



**Avid Configuration Guidelines
HP Z840 Dual CPU Workstation
Dual 8, 10, 12, 14 and 16 core**



1.) HP Z840 AVID Qualified System Specification:

Z840 / AVID Qualified Operating System:

- Supported: Microsoft® Windows 7 Pro 64-bit Edition with SP1 (SP1 required)
- Supported: Microsoft® Windows 8.1 - Pro and Enterprise (64-bit)
- Supported: Microsoft® Windows 10 - Pro and Enterprise (64-bit) – [Requires M/C 8.5 minimum](#)

Z840 Hardware Configuration

Supported v4 CPU Choices

- Dual Intel® 8-Core Xeon® Processors
E5-2620v4 2.1Ghz 8-core / 2400Mhz Memory (Processor will run memory at 2133MHz)
E5-2667v4 3.2Ghz 8-core / 2400Mhz Memory
- Dual Intel® 10-Core Xeon® Processors
E5-2630v4 2.2Ghz 10-core / 2400Mhz Memory (Processor will run memory at 2133MHz)
E5-2640v4 2.4Ghz 10-core / 2400Mhz Memory (Processor will run memory at 2133MHz)
- Dual Intel® 12-Core Xeon® Processors
E5-2650v4 2.2Ghz 12-core / 2400Mhz Memory
E5-2687v4 3.0Ghz 12-core / 2400Mhz Memory

Please note: The following 14-core and 16-core CPU configurations require a minimum of Media Composer 8.5.x

- Dual Intel® 14-Core Xeon® Processors
E5-2680v4 2.4Ghz 14-core / 2400Mhz Memory
E5-2690v4 2.6Ghz 14-core / 2400Mhz Memory
- Dual Intel® 16-Core Xeon® Processors
E5-2683v4 2.1Ghz 16-core / 2400Mhz Memory

Supported v3 CPU Choices

- Dual Intel® 8-Core Xeon® Processors
E5-2630v3 2.4GHz / 2133MHz memory (Processor will run memory at 1866MHz)
E5-2640v3 2.6GHz / 2133MHz memory (Processor will run memory at 1866MHz)
E5-2667v3 3.2GHz / 2133MHz memory
- Dual Intel® 10-Core Xeon® Processors
E5-2650v3 @ 2.3GHz 20 MB cache / 2133MHz memory
E5-2660v3 @ 2.6GHz 20 MB cache / 2133MHz memory
E5-2687v3 @ 3.1GHz 20 MB cache / 2133MHz memory
- Dual Intel® 12-Core Xeon® Processors
E5-2670v3 @ 2.3GHz 20 MB cache / 2133MHz memory
E5-2680v3 @ 2.5GHz 20 MB cache / 2133MHz memory
E5-2690v3 @ 2.6GHz 20 MB cache / 2133MHz memory

Supported Video Card

- 1.) NVIDIA K4200 4GB PCI-e graphics card
- 2.) NVIDIA K5200 8GB PCI-e graphics card
- 3.) NVIDIA M4000 8GB PCI-e graphics card (MC ver 8.4.3 or later required)
- 4.) NVIDIA M5000 8GB PCI-e graphics card (MC ver 8.4.3 or later required)
- 5.) AMD W7100 8GB PCI-e graphics card (AMD driver 15.20.1045 required)
- 6.) AMD WX7100 8GB PCI-e graphics card (AMD driver 16.40.3801 required)
- 7.) NVIDIA M6000 12GB/24GB PCI-e graphics card (Nvidia driver 362.13 required)
- 8.) NVIDIA P4000 8GB PCI-e graphics card (Nvidia driver 376.84 required)
- 9.) NVIDIA P5000 16 GB PCI-e graphics card (Nvidia driver 376.84 required)
- 10.) NVIDIA P6000 24 GB PCI-e graphics card (Nvidia driver 376.84 required)

System Disk Drive - 1TB SATA 6Gb/s 7200RPM (minimum recommended) , H.P. offers higher performing solid-state and SAS boot drive options which are acceptable options. Recommend an HP qualified drive be selected.

Memory Configurations

- Systems using the newer gen v4 CPU's will use 2400MHz memory
- Systems using the older gen v3 CPU's will use 2133MHz memory
-

Standard 32GB AVID memory configuration: All dual CPU configurations.

32GB (8 x 4GB) ECC memory –
(Requires eight 4GB DIMMs, **DIMM sizes cannot be mixed sizes**)
4GB memory modules must be installed in the following memory slots:
CPU0-DIMM1, CPU0-DIMM3, CPU0-DIMM6, CPU0-DIMM8
CPU1-DIMM1, CPU1-DIMM3, CPU1-DIMM6, CPU1-DIMM8

Higher capacity memory configurations: Avid Media Composer software can run in a larger capacity memory environment

Supported 64GB memory configuration: All dual CPU configurations.

64GB (8 x 8GB) ECC memory –
(Requires eight 8GB DIMMs, **DIMM sizes cannot be mixed sizes**)
8GB memory modules must be installed in the following memory slots:
CPU0-DIMM1, CPU0-DIMM3, CPU0-DIMM6, CPU0-DIMM8
CPU1-DIMM1, CPU1-DIMM3, CPU1-DIMM6, CPU1-DIMM8

Supported 64GB AVID memory configuration: All dual CPU configurations.

64GB (16 x 4GB) ECC memory –
(Requires sixteen 4GB DIMMs, **DIMM sizes cannot be mixed sizes**)
4GB memory modules must be installed in the following memory slots:
CPU0-DIMM1, CPU0-DIMM2, CPU0-DIMM3, CPU0-DIMM4
CPU0-DIMM5, CPU0-DIMM6, CPU0-DIMM7, CPU0-DIMM8
CPU1-DIMM1, CPU1-DIMM2, CPU1-DIMM3, CPU1-DIMM4
CPU1-DIMM5, CPU1-DIMM6, CPU1-DIMM7, CPU1-DIMM8

Memory configurations above 64GB: Media Composer has not been tested, and does not formally support memory environments above 64GB. If configuring the Z840 for an environment larger than 64GB capacity, for the benefit of Media Composer the following rules should be adhered to for all dual CPU configurations.

- 1.) The configuration must use 8 DIMM's or 16 DIMM's
- 2.) Memory lanes must be balanced
- 3.) Memory configurations which use "unbalanced" memory configuration are not recommended or formally supported in AVID environments
- 4.) Memory configurations which mix and match memory module sizes and locations may result in a poor performing, non-optimal operating environment.
- 5.) For 8 DIMM configurations the same size memory DIMM must be installed in the following DIMM slots:
 CPU0-DIMM1, CPU0-DIMM3, CPU0-DIMM6, CPU0-DIMM8
 CPU1-DIMM1, CPU1-DIMM3, CPU1-DIMM6, CPU1-DIMM8
- 6.) For 16 DIMM configurations follow step #5 above, and then populate the following 8 additional DIMM slots. The size of the memory DIMM for these slots must all be the same, *but, do not have to be the identical size as the DIMM's installed in step #5* (i.e., for example, the DIMM's installed in step #5 could be 8GB DIMMs and the DIMM's installed in the following slots for this step could be 4GB DIMM's):
 CPU0-DIMM2, CPU0-DIMM4, CPU0-DIMM5, CPU0-DIMM7
 CPU1-DIMM2, CPU1-DIMM4, CPU1-DIMM5, CPU1-DIMM7

2.) Qualified Operating Systems, Avid Client Editing Applications and CPU core-count restrictions:

Supported OS:

Microsoft® Windows 7 Professional 64-bit Edition with SP1 (SP1 required)

Microsoft® Windows 8.1 Professional / Enterprise 64-bit Edition

Microsoft® Windows 10 - Pro and Enterprise (64-bit) – Requires M/C 8.5 minimum

Not Supported - Microsoft® Windows – any 32-bit version, or Home, Ultimate or Educational version

Application	Minimum Rev	Supported CPU core-count
Media Composer 8.x	8.5.0	Supports the new v4 14 and 16 core CPUs
Media Composer 8.x	8.2.0	Maximum 12-core CPU's
Media Composer 7.x	7.0.4.1	
NewsCutter 11.x	11.0.4.1	

Note regarding Service packs:

As of this writing Service Pack 1 is the current Service Pack release for Win7 and is required for Avid software. As future Service Packs are released Avid will evaluate and announce formal support when testing is completed.

