

## Avid Configuration Guidelines HP Z400 Single Quad-Core CPU Workstation Gen1 Z400 – 4 DIMM / No Embedded Firewire Media Composer / NewsCutter

## 1.) HP Z400 AVID Qualified System Specification:

### Z400 / AVID Qualified Operating System choices:

- Microsoft® Windows Vista Business 64-bit Edition (SP1 / SP2)
- Microsoft® Windows Vista Ultimate 64-bit Edition (SP1 / SP2)
- Microsoft® Windows XP Professional 32-bit Edition (SP2 / SP3)
- Microsoft® Windows 7 Professional 64-bit Edition (Requires minimum Media Composer 5.0 or NewsCutter 9.0).

### Z400 Hardware Configuration

### Qualified CPU Choices

- 1.) Single Intel® Quad-Core Xeon® W3550 Processor @ 3.06GHz 8MB cache / 1066MHz memory
- 2.) Single Intel® Quad-Core Xeon® W3540 Processor @ 2.93GHz 8MB cache / 1066MHz memory

This processor selection has gone End-of-Life and is no longer available in new systems being purchased from H.P.

### Video Card Choice

NVIDIA Quadro FX 3800 1GB PCI-E video board

### System Hard Drive

320GB SATA-II 3Gb/s 7200RPM Hard Disk Drive (Minimum Recommendation)

### Memory Configuration

Memory: 6GB (3 x 2GB) DDR3 1333 ECC memory – (Requires three 2GB DIMMs, DIMM sizes cannot be mixed sizes)

2GB memory modules must be installed in the following memory slots: CPU0-DIMM1, CPU0-DIMM2, CPU0-DIMM3

### Memory configuration constraints

No other memory configurations are recommended in Z400 AVID environments. Only the 6GB (3 x 2GB) configuration is supported. Memory configurations which mix and match memory module sizes and locations will result in a poor performing, non-optimal operating environment.

### 1394a Firewire HBA requirement (For Firewire device support) (H.P. Option NM980AV)

NM980AV HP 3-port PCI 1394a Firewire IEEE HBA option (Installs in slot 5, has two external rear 1394a ports and also connects to front panel 1394a port) (Standard part of AVID Gen1 Z400 specific system SKU).

2.) Qualified Operating Systems for Avid Client Editing Applications, Hardware and Shared-Storage connectivity with the HP Z400:

- Supported: Microsoft® Windows Vista Business 64-bit Edition (SP1 / SP2)
- Supported: Microsoft® Windows Vista Ultimate 64-bit Edition (SP1 / SP2)
- Supported: Microsoft® Windows XP Professional 32-bit Edition (SP2 / SP3)
- Supported: Microsoft® Windows 7 Professional 64-bit Edition
- Not Supported Microsoft® Windows XP 64-bit (any version)
- Not Supported Microsoft® Windows Vista 32-bit (any version)
- Not Supported Microsoft® Windows 7 any 32-bit version, or any version of Home, Ultimate or Enterprise editions.

<u>Note regarding Service packs</u>: Latest Service Pack releases are recommended for all Avid qualified software releases for the Z400. Latest Vista and XP Service Pack releases <u>are mandatory</u> for <u>Media Composer 5.0</u>, <u>Symphony 5.0 and NewsCutter 9.0</u>

- SP2 for Vista O.S.
- SP3 for XP O.S.
- SP1 for Win7 64-bit (formally supported starting with M/C 5.5.2, Symphony 5.5.2, NewsCutter 9.5.2 releases)

