PCI-e Interface requiring: x4 PCI-E or lesser interface OR Avid HIB, DX Interface HBA
6	PCI-E 32bit /33MHz	PCI 32/33	
	Embedded Intel 82579LM Gb NIC	PCI-E x1 Gen 1	<u>Qualified for Avid ISIS 5000 / 7000 connectivity.</u>

5.) Use of embedded NIC ports for ISIS connectivity **Important Information**

The T3610 has one embedded NIC port - 82579LM. This ports is qualified for ISIS.

Embedded Intel network interface for ISIS connectivity:

For proper operation and connectivity of the Intel 82574L network interface with ISIS the following settings are required:

1. For the Intel NIC driver, under the performance settings, change the following parameters:
 - Receive Buffers to 1024
 - Transmit Buffers to 1024
2. Disable the windows firewall.

7.) Various Configuration

Details: A.) D/X hardware

configs –

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):

Failure to update the T3610 to an "Avid qualified BIOS" and set the BIOS settings per the instructions below may result in non-optimal operation of the AVID software and hardware.

- Minimum BIOS ver A.01

C.) Required system BIOS settings for AVID environments:

Hyper-Threading Setting:

Please Note: CPU Hyper-threading should be enabled in all configurations. It is currently enabled by default by Dell for shipping T3610's with BIOS ver A.01 or earlier

T3610 Required system BIOS changes:

1. Verify CPU Processors are set to Hyper-Threading **Current version BIOS vA.01 has Hyper-Threading enabled by default**
2. Set Turbo boost – **Disable**
3. Set C State Control - **Disable**

Set T3610 Required system BIOS changes:

- During boot up press F12 at the Dell splash screen to invoke Set Up.
- Select the Performance tab
- Select Processor
- Select Hyper-Threading
- Verify setting is Enable
 - If Hyper-Threading is set for Disable then it must be changed to Enable

- Select Turbo Boost-Disable
- Select C State Control-Disable
- In the bottom right corner select accept
- Exit system reboots

D.) Nvidia Qualified Driver:

