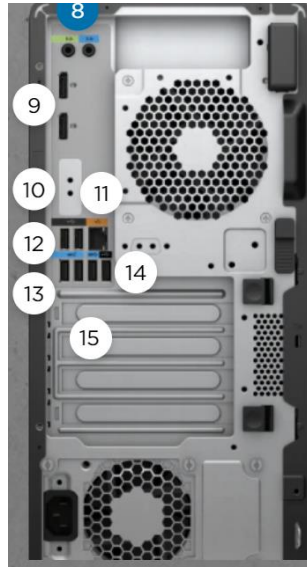




Avid Configuration Guidelines
HP Z2 G8 workstation Tower and SFF
6 or 8 Core CPU System



1. Universal Audio Jack
2. 2x Type-A USB 5Gbps signaling rate
3. 2x Type-A USB 10Gbps signaling rate
4. Type-C® USB 20Gbps signaling rate
5. SD Card Reader 4.0 (optional)
6. Slim ODD Bay
7. External 5.25" Bay
8. Audio Line In/Out
9. 2x DisplayPort™ 1.4
10. Optional Config. Port
11. RJ-45 (network)
12. 2x USB 480Mbps signaling rate
13. 2x Type-A USB 10Gbps signaling rate
14. 1x Type-A USB 5Gbps signaling rate
1x USB 480 Mbps signaling rate
15. PCIe G4 x16
16. Type-C Thunderbolt (optional)

Tower Front and
back



Small form factor

1.) HP Z2 G8 AVID Qualified System Specification:

Z2 G8 Hardware Configuration

Supported 11th Generation Intel Core i7/i9/Xeon CPU Choices

- Intel core i7-11700 2.5 Ghz, turbo up to 4.9 Ghz 8-core
- Intel core i7-11700K 3.6 Ghz, turbo up to 5.0 Ghz 8-core
- Intel core i9-11900 2.5 Ghz, turbo up to 5.2 Ghz 8-core
- Intel core i9-11900F 2.5 Ghz, turbo up to 5.2 Ghz 8-core (no onchip graphics)
- Intel core i9-11900K 3.5 Ghz, turbo up to 5.3 Ghz 8-core (Best Performance with MC)
- Xeon W-1350 3.3 Ghz, turbo up to 5.0 Ghz 6-core
- Xeon W-1350P 4.0 Ghz, turbo up to 5.1 Ghz 6-core
- Xeon W-1370 2.9 Ghz, turbo up to 5.1 Ghz 8-core
- Xeon W-1370P 3.6 Ghz, turbo up to 5.2 Ghz 8-core
- Xeon W-1390 2.8 Ghz, turbo up to 5.2 Ghz 8-core
- Xeon W-1390P 3.5 Ghz, turbo up to 5.3 Ghz 8-core (Best Performance with MC)

Supported Video Cards

- 1.) NVIDIA T600 4GB PCI-e Gen 3 video board
- 2.) NVIDIA T1000 4GB PCI-e Gen 3 video board
- 3.) NVIDIA RTX 3000 8GB PCI-e Gen 3 video board (SFF only) (Best performance for SFF)
- 4.) NVIDIA A4000 16GB PCI-e Gen 4 video board (Tower only)* (Best performance for Tower)
- 5.) AMD Radeon Pro W5500 or W5700 8GB PCI-e Gen 4 video board (tower only)*

Notes –

- PCIe Gen 4 GPUs have better performance on system with PCIe gen 4 slots

System Disk Drive – 500 GB (recommended) M.2 PCIe NVMe . HP offers lower performing SATA SSD, and 7200 RPM SATA HDD (very slow) boot drive options which are acceptable. Recommend a HP qualified drive be selected.