3.) Qualified Hardware and shared storage support:

	Qualified / Supported
Nitris DX / Mojo DX	Yes
Avid Artist DNxIO	<p>Yes – Supported <u>Can connect via PCIe or Thunderbolt 2</u></p> <p><u>PCIe vs Thunderbolt Guidance</u></p> <p><u>PCIe Guidance</u> Supports Win7 , Win 8.1 and Win 10</p> <p>PCIe preferred as it requires less system over-head due to direct PCIe to PCIe connection between the host CPU and Artist DNxIO. (PCIe is limited to 3-meter cable max length).</p> <p><u>Thunderbolt 2 Guidance</u></p> <p>Thunderbolt 2 - higher system over-head , particularly if sharing additional Thunderbolt devices on the same Thunderbolt bus with DNxIO.</p> <p>HP Z840 supports only one Thunderbolt HBA in a Z840 with single Thunderbolt port (resulting in Thunderbolt bus sharing for multiple Thunderbolt devices).</p> <p>Thunderbolt 2 offers support of cable lengths up to 60-meters (<u>via qualified Corning Thunderbolt cables</u>) for users needing to physically place the Artist DNxIO at longer distances from the host CPU Workstation.</p>
Avid Artist DnxIQ	PCIe only with BMD cable kit Thunderbolt 3 not supported
3 rd Party Qualified Hardware	See release notes and Avid website for information regarding supported 3 rd party hardware
NEXIS / ISIS Single 1Gb Ethernet Client NEXIS / ISIS Dual 1Gb Ethernet Client	ISIS 5500 / 5000 , 7500 / 7000 v4.0 NEXIS Pro, E2, E4, E5 V6.01
NEXIS / ISIS Hi-res (single10Gbit) client Myricom Single-Port 10Gbit	ISIS 5500 / 5000 , 7500 / 7000 v4.0 NEXIS Pro, E2, E4, E5 V6.01
NEXIS / ISIS Ultra Hi-res client (dual 10Gbit) Myricom Dual-Port 10Gbit	ISIS 5500 / 5000 v4.7 NEXIS Pro, E2, E4, E5 V6.01

4.) AVID qualified HBA info

AVID qualified HBA	AVID Part Number	Slot Location	Function / Notes
Vendor qualified 3 rd party PCI-e interface requiring: x16 PCI-e Gen3 or lesser interface	Not stocked by AVID	#6	Vendor qualified 3 rd party hardware interface. See release notes and Avid website for information regarding supported 3 rd party hardware
Avid Artist DNxIO interface HBA	Active: 7030-30048-02 Active: 7030-30048-01	#1	Avid Artist DNxIO interface HBA Supported only with the Gen 2 version HBA's: 7030-30048-02 and 7030-30048-01
Avid Artist DNxIQ interface HBA	BlackMagic PCIe cable kit	#1	PCIe Gen 3 Interface card and cable kit from BMD DNxIQ only
Nitris-DX / Mojo-DX Interface HBA **	Active: 7030-30048-02 Active: 7030-30048-01 Active: 7030-20084-01	#5	Avid Nitris / Mojo DX Hardware Interface HBA – Supported with any of the three listed Active HBA's
HP Thunderbolt-2 PCIe I/O HBA **	HP Option G8U72AV (After-Market HP P/N) F3F43AT	#5	Thunderbolt devices including: - 3 rd party supported video I/O devices - storage solutions - Avid Artist DNxIO - when cable distance longer than 3-meters is required (Host Workstation to DNxIO)
Myricom Single-Port 10G-PCIE-8B-S	7030-30041-01	#4	Shared Storage: NEXIS / ISIS 10Gb-Ethernet for Hi-Res client (ISIS 5000 / 5500 / 7000 / 7500)
Myricom Dual-Port 10G-PCIE2-8B2-2S	Not stocked by AVID	#4	Shared Storage: NEXIS / ISIS Dual 10Gb-Ethernet for Client v4.7 only (ISIS 5500 / 5000 only) Requires installer package 1.1.13 which installs driver 1.1.14 (the install package is bundled with ISIS 4.7.3)
Intel i350-T2 Dual Gb NIC	Not stocked by AVID	#4	Shared Storage: NEXIS / ISIS Dual Gb-Ethernet
Intel PRO 1000 PT	7030-20139-01	#4	Shared Storage: NEXIS / ISIS Dual Gb-Ethernet
Intel PRO 1000 PF Gb Fiber (Single or Dual Port)	Not stocked by AVID	#4	Shared Storage: NEXIS / ISIS Optical Fiber Gb-Ethernet
HP Z Turbo Drive PCIe Solid State Storage	Not stocked by AVID	Various	See HP link for config info: http://www8.hp.com/us/en/workstations/z-turbo-drive.html
Red Accelerator	Not stocked by AVID	#3, #4, #5 or #6	Hardware Accelerator for RED files

**** Critical Support Note for Avid DX Interface and HP Thunderbolt HBA: (See page 16 for detailed information)**

- **Important note – If installing an Avid DX interface HBA (for Nitris-DX or Mojo-DX), or HP Thunderbolt HBA in slot #5, jumper E3 on the Z840 motherboard must be placed on pins #1 and #2. Failure to do so will result in intermittent / unreliable operation of any hardware connected to either HBA.**

Artist DNxIO and Nitris-DX / Mojo-DX Interface HBA Support Note: (See reference pictures on page 17).

- For Artist DNxIO – Only the Gen2 versions 7030-30048-02 , -01 are supported
- For Nitris-DX and Mojo-DX – Any of the 3 versions are supported: Gen2 versions 7030-30048-02 , -01 and Gen1 ver 7030-20084-01

6.) Slot Configuration:

Slot Configuration Information

Slot #	Electrical	Mechanical	
1	x4 PCI-E Gen 3	x8	Artist DNXIO PCIe interface, Artist DnxIQ BMD PCIe card Or, user defined use, potential utilization: HP Z Turbo Drive PCIe Solid State Storage HBA , SAS Storage controller etc.
2	x16 PCI-E Gen 3	x16	Graphics Card: Nvidia K4200, K5200, M4000, M5000, M6000, P4000, P5000, P6000 AMD W7100, WX7100
3	x8 PCI-E Gen 3	x8	Not accessible when Nvidia K5200, M5000, M6000, P5000 or P6000 Graphics Card is used. User defined use, potential utilization: HP Z Turbo Drive PCIe Solid State Storage HBA , SAS Storage controller, Red Accelerator etc.
4	x16 PCI-E Gen 3	x16	Shared Storage Controllers for NEXIS / ISIS: Myricom 10G-PCI-E-8B-S Myricom Dual-Port 10G-PCI-E2-8B2-2S (ISIS 5500 / 5000 v 4.7 or later) Intel i350-T2 Intel PRO 1000 PT Intel Pro 1000 PF Gb Fiber HBA (single or Dual-port) or Red Accelerator / HP Z Turbo Drive PCIe Solid State Storage HBA
5	Configurable via motherboard Jumper E3 x8 PCI-E Gen 3 or x4 PCI-E Gen 2	x8	Avid HIB, Nitris-DX / Mojo-DX Interface HBA Active: 7030-30048-01 , 7030-30048-02 & 7030-20084-01 Or HP Thunderbolt-2 PCIe I/O HBA , HP Option G8U72AV when ordered with system. HP Option F3F43AT if ordered as an after-market option. http://www8.hp.com/us/en/products/oas/product-detail.html?oid=6946210#ltab=features Important note – If installing an Avid DX interface HBA or H.P. Thunderbolt HBA in slot #5, jumper E3 on the Z840 motherboard must be placed on pins #1 and #2. Failure to do so will result in non-recognition / intermittent / unreliable operation of either HBA. See page 16. Or Red Accelerator / HP Z Turbo Drive PCIe Solid State Storage HBA (For Red Accelerator or Z Turbo Drive, slot #5 must be set for x8 Gen3 PCI-E)
6	x16 PCI-E Gen 3	x16	Vendor Qualified 3 rd Party Hardware PCI-e Interface requiring: x16 PCI-E Gen3 (or lesser interface) / Full – Length PCI form factor or Red Accelerator / HP Z Turbo Drive PCIe Solid State Storage HBA
7	x1 PCI-E Gen 3	x1	Use this PCI-E space for Break-out connections for 3 rd party products such as the BlackMagic DeckLink HDMI ports, external x4 SAS connection from embedded motherboard SAS ports etc.,
	Embedded Intel I218-LM Gb NIC	PCI-E x1 Gen 2	Qualified for Avid NEXIS / ISIS connectivity
	Embedded Intel I210 Gb NIC	PCI-E x1 Gen 2	Qualified for Avid NEXIS / ISIS connectivity