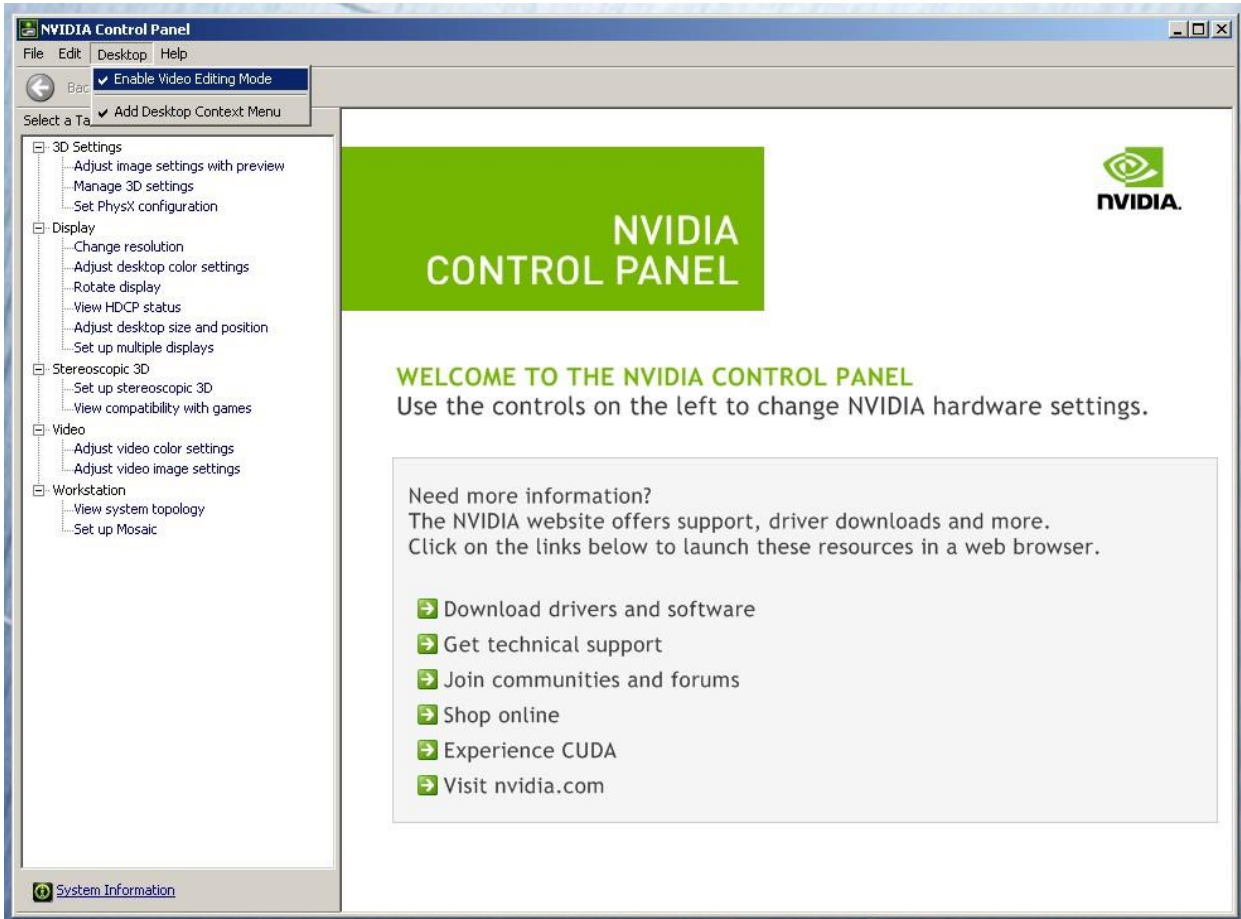
Nvidia qualified drivers

AVID Software	Version(s)	Nvidia GPU	Nvidia Driver Required
Media Composer / Symphony NewsCutter	6.5.4 10.5.4	Quadro K2000	310.90
Media Composer / Symphony NewsCutter	7.03/11.03 Win 7 or 8.0 7.03/11.03 Win 8.1	Quadro K2000	320.78 331.65

After installation of the AVID software the supported Nvidia driver can be found in the following directory:
 Program Files / Avid / Utilities / Nvidia. The Nvidia driver, 310.90, is NOT included with the 6.5.2.1 patch. You can find this Nvidia driver on the Avid Knowledge Base.

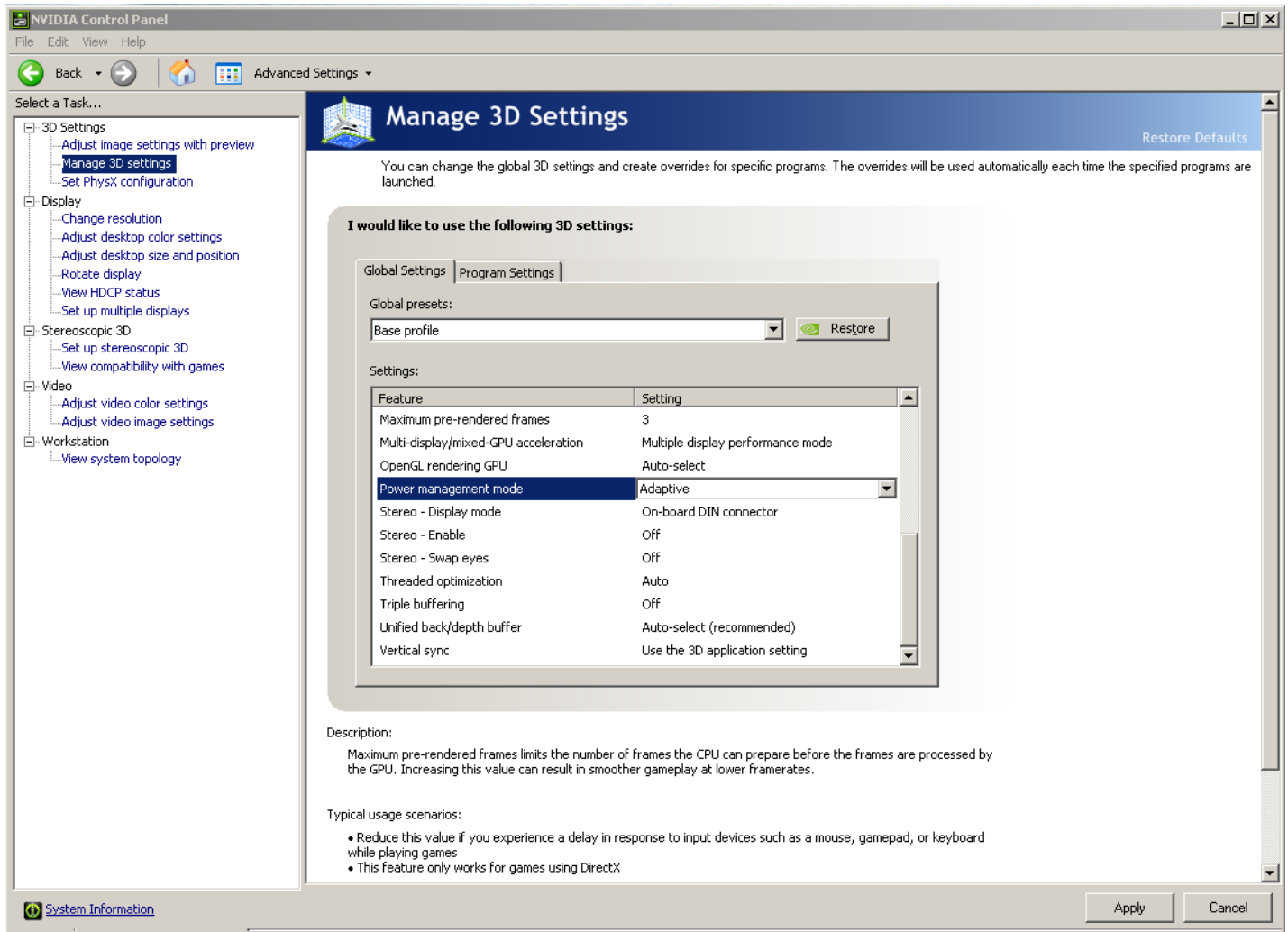
Set optimized Nvidia driver settings for Avid editing environments:

