



Avid Configuration Guidelines
HP Z800 Dual Quad-Core CPU Workstation
Symphony / Media Composer / Newscutter

1.) HP Z800 AVID Qualified System Specification:

Z800 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)

Z800 Hardware Configuration

- Dual Intel® Quad-Core Xeon® 5570 Processors @ 2.93GHz 8MB cache / 1333MHz memory
- NVIDIA Quadro FX 4800 1.5GB PCI-e video board
- 320GB SATA-II 3Gb/s 7200RPM Hard Disk Drive
- Standard AVID memory configuration: 6GB (6 x 1GB) DDR3 1333 ECC memory –
(Requires six 1GB DIMMs, **DIMM sizes cannot be mixed sizes**)
1GB memory modules must be installed in the following memory slots:
CPU0-DIMM1, CPU0-DIMM3, CPU0-DIMM5
CPU1-DIMM1, CPU1-DIMM3, CPU1-DIMM5

Optional 12GB memory configurations:

- 1) Optional AVID memory configuration: 12GB (12 x 1GB) DDR3 1333 ECC memory –
(Requires twelve 1GB DIMMs, **DIMM sizes cannot be mixed sizes**)
1GB memory modules must be installed in the following memory slots:
CPU0-DIMM1, CPU0-DIMM2, CPU0-DIMM3, CPU0-DIMM4, CPU0-DIMM5, CPU0-DIMM6
CPU1-DIMM1, CPU1-DIMM2, CPU2-DIMM3, CPU3-DIMM4, CPU4-DIMM5, CPU5-DIMM6

- B) Optional AVID memory configuration: 12GB (6 x 2GB) DDR3 1333 ECC memory –
(Requires six 2GB DIMMs, **DIMM sizes cannot be mixed sizes**)
2GB memory modules must be installed in the following memory slots:
CPU0-DIMM1, CPU0-DIMM3, CPU0-DIMM5
CPU1-DIMM1, CPU1-DIMM3, CPU1-DIMM5

Memory configuration constraints

- No other memory configurations are formally supported in AVID environments. Only the 6GB (6 x 1GB), and two 12GB configurations (12 x 1GB) and (6 x 2GB) configurations are supported. 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 for Avid Client Editing Applications, Hardware and Shared-Storage connectivity with the HP Z800:

- **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)**

- **Not Supported - Microsoft® Windows XP 64-bit (any version)**
- **Not Supported - Microsoft® Windows Vista 32-bit (any version)**

3.) Qualified Avid Editing Applications and Hardware Supported on the HP Z800 workstation:

AVID qualified Hardware / Shared Storage

	Qualified / Supported by Operating System		Minimum AVID Version S/W	
	Vista 64-bit	WinXP 32-bit	Vista 64-bit	WinXP 32-bit
Mojo DX	Yes	Yes	Media Composer v3.5.4 NewsCutter 7.5.4	Media Composer v4.0 NewsCutter 8.0
Nitris DX	Yes	Yes	Symphony 3.5.4 Media Composer v3.5.4 NewsCutter 7.5.4	Symphony v4.0 Media Composer v4.0 NewsCutter 8.0
1394 Mojo-SDI DNA	Yes	Yes**	Media Composer v3.5.4 NewsCutter 7.5.4	Media Composer v4.0** NewsCutter 8.0**
1394 Adrenaline DNA	Yes	Yes**	Media Composer v4.0 NewsCutter 8.0	Media Composer v4.0** NewsCutter 8.0**
1394 Mojo-Analog DNA	No	No	N/A	N/A
Symphony-Nitris DNA (Classic)	No	No	N/A	
Unity ISIS 1 Gbit Ethernet Client	Yes	Yes	ISIS 2.03	
Unity ISIS Hi-res (10 Gbit) client	Yes	Yes	ISIS 2.03	
Unity MediaNet Fibre	Yes	Yes	MediaNet 5.1.2	
Unity MediaNet AECIFs	Yes	Yes	MediaNet 5.1.2	

**** WIN XP 32-bit Support Note:** For operation with WinXP 32-bit OS and 1394 Adrenaline and 1394 Mojo-SDI hardware, installation of Service Pack 3 (SP3) and the following 1394b Microsoft Hot-Fix (955408) are 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.