7.) Required system BIOS settings for AVID environments:

Hyper-Threading Setting:

Please Note: CPU Hyper-threading should be enabled. It is currently enabled by default by HP

Z840 Required system BIOS settings:

1. Verify CPU Processors are set to Hyper-Threading
2. Set Memory NUMA – **Disable**

Z840 Optional system BIOS settings**

**** Only required if the User is experiencing recognition, operational or audio “popping” when using a USB audio I/O device (such as an Mbox or 3rd party USB audio device). These settings will resolve any of these issues which might be experienced with USB audio I/O devices.**

1. Set Runtime Power Management - **Disable**
2. Set Idle Power Savings - **Normal**
3. Set Intel Turbo Mode – **Disable**

Set Z840 Required system BIOS settings:

- During boot up press F10 at the HP splash screen to invoke Set Up.
- Select the Advanced tab
- Select Performance Options
- Verify Intel Hyper-Threading setting is Enable
 - If Hyper-Threading is set for Disable then it must be changed to Enable
- Return to the Main screen
- Select Advanced Tab
- Select Performance Options
- Select Non-Uniform Memory Access (NUMA)
- Default setting is Enable
 - Change this setting from Enable to Disable
- Return to the Main screen
- Select “Save Changes and Exit”
- When prompted to “Save Changes?” , select “Yes”
- System will reboot

Set Z840 Optional system BIOS settings: ****Only required if connecting USB audio I/O devices and experiencing any of the issues described above..**

- Select Advanced Power Options
- Select Runtime Power Management
- Default setting is Enable
 - Change this setting from Enable to Disable
- Select Idle Power Savings
- Default setting is Extended
 - Change this setting from Extended to Normal
- Return to the Main screen
- Select the Power tab
- Select Hardware Power Management
- Select Turbo Mode **(This setting might not appear once the Runtime Power Management setting has been disabled. This is o.k. and means Turbo Mode has been disabled).**
- Default setting is Enable
 - Change this setting from Enable to Disable
- Select “Save Changes and Exit”
- When prompted to “Save Changes?” , select “Yes”
- System will reboot

8.) Qualified GPU's, Drivers and settings:

AVID S/W	Version(s)	OS	GPU	Driver Required
Media Composer	8.6 and later	Win 7 Win 8.1 Win 10	Nvidia P4000, P5000, P6000 AMD WX7100	Nvidia 376.84 * AMD 16.40.3801
Media Composer	8.6 and later	Win 7 Win 8.1 Win 10	Nvidia K4200, K5200 M4000, M5000, M6000 (24GB or 12GB) AMD W7100	Nvidia 362.13 * AMD 15.20.1045
Media Composer	8.5 and later	Win 7 Win 8.1 Win 10	Nvidia K4200, K5200 M4000, M5000, M6000 (12GB ver) AMD W7100	Nvidia 353.82 * AMD 15.20.1045
Media Composer	8.4.3 and later	Win 7 Win 8.1	Nvidia K4200, K5200 M4000, M5000, M6000 (12GB ver) AMD W7100	Nvidia 353.82 * AMD 14.301.1019.1001
Media Composer	8.2.0 and later 7.0.4.1 and late	Win 7 Win 8.1	Nvidia K4200, K5200	Nvidia 340.84
NewsCutter	(11.x) 11.0.4.1 and later	Win 7 Win 8.1	Nvidia K4200, K5200	Nvidia 340.84

After installation of the AVID software the supported Nvidia driver can typically be found in the following directory:
[Program Files / Avid / Utilities / Nvidia](#)

If needed search the Avid KB for the specified Nvidia or AMD driver.

**For Nvidia drivers, two separate Nvidia installers exist– One is for Win7 / Win8.1 and the other for Win10. Both versions are provided with M/C*

The required GPU files and installation instructions for AMD graphics can be found at the following Avid KB link:

http://avid.force.com/pkb/articles/en_US/download/AMD-Supported-GPU-Drivers

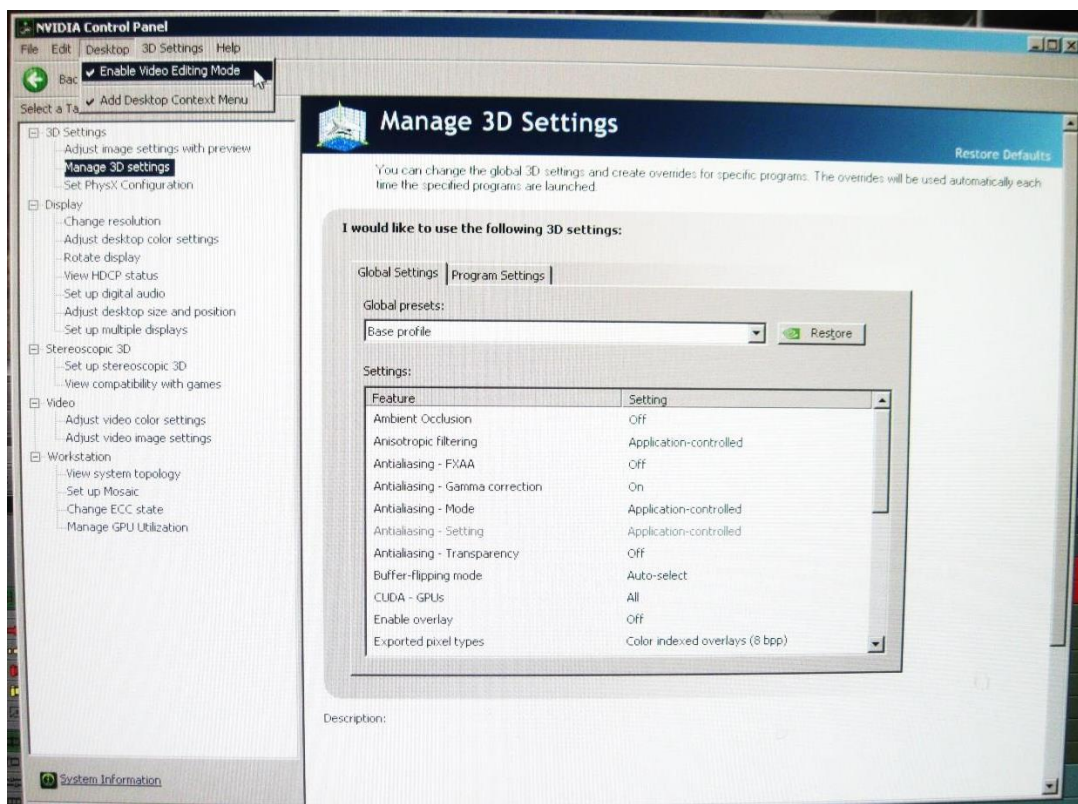
The required GPU files and installation instructions for Media Composer 7.0.4.1 can be found at the following Avid KB link:

http://avid.force.com/pkb/articles/en_US/compatibility/Media-Composer-7-0-4-1-Nvidia-GPU-Update