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

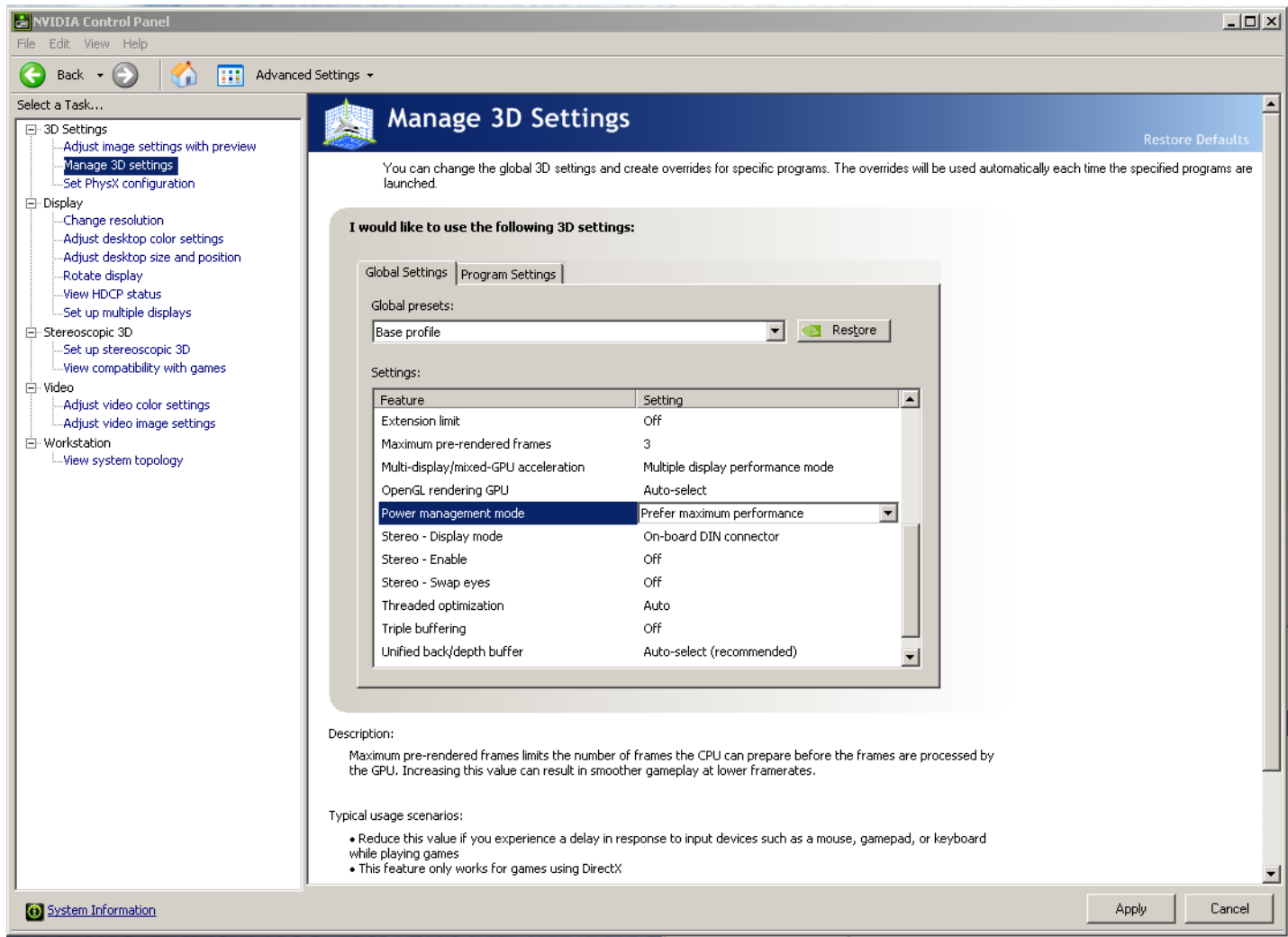


5. Select Manage 3D Settings
6. Select “Global Settings” Tab
7. Under the “Global Settings” tab select “Base Profile”

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



- For the “Power management mode” feature, select “Prefer maximum performance” as shown in the picture below.