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

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.
 Restart your system after running the hot-fix.

The 955408 1394 Hot-Fix does not apply to Vista 64-bit O.S. environments.

AVID qualified HBA info

AVID qualified HBA	AVID Part Number	Slot Location	Function
Avid HIB, DX Interface HBA	Active: 7030-20084-01 Passive: 7030-30021-01 **	#1	Avid DX Hardware Interface HBA
Atto FC-41ES	7030-20004-01	#4	Shared Storage: Unity MediaNet Fibre
Intel PRO 1000 PT - ISIS	7030-20139-01	#4	Shared Storage: Unity ISIS Copper Gb-Ethernet
Intel PRO 1000 PF - ISIS	Not stocked by AVID	#4	Shared Storage: Unity ISIS Optical Gb-Ethernet
Chelsio S310E-SR	7030-20171-01	#4	Shared Storage: Unity ISIS 10Gb-Ethernet
Atto R380	7030-20166-01	#5	Local Storage – VideoRAID ST
Atto UL5D	7030-20002-01	#5	Local Storage – VideoRAID RTR & Legacy Avid u320 SCSI storage <i>(The UL5D BIOS should be disabled)</i>
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

**** [DX Interface HBA Support Note: \(See reference pictures on page 6 of this guide\).](#)**

- 1) *Active DX interface HBA (7030-20084-01) functions with all Z800 DX supported releases of Symphony, Media Composer and Newscutter. (Media Composer / Symphony 3.5.4 and Newscutter 7.5.4 or later releases).*

- 2) *Passive DX interface HBA (7030-30021-01) requires Symphony 4.0, Media Composer 4.0 or Newscutter 8.0 or later version software. **Running the passive version DX HIB with prior software releases may result in instability.***

4.) Slot Configuration:

-			DX Hardware	1394 Adrenaline DNA Hardware 1394 Mojo-SDI DNA Hardware
Slot #	Electrical	Mechanical		
1	x4 PCI-E Gen 2	x8	Avid HIB, DX Interface HBA Active: 7030-20084-01 (all s/w releases) Passive: 7030-30021-01 <i>(Requires M/C – Symphony s/w releases 4.x or later and Newscutter 8.x or later)</i>	<i>1394b PCI-Express HBA required (w 8K buffers) specific info below</i> AVID 1394 DNA hardware must connect here.
2	x16 PCI-E Gen 2 (225Watts)	x16	Quadro FX 4800	Quadro FX 4800
3	x4 PCI-E Gen 1	x8	<i>Not Used</i>	<i>Not Used</i>
4	x8 PCI-E Gen 2	x16	Shared Storage Controllers: Atto FC-41ES - MediaNet Intel PRO 1000 PT - ISIS Intel PRO 1000 PF - ISIS Chelsio S310E-SR - ISIS 10Gb	Shared Storage Controllers: Atto FC-41ES - MediaNet Intel PRO 1000 PT - ISIS Intel PRO 1000 PF - ISIS Chelsio S310E-SR - ISIS 10Gb
5	x16 PCI-E Gen 2 (225Watts)	x16	Local Storage Controllers: Atto R380 - SAS VRII ST support Atto UL5D - Legacy u320 SCSI support	Local Storage Controllers: Atto R380 - SAS VRII ST support Atto UL5D - Legacy u320 SCSI support <i>(The UL5D BIOS should be disabled)</i>
6	PCI-E 32bit /33MHz	PCI 32/33	<i>Secondary SAS Port (Embedded)</i>	<i>Secondary SAS Port (Embedded)</i>
7	x8 PCI-E Gen 2	x16	<i>Optional if needed – Panasonic P2 PCI-E reader HBA</i>	<i>Optional if needed – Panasonic P2 PCI-E reader HBA</i>
	Embedded Broadcom BCM5764 GbE NIC	PCI-E x1 Gen 1	<i>Not qualified for Avid ISIS Connectivity</i> <i>Qualified for Avid MediaNetwork AECIFs</i>	<i>Not qualified for Avid ISIS Connectivity</i> <i>Qualified for Avid MediaNetwork AECIFs</i>