## 3.) Qualified Avid Editing Applications and Hardware Supported on the HP Z400 workstation:

	Qualified / Supported by Operating System		Ν	Minimum AVID Version S/W		
	-			M/C = Media Composer N/C=NewsCutter		
	Win7 Pro 64-bit	Vista 64-bit	WinXP 32-bit	Win 7 Pro 64-bit	Vista 64-bit	WinXP 32-bit
Mojo DX	Yes	Yes	Yes	M/C v5.0 N/C v9.0	M/C v3.5.4 N/C v7.5.4	M/C v3.5.9 N/C v7.5.9
Nitris DX	Yes	Yes	Yes	M/C v5.0 N/C v9.0	M/C v3.5.4 N/C v7.5.4	M/C v3.5.9 N/C v7.5.9
1394 Mojo-SDI DNA	Yes	Yes	Yes**	M/C v5.0 N/C v9.0	M/C v3.5.4 N/C v7.5.4	M/C v3.5.9 ** N/C 7.5.9 **
1394 Adrenaline DNA	Yes	Yes	Yes**	M/C v5.0 N/C v9.0	M/C v3.5.4 N/C v7.5.4	M/C v3.5.9 ** N/C 7.5.9 **
Matrox MX02 Mini	Yes	Yes	Yes	Requires r	minimum M/C 5.0 / I	NewsCutter 9.0
AJA IO Express	Yes	No	No	O.S. supj Compatible onl Requires mi	port - Windows 7 Pı ly with Media Comp nimum M/C 5.5.1 / I	o 64-bit only. oser or NewsCutter NewsCutter 9.5.1
1394 Mojo-Analog DNA	No	No	No		N/A	
Symphony-Nitris DNA (Classic)	No	No	No		N/A	
Unity ISIS System Infrastructure	Yes	Yes	Yes		ISIS 1.4 Infrastruct	ure
Unity ISIS 1 Gbit Ethernet Client	Yes	Yes	Yes		ISIS 2.03 Client	
Unity ISIS Hi-res (10 Gbit) client	Yes	Yes	Yes		ISIS 2.03 Client	
Unity MediaNet Infrastructure	Yes	Yes	Yes	Ме	ediaNet 4.2.4 Infrastr	ucture
Unity MediaNet Fibre	Yes	Yes	Yes		MediaNet 5.1.2 Cli	ent
Unity MediaNet AECIFs	Yes	Yes	Yes		MediaNet 5.1.2 Cli	ent

AVID qualified Hardware / Shared Storage

\*\* <u>WIN XP 32-bit Support Note:</u> For operation with WinXP 32-bit OS and 1394 Adrenaline or 1394 Mojo-SDI hardware, installation of Service Pack 3 (SP3) and the following 1394b Microsoft Hot-Fix (955408) is required. Both the Hot-Fix and SP3 are mandatory requirements to ensure proper operation of the supported 1394b PCI-E HBA with AVID 1394 DNA hardware. Restart the system after running the hot-fix.

> The 955408 hot-fix can be down-loaded from Microsoft's website at: http://support.microsoft.com/hotfix/KBHotfix.aspx?kbnum=955408&kbln=en-us

**NOTE:** The hot-fix must be installed with the 1394b adapter physically installed in slot #1. Installation of the hot-fix without the 1394 adapter installed in slot #1 will result in improper operation of 1394 Adrenaline and 1394 Mojo-SDI. If the hot-fix was initially run without the 1394b adapter installed, it is okay to run the hot-fix again. Running the hot-fix multiple times will not result in any system issue.

Please Note: The hot-fix page indicates that this fix is for SP4. This hot-fix is actually for SP3. It is safe to use this fix for SP3.

## AVID qualified HBA info

AVID qualified HBA	AVID Part Number	Slot	Function
Avid HIB, DX Interface HBA**	Active: 7030-30048-01 Active: 7030-20084-01	#1	Avid DX Hardware Interface HBA
Matrox MX02 Mini PCI-E Interface HBA	Not stocked by AVID	#1	Matrox MX02 Mini interface (Part of Matrox MX02 Mini kit)
AJA IO Express PCI-E Interface HBA	Not stocked by AVID	#1	AJA IO Express interface (Part of AJA IO Express kit)
Atto FC-41ES***	7030-20004-01	#3	Shared Storage: MediaNet LAN-Share Fibre
Intel PRO 1000 PT - ISIS	7030-20139-01	#3	Shared Storage: Unity ISIS Copper Gb-Ethernet
Intel PRO 1000 PF - ISIS	Not stocked by AVID	#3	Shared Storage: Unity ISIS Optical Gb-Ethernet
Chelsio S310E-SR	7030-20171-01	#3	Shared Storage: Unity ISIS 10Gb-Ethernet
Myricom 10G-PCIE-8B-S***	7030-30041-01	#4	Shared Storage: Unity ISIS 10Gb-Ethernet Requires minimum ISIS 2.2
LSI 9200-8e SAS controller	7030-30036-01	#4	SAS Local Storage: Xtore StudioRAID 16Re (16-bay) chassis Xtore StudioRAID 5Te (5-bay) chassis
Atto H680	7030-30028-01	#4	SAS Local Storage – Avid VideoRAID SR (16-bay)
Atto R380	7030-20166-01	#4	SAS Local Storage – Avid VideoRAID ST (5-bay) and Xtore StudioRAID 5Ti (5-bay) chassis
Atto UL5D	7030-20002-01	#4	Local Storage – VideoRAID RTR & Legacy Avid u320 SCSI storage (The UL5D BIOS should be disabled)
H.P. NM980AV 3-port PCI 1394a Firewire IEEE HBA	7030-20154-01	#5	1394 Camera / Deck support
StarTech PEX1394B3 1394b PCI-E	7030-30029-01	#1	1394 connectivity for: 1394 Adrenaline DNA / 1394 Mojo-SDI DNA
Dynex DX-PCI2PF 1394b PCI-E	Alternate 1394b PCI-E HBA, Not stocked by AVID	#1	1394 connectivity for: 1394 Adrenaline DNA / 1394 Mojo-SDI DNA
Point Grey Research model FWB-PCIE-01, 1394b PCI-E	Alternate 1394b PCI-E HBA, Not stocked by AVID	#1	1394 connectivity for: 1394 Adrenaline DNA / 1394 Mojo-SDI DNA

