



## Technical White Paper

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# HP Z8 Fury G5 Workstation Architecture

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## Introduction

The HP Z8 Fury G5 is the successor to the HP Z8 G4 workstation. Its architecture introduces several improved functionalities and technologies including the latest Intel® Xeon W-3500 processors, DDR5 memory architecture, PCIe Gen 5 technology, front removable hot-swappable NVMe storage, improved thermal management and increased performance.



## System Highlights

### Extreme Workstation Performance

Z by HP innovations start with the customer to deliver the performance benefits needed, whether it's importing and working with large models and assemblies, running complex simulations, or training complex deep learning and machine learning models faster. The Z8 Fury G5 delivers powerful performance while staying cool and quiet under high-performance workflows. With up to 60 cores in a single CPU, this workstation unleashes the power of four high-end double-wide GPUs with 2TB of DDR5 memory due to the transformative single socket technology. Now you can breeze through even the most complex virtual production, VFX, and deep learning.

HP Z8 Fury G5 product benefits include:

#### 1. Relentless Power. Extraordinary Expandability.

Tackle the most complex workflows with up to a 60 core Intel® Xeon® W CPU<sup>1</sup>, up to 4 high-end GPUs, 2TB DDR5 RAM, 120 TB storage and 2,250W of power.<sup>2</sup> Easily expand as work evolves with 8 PCIe slots (up to Gen 5), and 4 front accessible NVMe bays.<sup>3</sup>

#### 2. Engineered to Stay Cool and Quiet.

Push your desktop workstation without disruptive noise. Smart fan control keeps the system whisper-quiet by tuning fan speeds in real-time using over 20 temperature sensors. Precisely placed vents and ducts streamline airflow and heat removal.

#### 3. Redundant Power. Reassuring Reliability.

Never worry that your PC will fail mid-project. For the first time in a Z desktop workstation, get a redundant power supply<sup>4</sup> for built-in backup. This PC also undergoes 360K hours of rigorous testing<sup>5</sup>, military-standard testing<sup>5</sup> and ISV certifications.

#### 4. Solutions for Smarter Workflows.

Remotely access the power of your Z with HP Anyware<sup>6</sup>. Get fast responsiveness and image quality even in high-end workflows. Save time with WSL2<sup>7</sup>, enabling Linux to run in Windows. Get easy access to tools from the Z by HP Data Science Stack Manager<sup>8</sup>

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## HP and Sustainability

HP continues to be a dedicated player in the world of technology and sustainability\* in order to help protect our shared future. Sustainably built, this product contains 40% recycled plastics,\*\* 80% recycled packaging content, and is EPEAT Gold and TCOv9 Certified. The production of this workstation prevented materials from ending up in the ocean or a landfill, as its fans contain ocean-bound plastic\*\*\* and all G5 products contain 10% post-industrial recycled metal. HP has also taken steps to minimize the amount of polyvinyl chloride in our products, as it is now only present in external power cables and keyboard/mouse cables.

\*Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. EPEAT® status varies by country. Visit [www.epeat.net](http://www.epeat.net) for more information.

\*\*Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 EPEAT standard.

\*\*\*Fans contain up to 25% ocean-bound plastic by weight.

## Latest Technologies

### The Latest Intel® Processor

The HP Z8 Fury G5 Workstation uses the Intel® W790 Alder Lake-S chipset to support the latest Intel® Xeon® W processors, including processors of up to 60 cores and up to 385W. Intel® Xeon® W processors utilize four integrated memory controllers each supporting two DDR5 channels that increase memory bandwidth by 50%. The architecture supports 112 PCIe lanes and includes PCIe Gen5 technology. The Intel® Xeon® W processors utilize four integrated memory controllers, each supporting two DDR5 channels that increase the memory capacity and bandwidth.

### Next Generation Intel® Active Management Technology

New features for Intel® AMT 16.10 include:

- Upgrade to Boot Guard Gen 1.1.
- PCHC Firmware Component.
- Intel® Total Memory Encryption (Intel® TME).

### DDR5 Memory Technology

The HP Z8 Fury G5 Workstation introduces support for DDR5 Registered DIMMs up to 4400MHz at 2 DIMMs per channel and up to 4800MHz at 1 DIMM per channel. The speed that the memory runs is determined by the processors and is limited to 4800MHz for the Intel® Xeon® W processor generation. The HP Z8 Fury G5 supports up to 2TB\* of memory. NUMA and Non-NUMA modes are supported, and dynamic power saving is enabled. ECC memory is supported.

