Interactive BIOS simulator

HP Z4 G4 Workstation

Welcome to the interactive BIOS simulator for the HP Z4 G4 Workstation

Here's how to use it...

<u>BIOS Utility Menus:</u> (Click the link to navigate to the individual menus) On this page you will find thumbnail images of each of the product's BIOS utility menus. To view a specific menu in greater detail, simply click that thumbnail. Just as in the live BIOS, on each menu, you can select the tab of each of the other utility menus to navigate directly to that menu.

Menu options:

While the menu options cannot be toggled, many of them offer item specific information about that option. To view this information, use the cursor to rollover the option and the information will present in a pane on the right of the BIOS screen.

That's it!

On every page there is a link that brings you back to either this Welcome page or the BIOS Utility Menus page enabling you to navigate to whatever BIOS option you wish to review.

BIOS Utility Menus

Main

Security

Advanced

UEFI Drivers

Suppress POST Errors



Item Specific Help

BASIC SYSTEM INFORMATION

Product Name Processor 1 Memory Size System BIOS HP Z4 G4 Workstation Genuine Intel(R) CPU 0000%@ 8 GB ECC RDDR4 P61 v01.07 11/13/2017

SERVICE -----

Born On Date Serial Number SKU Number Universally Unique Identifier (UUID) Asset Tracking Number 00/00/0000

1JP11AV SCC5E2BA-2E08-B220-E2C9-2A2EBSC5013C



HP Computer Setup

Item Specific Help

ADVANCED SYSTEM INFORMATION

Product Name Memory Size Memory Speed HP Z4 G4 Workstation 16384 MB 2133 MHz

PROCESSOR 1 -----

ProcessorType Cache Size (L1/L2/L3) Processor Speed MicroCode Revision Processor Stepping CPU0-DIMM1 CPU0-DIMM2 CPU0-DIMM3 CPU0-DIMM3 CPU0-DIMM5 CPU0-DIMM5 CPU0-DIMM5 Genuine Intel(R) CPU 0000% @ 256 KB / 4 MB / 8448 KB 2400 MHz 80000034 2 8 GB Hynix Empty Empty Empty Empty Empty Empty Empty

Empty



HP Computer Setup

Item Specific Help

FIRMWARE -----

System BIOS ME Firmware Version ME Firmware Mode Reference Code Revision Super I/O Firmware Version P61 v01.07 11/13/2017 11.11.50.1422 AMT Disabled 147R015 6.3.3



HP Computer Setup

Item Specific Help

SERVICE	
Born On Date	00/00/0000
Serial Number	
SKU Number	1JP11AV
Universally Unique Identifier (UUID)	SCC5E2BA-2E08-B220-E2C9-2A2EBSC5013C
Asset Tracking Number	
Feature Byte	
Build ID	
Product Family	103C_53335X HP Workstation
System Board ID	81C5
System Board CT Number	
COMMUNICATION	

Embedded LAN Controller (AMT) MAC Address	3C-52
Intel I210 Embedded LAN Port MAC Address	A0-80

3C-52-82-DB-7A-27 A0-8C-FD-DD-D4-49







HP PC Hardware Diagnostics UEFI

Please select a Language.

English
Cestina
Dansk
Deutsch
Nederlands
Espanol
eesti keel
Suomi
Francais
Hrvatski
Magyar



Main

Update System BIOS

Current System BIOS Version: Current BIOS Release Date: Installation Date of Current BIOS: Most Recent Update Check: P61 V01.07 11/13/2017 01/01/2016 Never Checked

BIOS Rollback Policy

Allow BIOS Updates Using a Network **2**

1



HP Computer Setup

Item Specific Help

1. Check HP.com for BIOS Updates

Checks for the latest BIOS release revision on the network, and lets the user decide whether to download the BIOS image and update System.

2. Allow BIOS Updates Using a Network

Enable/Disable automatic BIOS updates through the network in a scheduled basis.

3. BIOS Update Preferences

Sets the configurations to perform BIOS updates through the network.

MS Windows Bitlocker Drive Encryption (BDE) may be enabled on your system. HP requires that BDE be suspended temporarily before the BIOS is flashed and that you obtain your BDE recovery password or recovery PIN before suspending BDE. After the BIOS is updated, BDE can be resumed.



Minimum BIOS Version

Current Minimum BIOS Version: 00.00.00

Minimum BIOS Version:



Main

BIOS Update Preferences

Check for Update on Next Reboot 1



Automatic BIOS Update Setting

BIOS Update Frequency



HP Computer Setup

Item Specific Help

Check for Update on Next Reboot
 Enable/Disable an automatic BIOS check on next reboot.

2. BIOS Source

Choose one of the available options. *Click on the field to see the options.*

Automatic BIOS Update Setting

Choose one of the available options. *Click on the field to see the options.*

3. BIOS Update Frequency

Choose one of the available options.

2

3

4

Configure Update Source

There is no custom URL configured.

BIOS Update source can be changed to a CUSTOM URL instead of HP.com. This is only recommended for systems in a managed IT environment.