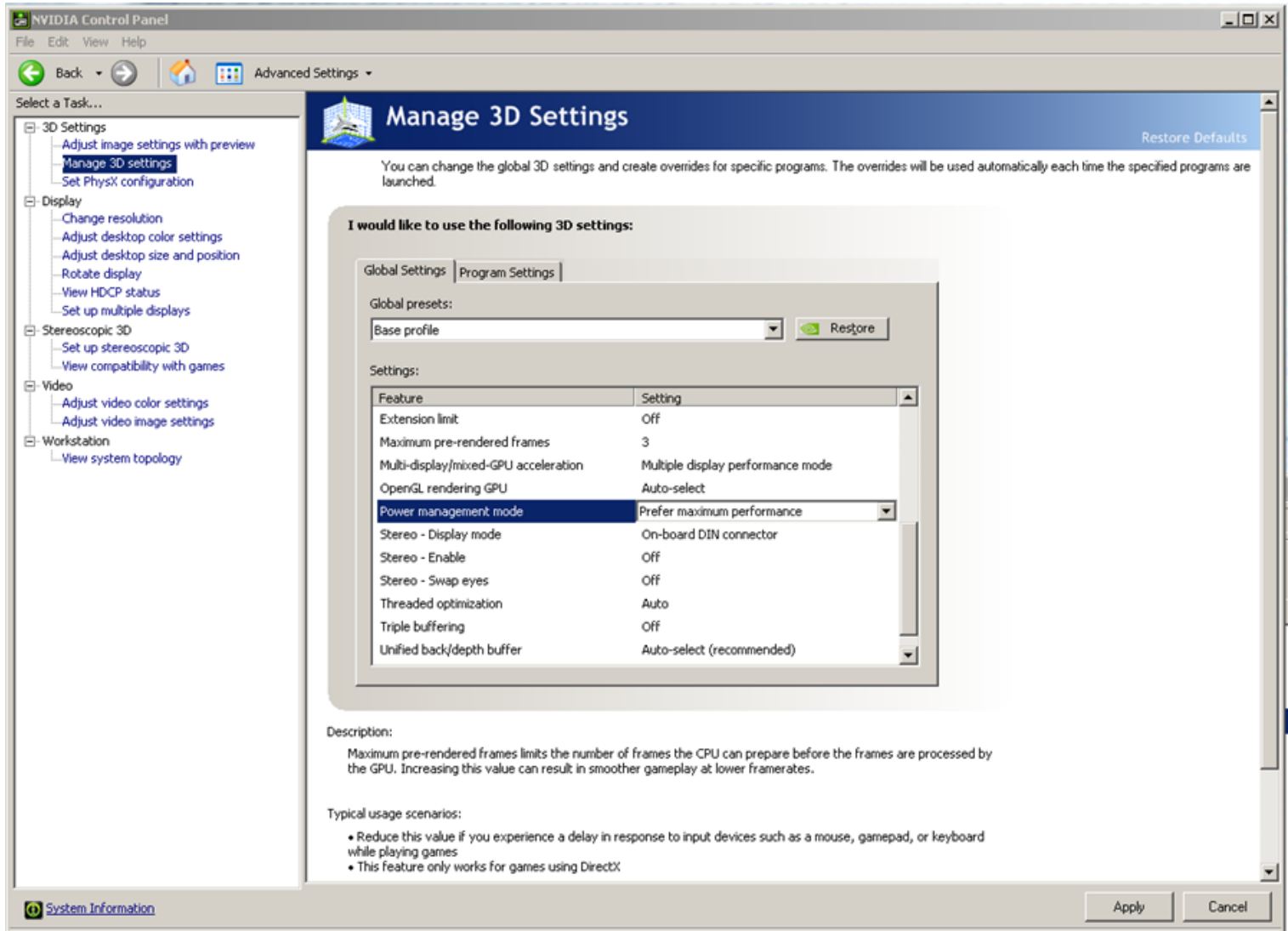
The required GPU files and installation instructions for NewsCutter 11.0.4.1 can be found at the following Avid KB link:

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. See picture below
6. Right-Click on the desktop and select Nvidia Control Panel
7. Select Manage 3D Settings
8. Select "Global Settings" Tab
9. Under the "Global Settings" tab select "Base Profile".
10. Scroll down and locate the "Power Management Mode" feature. The default setting is "Adaptive". For the "Power management mode" feature, select "Prefer maximum performance" as shown in the picture below.



11. Depress the "Apply" button.
12. Nvidia settings complete

9.) Use embedded NIC ports for NEXIS / ISIS connectivity

The Z840 has two embedded Intel NIC ports:

- I218-LM
- I210

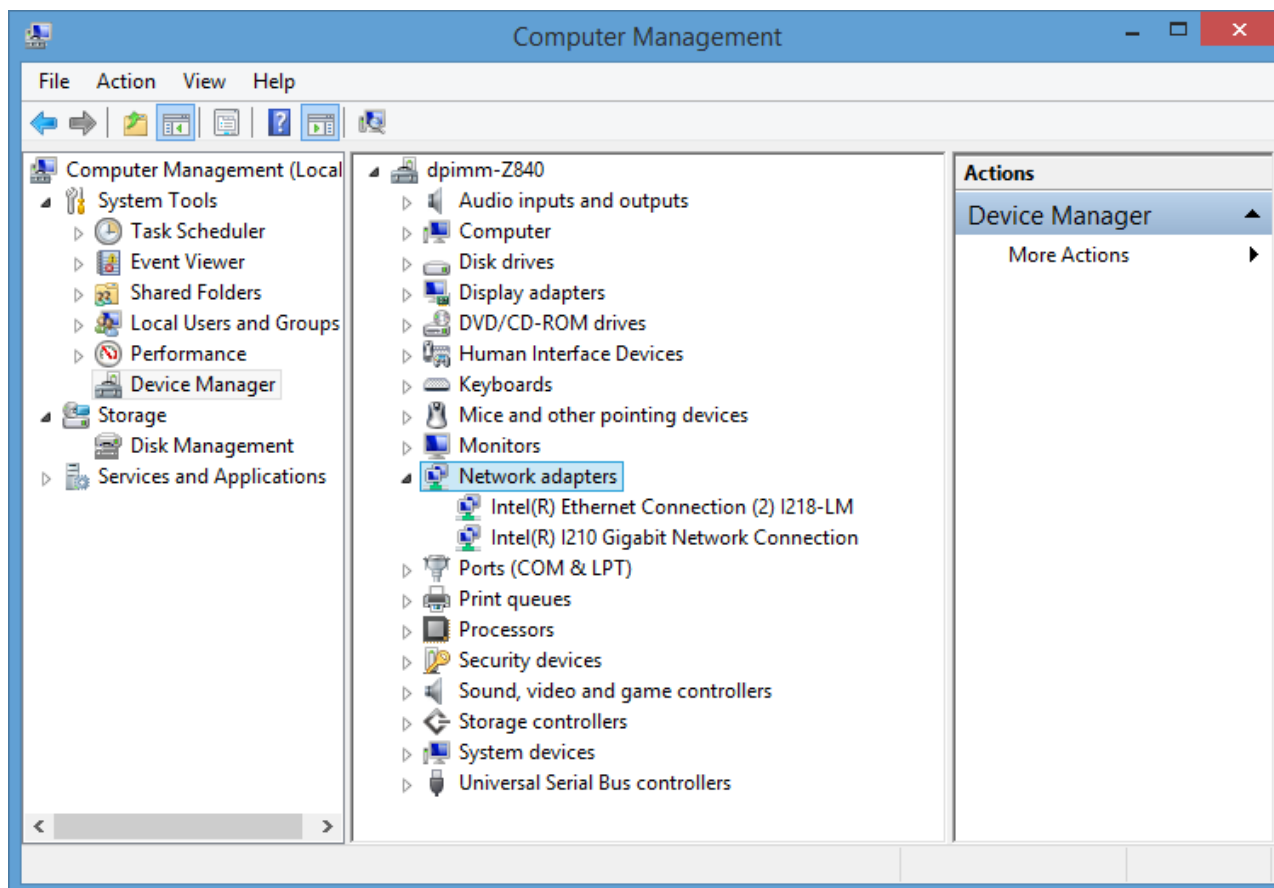
These NIC ports are qualified for Avid NEXIS / ISIS connectivity. An add-in NIC HBA is not recommended or required.