- Depress the “Apply” button.

- Nvidia driver optimization settings for Avid environments are complete.

E.) Nvidia Quadro GPU monitor connectivity:

The Nvidia Quadro K2000 graphics card has a single DVI port and two Display-Port ports

*(Important: Display-ports **are not** HDMI ports; at first glance they do look very similar to HDMI ports)*

(Please Note: Only two of the three video ports can simultaneously be used. Connecting to all three video ports at the same time will result in non-functioning video output from the Nvidia GPU video card.)

The Dell T3610 includes one Display-Port-to-DVI adapter.

For dual monitor connectivity:

1. Use the DVI port and one Display-Port (Display-Port connection can be native display-port to monitor via display-port connection, or use the display-port-to-DVI-adapter supplied with the system to connect to a native DVI monitor).
2. Or use two Display-Ports (Requires monitors with native display-port connections, two display-port to DVI adapters are not recommended when using dual display-port connections).

F.) Serial Port Deck Control

The Dell T3610 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 T3610 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&txtModeIID=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 T3610 USB port.
- Once the Keyspan 19HS driver is installed then plug the Keyspan 19HS into a T3610 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.

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

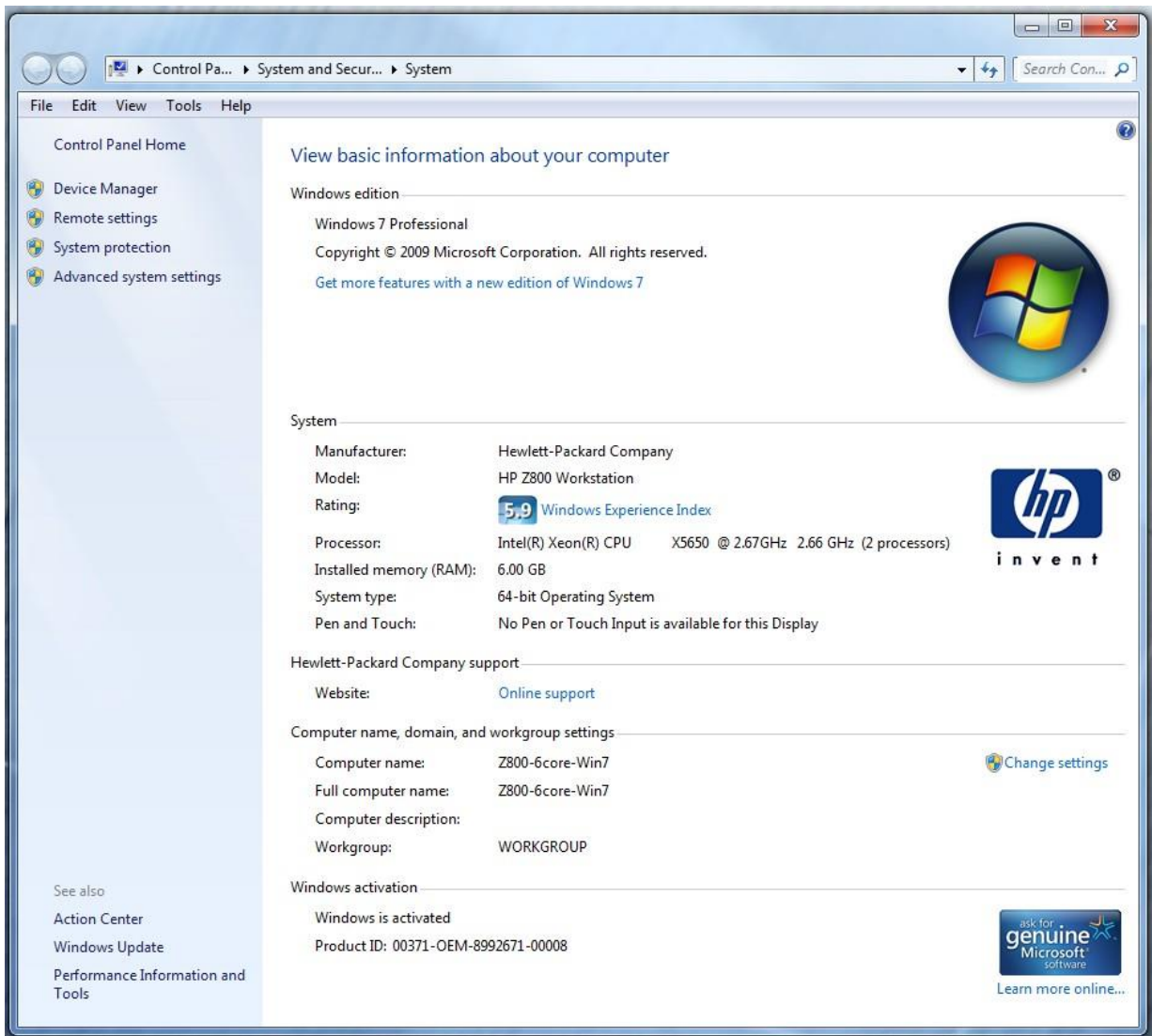
The following links provide O.S. setting suggestions for ensuring optimum performance when working with your Avid editing application with a Windows operating system.

