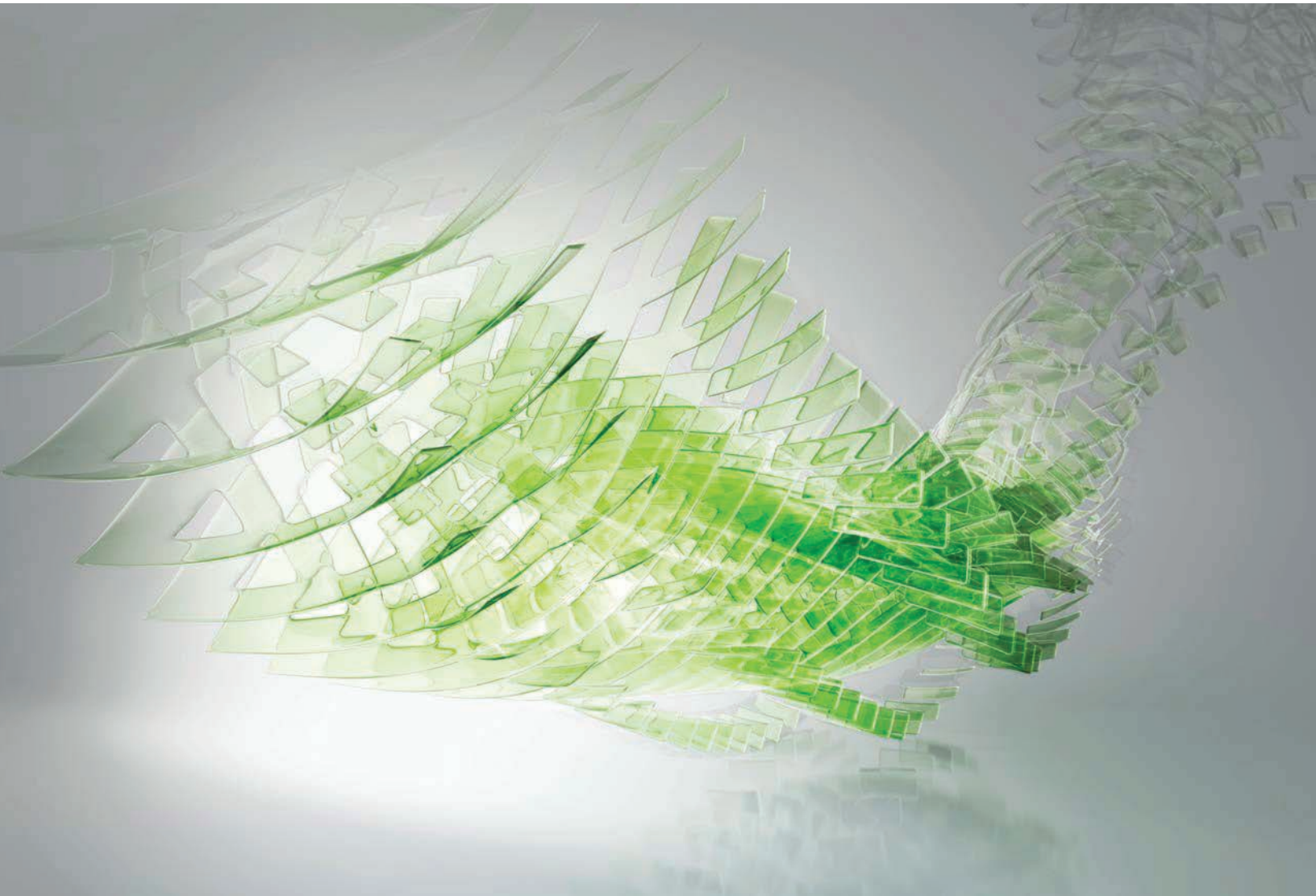




AUTODESK®
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HP Z440 Workstation Certified Hardware Setup Guide

Version 1.0 2016-09-07

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Z440 overview & environment

1

Revision history

Title	Date	Version	Notes
HP Z440 Certified Hardware Setup Guide	2016-09-07	1.0	

Scope of this document

This is a guide to building an Autodesk Certified Creative Finishing HP Z440 workstation. This guide is supplemental to HP Z440 workstation documentation and to Autodesk product documentation.

- Before unpacking or opening the workstation, take note of HP's Z440 documentation found at <http://www8.hp.com/us/en/workstations/z440.html>, especially:
 - Regulatory, Safety and Environmental Notices User Guide
 - Safety & Comfort User Guide
 - HP Z440, Z640, and Z840 Workstation Series - Maintenance and Service Guide
 - HP Z440 User Guide
- See <http://www.autodesk.com/vxf> for the latest Autodesk Creative Finishing product documentation, including system requirements, installation guides, release notes, user guides, and other documents. For system requirements, see: <http://www.autodesk.com/z440-sysreqs>

Power and air conditioning requirements

The values for power consumption and heat output were recorded on a certified workstation. The below power requirements must be supplied and an HVAC system must maintain the ambient temperature at the correct level.