\*May not be available at launch

### USB 3.2 Gen2x2 Type-C®

The HP Z8 Fury G5 configured with the Premium Front I/O module provides two USB 3.2 Gen2x2 Type-C® ports in addition to two USB3.1 Gen1 Type-A ports. The Type-C® ports each deliver up to 15W of power (3A @ 5V) when the system is running. More information on USB Technology and Performance measurements can be found in the “Resources, contacts, or additional links” section below.

## I/O and Storage

### Internal I/O

The HP Z8 Fury G5 provides a total of eight high-performance Graphics, and I/O slots including two PCIe5 x16, two PCIe4 x16, one PCIe5 x4, two PCIe4 x4, and one PCIe3 x8 dedicated electrical slots. It also provides two PCIe4 x8 electrical slots for four internal M.2 PCIe-attached storage devices. The Z8 Fury G5 also supports an optional Front Removable



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NVMe storage and has four PCIe4 x4 buses to support four front removable M.2. The HP Z8 Fury G5 provides an internal 1-port USB3.0 header, an internal 2-port USB2.0 header and an internal 1-port USB2.0 header.

## External I/O

On the front I/O area, the HP Z8 Fury G5 can be configured two ways.

- The Entry Front I/O option provides 4 USB 3.1 Gen1 Type-A ports (the left-most supports battery charging), combo headset/microphone jack, and the option for an SD card reader.
- The Premium Front I/O option provides 2 USB3.2 Gen2x2 Type-C® ports, 2 USB3.1 Gen1 Type-A ports (the left-most supports battery charging), combo headset/microphone jack, and the option for an SD card reader.

In the rear I/O area, the HP Z8 Fury G5 provides 4 USB 3.1 Gen1 ports via a hub and 2 direct USB3.2 Gen1 ports, 2 gigabit Ethernet LAN ports, audio Line-In, audio Line-Out and PS/2 ports. Additional rear I/O ports can be added via PCIe add-in cards.

## Storage

The HP Z8 Fury G5 supports six 6Gb/s SATA ports on the Intel® W790 Alder Lake-S chipset's SATA controller. The SATA controller operates in AHCI mode or RAID mode and supports RAID modes 0, 1, 5 and 10.

A header is provided for installation of an Intel® VROC Upgrade Module to enable NVMe RAID.

## Graphics

The HP Z8 Fury G5, depending on system and power supply configurations, can support up to six 75W cards, or up to four 300W cards. Confirm power supply and configuration support using configurator on hp.com.

## Power Supply Options

The base chassis comes with a single power supply capable of supplying 1125W (1450W @ 230V and is 90% efficient.

The redundant/aggregate capable chassis comes with two power supplies, each capable of the same power output and efficiency as the single supply in the base chassis. This makes two modes of operation possible.

- If the configuration's power requirement is limited to less than 1125W (1450W @ 230V) and both PSUS are powered the system provides redundancy. If one PSU loses power for some reason, the remaining PSU picks up all of the load in almost all cases.
- If the configuration's power requirement is more than 1125W (1450W @ 230V) the two power supplies can be used to supply up to 2250W (2900W @ 230V). There is no redundancy in this case.

## Other Features

- Rear panel power on/off switch and LED for easier rack maintenance
- ENERGY STAR® qualified configurations, China's Energy Conservation Program (CECP) configurations, European Union's ErP LOT6 2013 power limit of 0.5W in Max Power Savings off mode.
- Intel® vPro™ manageability with support both for DASH and Intel® AMT (Advanced Manageability Technology) on all the Xeon® processors. IT managers have increased flexibility in optimizing their Enterprise manageability strategy across HP's Commercial Laptops, Desktops and Workstations.