- Optimizations for Video Editors - Windows 7

http://avid.force.com/pkb/articles/en_US/troubleshooting/en349411

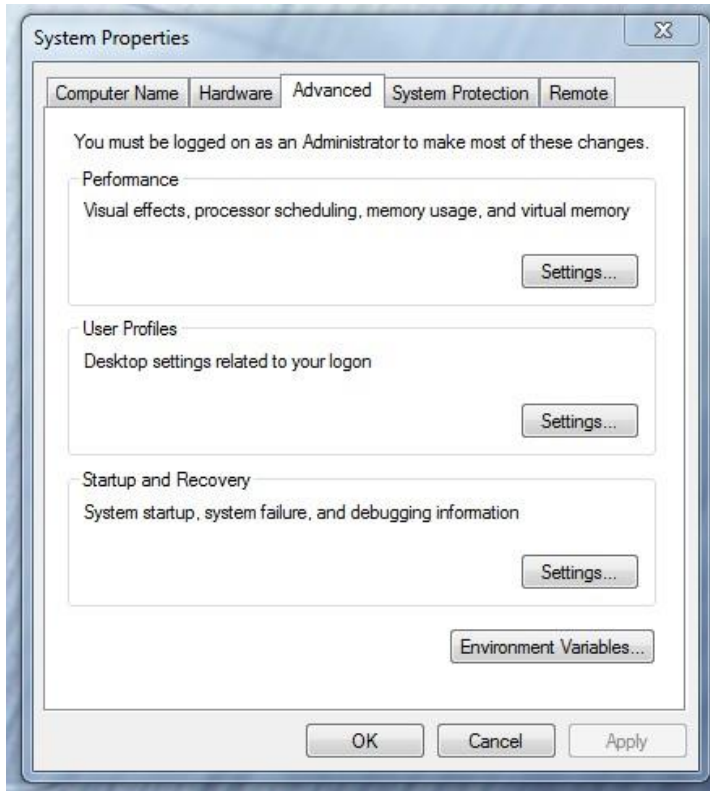
H.) Set Windows “Visual Effects” for “best performance”:

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

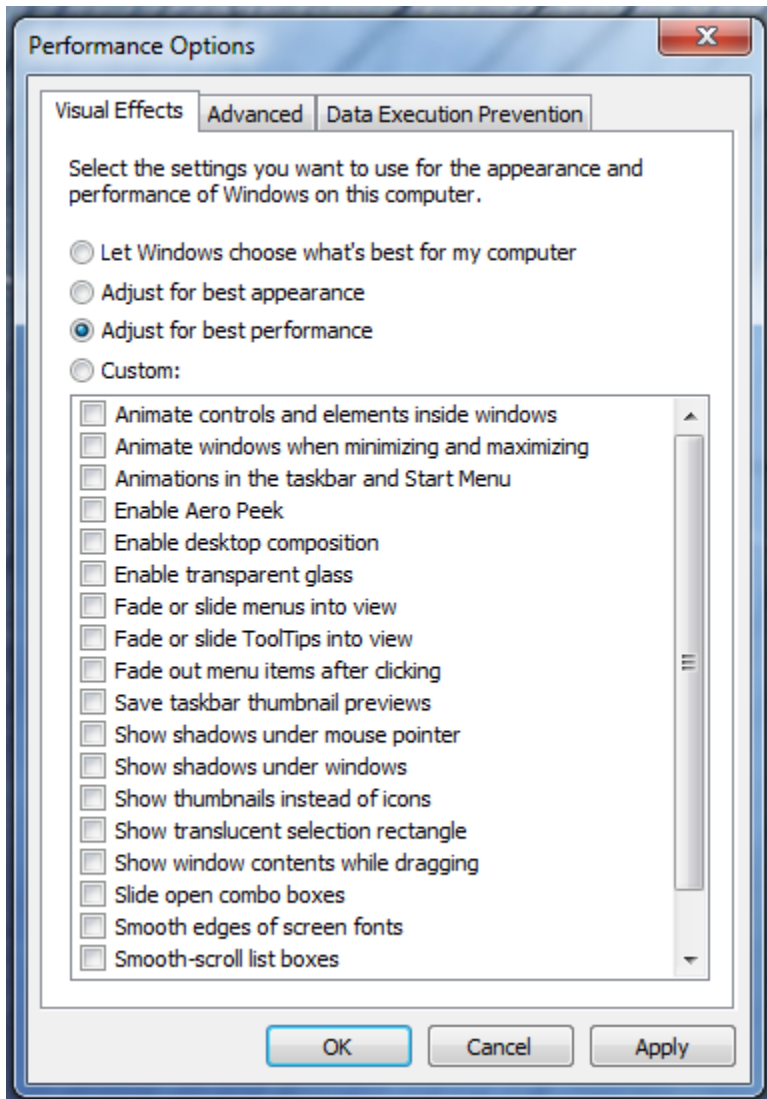


4. On the left side of the screen above, locate and select “Advanced system settings”

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



9. Depress the “Apply” button
10. Required Windows visual performance settings for Avid environments are now complete.

I.) **Intel NIC Port(s) for ISIS connectivity:**

Embedded 82574L port / Intel PRO 1000 Dual Gb HBA / Intel i350-T2 Dual Gb NIC HBA

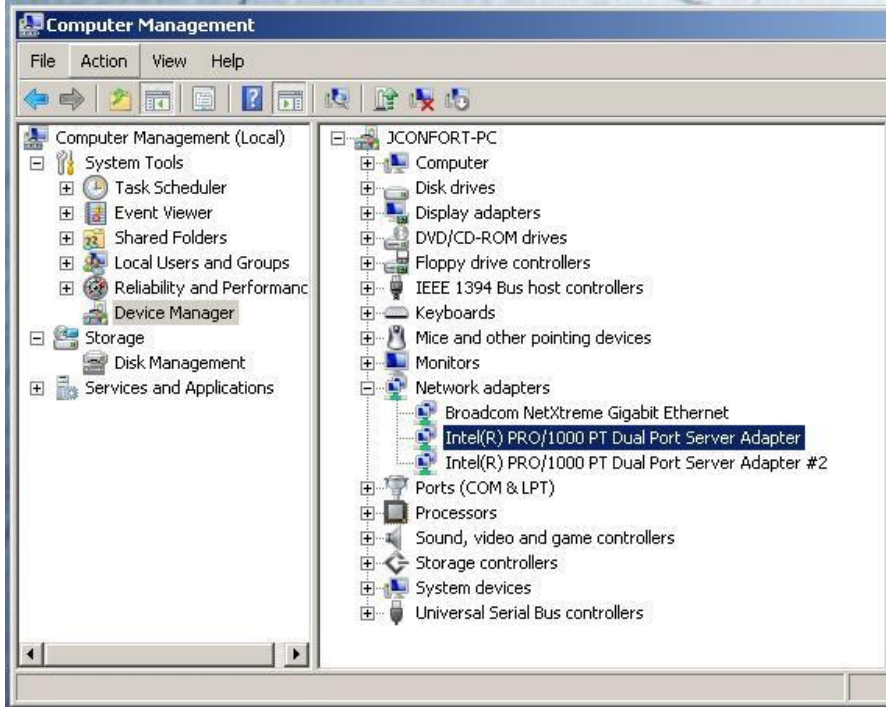
For proper operation and connectivity of any Intel NIC port used with ISIS the settings below are required.

Example below is for the Intel PRO 1000 PT.

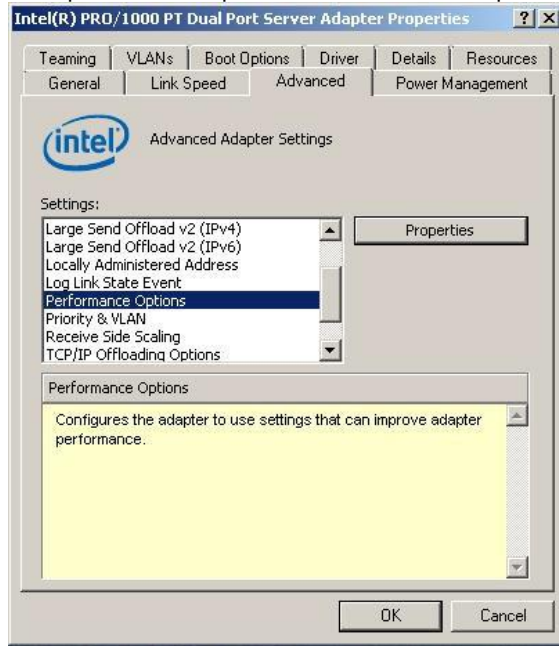
1. For the performance settings, change the following parameters:
 - Receive Buffers to 1024
 - Transmit Buffers to 1024
2. Disable the windows firewall.

To set the Intel NIC Receive / Transmit buffers:

Go to device manager and select each instance of the network adapter device which will be used for ISIS connectivity.