## Specific Important qualified HBA Support Notes

### \*\* <u>DX Interface HBA Support Note: (See reference pictures on page 11 of this guide).</u>

- 1) Active DX interface HBA (7030-30048-01 and 7030-20084-01) function with all Z400 DX supported releases of Media Composer and NewsCutter. (Media Composer 3.5.4 and NewsCutter 7.5.4 or later releases).
- 2) Passive DX interface HBA (7030-30021-01) requires Media Composer 3.5.9 or NewsCutter 7.5.9 or later version software. Running the passive version DX HIB with prior software releases may result in instability.

# \*\*\* Atto FC-41ES HBA Support Note:.

1) The Z400 requires a Rev D or later version FC-41ES. The board revision is clearly marked on a label on the back of the FC-41ES. Earlier revisions (A, B and C) of the FC-41ES may demonstrate compatibility issues when used with the Z400 including not being recognized by the Z400 CPU.

# Chelsio S310E-SR 10Gb Interface HBA Support Note.

1) Qualified only with Windows XP 32-bit and Vista 64-bit O.S. Cannot be used with Win7 O.S.

## \*\*\* <u>Myricom 10G-PCIE-8B-S 10Gb Interface HBA Support Notes.</u>

- Initial shared storage HBA's used in the Z400 resided in slot #3. However, the Myricom 10G-PCIE-8B-S must reside in slot #4 as this HBA requires the performance of the additional PCI-E lanes offered for slot#4. It will not function properly if used in slot #3. Using the Myricom 10G-PCIE-8B-S for ISIS 2.2.x connectivity will not allow for support of simultaneous connection to local storage in Z400 configurations as the local storage controllers must also reside in slot #4.
- 2) Qualified with Windows XP 32-bit, Vista 64-bit O.S. and Win7 Pro 64-bit. Requires minimum ISIS 2.2 For XP 32-bit client, qualified only with ISIS 7000 (ISIS Classic). Not qualified or recommended with ISIS 5000 and WinXP 32-bit client.

			DX Hardware configs Or Matrox MX02 Mini configs Or A IA IO Express configs	1394 Adrenaline DNA Hardware 1394 Mojo-SDI DNA Hardware
Slot #	Electrical	Mechanical	AJA IO Express comigs	
1	x4 PCI-E Gen 2 (25Watts)	x8	Avid HIB, DX Interface HBA Active: 7030-30048-01 & 7030-20084-01 (all s/w releases) Passive HIB: 7030-30021-01 (Requires Media Composer s/w release 3.5.9 or later and NewsCutter 7.5.9 or later) OR Matrox MX02 Mini PCI-E Interface HBA OR AJA IO Express PCI-E Interface HBA	1394b PCI-Express HBA required (w 8K buffers). See specific info below in section 5. AVID 1394 DNA hardware must connect to the PCI-E 1394b HBA
2	x16 PCI-E Gen 2 (75Watts)	x16	Graphic Quadro	es Card: FX 3800
3	x4 PCI-E Gen 1 (25Watts)	x8	Shared Storage Controllers: Atto FC-41ES - MediaNet LAN Share Intel PRO 1000 PT - ISIS 5000 / 7000 Intel PRO 1000 PF - ISIS 5000 / 7000 Chelsio S310E-SR - ISIS 10Gb	
4	x16 PCI-E Gen 2 (75Watts)	x16	Local Storage Controllers: Atto H680 – Avid SAS VideoRAID SR (16-bay) support Atto R380 – Avid SAS VideoRAID ST (5-bay) support Atto R380 – SAS Xtore StudioRAID 5Ti (5-bay) support LSI 9200-8e SAS Xtore 16Re (16-bay) support LSI 9200-8e SAS Xtore 5Te (5-bay) support Atto UL5D - Legacy u320 SCSI support OR Shared Storage Controller: Myricom 10G-PCIE-8B-S	
5	PCI 32bit /33MHz	PCI 32/33	HP NM980AV 1394a PCI HBA Primary 1394 connection for 1394 camera / deck / disk drive (1394 disk drives are recommended only for file transfers)	
6	PCI 32bit /33MHz	PCI 32/33	Not U	Jsed
	Embedded Broadcom BCM5764 GbE NIC	PCI-E x1 Gen 1	<u>Not qualified</u> for Avid ISIS 5000 / <u>Qualified</u> for Avid MediaNetwork AEC	7000 Connectivity DIFs