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## HP Z8 G5 vs HP Z8 G4 Feature Comparison

Figure 1: Z8 Fury G5 vs Z8 G4 Feature Comparison

	HP Z8 Fury G5	HP Z8 G4
Processors	Intel® Xeon® W Processor 5th Generation up to 385W	Intel® Xeon® Scalable Processor
New Instruction Set	AMX (Advanced Matrix Extensions)	AVX-512 AES-NI
Memory Technology	DDR5: Registered DIMMs  Up to 4800MHz	DDR4: Registered DIMMs  Up to 2933MHz
PCIe Support	PCIe Gen 4/5	PCIe Gen 3
USB Enhancement	Two USB 3.2 Gen2x2 Type-C® ports (Premium Front I/O option)	Two USB 3.1 Gen2 Type-C® ports (Premium Front I/O option)
USB SuperSpeed Ports	6 Rear, 4 Front (Entry Front I/O) or 2 Front (Premium Front I/O), 1 Internal	6 Rear, 4 Front (Entry Front I/O) or 2 Front (Premium Front I/O), 1 Internal
Manageability	Intel® ME16.10 Intel® vPro™	Intel® ME11, Intel® vPro™
Operating System	Windows 11 Pro for Workstations 64-bit	Windows 10 Professional 64-bit Windows 7 Professional 64-bit



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## HP Z8 Fury G5 - CPUs Supported

Figure 2: Intel® Xeon® W-3500 Processors supported at CPU Refresh

Name	Clock Speed (GHz)	Cores	Cache (MB)	Memory Speed (MHz)	TDP (W)
Intel® Xeon® W9-3595X processor	1.7	60	112.5	4800*	385W
Intel® Xeon® W9-3575X processor	2.2	44	97.5	4800*	340W
Intel® Xeon® W7-3565X processor	2.5	32	82.5	4800*	335W
Intel® Xeon® W7-3555 processor	2.7	28	75.0	4800*	325W
Intel® Xeon® W7-3545 processor	2.7	24	67.5	4800*	310W
Intel® Xeon® W5-3535X processor	2.9	20	52.5	4800*	300W
Intel® Xeon® W5-3525 processor	3.2	16	45.0	4800*	290W

Figure 3: Intel® Xeon® W-3400 Processors supported at introduction

Name	Clock Speed (GHz)	Cores	Cache (MB)	Memory Speed (MHz)	TDP (W)
Intel® Xeon® w9-3495X processor	1.9	56	105	4800	350W
Intel® Xeon® w9-3475X processor	2.2	36	82.5	4800	300W
Intel® Xeon® w7-3465X processor	2.5	28	75	4800	300W
Intel® Xeon® w7-3455 processor	2.5	24	67.5	4800	270W
Intel® Xeon® w7-3445 processor	2.6	20	52.5	4800	270W
Intel® Xeon® w5-3435X processor	3.1	16	45	4800	270W
Intel® Xeon® w5-3433 processor	2	16	45	4400	220W
Intel® Xeon® w5-3425 processor	3.2	12	30	4800	270W
Intel® Xeon® w5-3423 processor	2.1	12	30	4400	220W

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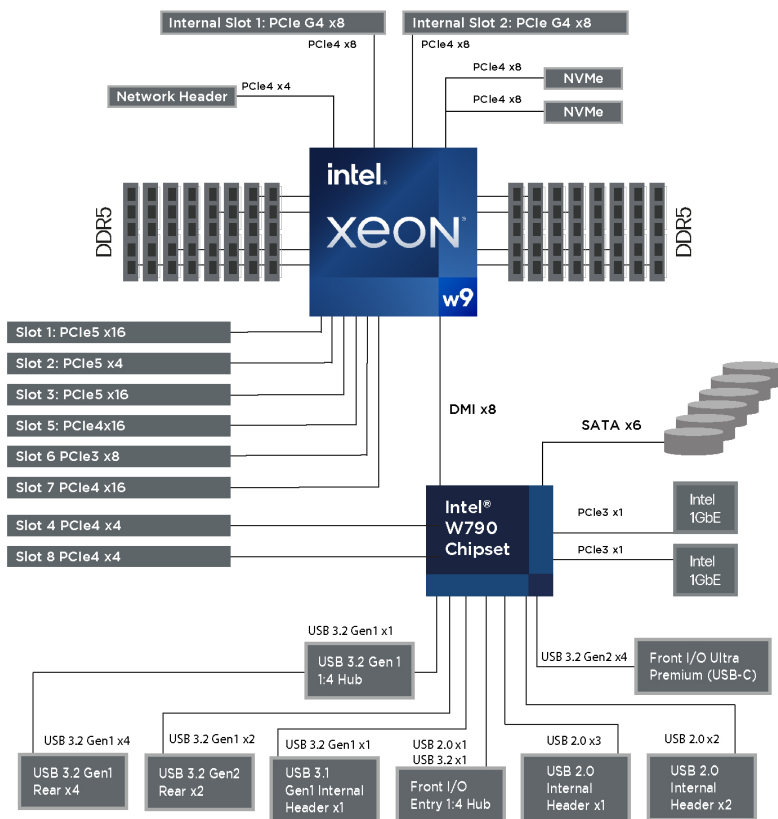
All processors feature Intel® vPro™ Technology, feature Intel® Turbo Boost Technology, and support hyperthreading.