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

1394 (Adrenaline / Mojo) DNA must connect via high performing specific add-in 1394b PCI-Express Firewire cards (with 8K buffers) which must be installed in Slot #1. *The Z800 embedded 1394 port **cannot be used** for connectivity to 1394 (Adrenaline / Mojo) DNA hardware.*

Current qualified PCI-Express 1394b Firewire cards are:

1.) StarTech PEX1394B3 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>

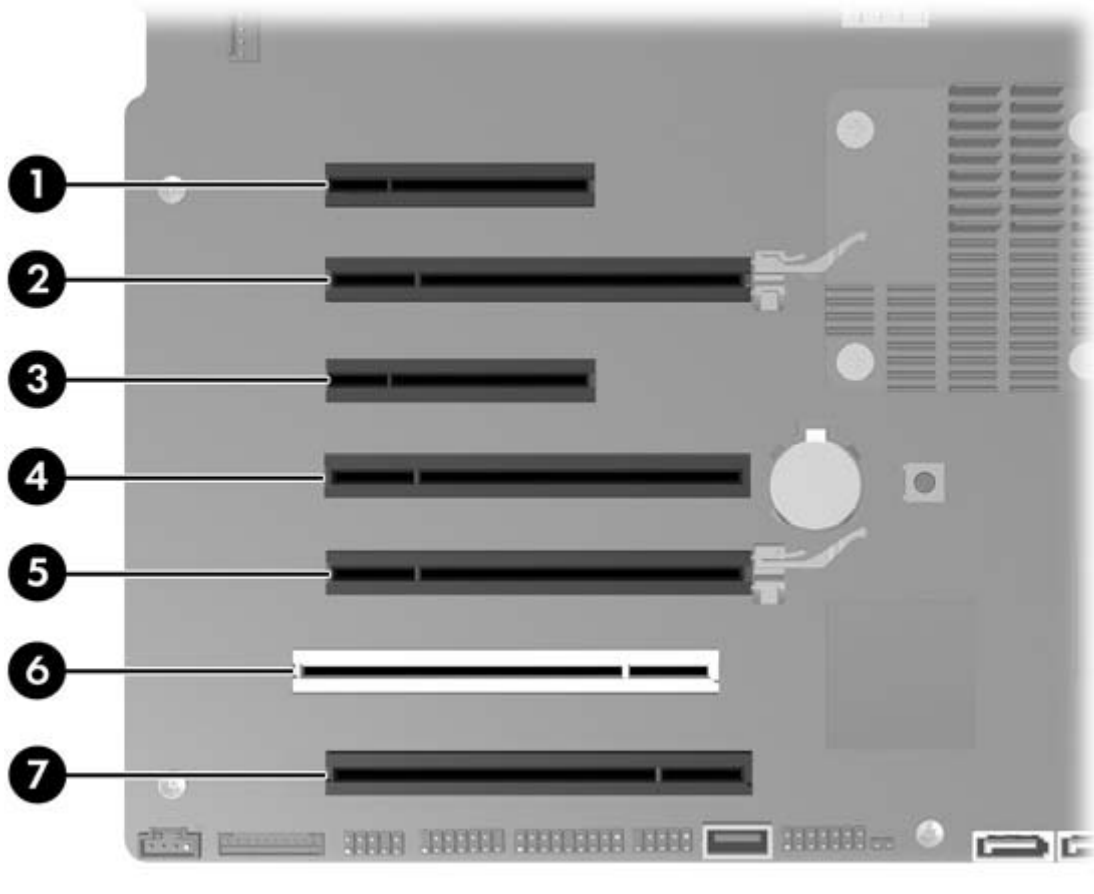
3.) Point Grey Research FWB-PCIE-01

http://www.ptgrey.com/products/firepro/adapters/FWB-PCIE/PCIe_1394b_card_datasheet.pdf

6.) Utilization of the Z800 embedded (on-board) 1394 ports.