## 5.) 1394 DNA (Adrenaline / Mojo) hardware configuration requirement (slot #1 requirement)

AVID 1394 DNA (Adrenaline / Mojo) hardware must connect via specific high-performance add-in 1394b PCI-Express Firewire cards (with 8K buffers) which must be installed in Slot #1. *The Z400 front panel 1394 port or the external 1394 ports on the HP PCI 1394 card (installed in slot #5) cannot be used* for connectivity to AVID 1394 DNA hardware.

Current qualified PCI-Express 1394b Firewire cards are:

- 1) StarTech PEX1394B3 (AVID P/N 7030-30029-01)
- http://www.startech.com/item/PEX1394B3-2b-1a-PCI-Express-1394-FireWire-Adapter-Card.aspx
- 2) Dynex DX-PCI2PF

http://www.dynexproducts.com/pc-729-2-dynex-2-port-firewire-800-and-1-port-firewire-400-pcie-adapter.aspx

3) Point Grey Research FWB-PCIE-01

http://www.ptgrey.com/products/firepro/adapters/FWB-PCIE/PCIe\_1394b\_card\_datasheet.pdf

#### 6.) Utilization of 1394 a/b adapters. HP NM980AV 1394a PCI HBA (Slot #5) and optional PCI-E 1394b HBA (Slot #1).

- NM980AV HP 3-port PCI 1394a Firewire IEEE HBA option. Installs in slot 5, has two external rear 1394a ports and also connects to Z400 front panel 1394a port.
- Optional 1394b PCI-Express Firewire card (with 8K buffers) StarTech, Point Grey Research, Dynex etc. (Slot #1)

Configuration	NM980AV HP 3-port PCI 1394a Firewire IEEE HBA option (Slot #5)	1394b PCI-Express Firewire card (with 8K buffers) StarTech, Point Grey Research, Dynex etc. (Slot #1)
comguration	Utilization for 1394 Camera / Deck / Disk Drive support	Utilization for AVID 1394 DNA (Adrenaline / Mojo) hardware support
AVID 1394 DNA (Adrenaline / Mojo) Or Matrox MX02 Mini Hardware configs Or AJA IO Express Hardware configs	Yes - Supports 1394 Deck / Camera / Disk Drive	<b>Required.</b> Avid specified add-in 1394b controller required in slot #1 for AVID 1394 DNA (Adrenaline / Mojo) connectivity.
DX H/W	Yes - Supports 1394 Deck / Camera / Disk Drive	N/A
S/W Only	Yes - Supports 1394 Deck / Camera / Disk Drive	N/A

### Slot #1 1394b PCI-Express HBA (w 8K buffers) AVID 1394 DNA (Adrenaline / Mojo) must connect here (any of the 3 connections can be used)



Slot #5 NM980AV HP 3-port PCI 1394a Firewire IEEE HBA option (also connects internally to Z400 front panel 1394 port). Primary 1394 connection for Deck / Camera / Disk Drive HP 1394 HBA in slot#5 <u>cannot be used</u> for 1394 DNA Adrenaline / Mojo support.

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# 7.) HP Z400 I/O Slot Layout

# HP Z400 Slot Layout



### 8.) Various Configuration Issues:

### A.) D/X hardware configs -

Active DX interface HBA's (P/N's 7030-30048-01 and 7030-20084-01) <u>pictured below</u> function with all Z400 DX supported releases of Symphony, Media Composer and NewsCutter. (Media Composer / Symphony 3.5.4 and NewsCutter 7.5.4 or later releases).

7030-30048-01

7030-20084-01



Passive DX interface HBA (7030-30021-01) <u>pictured below</u> requires minimum Symphony / Media Composer 3.5.9 or NewsCutter 7.5.9 version software. Running the passive version DX HIB with prior software releases may result in instability.