#### Disclaimers:

Intel® vPro™ requires Windows 10 Pro 64 bit or higher, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or Wi-Fi 6E WLAN and TPM 2.0. Some functionality requires additional third-party software in order to run. Features of vPro Essentials and Enterprise vary. See <http://intel.com/vpro>.

Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See [www.intel.com/technology/turboboost](http://www.intel.com/technology/turboboost) for more information.

## HP Z8 Fury G5 Block Diagram and PCI-Express Performance



### Integrated PCI-Express 5.0

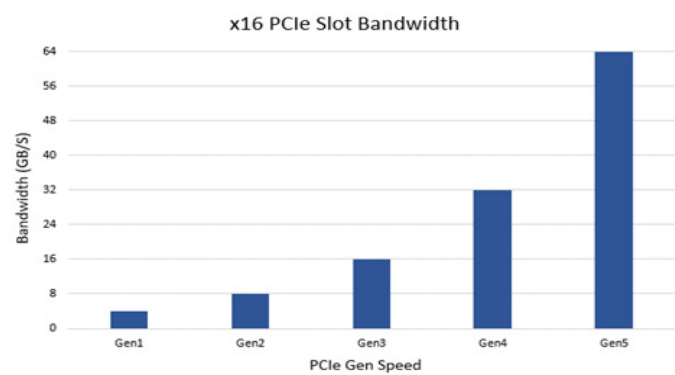
The HP Z8 Fury G5 uses the Intel® Xeon® W processor family, with integrated PCI-Express 5.0 controllers delivering a peak bandwidth of 64 GB/s per direction (4 GB/s per lane). PCI-Express 5.0 is backward compatible with 1.0, 2.0, 3.0, and 4.0. All PCIe slots will train to the highest common speed. PCI-Express slots will initialize at 1.0 and then transition to the max common speed through a training sequence that involves multiple adaptive training phases. It is recommended to carefully evaluate and validate PCI-Express devices that are not available or supported by HP.

### PCI-Express Performance

The HP Z8 Fury G5 integrates several features within the processor: multiple PCIe 5.0 controllers, DMA caching, and four 2-channel memory controllers per processor (2 DIMMs per channel). This produces excellent performance in I/O bandwidth, remote bandwidth, and latency.

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**Figure 4:** x16 Peak Bandwidth per Direction (GB/s)



**Recipe for Optimizing PCI-Express I/O Performance**

For high I/O bandwidth applications, the choice of slot loading, processor, and memory configuration can be optimized to ensure maximum bandwidth available. Applications and cards sensitive to I/O latency may benefit as well from some of the tips below.

**Recommended Configuration Steps**

- Place GPU and graphics cards first, following the slot order listed in Figure 3.
- Place I/O cards next, from highest bandwidth to lowest, following the slot order listed in Figure 3. This is the optimal load order for most applications.
- Additional I/O bandwidth refinements may be possible. If necessary, refer to the tips below.

**Figure 5:** HP Z8 Fury G5 I/O Slot Recommended Load Order

Card Load	Card Description	Slot 1	Slot 2	Slot 3	Slot 4	Slot 5	Slot 6	Slot 7	Slot 8	Personal-ity 1	Personal-ity 2
		PCIe5-x16 CPU	PCIe5-x4 CPU	PCIe5-x16 CPU	PCIe4-x4 PCH	PCIe4-x16 CPU	PCIe3-x8 CPU	PCIe4-x16 CPU	PCIe4-x4 CPU0	PCIe4-x8 CPU	PCIe4-x8 CPU
1	1st Graphics			Only							
2	2nd Graphics*	1				3		2			
3	3rd Graphics					2	3	1			
4	Thunderbolt-4 (2-port)								Only		
5	4th Graphics		3			1	2				
6	5th Graphics		2				1				
7	6th Graphics		Only								