Note – PCIe gen 4 M.2 drives are twice as fast as the PCIe gen 3 M.2 drives

Standard AVID memory configuration:

- Systems using the Xeon CPU's will use DDR4-3200MHz ECC memory (up to 4 DIMMs per system)
- Systems using core i7 or i9 will use DDR4-3200Mhz Non-ECC memory (up to 4 DIMMs per system)
- 128 GB memory max for this system
- Each CPU has 2 memory lanes - optimal bandwidth when 2 or 4 memory lanes filled
 - 32GB (2 x 16GB) DDR4 3200MHz memory – (Requires two 16GB DIMMs)

Memory modules must be installed according to manufacturer's requirements

Optional AVID memory configuration:

- 16GB (2 x 8GB) DDR4 3200 memory – (Requires two 8GB DIMMs)
- 32GB (4 x 8GB) DDR4 3200 memory – (Requires four 8GB DIMMs)
- 64GB (4 x 16GB) DDR4 3200 memory – (Requires four 16GB DIMMs)
- 64GB (2 x 32GB) DDR4 3200 memory – (Requires two 32GB DIMMs)
- 128GB (4 x 32GB) DDR4 3200 memory – (Requires four 32GB DIMMs)

Memory configuration constraints

- No other memory configurations are formally supported in AVID environments.
- Un-balanced memory configurations which mix and match memory module sizes and locations will result in a poor performing, non-optimal operating environment.
- Most Avid configs require the 450 Watt chassis power option for SFF, 500 or 700 Watt option for Tower

2.) Qualified Operating Systems and Avid Client Editing Applications for the HP Z2 G8:

HP Supports and ships with:

- Microsoft® Windows 10 Pro for workstations 64-bit Version 20H2 or later

Not Supported –

- Microsoft® Windows 7 – any version
- Microsoft Windows 8 or 8.1 – any version
- Microsoft Windows 10 Pro versions no longer supported by Microsoft - before version 1909

Media Composer Application	Minimum Rev
Media Composer	2019.12.x, 2020.12.x, 2021.x
Media Composer 7.x, 8.x, 2018.x	Not supported
NewsCutter 11.x	Not Supported

* See Avid Media Composer version matrix for Nvidia driver version

https://avid.secure.force.com/pkb/articles/en_US/Compatibility/en267087

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

	Qualified / Supported
Nitris DX Mojo DX	NOT SUPPORTED End of support 3/31/2020
Artist DNxIO/ DNxIQ (PCIe or thunderbolt connection). SFF requires TB connection as the BMD HIB is full size PCIe only Artist DNxIV/DNxIP/DNxID (thunderbolt only connection) HP TB4 card TBD (not available at this time)	Yes – Supported <u>PCIe Guidance</u> PCIe preferred as it requires less system over-head due to direct PCIe to PCIe connection between the host CPU and Artist DNxIQ <u>Thunderbolt Guidance</u> Thunderbolt 2 & 3 - higher system over-head, not recommended to share Thunderbolt devices on the same Thunderbolt bus with DNxID, DNxIV. DNxIP DNxIO would require TB3 to TB2 converter
3 rd Party Qualified Hardware	See release notes and Avid website for information regarding supported 3 rd party hardware (vendor qualified)
NEXIS Single 1Gb Ethernet Client NEXIS Dual 1Gb Ethernet Client Intel i350 T2V2, i219, X722	Avid NEXIS Pro, E2, E2 SSD, E4, E5, E5 NL V21.3
NEXIS Ultra Hi-res (10Gbit) client Atto FFRM-NS11,NS12 NT11, NT12 Atto FFRM-N322 (10 Gb only) Intel X550, X520-T2, X540-T2, X710-DA2, X722	Avid NEXIS Pro, E2, E2 SSD, E4, E5, E5 NL V21.3
NEXIS 40Gigabit Atto FFRM-NQ 41/42 Atto FFRM-N351/N352 (40 Gb only) Atto FFRM-N311/N312 (40 Gb only)	Avid NEXIS Pro, E2, E2 SSD, E4, E5, E5 NL V21.3