Examples: http://www.host.com/path ftp://ftp.host.com/path ftp://user:password@ftp.host.com/path http://192.168.0.1/path

Press ESC to CANCEL Type the System MAC Address and press ENTER to SAVE



Main

Network Configuration Settings





IPv4 Configuration

- ➡ <u>IPv4 Subnet Mask</u>
- ➡ <u>IPv4 Gateway</u>

DNS Configuration

Data transfer timeout Force HTTP no-cache **5** 100



HP Computer Setup

Item Specific Help

1. Proxy Server

Enable/Disable the use of a proxy server.

2. Test Network Connection

Check the network connection using current BIOS update configuration. *Click on the field to see the options.*

3. IPv4 Configuration

Setup for static IPv4 address. *Click on the field to see the options.*

4. DNS Configuration

Configure a list of DNS addresses.

5. Force HTTP no-cache

Disable HTTP caching.

Help

3

4

Test Network Connection

Your network server connection is working.

IPV4 Configuration: Automatic IPV4 Address: 192.168.0.106 IPV4 Subnet Mask: 255.255.255.0 IPV4 Gateway: 192.168.0.1 DNS Configuration: Automatic Primary DNS: 75.75.75.75 Secondary DNS: 75.75.76.76 MAC Address: EC:B1:D7:63:65:DE

Current Proxy: Current Custom Source URL: HP.COM

Main

Change Date And Time

Set Date (MM/DD/YYYY) Set Time (HH:MM): 08/07/2017 23:05



HP Computer Setup

Item Specific Help

Main

System IDs



HP Computer Setup

Item Specific Help

Feature Byte

Current Setting:



Build ID

Current Setting:



Serial Number

Current Setting:



SKU Number

Current Setting: 1JP11AB



Product Family

Current Setting: 103C_53335X HP Workstation



System Board CT Number

Current Setting:



Product Name

Current Setting: HP Z4 G4 Workstation



Main

System IDs



HP Computer Setup

Item Specific Help

Asset Tracking Number

Current Setting:



Ownership Tag

Current Setting:



Replicated Setup



HP Computer Setup

Item Specific Help

Replicated Setup

The file cannot be accessed. Please insert a USB storage device and try again.

Are you sure you want to save custom defaults and exit?



Item Specific Help

Are you sure you want to apply custom defaults and exit?



Item Specific Help

Are you sure you want to apply factory defaults and exit?



Item Specific Help

Are you sure you want to ignore changes and exit?



Item Specific Help

Are you sure you want to save changes and exit?



Item Specific Help

Administrator Tools



Security Configuration

Utilities

Absolute® Persistence Module Current State Activation Status : Inactive Absolute® Persistence Module Permanent Disable : No System Management Command



HP Computer Setup

Item Specific Help **1. Create BIOS Administrator Password** The Administrator password controls access to the following features: • Setup Menu (F10) • 3rd Party Option ROM Management (F3) • Update System ROM • WMI Commands that change system settings • BIOS Configuration Utility (BCU)

• Alternative Power-On Password

BIOS Administrator Password

Enter BIOS Administrator Password


Enter POST Power-On Password



Password Maximum Length

At least one symbol is required in Administrator and User passwords At least one number is required in Administrator and User passwords At least one upper case character is required in Administrator and User passwords At least one lower case character is required in Administrator and User passwords Are spaces allowed in Administrator and User passwords?

Clear Password Jumper

TPM Embedded Security

TPM Specification Version

TPM Device

TPM State **2**

Clear TPM

TPM Activation Policy

1

2.0



HP Computer Setup

Item Specific Help

1. TPM Device

Exposes the integrated Trusted Platform Module (TPM) for use. *Click on the field to see the options.*

TPM State

Enables the integrated Trusted Platform Module (TPM).

BIOS Sure Start

Verify Boot Block on every boot BIOS Data Recovery Policy

Sure Start BIOS Settings Protection 1

Requires BIOS Administrator Password to be set

Enhanced HP Firmware Runtime Intrusion and Detection **2** Sure Start Security Even Policy

3



Item Specific Help

1. Sure Start BIOS Settings Protection

When enabled, HP Sure Start will lock all critical BIOS settings and provide enhanced protection for these settings via the HP Sure Start non-volatile (flash) memory

The BIOS administrator credentials must be set to enable this setting
 See HP Sure Start documentation for details on which BIOS settings are protected

2. Enhanced HP Firmware Runtime Intrusion and Detection

- Enables monitoring of HP system firmware executing out of main memory while the user Operating System is running.

- Any anomalies detected in HP System firmware that is active while the user operating system is running will result in a Sure Start Security Event being generated. *Click on the field to see the options.*

3. Sure Start Security Event Policy

This setting controls HP Sure Start behavior upon identifying a critical security event (any modification to HP firmware) during OS runtime.