For proper operation and connectivity of the Intel NIC(s) with NEXIS / ISIS the following settings are required:

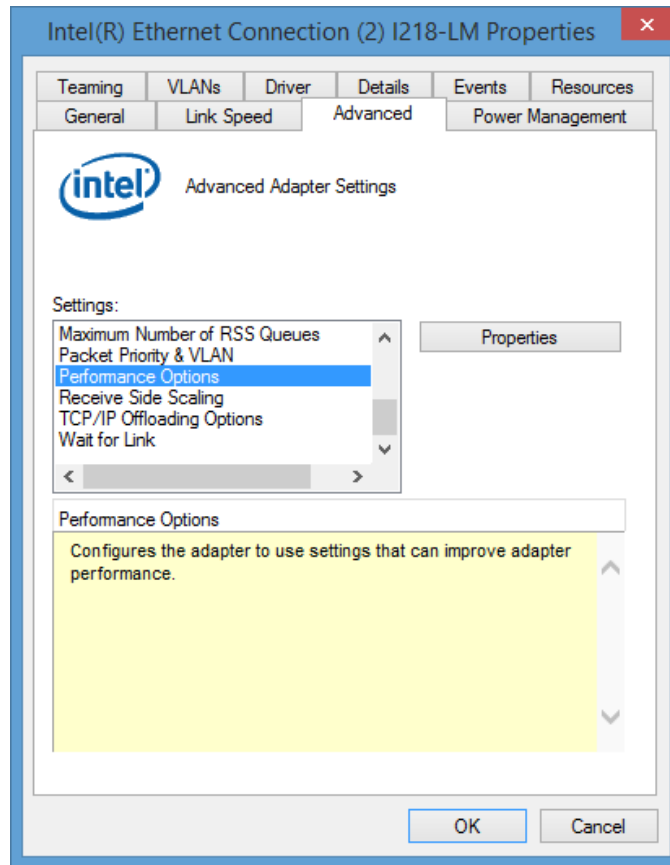
1. For the performance settings, change the following parameters:
 - Receive Buffers to 1024
 - Transmit Buffers to 1024
2. Disable the windows firewall.

To set the Intel NIC Receive / Transmit buffers:

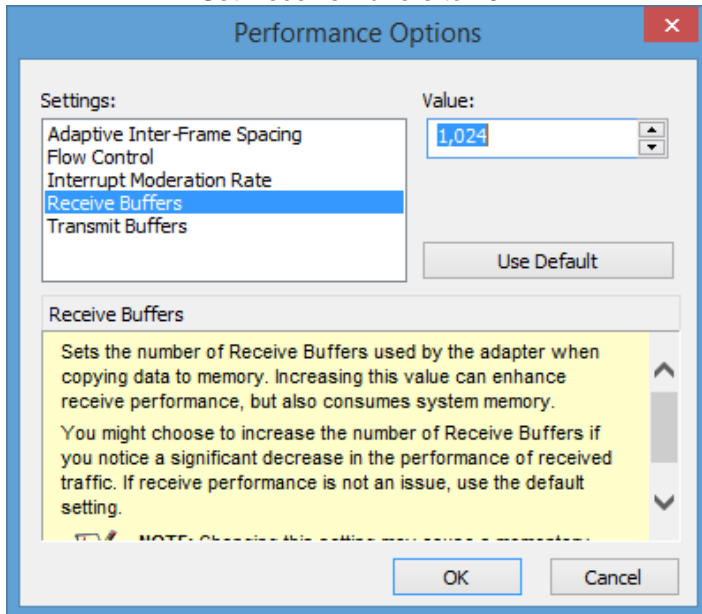
Go to device manager and select each instance of the network adapter device which will be used for ISIS connectivity.



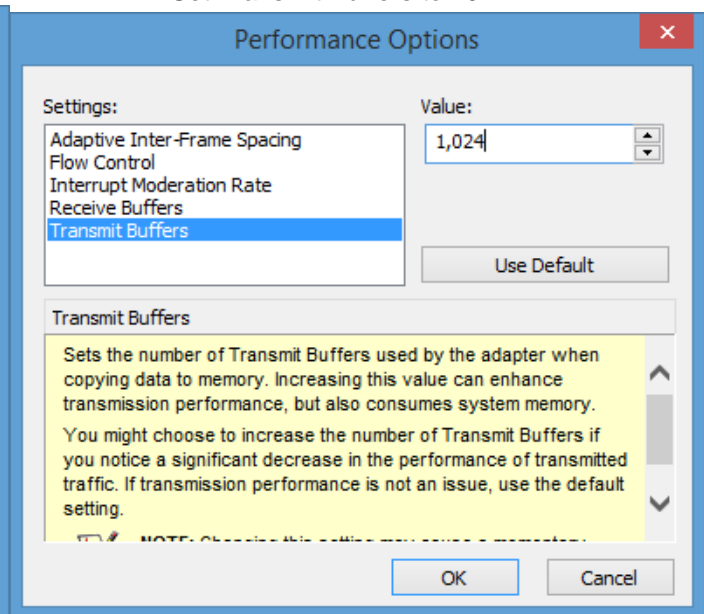
Select performance options and then select Properties.