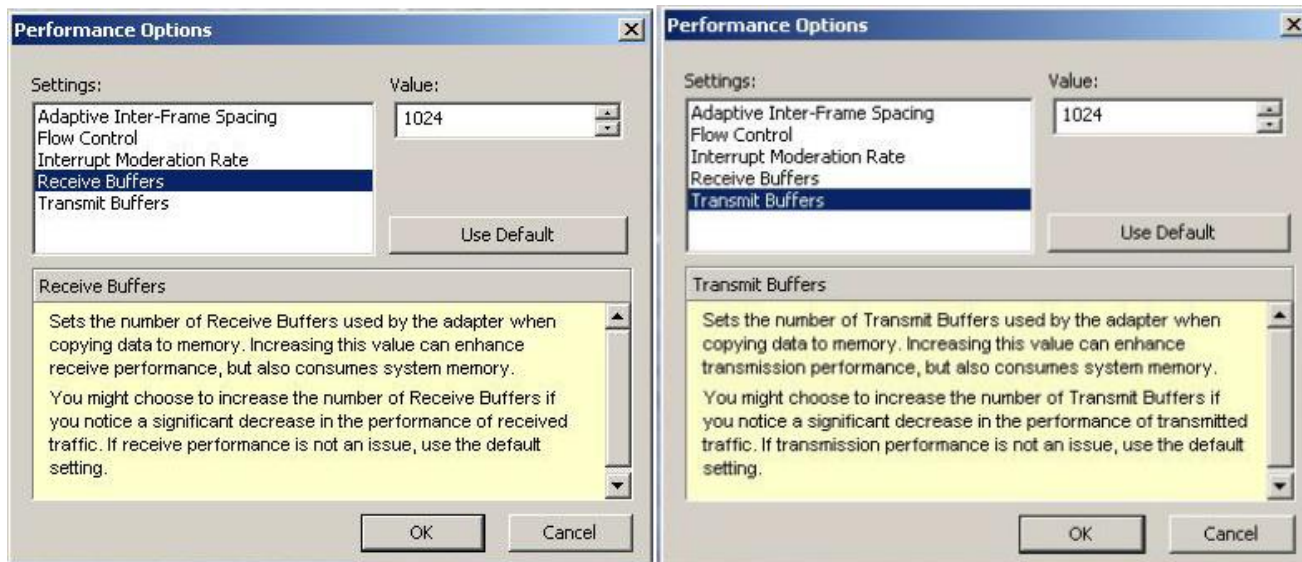


Select performance options and then select Properties.