4.) AVID qualified HBA info

AVID qualified HBA	AVID Part Number	Slot Location	Function
Avid Artist DNxIO HBA Avid Artist DNxIQ HBA	Avid part # 7030-30048-02 BMD PCIe cable kit	#4	Avid Artist DnxIO interface HBA Avid Artist DNxIQ interface HBA
HP Thunderbolt 4 adapter card	Not stocked by AVID	#4	TBD - not available at this time
Atto R680, H680	Not stocked by AVID	#3	Local SAS Storage
LSI 9200-8e SAS controller	7030-30036-01	#3	Local SASStorage:
Vendor qualified 3 rd party hardware X4 PCI-e	Not stocked by AVID	#4	Vendor qualified 3 rd party hardware interface. See release notes and Avid website for information regarding supported 3 rd party hardware
Atto FFRM-NQ 41/42 Atto FFRM-N351/N352 (40 Gb only) Atto FFRM-N311/N312 (40 Gb only)	Not stocked by AVID	#3	Shared Storage: NEXIS 40 Gb-Ethernet
Atto FFRM-NS11,NS12 NT11, NT12 Intel X550, X520-T2, X540-T2, X710-DA2, X722 Atto FFRM-N322 (10 Gb only)	Not stocked by AVID	#3	Shared Storage: NEXIS 10 Gb-Ethernet
Intel i350-T2 – Dual Gb NIC	Not stocked by AVID	#3	Shared Storage: NEXIS Copper 1 Gb-Ethernet Dual Gb NEXIS Connectivity

Notes:

- Avid HIB part # 7030-30048-01 is no longer supported with DNxIO (use # 7030-30048-02 only)
- Avid artist DnxIQ requires BMD cable kit and PCIe card – Avid HIB card is NOT supported with DNxIQ
- HP thunderbolt 4 PCIe card will be supported in Z2 G8 once qualified by HP & Avid
- Note: PCIe half height cards required for SFF

5.) Slot Configuration:

Slot Configuration Information (Tower and SFF)			
Slot #	Electrical	Mechanical	
1	x16 PCI-e Gen 4	X16	Graphics Card: Nvidia T600, T1000 (both) RTX3000 (SFF only) – double wide RTX A4000 (Tower only) AMD W5500 (Tower only) AMD W5700 Double wide(Tower only)
2	X1 PCI-e Gen 3	X4 open ended	Not Used (PCIe x1)
3	X4 PCI-e Gen 3	SFF: X4 open ended Tower:x16	Shared or local storage controller (PCIe x8 cards will connect at x4 only)
4	X4 PCI-e Gen 3	Tower: X4 open ended SFF: x16	Avid/BMD HIB card for DNxIO, DNxIQ, HP Thunderbolt 4 adapter card for DNxIV/DNxIP/DNxID 3 rd party PCIe Open IO card
M1	M.2 slot 1 PCI-e Gen 4	M.2 x4	HP M.2 NVMe SSD storage cards PCIe gen 4 (2x faster than Gen 3)
M2	M.2 slot 2 PCI-e Gen 3	M.2 x4	HP M.2 NVMe SSD storage cards PCIe gen 3
	Embedded Intel I219-LM Gb NIC	PCI-e x1 Gen 3	Qualified for Avid Nexis

6.) Use of embedded NIC ports for Nexis connectivity Important Information

The Z2 G8 has one embedded NIC ports. This port is qualified for Nexis

For proper operation and connectivity of the Intel network interface with NEXIS the following settings are required (these should be set automatically when Nexis is installed):

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

7.) Required system BIOS settings for AVID environments:

Use latest version from Vendor website

Please Note: CPU Hyper-threading should be enabled in all configurations. It is currently enabled by default by HP for shipping Z2 G8 systems

Z2 G8 Required system BIOS changes:

1. Verify CPU Processors are set to Hyper-Threading

Set Z2 G8 Required system BIOS changes:

- During boot up press F10 at the HP splash screen to invoke Set Up.
- Select the Performance tab
- Select Hyper-Threading
- Verify setting is Enabled (or enable if currently set to disable)

8.) Graphics Drivers:

AVID Software	Version(s)	GPU	Driver Required
Media Composer	2021.x	2021 Nvidia cards	Nvidia 462.59
	2020.12.x 2019.12.x	AMD W5500, W5700	AMD driver 2021.Q1