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Card Load	Card Description	Slot 1	Slot 2	Slot 3	Slot 4	Slot 5	Slot 6	Slot 7	Slot 8	Personal-ity 1	Personal-ity 2
		PCIe5-x16 CPU	PCIe5-x4 CPU	PCIe5-x16 CPU	PCIe4-x4 PCH	PCIe4-x16 CPU	PCIe3-x8 CPU	PCIe4-x16 CPU	PCIe4-x4 CPU0	PCIe4-x8 CPU	PCIe4-x8 CPU
8	Z Turbo Drive Dual Pro (2x M.2 w/ Levers)									1	2
9	Z Turbo Drive Quad Pro (4x M.2 card)	3				2		1			
10	Z Turbo Drive Dual Pro (2x M.2 w/ Bracket)	3				2	4	1			
11	Network Interface (LAN, etc.)	3	5			2	4	1			
12	Network Interface (WLAN)					4	3	2	1		
13	HP Integrated Remote System Controller		5		4		3	2	1		
14	PS2/Serial Module		2		3		4	5	1		

## Additional Tips

- For applications doing direct bus Peer-to-Peer transfers between cards, load the corresponding cards in slots off the CPU.
- If possible, make sure all I/O cards are loaded in slots that have a PCI-Express Lane Width at least as wide as the card (see Figure 3).
- For predictable latencies, try disabling NUMA (Non-Uniform Memory Access) mode (BIOS setup menu -> Advanced -> Performance Options -> Non-Uniform Memory Access (NUMA) = Disable).
- For cards that are latency sensitive, load these cards in processor slots.
- Ensure Idle Power Savings BIOS setting is set to Normal (BIOS setup menu -> Advanced -> Power Options -> Idle Power Savings = Normal).
- Use the latest system BIOS version available on hp.com.
- Check for updates in the latest performance optimization white papers (link below).

## HP Z8 Fury G5 Memory Configurations and Optimization

The purpose of this section is to provide an overview of the memory configurations for the HP Z8 Fury G5 Workstation and to provide recommendations to optimize performance.

### Supported Memory Modules

Types of memory supported on an HP Z8 Fury G5 Workstation include:

- 16 GB, 32 GB and 64GB PC5-4800-R 4800 MHz and 5600MHz DDR5 Registered DIMMs
- 128 GB PC5-4800 3DS 4800 MHz and 5600MHz DDR5 3DS Registered DIMMs
- Single and dual rank DIMMs based on 16GB and 32Gb<sup>9</sup> DRAMs are supported
- Quad and octal rank 3DS RDIMMs are supported
- 128GB PCI5-5600 5600MHz DDR5 Registered DIMMs<sup>9</sup>

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Types of memory NOT supported on an HP Z8 Fury G5 Workstation are:

- Unbuffered DIMMs
- Non-ECC DIMMs
- DDR, DDR2, DDR3, DDR4 DIMMs

See Memory Technology White Paper for more memory module technical information.

## Platform Capabilities

### Maximum Capacity: 2TB

- Total of 16 memory sockets
- 4 Memory controllers with 2 channels per memory controller for a total of 8 channels and 2 sockets per channel

### Speed

- 4800MHz, 4400MHz and 4000MHz memory speeds are supported in this platform
- For 1 DIMM per channel configurations, the max memory speed is 4800MHz
- For 2 DIMM per channel configurations, the max memory speed is 4400MHz
- Memory will operate at the speed of the slowest rated installed processor or DIMM

### Mixing of DIMMs in a System

- Registered and 3DS LR DIMMs cannot be mixed in a system
- Mixing x4 DRAMs with x8 DRAMs is not supported.
  - 16GB and 32GB RDIMMs supported by HP are x8 and can be mixed in a system
  - 64GB RDIMMs supported by HP are x4 and cannot be mixed with other sized DIMMs in a system

## Memory Features

This platform supports the new DDR5 technology:

- DDR5 supports higher bandwidths, capacities, and power efficiencies
- Improves reliability features
- DDR5 has increased technology efficiencies
- Adds support for on-die ECC
  - On-die ECC is where the data stored on the memory module is monitored by the DRAM for errors
  - Only single-bit errors are automatically corrected, multi-bit errors are not detected
- But system ECC is still supported on all RDIMMs
  - Single-bit errors are automatically corrected
  - Multi-bit errors are detected and will cause the system to immediately reboot and halt with an F1 prompt error message
  - By way of comparison, non-ECC memory (not supported on this platform) does not detect or correct single-bit or multi-bit errors which can cause instability, or corruption of data, in the platform. See Memory Technology White Paper for more information.

