

# VR Ready Configurations

HP Z Workstations for Professional Virtual Reality



## Introduction

Virtual Reality allows an innovative method of interaction with simulations and models, giving professionals a new tool for creation, development, and consumption. Segments such as digital media are emerging with titles and video content while architecture, engineering, and construction are generating graphically intense models and walk-throughs with the ability to navigate and explore. Product development teams are prototyping initial designs and simulations enhancing collaboration. These applications require workstation computing power, and HP has teamed up with NVIDIA® to provide “VR Ready Configurations.”

### VR Ready Configuration

VR experiences require high performance graphics cards to deliver seamless and immersive content. At a minimum, the workstation should be equipped with a NVIDIA® Quadro® M5000 and an Intel® Core™ i5-4590 or Xeon® E3-1240 v3 processor. These requirements are reflected below in the graphics, which depict the HP Workstation offerings labeled as Good, Better, and Best. These configurations are preset to streamline the selection process for a VR Ready Workstation. However, a custom configuration can also be discussed with your sales representative.

While virtual reality experiences are largely gated by the graphics card, the CPU can affect the performance for certain applications. In general, VR content benefits the most from a higher frequency rather than a larger core-count processor, because most applications cannot properly utilize the increased core count. Memory speed is another variable that can have an impact on the user's experience in VR, especially with the standardization on DDR4 architecture. But the impact is usually smaller than graphics and processor choices.



**Good**

**HP Z440 Workstation**

- Processor: Intel® Xeon® E5-1620 v4
- Windows 10
- 16 GB (2x8 GB)
- Disk
  - HP 256 GB SATA 6 GB/s SSD
- NVIDIA® Quadro® P5000
- NVIDIA® Quadro® P5000

**Better**

**HP Z640 Workstation**

- Processor: Intel® Xeon® E5-1630 v4
- Windows 10
- 32 GB (4x8 GB)
- Disk
  - OS: HP 512 GB SATA 6 GB/s SSD
  - Data: HP 512 GB SATA 6 GB/s SSD
- NVIDIA® Quadro® P6000
- NVIDIA® VR Ready

**Best**

**HP Z840 Workstation**

- Processor: 2x Intel® Xeon® E5-2637 v4
- Windows 10
- 32 GB (8x4 GB)
- Disk
  - OS: HP 256 GB SATA 6 GB/s SSD
  - Data: HP Z Turbo Drive Quad Pro 2x512 GB PCIe SSD
- 2x NVIDIA® Quadro® P6000
- NVIDIA® VR Ready

## Upcoming Hardware Releases

The new generation of graphics cards from NVIDIA® are based on the Pascal architecture and are currently released in the Zx40 line of workstations with the addition of the P4000 card in April 2017. The Pascal architecture will provide roughly a 30% increase in performance compared to the previous generation Maxwell cards. In addition to the new Quadro® Pascal cards, HP will be supporting NVIDIA® GeForce® cards on select HP Z Workstations starting in May 2017. The GeForce® 1070 and 1080 will both be supported in workstation products with a dual configuration also supported for the 1070. It should be noted that the performance comparisons in VR workflows for GeForce® and Quadro® are as follows: P5000 is roughly equivalent to GTX1080 while the GTX1070 performs slightly better than the P4000.

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