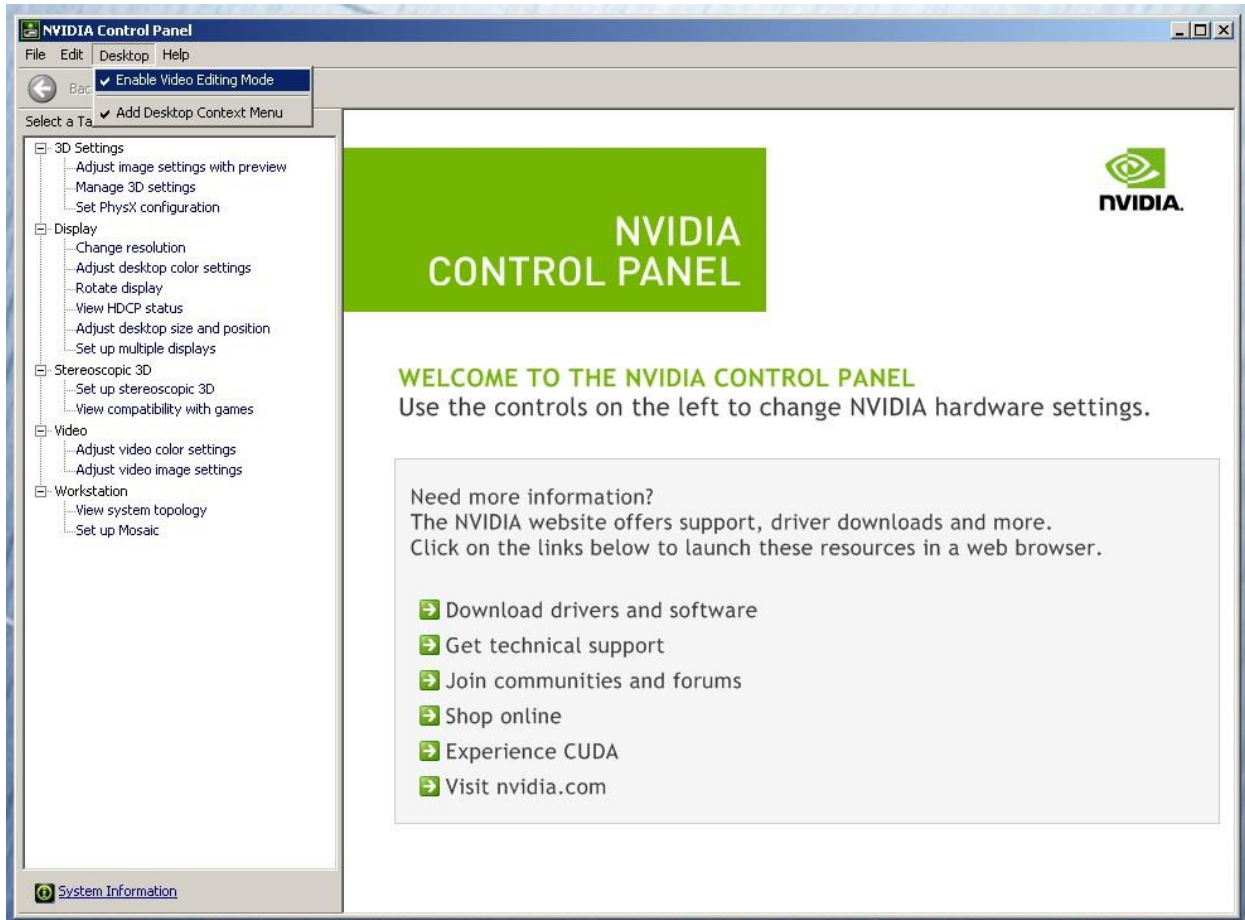
After installation of the AVID software the supported Nvidia driver can be found in the following directory:
Program Files / Avid / Utilities / Nvidia.

****** The AMD graphics driver is NOT included with MC release builds. You can find this driver on the AMD web page
<https://www.amd.com/en/support>

See Avid Media Composer version matrix for Nvidia driver version
https://avid.secure.force.com/pkb/articles/en_US/Compatibility/en267087