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

It is **mandatory** that the BIOS be updated to an "AVID Qualified" BIOS. *Failure to update the Z400 to an "Avid qualified BIOS" will result in non-optimal operation of the AVID software and hardware.* 

- Minimum BIOS ver 1.06
- Also qualified ver 1.14, ver 1.17, ver 3.07, ver 3.12, ver 3.12, ver 3.15, ver 3.19 (preferred)

Current Avid qualified Z400 BIOS information is maintained at the following Avid KB link:

http://avid.custkb.com/avid/app/selfservice/search.jsp?DocId=267609&Hilite=hp+bios

Z400 Required system BIOS settings:

- 1. Set CPU Processors Hyper-Threading Enable
- 2. Set Runtime Power Management Disable
- 3. Set MWAIT-Aware OS Disable
- 4. Set Idle Power Savings Normal

### Z400 Optional system BIOS change:

1. Set Intel Turbo Boost Technology \*\* – Disable

\*\* Only required if connecting USB audio I/O devices. This setting will eliminate any audio "motor-boating" or audio "popping" which may be experienced with USB audio I/O devices.

See Instructions on how to set Z400 BIOS settings on the next page:

- During boot up press F10 at the HP splash screen to invoke Set Up.
- Select the Advanced tab
- Select Processors. <Enter>
- Select Hyper-Threading
- Default setting is Disable
  - Change this setting from Disable to Enable
- Hi F10 to save the Hyper-Threading setting
- Select the Power tab
- Select OS Power Management <return>
- Select Runtime Power Management
- Default setting is Enable
  - Change this setting from Enable to Disable
- Select MWAIT-Aware OS
- 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
- Hi F10 to save the Runtime Power Management, MWAIT-Aware OS, and Idle Power Savings
- Press F10 twice to Save
- Save Changes and Exit
- System will Reboot

### Set Z400 Optional system BIOS setting:

- Select the Power tab
- Select Hardware Power Management <Enter>
- Select Intel Turbo Boost Technology
- Default setting is Enable
  - Change this setting from Enable to Disable
- Press F10 twice to Save
- Save Changes and Exit

### C.) WinXP 32-bit Configuration Issue:

<u>Windows XP 32-bit memory utility</u>: (AVID Install3GB utility) (Does not apply to systems running Vista 64-bit). Upon completion of the AVID software installation, the AVID / WinXP 32-bit memory utility must be run to properly configure the WinXP 32-bit environment to run AVID software. This utility is named "Install3GB" and resides in the following folder location c:\Programs \ Avid \ Utilities \ 3GB. Simply double-click on the "Install3GB" utility and enter the proper parameter for your particular AVID configuration. The "Install3GB" utility is user friendly and will walk the user through determination of the proper setting. This utility only needs to be run once and will create the proper permanent WinXP 32-bit operating system setting. Should your AVID hardware / software configuration ever change, simply rerun the utility and reconfigure WinXP 32-bit as needed. The "Install3GB" utility should never be run for a Vista 64-bit environment (WinXP 32-bit only).

## D.) Nvidia Qualified Drivers:

AVID Software	Version(s)	Nvidia GPU	Nvidia Driver Required
Media Composer / Symphony	5.0.3.7r and later	Quadro FX 3800	190.38 or 259.77 <b>^^</b>
NewsCutter	9.0.3.7r and later	Quadro FX 3800	190.38 or 259.77
Media Composer / Symphony	4.0.3 to 5.0.2	Quadro FX 3800	190.38
NewsCutter	8.0.3 to 9.0.2	Quadro FX 3800	190.38
Media Composer / Symphony	3.5.4 to 4.0.2	Quadro FX 3800	182.65
NewsCutter	7.5.4 to 8.0.2	Quadro FX 3800	182.65

## Nvidia qualified drivers

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

\*\* Refer to the ReadMe for the specific version of Symphony, Media Composer or NewsCutter being installed

### <u>Set optimized Nvidia driver settings for Avid editing environments:</u> For driver versions 190.38 and 259.77 make the following setting for "Power Management Mode"

- 1. Right-Click on the desktop
- 2. Select Nvidia Control Panel
- 3. Select Manage 3D Settings
- 4. Select "Global Settings" Tab
- 5. Under the "Global Settings" tab select "Base Profile" as shown in the picture below:

NVIDIA Control Panel     File Edit View Help			
Back + 🕥 🏑 🎹 Advance	d Settings 👻		
Select a Task			
- 3D Settings	You can change the global 3D setting: launched.	ngs s and create overrides for specific programs. The overrides will be used automa	Restore Defaults atically each time the specified programs are
Change resolution Adjust desktop color settings	I would like to use the following 3D se	ttings:	
Adjust desktop size and position Rotate display	Global Settings Program Settings		
	Global presets:		
Stereoscopic 3D	Base profile	Res <u>t</u> ore	
	Settings:		
-Adjust video color settings	Feature	Setting	
Adjust video image settings	Ambient Occlusion	Off	
Workstation     View system topology	Anisotropic filtering	Application-controlled	
wiew system topology	Antialiasing - Gamma correction	Off	
	Antialiasing - Line gamma	Off	
	Antialiasing - Mode	Application-controlled	
	Antialiasing - Setting	Application-controlled	
	Antialiasing - Transparency	Off	
	Buffer-flipping mode	Auto-select	
	CUDA - GPUs	All	
	Enable overlay	Off	
	Exported pixel types	Color indexed overlays (8 bpp)	
	Description: This listbox contains all of the features you setting of a feature using the dropdown list Typical usage scenarios: • Default 3D settings for your applications	can adjust on your NVIDIA GPU-based graphics card. You can change the pox beside the feature name.	_
Surtem Information			Applu Cancel
System Information			Apply Lancel

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



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



8. Depress the "Apply" button.

For driver versions 190.38 and 259.77 make the following setting for "Multi-display/mixed-GPU acceleration"

- 1. Stay in the "Manage 3D Settings" and "Base Profile" area
- 2. Select "Global Settings" Tab
- 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).



If using driver version 190.38 no further settings are required.

If using driver version 259.77 make the following additional setting for "3D App-Video Editing"

<u>Please Note:</u> Do not make the "3D App-Video Editing" setting if you are using Avid FX or Boris Continuum Complete. Do not use the "3D App - Video Editing" setting with these applications. There is a known redraw issue. If using the 259.77 driver, but face the mentioned limitation and cannot use the "3D App-Video Editing" setting, the user may experience a black flash on startup in the Source/Record monitors.

- 1. Stay in the "Manage 3D Settings" area
- 2. Select "Global Settings" Tab
- 3. Under "Global Settings" tab select "3D App-Video Editing" setting as shown in picture below:

NYIDIA Control Panel				<u>_                                    </u>
File Edit View Help				
🚱 Back 🛛 💮 🚮 🎹 Advanced	Settings 👻			
Select a Task	Manago 3D Sott	ings		<u> </u>
Back <ul> <li>Back</li> <li>Adjust image settings with preview</li> <li>Mange 3D settings</li> <li>Set Physix configuration</li> </ul> Big Display <ul> <li>Change resolution</li> <li>Adjust desktop color settings</li> <li>Adjust desktop size and position</li> <li>Rotate display</li> <li>View HDCP status</li> <li>Set up multiple displays</li> <li>Set up stereoscopic 3D</li> <li>View compatibility with games</li> <li>Video</li> <li>Adjust video color settings</li> <li>Adjust video image settings</li> <li>Workstation</li> <li>View system topology</li> </ul>	Settings - You can change the global 3D settir Jourched. You can change the global 3D settir Jourched. I would like to use the following 3D settir Global Settings Program Settings Global presets: 3D App - Video Editing Settings: Feature Ambient Occlusion Anisotropic filtering Antialiasing - Gamma Correction Antialiasing - Ine gamma Antialiasing - Ine gamma Antialiasing - Ine gamma Antialiasing - Setting Antialiasing - Setting Antialiasing - Setting Antialiasing - Transparency Buffer-flipping mode CUDA - GPUs Enable overlay Exported pixel types Description: This listbox contains all of the features yo setting of a feature using the dropdown list	ings ags and create overrides for specific programs. The over settings: Setting Off Application-controlled Off Application-controlled Off Application-controlled Off Application-controlled Off Color indexed overlays (8 bpp) u can adjust on your NWDIA GPU-based graphics card stbox beside the feature name.	errides will be used automatically each	▲ h time the specified programs are
	Typical usage scenarios: • Default 3D settings for your applications			
System Information				Apply Cancel

- 4. Depress the "Apply" button
- 5. Nvidia driver optimization settings for Avid environments are complete.

### E.) Nvidia Quadro GPU monitor connectivity:

The Nvidia Quadro FX 3800 graphics card has a single DVI port and two Display-Port ports (*Important: Display-ports <u>are not</u> 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 HP Z400 includes one Display-Port-to-DVI adapter. HP P/N 481409-001

### For dual monitor connectivity:

- 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).



Reference picture Quadro FX 3800

### F.) Connecting to Analog VGA monitors and VGA switchers - Single and dual monitor connectivity:

Due to the large number of available types, AVID cannot guarantee functionality with older technology analog VGA monitors / switchers.