Command and Address parity is supported

- Command and Address errors are detected and will cause the system to immediately reboot and halt with an F1 prompt error message.

This platform supports 4 memory controllers with 2 channels per memory controller for a total of 8 channels that increases system performance



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## Optimize Performance

System performance is largely based on the applications being used. Generally, to obtain the best performance, it is advised that you follow the following guidelines:

- For best performance, it is recommended to load memory into all memory controllers and channels. Since these platforms have 4 memory controllers and 8 channels, install memory in sets of 4 or 8.
- Proper individual DIMM capacity selection is essential to maximizing performance. Evenly distributing total desired memory across all operational channels and memory controllers will deliver the best performance.
- To increase overall performance, install multiple ranks in each channel. This can be accomplished by installing 2 single ranked DIMMs in the same channel.
- Maximum performance can be achieved by changing the OS power mode to Ultimate Performance in BIOS.

**Figure 6:** Optimal configurations for the HP Z8 Fury G5 (Note: the following tables do not include all available orderable configurations)

Configuration	DIMM1 (Black)	DIMM2 (White)	DIMM3 (Black)	DIMM4 (White)	DIMM5 (Black)	DIMM6 (White)	DIMM7 (Black)	DIMM8 (White)	CPU	DIMM9 (White)	DIMM10 (Black)	DIMM11 (White)	DIMM12 (Black)	DIMM13 (White)	DIMM14 (Black)	DIMM15 (White)	DIMM16 (white)	Rating
16GB (1x16GB)	X																	GOOD
32GB (2x16GB)	X																X	GOOD
32GB (1x32GB)	X																	GOOD
64GB (4x16GB)	X				X								X				X	BETTER
64GB (2x32GB)	X																X	GOOD
64GB (1x64GB)	X																	GOOD
128GB (8x16GB)	X		X		X		X				X		X		X		X	BEST
128GB (4x32GB)	X				X								X				X	BETTER
128GB (2x64GB)	X																X	GOOD
256GB (16x16GB)	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	BEST
256GB (8x32GB)	X		X		X		X				X		X		X		X	BEST
256GB (4x64GB)	X				X								X				X	BETTER
256GB (2x128GB)	X																X	GOOD
512GB (16x32GB)	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	BEST
512GB (8x64GB)	X		X		X		X				X		X		X		X	BEST
512GB (4x128GB)	X				X								X				X	BETTER

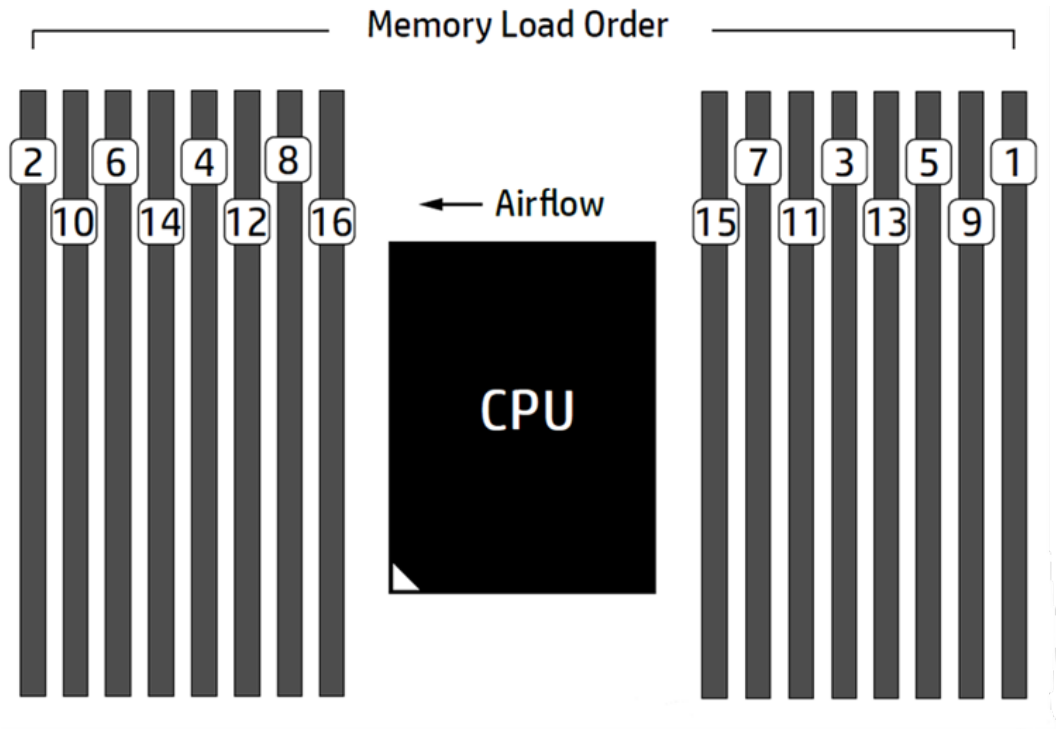
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Configuration	DIMM1 (Black)	DIMM2 (White)	DIMM3 (Black)	DIMM4 (White)	DIMM5 (Black)	DIMM6 (White)	DIMM7 (Black)	DIMM8 (White)	CPU	DIMM9 (White)	DIMM10 (Black)	DIMM11 (White)	DIMM12 (Black)	DIMM13 (White)	DIMM14 (Black)	DIMM15 (White)	DIMM16 (White)	Rating
1TB (16x64GB)	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	BEST
1TB (8x128GB)	X		X		X		X				X		X		X		X	BEST
2TB (16x128GB)	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	BEST