Set Receive Buffers to 1024



Set Transmit Buffers to 1024

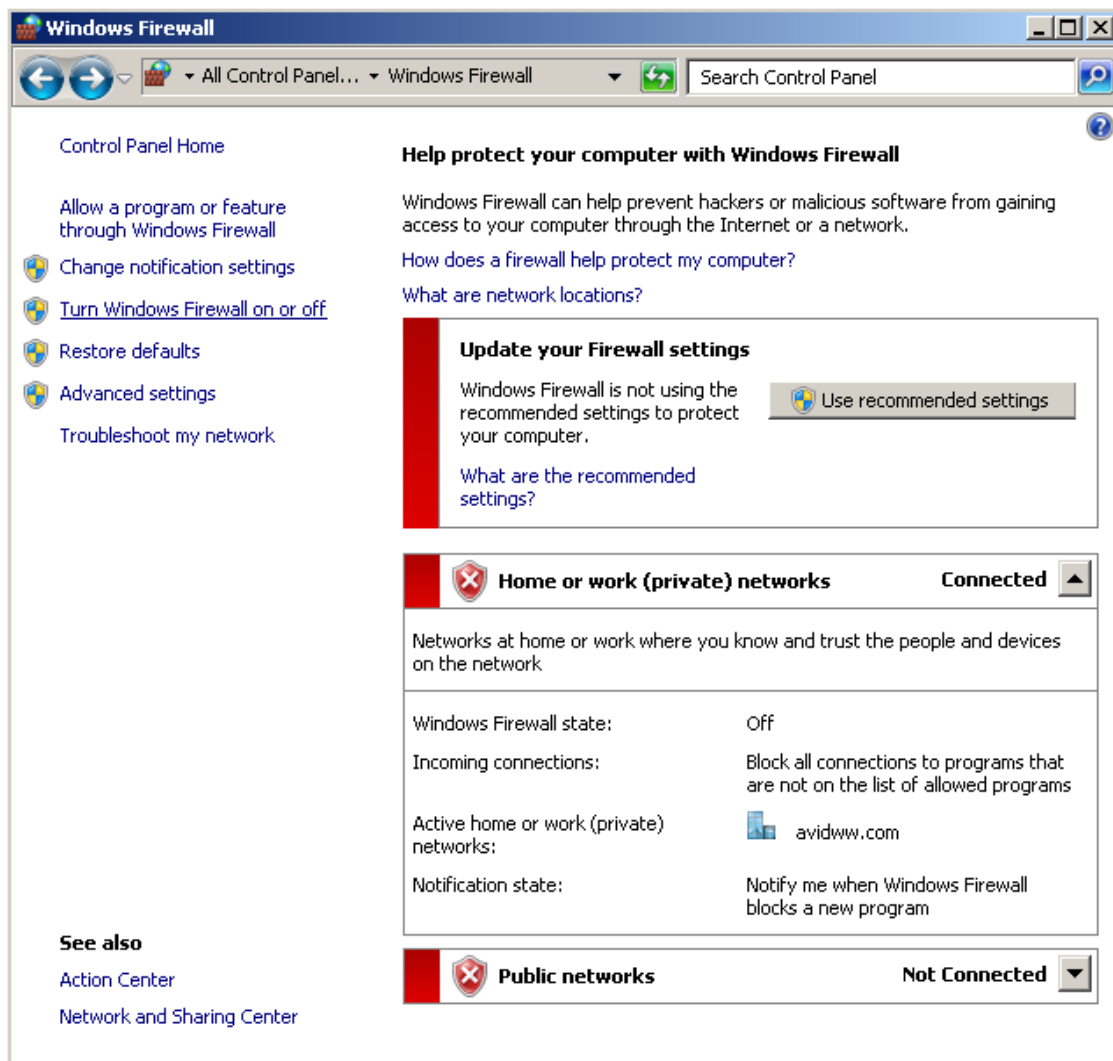


Perform this for each instance of any Intel NIC port which will be used for NEXIS / ISIS connectivity.

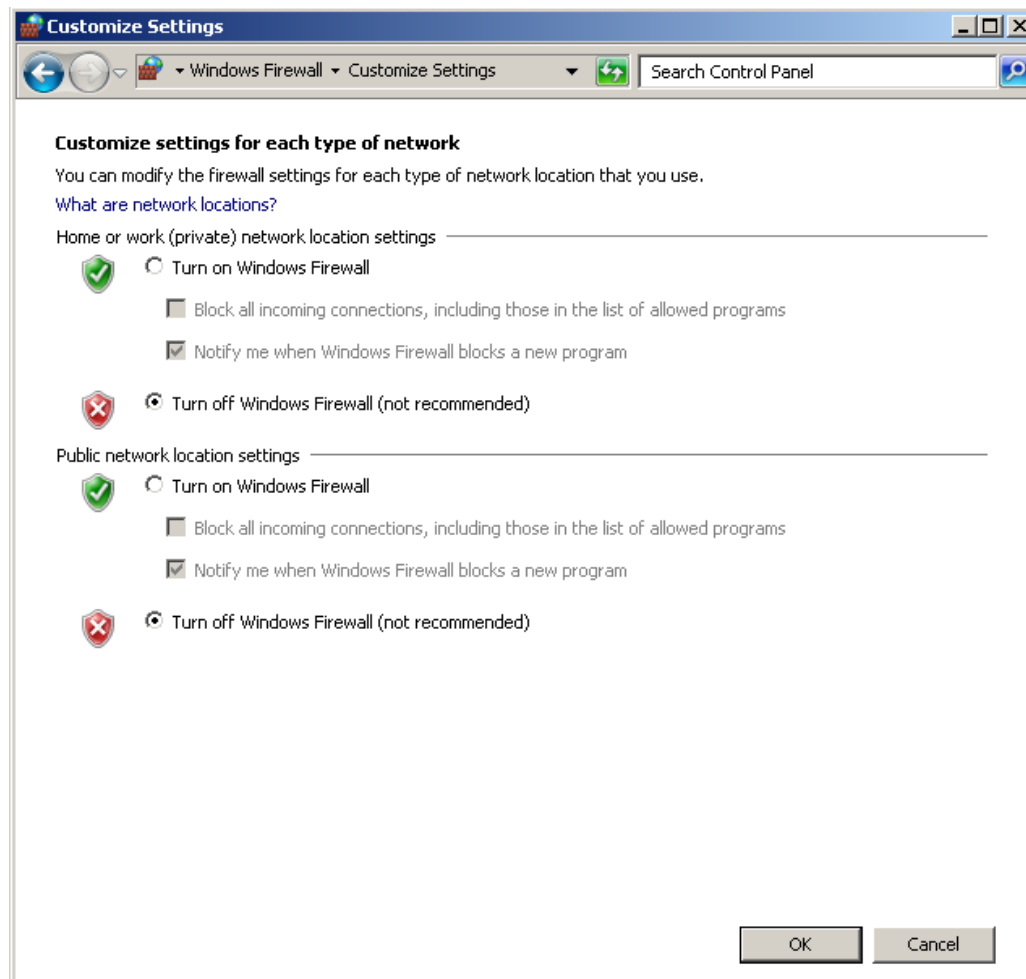
9a.) Firewall Notes For NEXIS / ISIS Connectivity

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



Important note specific to 2 X 1Gb connected client on ISIS 7500/7000 that use Windows 8.1

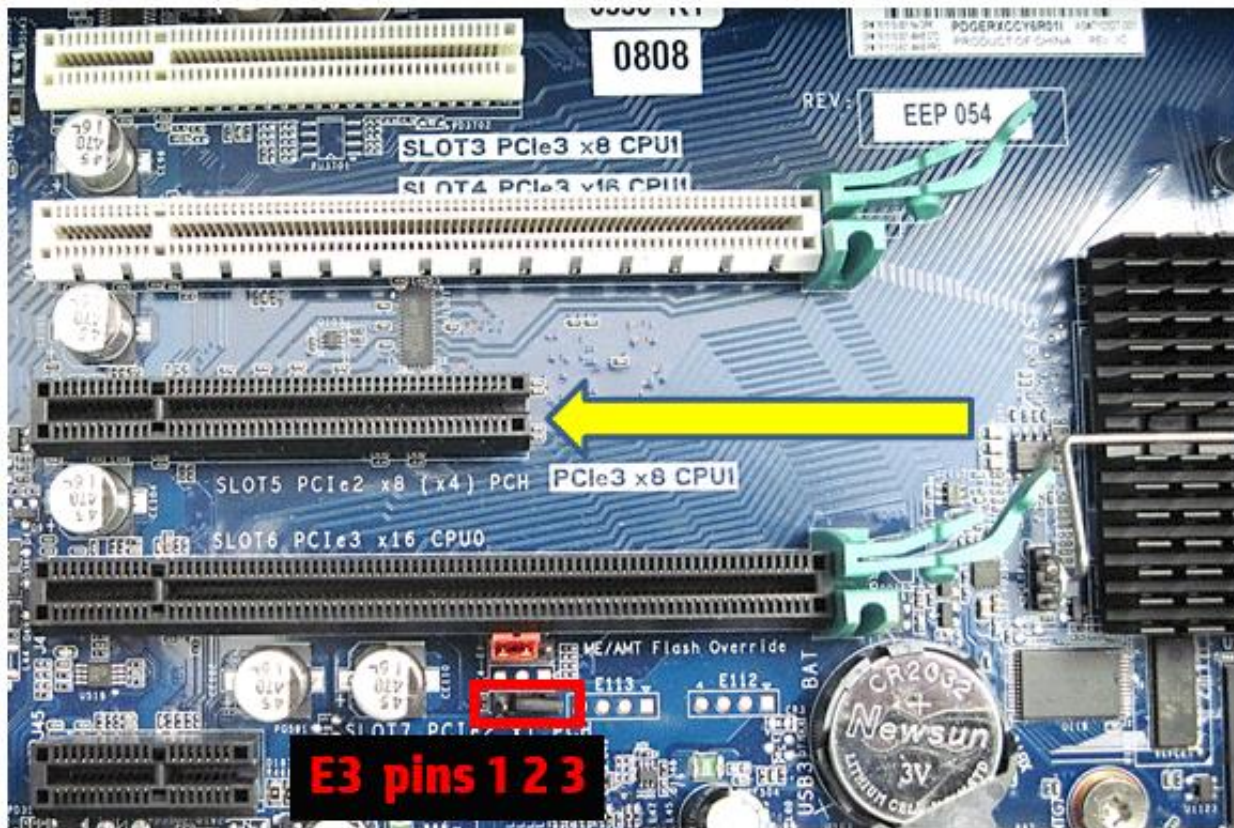
Note: To avoid lower performance on Windows 8.1 clients with 2 x 1Gb connection to ISIS 7000, check the following related to the Windows Firewall:

1. The network profile for adapter connected to ISIS network should be private or domain. If it is set to public then in ISIS Client manager General preferences you need to check if Public network profile is enabled. The Windows Firewall settings changed in the ISIS client will take effect upon next reboot.
2. Confirm the Windows Firewall is turned on for the proper network profile which is assigned to network between client and ISIS.