Power consumption

Device	Amps continuous 120 V	Amps on startup or max 120 V	Amps continuous 240 V	Amps on startup 240 V
Monitor EIZO CG277W	0.35	2.1	0.18	1.05
Monitor EIZO CG318W	0.6	1	0.3	0.5
Z440 8-cores, M5000, AJA 4, FDR, ATTO16G 64GB (8x8G)	2.0	2.5	1.0	1.25

Device	Amps continuous 120 V	Amps on startup or max 120 V	Amps continuous 240 V	Amps on startup 240 V
Dothill RAID	3.2	3.5	1.6	1.75
Dothill Raid and 1 expansion chassis	5.4	5.8	2.7	2.9

Since most of the electric power consumed by a workstation is converted to heat, the power consumption indicates how much airconditioning is required to offset the heat produced. Use the following to calculate the air conditioning:

- 1 Watt = 3.413 BTU
- 12000 BTU = 1 ton of air conditioning

Peripherals

For a full list of supported peripherals see the system requirements. Workstation certification implies that only supported peripherals are used.

Hardware setup

2

Open and check the workstation

- 1 Remove the workstation's side access panel to access the inside of the computer.
- 2 Check that the following default components are installed in the workstation:
 - CPU
 - DIMMs
 - Optical drive
 - One hard drive in hard-drive bay 0.
- 3 Validate that the SATA ports on the motherboard are properly connected. A list of all the ports is on the back of the workstation's side panel.
 - SATA 0 = DVD drive (cable labeled SYS BRD)
 - sSATA 0 = HHD BAY 0 – Empty Drive Bay
 - sSATA 1 = HHD BAY 1 – Empty Drive Bay
 - All other ports should be empty.

Install PCI cards

- 1 Release the green PCI retaining clips to enable the insertion of the cards
- 2 Remove the PCI slot covers for each of the cards to be installed. There are six, numbered 1 to 6 starting from the top.
- 3 Insert the graphic card in slot 5, per the table below. The card will also cover the neighbouring slot 6.
- 4 There are two power cables plugged in above the front fan of the workstation. Unclip one cable from there and plug it into the graphic card.
- 5 Insert the Fiber Channel HBA in slot 2. Locate the other 6-pin power cable from the front fan of the workstation and connect it to the card.
- 6 Insert the AJA KONA PCIe card in slot 4.
- 7 Optional (if ordered): Insert the Mellanox InfiniBand FDR/40 GigE PCIe card in slot 3.

Slot configuration

Slot	Card
1	N/A

Slot	Card
2	Fiber Channel HBA
3	InfiniBand HCA
4	video I/O card
5	graphic card
6	N/A

DIMM setup

The memory should be pre-installed in the workstation. Refer to this section for memory upgrades or configuration changes.

Total RAM	Number of DIMMs	DIMM position
32 GB	4 x 8 GB	1, 3, 6, 8
64 GB	8 x 8 GB	All DIMM slots

Each channel includes two DIMM sockets; black and white connector pairs represent a channel. The DIMMs should be loaded first in the black sockets and then in the white sockets.

Reassemble the workstation

- 1 Clip the green and black PCI retaining clips to retain the cards.
- 2 Re-attach the workstation's side access panel.

Connect peripherals

- 1 Connect the keyboard and mouse to USB ports.
- 2 Connect the Display Port cable provided with the monitor from the DP port of the graphic card port to the monitor's DP port. If using an extender cable, see the system requirements for setup instructions.
- 3 Connect a power cable to the monitor and connect a power cable to the workstation.

BIOS & firmware setup

3

Update & configure BIOS

Requirements:


- A computer connected to the internet and with a free USB port.
 - A USB drive, ideally with an activity indicator light.
 - The BIOS .bin file, downloaded from HP.
 - The DKU, downloaded from the link in the system requirements.
- 1 Copy the .bin to the USB drive in this path: Hewlett-Packard/BIOS/New/.
 - 2 Extract from the DKU the file DKU_<version_number>/Utils/BIOS/HPZ440/Hp_Setup_<version_number>.txt, copy it to the root of the USB drive and rename it to HpSetup.txt.
 - 3 With the USB drive connected to the workstation, power up the workstation.
 - 4 When the HP logo displays, press F10 to enter the BIOS settings.
 - 5 Go to the Main menu > Update System BIOS and follow the instructions to flash the BIOS.
 - 6 Leaving the USB drive in place, restart the workstation.
 - 7 When the HP logo displays, press F10 to enter the BIOS settings.
 - 8 Go to Main menu > Replicated Setup > Restore current settings from USB drive.
 - 9 The restoration takes about five seconds. When the USB's activity indicator light (if applicable) stops flashing, choose Main menu > Save Changes and Exit. The workstation's BIOS is now configured to Autodesk specification. Remove the USB drive and restart the workstation.

PCI cards

After installing the Linux OS, the PCI cards may require firmware upgrades. See the system requirements and the Flame Family Installation Guide for the firmware upgrade procedure.

Update the EIZO firmware

For supported monitors and firmware versions, see the system requirements. Update the firmware to ensure self-calibration accuracy and stable performance.

- 1 With the monitor powered on, press the hardware button marked  to enter the menu.
- 2 Select the Information menu option. The first five digits in the Version line represent the firmware version.

To update the firmware download the firmware installer from the EIZO site and refer to the documentation in the package for instructions on updating the firmware. EIZO only produces installers for Windows and OS X, so the monitor must be physically attached to a computer running one of those operating systems.