<u>Configuration</u>	On-board 1394 utilization for Camera / Deck / Disk Drive support	On-board 1394 utilization for AVID 1394 DNA (Adrenaline / Mojo) hardware support
AVID 1394 DNA (Adrenaline / Mojo) Hardware	Yes - Supports 1394 Deck / Camera / Disk Drive	Embedded 1394 Not supported for connectivity to AVID 1394 DNA (Adrenaline / Mojo) hardware. 1394 DNA Requirement. 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

HP Z800 Slot Layout



7.) Configuration Issues:

Windows XP 32-bit memory utility: (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/X hardware configs –

Active DX interface HBA (7030-20084-01) pictured below functions with all Z800 DX supported releases of Symphony, Media Composer and Newscutter. (Media Composer / Symphony 3.5.4 and Newscutter 7.5.4 or later releases).



*Passive DX interface HBA (7030-30021-01) pictured below requires minimum Symphony 4.0, Media Composer 4.0 or Newscutter 8.0 version software. **Running the passive version DX HIB with prior software releases may result in instability.***



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

If the Z800 has BIOS version 1.05 or earlier installed, it is **mandatory** that the BIOS be updated to an "AVID Qualified" BIOS. *Failure to update the Z800 to an "Avid qualified BIOS" will result in non-optimal operation of the AVID software and hardware.*

- 1.06 (Minimum BIOS version for Avid environments).
- 1.14 (Qualified July 14th 2009)

Required system BIOS settings for AVID environments:

Please Note: CPU Hyper-threading is Disabled by default and should not be enabled on the Z800 for Avid environments.

Z800 Required system BIOS changes:

1. Set Memory Mode Interleave - **Enable**
 2. Set Runtime Power Management - **Disable**
 3. Set MWAIT-Aware OS - **Disable**
 4. Set Idle Power Savings - **Normal**
- During boot up press F10 at the HP splash screen to invoke Set Up.
 - Select the Advanced tab
 - Select Chipset / Memory. <Enter>
 - Select Memory Mode Interleave
 - Default setting is Disable
 - Change this setting from Disable to Enable
 - Hi F10 to save the Memory Mode Interleave 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

Nvidia driver 182.65 is the AVID qualified driver for support of the new FX4800 graphics card. The previously qualified 169.47 Nvidia driver released with previous versions of Avid editing applications does not support the new generation FX4800 video card.

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:

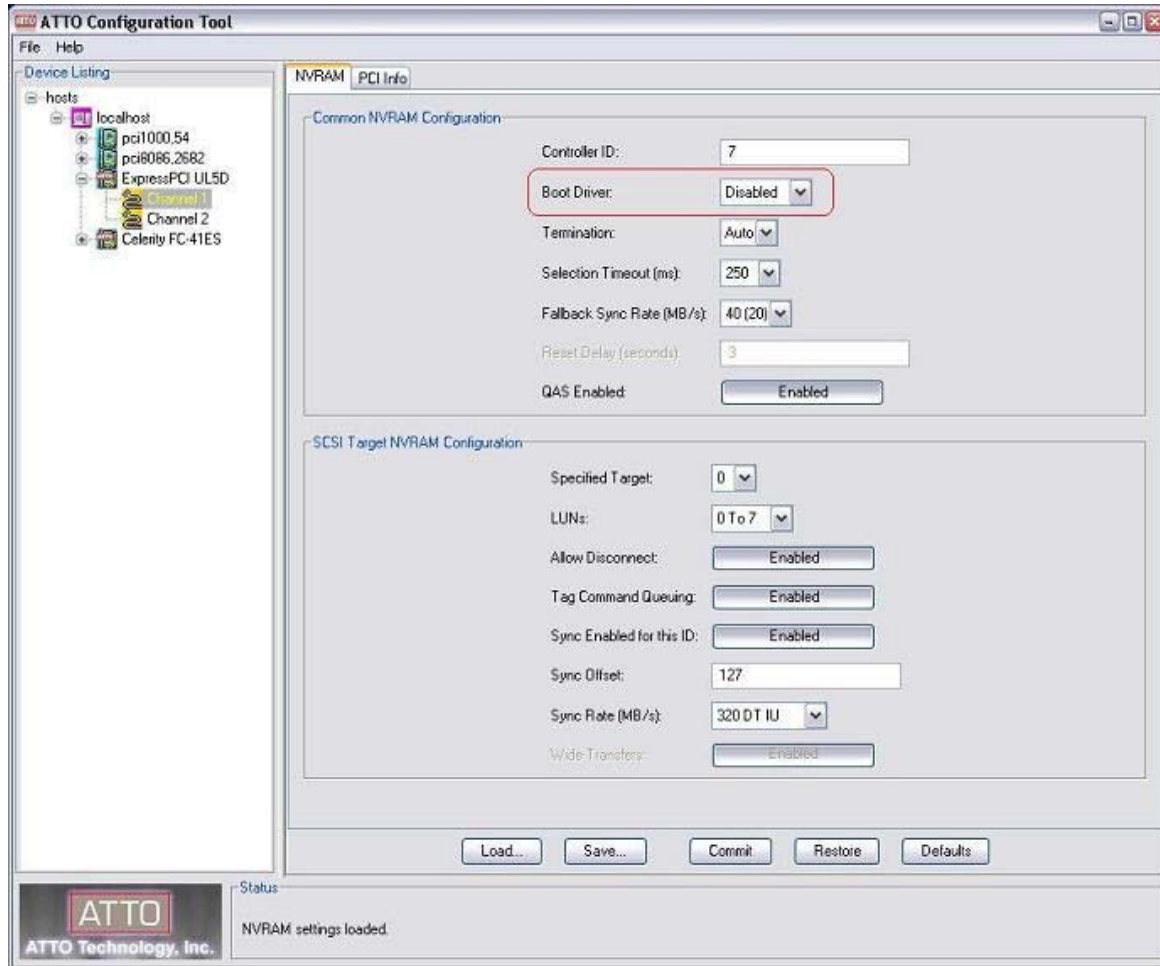
- A. AVID Knowledge Base article 273945, <http://avid.custkb.com/avid/app/selfservice/search.jsp?DocId=273945&Hilite=UL5D>