### **Recommendations are:**

- 1. Use a passive DVI-to-VGA adapter on the FX 3800 DVI port for the primary VGA connection
- For a 2<sup>nd</sup> analog VGA connection, several manufacturer's offer active "Display-Port-to-VGA" adapters. Performance with these adapters may vary based on your particular model VGA monitors and switches. (Making two VGA connections via two display-port-to-VGA adapters is not recommended).
- 3. "Display-Port-to-VGA" adapters are available from the following 3<sup>rd</sup> party manufacturer's:

http://h10010.www1.hp.com/wwpc/us/en/sm/WF06c/A10-51210-64265-3965876-64265-3895841-3895842-3895844.html

http://accessories.us.dell.com/sna/products/Cables/productdetail.aspx?c=us&l=en&cs=19&sku=330-4685

http://www.siig.com/ViewProduct.aspx?pn=CB-DP0082-S1

## G.) Serial Port Deck Control:

The HP Z400 workstation does not have an embedded serial port. 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)

- 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 Z400 directly to the RS422 port of a deck. <u>http://www.addenda.com/addenda-elect/products/rsUSB4.php</u>
- 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 Z400 USB port.
- Once the Keyspan 19HS driver is installed then plug the Keyspan 19HS into a Z400 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 2<sup>nd</sup> serial port cable connect the port of the Addenda marked "RS422 to VTR" to the deck control serial port of the deck.

### H.) 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 Vista or Win 7

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

- Optimizations for Video Editors - Windows XP

http://avid.custkb.com/avid/app/selfservice/search.jsp?DocId=390331

## I.) 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:

Control Pa > S	ystem and Secur > System	-	← Search Con ♀
File Edit View Tools Help			
Control Panel Home	View basic information	about your computer	•
🛞 Device Manager	Windows edition		
Remote settings	Windows 7 Professional		$\frown$
🛞 System protection	Copyright © 2009 Microso	ft Corporation. All rights reserved.	
Advanced system settings	Get more features with a n	ew edition of Windows 7	
	System		
	Manufacturer:	Hewlett-Packard Company	
	Model:	HP Z800 Workstation	
	Rating:	5,9 Windows Experience Index	
	Processor:	Intel(R) Xeon(R) CPU X5650 @ 2.67GHz 2.66 GHz (2 processors)	
	Installed memory (RAM):	6.00 GB	invent
	System type:	64-bit Operating System	
	Pen and Touch:	No Pen or Touch Input is available for this Display	
	Hewlett-Packard Company su	pport	
	Website:	Online support	
	Computer name domain and	workaroup settings	
	Computer name:	Z800-6core-Win7	Change settings
	Full computer name:	Z800-6core-Win7	
	Computer description:		
	Workgroup:	WORKGROUP	
See also	Windows activation		
Action Center	Windows is activated		ack for
Windows Update	Product ID: 00371-OEM-89	92671-00008	genuine
Performance Information and Tools			Learn more online

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).

Performance Options
Visual Effects Advanced Data Execution Prevention
Select the settings you want to use for the appearance and performance of Windows on this computer.
Itet Windows choose what's best for my computer
Adjust for best appearance
Adjust for best performance
O Custom:
<ul> <li>Animate controls and elements inside windows</li> <li>Animate windows when minimizing and maximizing</li> <li>Animations in the taskbar and Start Menu</li> <li>Enable Aero Peek</li> <li>Enable desktop composition</li> <li>Enable transparent glass</li> <li>Fade or slide menus into view</li> <li>Fade or slide ToolTips into view</li> <li>Fade out menu items after clicking</li> </ul>
<ul> <li>Save taskbar thumbnail previews</li> <li>Show shadows under mouse pointer</li> <li>Show shadows under windows</li> <li>Show thumbnails instead of icons</li> <li>Show translucent selection rectangle</li> <li>Show window contents while dragging</li> <li>Slide open combo boxes</li> <li>Side open combo boxes</li> </ul>
Smooth-scroll list boxes
OK Cancel Apply

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.

**J.)** <u>ATTO UL5D issue:</u> 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

ATTO Configuration Tool				
File Help Device Listing	MPAN POLIC			
B hosts	NYBANI PLI Into			
Iocalhost     Im oci1000 54	Common NVRAM Configuration			
€ pci6066,2682		Controller ID:	7	
		Boot Driver:	Disabled V	
Celerity FC-41ES		Termination:	Auto	
2000/11/		Selection Timeout (ms):	250 🖌	
		Fallback Sync Rate (MB/s)	40 (20) 🗸	
		Repet Delay (seconds)	3	
		QAS Enabled	Enabled	
	SCSI Target NVRAM Configuration			
	a de la companya de server	Specified Target:	0 🛩	
		LUNs:	0To7 M	
		Allow Disconnect:	Enabled	
		Tag Command Queuing:	Enabled	
		Sync Enabled for this ID:	Enabled	
		Sync Offset:	127	
		Sync Rate (MB/s):	320 DT IU	
		Wide Transfers	Enabled	
	19		·	
	Load.	. Save	Commit Restore Defaults	
ATTO Technology, Inc.	atus VRAM settings loaded.			