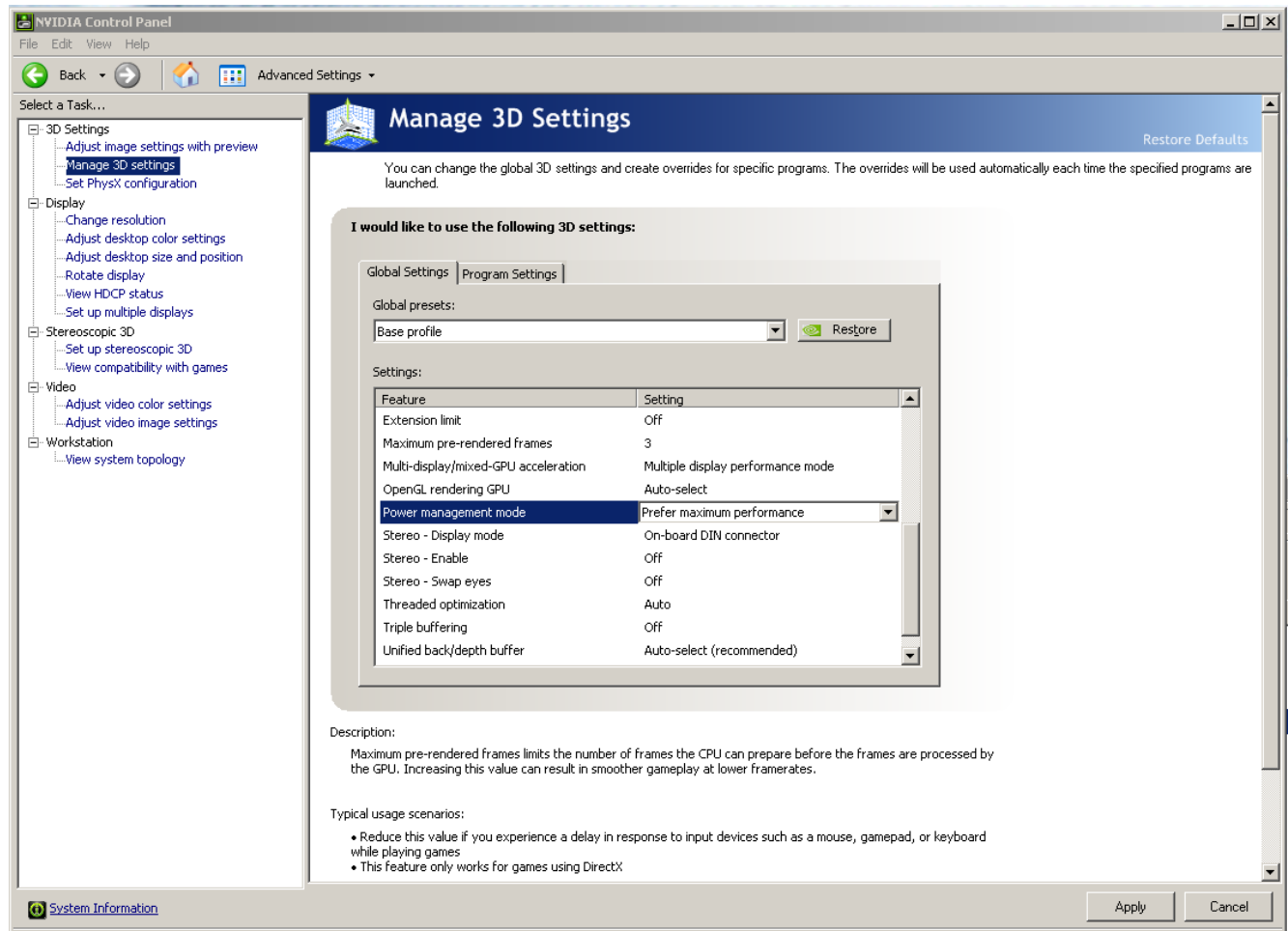
Set optimized Nvidia driver settings for Avid editing environments:

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 “3D App – Default Global Settings” (Same as Base Profile)
8. 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.



- Depress the “Apply” button.
- Nvidia driver optimization settings for Avid environments are complete.

9.) GPU monitor connectivity:

The Nvidia RTX A4000 graphics card has four Display-Port ports. The T600, T1000, RTX 3000 has 4 mini-display ports. All 4 ports can be used simultaneously.

The AMD W5500 graphics card has four full size display ports. The W5700 has 5 mini display ports.

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

10.) Serial Port Deck Control

The HP Z2 G8 workstation does NOT have an embedded serial port. Primary or secondary / additional serial port deck control can be established using USB to serial port adapters. See the Avid KB for more info.

11.) 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 10

http://avid.force.com/pkb/articles/en_US/Troubleshooting/Media-Composer-Windows-10-Optimizations-and-Troubleshooting

Revision Update

Revision	Date	Name	Update
Rev A	June 18, 2021	Dave Pimm	Initial release of the HP Z2 G8 configuration guide