Install Atto UL5D configuration tool and launch the software.

Expand the Express PCI UL5D menu, and click on Channel.

The **Boot Driver** has to be **disabled** on **both channels** 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. Select Host Adapter BIOS
7. Select "Disabled" using [Page Up] / [Page Down]
8. Press "ESC"
9. Press "ESC"
10. Select 4 – Save Parameters and Exit

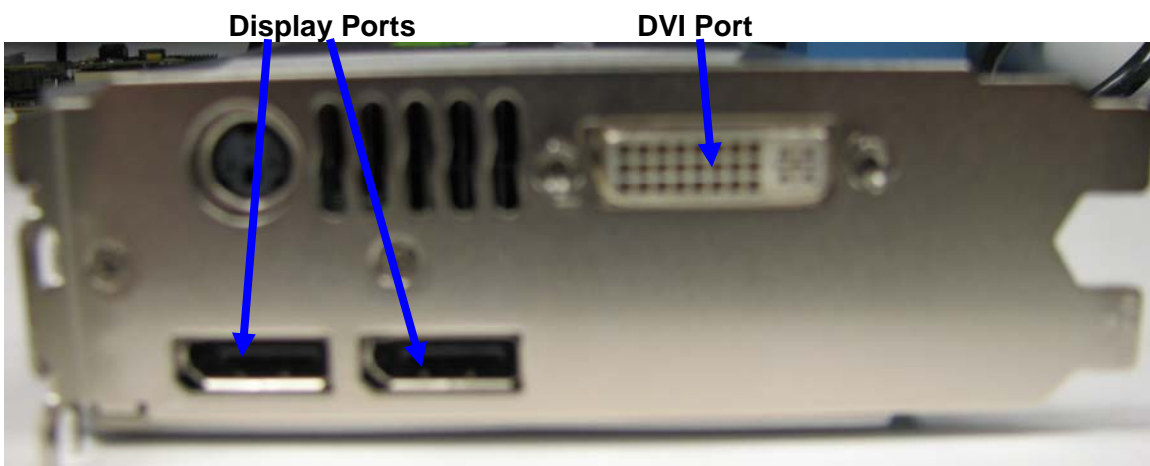
8.) Nvidia FX 4800 monitor connectivity:

The new generation Nvidia FX 4800 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 FX 4800 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 FX 4800 video card.*)

The HP Z800 includes one Display-Port-to-DVI adapter. HP P/N 481409-001

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*).