Set Receive Buffers to 1024

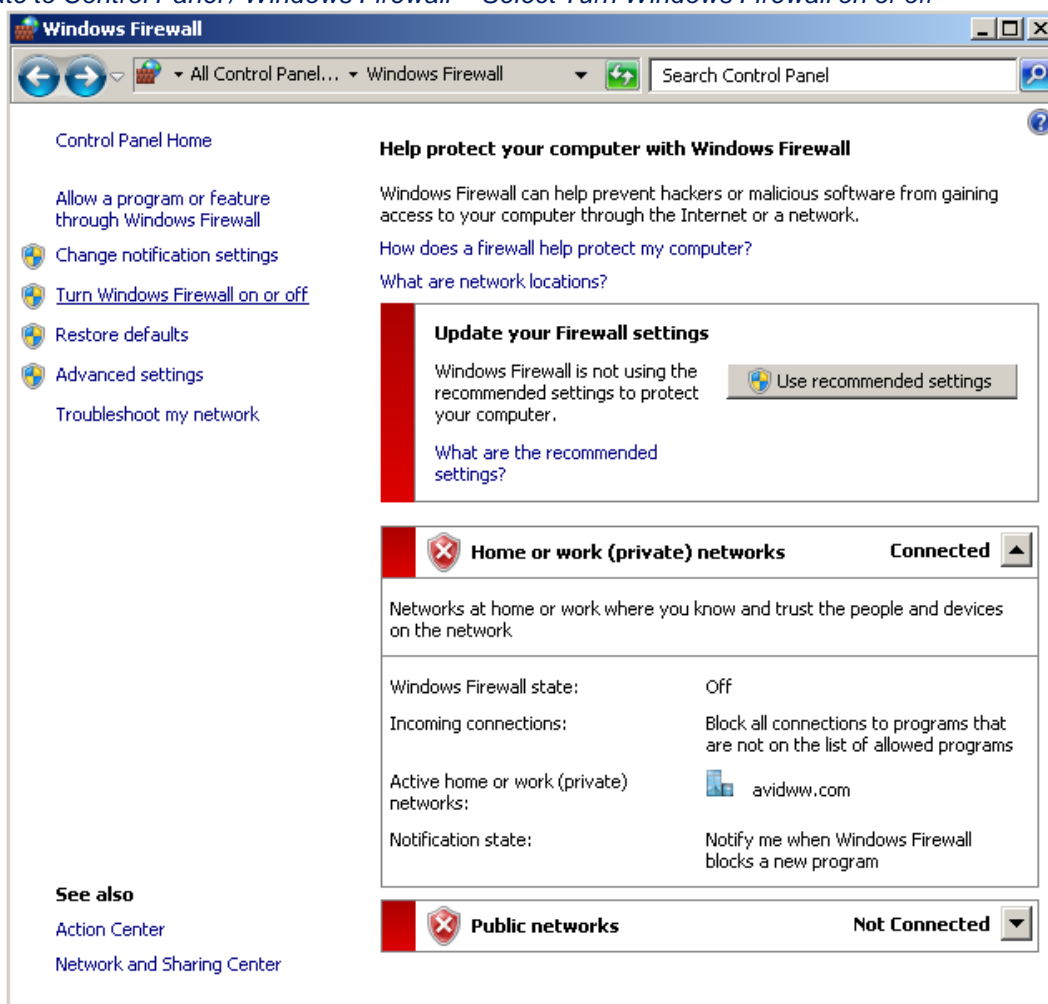
Set Transmit Buffers to 1024



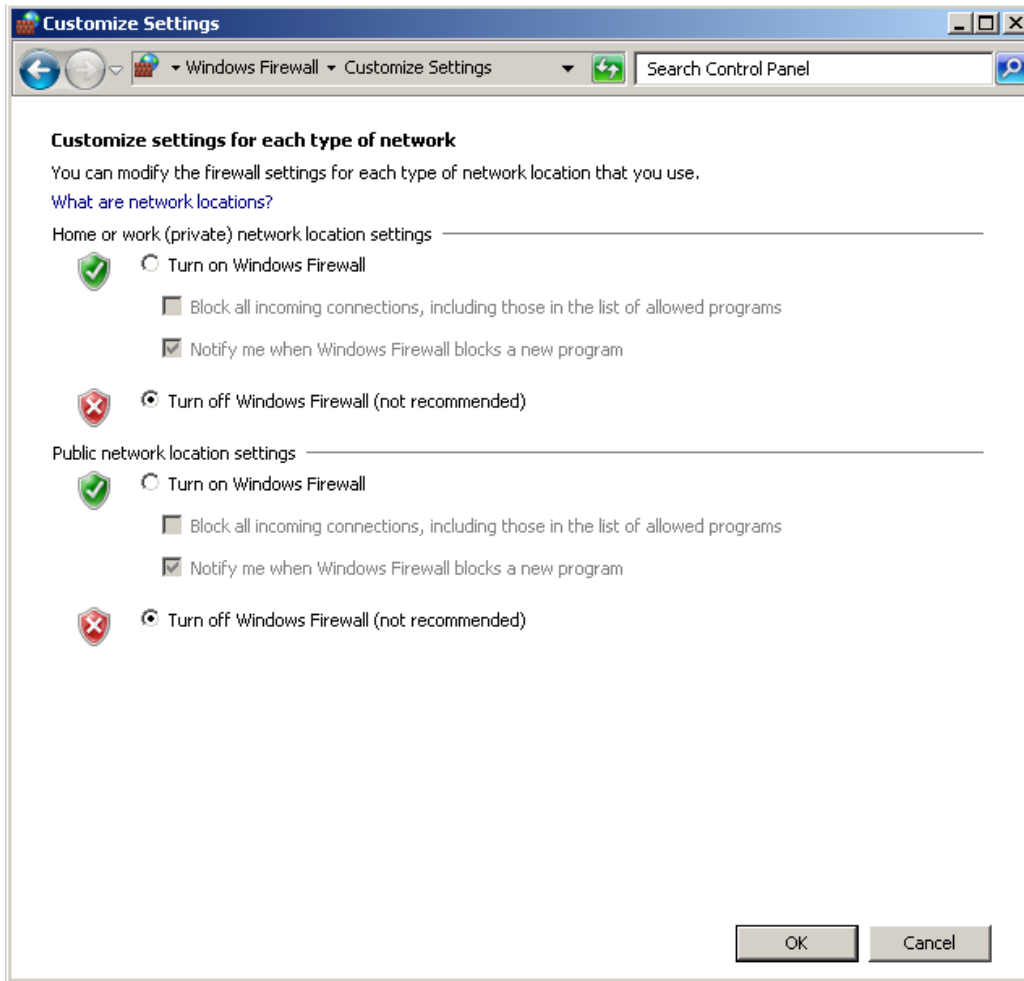
Perform this for each instance of and Intel NIC port which will be used for ISIS connectivity.

J.) Disable the windows firewall:

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
Rev A	Dec 6 th , 2013	Dave Pimm	Initial release of the Dell T3610 configuration guide