#### 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

- K.) <u>Intel PRO 1000 PT for ISIS connectivity</u>: 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.



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#### Set Receive Buffers to 1024

#### Set Transmit Buffers to 1024

erformance Options	×	Performance Options	2
Settings:	Value:	Settings:	Value:
Adaptive Inter-Frame Spacing Flow Control Interrupt Moderation Rate Receive Buffers Transmit Buffers	1024	Adaptive Inter-Frame Spacing Flow Control Interrupt Moderation Rate Receive Buffers Transmit Buffers	1024
	Use Default		Use Default
Receive Buffers		Transmit Buffers	
Sets the number of Receive Buf copying data to memory. Increas receive performance, but also c You might choose to increase th you notice a significant decreas traffic. If receive performance is setting.	fers used by the adapter when sing this value can enhance onsumes system memory. The number of Receive Buffers if e in the performance of received mot an issue, use the default	Sets the number of Transmit Buffet copying data to memory. Increasing transmission performance, but also You might choose to increase the r you notice a significant decrease in traffic. If transmission performance setting.	rs used by the adapter when g this value can enhance o consumes system memory. number of Transmit Buffers if n the performance of transmitted a is not an issue, use the default
	OK Cancel		OK Cancel

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.

#### Disable the windows firewall:

Windows Firewall Windows Firewall can help prevent hackers or malicious software from gaining access to your computer through the Internet or network. How does a firewall help protect my computer? Your computer is not protected: turn on Windows Firewall		
Windows Firewall is off. Network location: <u>What are network locations?</u>	<u>Change settings</u> Private network	
settings to protect your computer. What are the recommended settings?	update settings now	
	<ul> <li>Windows Firewall can help prevent hackers or malicious soft your computer through the Internet or network.</li> <li>How does a firewall help protect my computer?</li> <li>Image Your computer is not protected: turn on Windows</li> <li>Windows Firewall is off.</li> <li>Network location:</li> <li>What are network locations?</li> <li>Image Windows Firewall is not using the recommended settings to protect your computer. What are the recommended settings?</li> </ul>	



### Revision Update

Revision	Date	Name	Update
A	June 16 <sup>th</sup> , 2009	Joe Conforti	Initial Public Release
A1	June 24 <sup>th</sup> , 2009	Joe Conforti	General Clean-up
B1	Sept 22 <sup>nd</sup> , 2009	Joe Conforti	Added DNA Adrenaline support and WinXP 32-bit support. Align with initial 4.x Media Composer and 8.x NewsCutter releases. Add support requirement for passive DX HIB. Add advice for connecting analog monitors.
С	March 1st, 2010	Joe Conforti	General updates and clarifications
D	May 20 <sup>th</sup> , 2010	Joe Conforti	Details for Media Composer 5.0 / NewsCutter 9.0 releases etc including info for Win7 support, Matrox MX02 Mini and Myricom 10GB (ISIS 2.2) support
D1	March 21 <sup>st</sup> 2010	Joe Conforti	Corrected Win7 NewsCutter ver to 9.0
E	March 2 <sup>nd</sup> , 2011	Joe Conforti	Added support for: Media Composer 5.5, Symphony 5.5, NewsCutter 9.5, AJA IO Express, new DX Interface HBA, LSI 9200-8e SAS controller, AIC Xtore storage, new Nvidia driver (and specified optimized Nvidia driver settings). Clarifications: Win7 Legacy Driver use for 1394 DNA products, O.S. utilization for Chelsio S310E-SR 10Gb HBA, O.S. utilization for Myricom 10G-PCIE-8B-S 10Gb HBA, Set Windows "Visual Effects" for best performance. Added O.S. setting recommendations for optimum performance with Avid Editing applications. Also, general updates and clarifications.
F	March 24th, 2011	Joe Conforti	Added support for Xtore StudioRAID 5Ti and simplified chart on page 6

			Added optional system BIOS change:
G	May 18 <sup>th</sup> , 2011	Joe Conforti	Disable Intel Turbo Boost Technology– Only required if connecting USB audio I/O devices. This setting will eliminate any audio "motor-boating" or audio "popping" which may be experienced with USB audio I/O devices. Added Win7 SP1 formal support starting with M/C 5.5.2, Symphony 5.5.2, NewsCutter 9.5.2 releases BIOS ver 3.19 gualified