10.) Various Configuration Details:

Important setting to ensure proper and reliable operation of Avid DX hardware and HP Thunderbolt HBA:

Slot 5 can operate as either an x8 PCI-E Gen3 or x4 PCIe-E Gen2 slot. Slot 5 is configured as shipped from the factory by H.P. as x8 PCI-E Gen3. Avid DX hardware and the HP Thunderbolt HBA requires the slot to be configured as an x4 PCI-E Gen2. To set slot #5 to x4 PCI-E Gen2 install the E3 jumper on pins 1 and 2 of the E3 jumper header. By default, E3 jumper is on pins 2 and 3. See picture below to locate Jumper E3. ***This must be done with the system powered-off and the A/C power cord disconnected.***



Artist DNxIO and Nitris-DX / Mojo-DX active interface HBA support note:

- For Artist DNxIO – Only the Gen2 versions 7030-30048-02 , -01 are supported
- For Nitris-DX and Mojo-DX – Any of the 3 versions are supported: Gen2 versions 7030-30048-02 , -01 and Gen1 ver 7030-20084-01

Avid active Gen2 interface HBA 7030-30048-01



**Avid active Gen1 interface HBA 7030-20084-01
(Not for use with Artist DNxIO)**



Ensuring that Avid Artist DNxIO , Nitris-DX and Mojo-DX are properly recognized with Windows 8 systems

Recognition of the Avid DX hardware may be problematic when the CPU is powered and a fast start-up boot method is used to activate the CPU. To change this behaviour on Win 8, turn off the fast start-up selection in the shutdown settings. To do this: Open the control panel and select Hardware and Sound. Under Power Options, select Change what the power buttons do. At the bottom, de-select Turn on fast start-up and save the changes. This will insure consistent and proper recognition of the Avid DX hardware.

For very detailed instructions search the Avid Support Knowledge Base for the following article:

“Ensuring that Avid Nitris-DX and Mojo-DX are properly recognized with Windows 8 systems”

See Instructions Below:

- 1.) Open Control Panel and select “Hardware and Sound”
- 2.) Under Power Options, select “Change what the power buttons do”
- 3.) Select “Change settings that are currently unavailable” (This will allow the user to change the “Turn on fast start-up” setting)
- 4.) “Turn on fast start-up” will likely be currently selected
- 5.) De-select / Un-check “Turn on fast start-up”
- 6.) Select “Save Changes”

11.)Serial Port Deck Control:

Serial Port Deck Control:

The HP Z840 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 Z840 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 Z840 USB port.
- Once the Keyspan 19HS driver is installed then plug the Keyspan 19HS into a Z840 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.

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

The following Avid support KB articles 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

For Win7 Optimizations search the Avid Support Knowledge Base for the following article:
[“Windows Guide - Windows 7 Optimizations and Troubleshooting”](#)

For Win8 Optimizations search the Avid Support Knowledge Base for the following article:
[“Windows Guide - Windows 8 Optimizations and Troubleshooting”](#)

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

H.P. offers SAS Back Panel Connector Kits which can be used to connect to external SAS storage chassis. Ordering info from HP is as follows:

- G8X53AV HP SAS Back Panel Connector Kit (when ordered with system from HP)
(EM164A when ordered as an after-market option)
- G8X52AV HP SAS Back Panel Bulkhead Kit (when ordered with system from HP)



External SAS Port 1

G8X53AV HP SAS Back Panel Connector Kit
(EM164A when ordered as an after-market option)

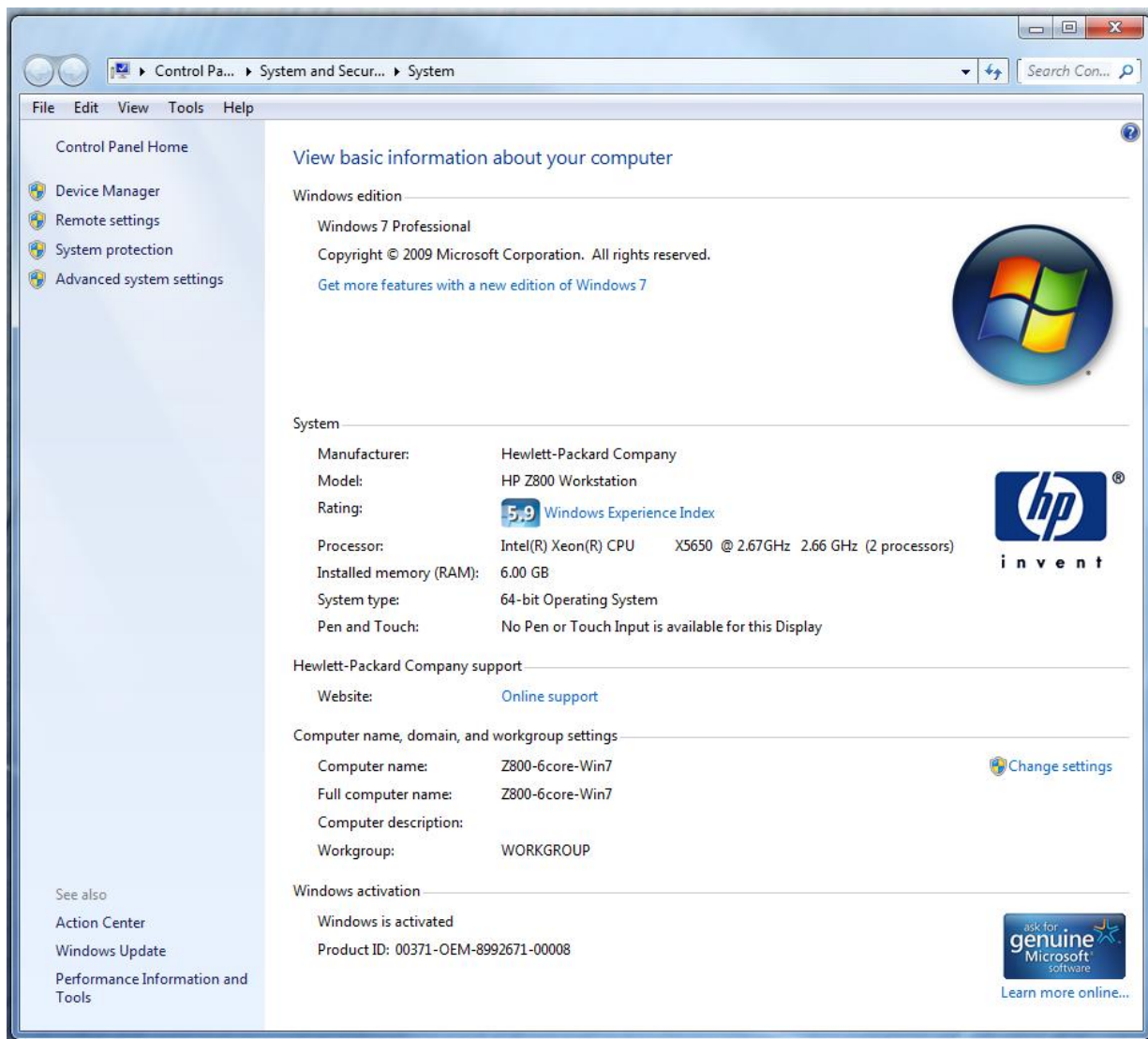


External SAS Port 2

G8X52AV HP SAS Back Panel Bulkhead Kit
(via PCI card slot)