### Loading Rules

- Load the memory modules in order of size, starting with the largest module and finishing with the smallest module.
- 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. The DIMMs should be loaded starting with the DIMM furthest from the CPU, with the first DIMM loaded in the right most socket and alternating sides of the CPU.
- See the figure below for loading order.

**Figure 7:** Loading order for single



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## Summary

The memory configurations of the HP Z8 Fury G5 Workstation have been specifically crafted to meet strict long-term reliability standards with an optimized performance that provides users with seamless functionality. Design, cooling, and power solutions were validated to ensure DIMMs met max performance. HP values product quality and end user productivity, which is why the products discussed in this document are backed by HP's warranty. For more information, visit <https://www.hp.com/us-en/workstations/desktop-workstation-pc.html>.

## Resources, Contacts, or Additional Links

Visit **HP's White Paper site** to learn more about the innovation in HP Workstations and the latest technologies offered in the products.

## Disclaimers

1. Multicore is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.
2. Optional, configurable features. Configurations for 2TB DDR5 RAM and 120 TB storage are planned to be available in the first half of 2023. Configuration for 120TB requires separate additional purchase. For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35GB is reserved for system recovery software.
3. Optional, configurable features. Configuration for front accessible NVME bays is planned to be available in the first half of 2023. Two front accessible NVMe bays require a 5.25 bay carrier.
4. Optional, configurable feature. Redundant and aggregate power requires configuring two 1125W power supplies at hardware purchase.
5. MIL-STD testing is not intended to demonstrate fitness for U.S. Department of Defense contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Accidental damage requires an optional HP Accidental Damage Protection Care Service.
6. Network access required. HP Anyware software and licensing are available through a 1- or 3-year subscription. Renewal is required after the subscription term. HP Anyware subscriptions are based on the number of concurrent PCoIP connections used (pay for the number of host connections, not the software) with a minimum order quantity of 5. For a limited time, an HP Anyware Professional subscription also includes access and support for ZCentral Remote Boost and ZCentral Connect and is available for purchase through an HP reseller or contact sales at [hp.com/Anyware](https://hp.com/Anyware). ZCentral Remote Boost Sender requires Windows 10 and 11, RHEL/CentOS (7 or 8), or UBUNTU 18.04 or 20.04 LTS operating systems. macOS (10.14 or newer) operating system and ThinPro 7.2 are only supported on the receiver side. ZCentral Connect requires Windows (10 or 11) or Windows Server (2016 or 2019) operating system, Microsoft Active Directory and Intel® Active Management Technology for select features. For system requirements and to install HP Anyware and Anyware Manager, refer to the Admin Guides at: <https://docs.teradici.com/find/product/hp-anyware>.
7. Optional, configurable feature that must be configured at purchase. Requires Windows 10 or higher, Intel® Core i5 processor or higher and is available on select Z workstations. You must be running Windows 10 version 21H2 and higher (Build 19044 and higher) or Windows 11.
8. Z by HP Data Science Stack Manager requires Windows 10 version 21H2 (Build 19044) and higher or 64-bit Ubuntu 20.04 and is available on select Z workstations.
9. Not available until December 2024.





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