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 4800 DVI port for the primary VGA connection
2. For a 2nd 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 3rd party manufacturer's:

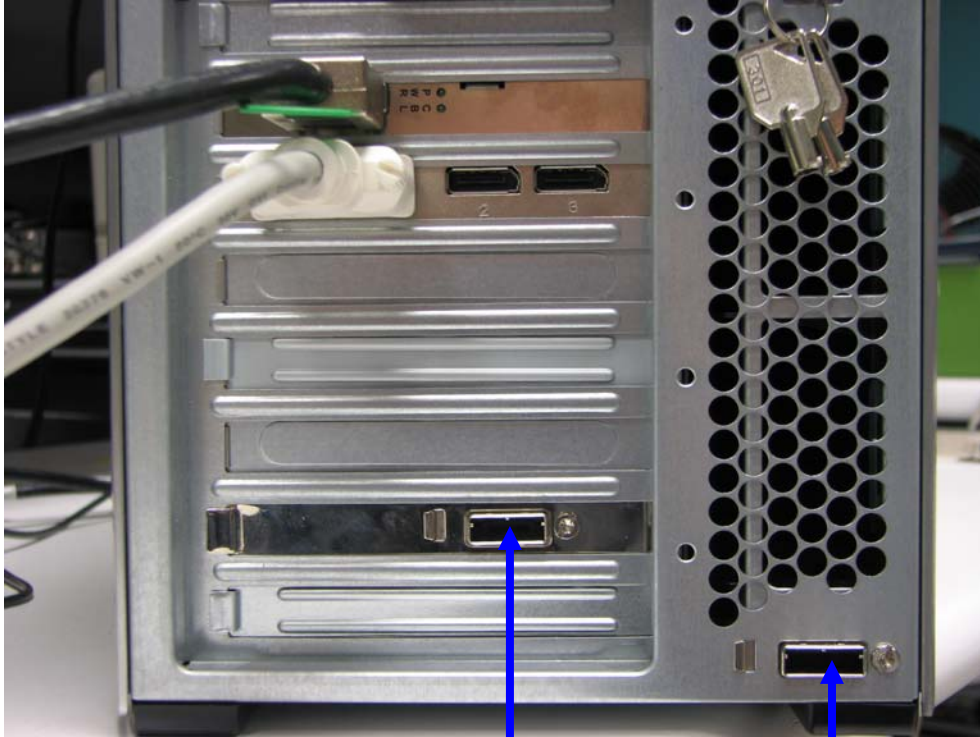
<http://h10010.www1.hp.com/wwpc/us/en/sm/WF06c/A10-51210-64265-3965876-64265-3895841-3895842-3895844.html>

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

<http://www.siiq.com/ViewProduct.aspx?pn=CB-DP0082-S1>

9.) SR SAS storage connectivity:

The Z800 can support two external AVID SR SAS local storage chassis:



External SAS Port 2 External SAS Port 1

10.) Serial Port Deck Control:

The HP Z800 workstation does have an embedded serial port. The embedded serial-port has been qualified by Avid and will maintain frame accuracy in Avid environments. A USB-to-serial-port adapter is not required unless the user requires simultaneous connection to two decks via a serial port. If the user requires simultaneous connection to two decks via serial port, the deck control for the 2nd serial port must be established via a Keyspan (Tripp-Lite) Model USA-19HS USB-to-serial-port adapter. The 19HS USB-to-serial-port adapter has been qualified by Avid and will maintain frame accuracy in Avid environments.

AVID P/N 7080-20013-01

<http://www.tripplite.com/en/products/model.cfm?txtSeriesID=518&EID=13384&txtModelID=3914>

Revision Update

Revision	Date	Name	Update
A	July 16 th , 2009	Joe Conforti	Initial Public Release
A1	July 24 th , 2009	Joe Conforti	General Clean-up
B1	Sept 22 nd , 2009	Joe Conforti	Added DNA Adrenaline support and WinXP 32-bit support. Align with initial 4.x Symphony, 4.x Media Composer and 8.x Newscutter releases. Added support for 12 x 1GB memory configuration. Add support requirement for passive DX HIB. Add recommendation for connecting analog monitors. Add slot guide info for Panasonic P2 PCI-E HBA.