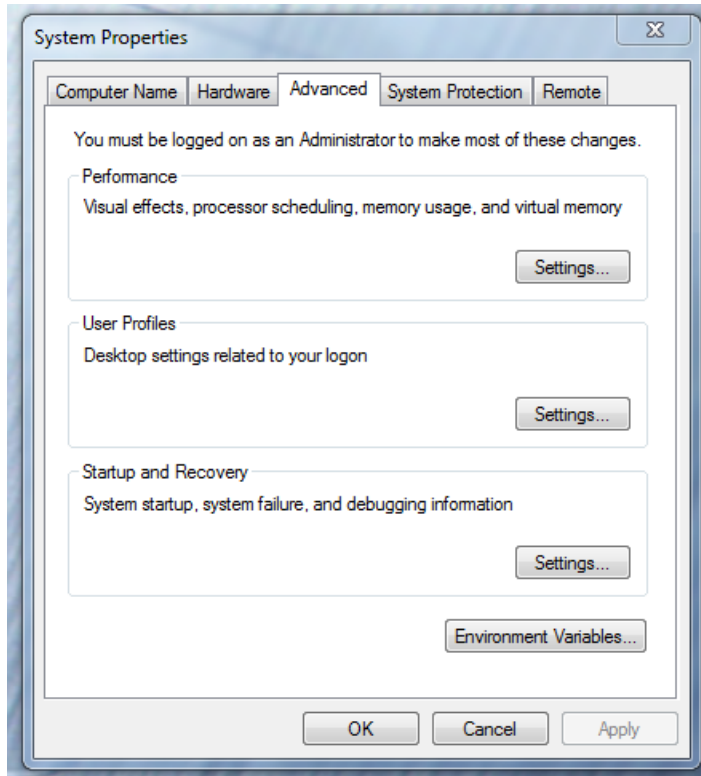
14.)Set Windows “Visual Effects” for “best performance”:

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



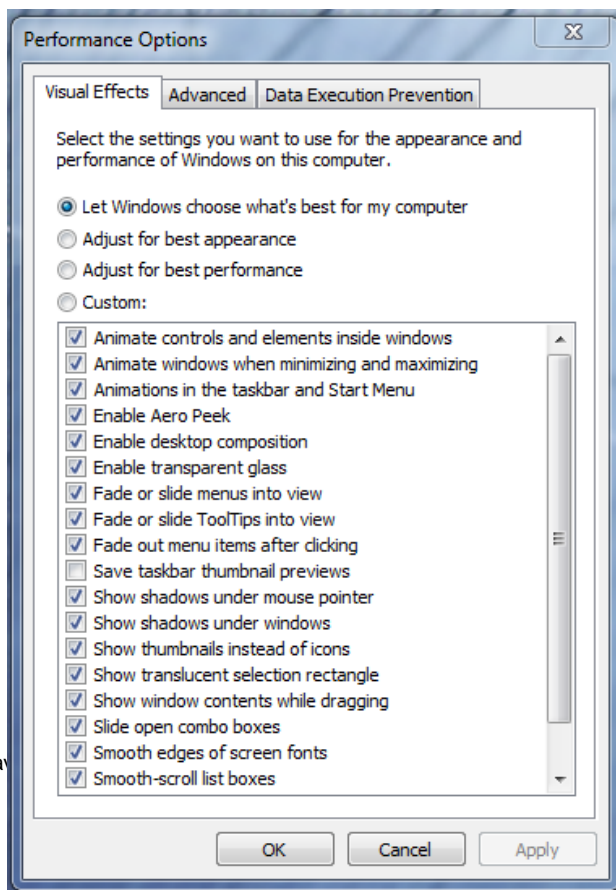
4. On the left side of the screen above, locate and select “Advanced system settings”

5. The System properties window will be displayed. (Picture below).

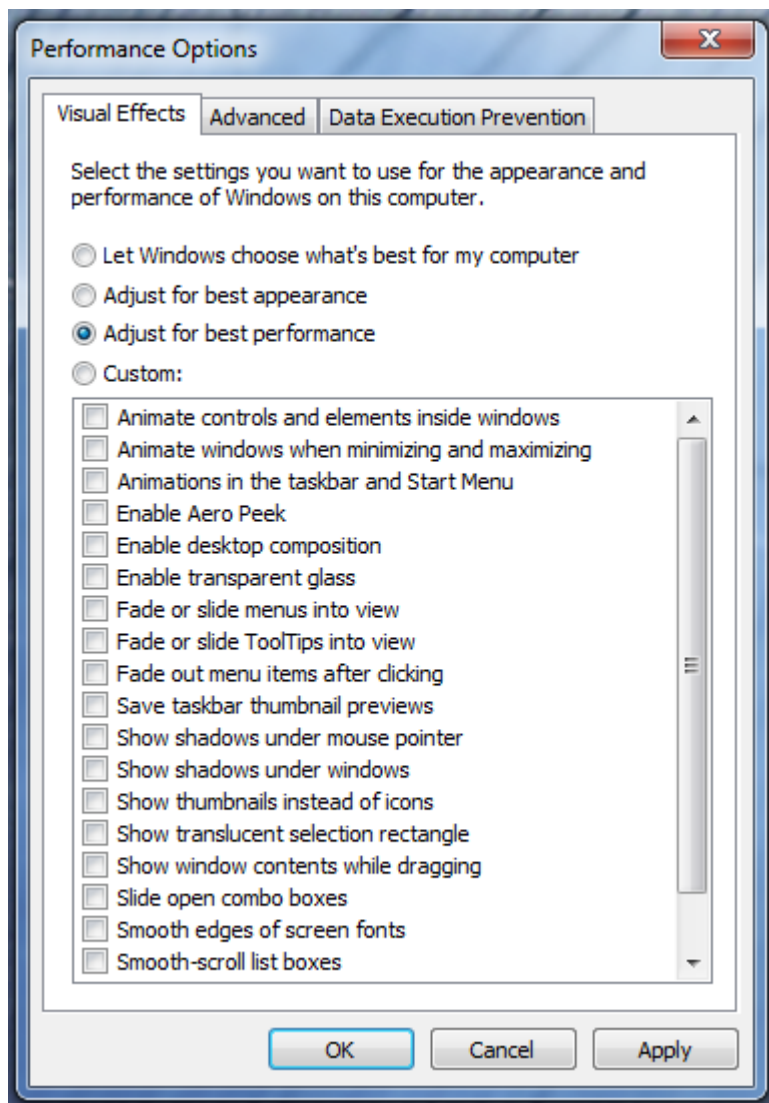


6. Under the "Advanced" tab depress the "Settings..." button for performance.

7. The "performance Options" window will be displayed. (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.

Revision Update

Revision	Date	Name	Update
Rev A	Dec 2, 2014	Joe Conforti	Initial release of the Z840 configuration guide for support of Media Composer 7.x , 8.x and NewsCutter 10.x , 11.x
Rev B	Dec 29 , 2014	Joe Conforti	Minor corrections / clarifications for slot configurations and qualified HBA's
Rev C	March 1 st , 2016	Joe Conforti	Added support for Artist DNxIO / Win 10 / New Nvidia GPU M4000, M5000, M6000 / AMD GPU support / general updates & clarifications
Rev D	July 14 th , 2016	Joe Conforti	Added support for v4 Xeon CPU's, 2400MHz memory and new Nvidia driver (362.13 released with M/C 8.6). Added support for the 24GB version of the M6000 GPU. Also added the Intel i350-T2 dual Gb NIC which had inadvertently been left out.
Rev E	May 4 th , 2017	Dave Pimm	Add new Nvidia graphics, add DnxIQ