- Log event only - HP Sure Start will log all critical security events m the HP Sure Start Audit log within the HP Sure Start non-volatile (flash) memory

- Log Event and notify user: In addition to logging all critical security events. HP Sure Start will notify the user within thr operating system that a critical event has occurred

- Log Event and power off system: In addition to logging all critical events. HP Sure Start will power off the system upon detecting a HP Sure Start Security Event. Due to the potential for data loss, use of this setting is only recommended in situations where security integrity of the system is a higher priority than the risk of potential data loss System Security

Virtualization Technology (VTx) Virtualization Technology for Directed I/O (VTd) Trusted Execution Technology (TXT)

TXT cannot be enabled unless VTx, VTd, and TPM are enabled first.



Item Specific Help

Hard Drive Utilities

Save/Restore MBR of the system hard drive is only available with drives that have a Master Boot Record.

Save/Restore MBR of the system hard drive is only available with drives that have a Master Boot Record. Save/Restore GPT of the system hard drive is only available with drives that have a GUID Partition table.

Allow OPAL Hard Drive SID Authentication



	Item Specific Help
Help	

Select a Drive



HP Computer Setup

Item Specific Help 1. SATAO: ST500LX025-1U717D-SSHD Set HDD Password

Help

DriveLock Security Options

Allow OPAL Hard Drive SID Authentication

A BIOS Administrator Password must be defined before you can enable Automatic Drivelock.



HP Computer Setup

Item Specific Help

Help

Set DriveLock Master Password

Please exercise caution when using DriveLock. Losing the passwords will render a drive permanently unusable.

Please be aware these settings take place immediately: save not necessary.

Enter Drivelock Master Password.



Set DriveLock User Password

Please exercise caution when using DriveLock. Losing the passwords will render a drive permanently unusable.

Please be aware these settings take place immediately: save not necessary.

Enter Drivelock User Password.



Select a Drive



HP Computer Setup

Item Specific Help

Help

Secure Erase

This operation will erase all data on the hard drive. Please make sure the computer is connected to AC power during this process.

Are you sure you want to restore settings to default?



Item Specific Help

1

Remote HP PC Hardware Diagnostics

2

3



HP Computer Setup

Item Specific Help

1. Port Options

Enable/Disable Port Settings

2. Settings

Set the configuration for Remote HP PC Hardware Diagnostics, including the URLs used for download and upload, the scheduled execution frequency, etc.

3. Execute Remote HP PC Harware Diagnostics

Immediate execution of Remote HP PC Hardware Diagnostics based on the configurations is Settings option. Note that any unsaved BIOS settings are lost.

Display Language

Select Language

Select Keyboard Layout



Item Specific Help

Scheduled Power-On

Sunday 1	
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Hour	0
Minute	0



HP Computer Setup

Item Specific Help

1. Days

Enable the days of the week to turn the system on. This feature wakes the system up from a powered off state.

Boot Options

Startup Delay (sec.)

Fast Boot CD-ROM Boot USB Storage Boot Network (PXE) Boot

Network (PXE) Boot Configuration

After Power Loss

Prompt on Memory Size Change NumLock on at boot UEFI Boot Order

USB Drives CD/DVD Drives SATAO: Hard Drive New Mass Storage NETWORK BOOT: IPV4 Network - Intel(R) Ethernet Connection (2) 1219-LM NETWORK BOOT: IPV4 Network - Intel(R) 1210 Gigabit Network Connection NETWORK BOOT: IPV6 Network - Intel(R) Ethernet Connection (2) 1219-LM NETWORK BOOT: IPV6 Network - Intel(R) 1210 Gigabit Network Connection

Legacy Boot Order Enable legacy boot, save settings & exit, then return to setup.



HP Computer Setup

Item Specific Help 1. After Power Loss Determine the system's state after power is lost to the unit.

Secure Boot Configuration

Configure Legacy Support and Secure Boot

Secure Boot Key Management Import Custom Secure Boot keys Clear Secure Boot keys Reset Secure Boot keys to factory defaults Enable MS UEFI CA key

Ready BIOS for Device Guard Use

Requires BIOS Administrator Password to be configured and Secure Boot to be enabled.



HP Computer Setup

Item Specific Help

1. Ready BIOS for Device Guard Use

When set to "Configure on Next Boot", the BIOS will change the feature listed below to their suggested Device Guard states, on the boot after saving changes and exit. Virtualization features will be enabled. Removable and network boot devices will be disabled (for example, USB boot, CD-ROM boot, Thunderbolt boot, etc.). MS UEFI CA Key will be disabled.

When set to "Clear Configuration on Next Boot", the BIOS will set the listed features to their Custom Default state if custom defaults have been saved. If custom defaults have not been saved, the BIOS will restore the listed features to their factory default states.



System Options

SATA Controller SATA Controller RAID Mode 1 TB Memory cap

1 TB Memory cap

PCIE MMIO Assignment Mode

PCle Training Reset



Item Specific Help

Built-In Device Options

Embedded LAN Controller

Wake On LAN

Intel I210 Embedded LAN Port

Audio Device **1**

Internal Speakers

LAN / ALAN Auto Switching

Increase Idle Fan Speed(%)

Increase PCIe Idle Fan Speed(%)





Port Options

Front USB Ports Rear USB Ports Internal USB Ports Media Card Reader SATA0 SATA1 SATA1 SATA1 SATA2 SATA2 SATA3 SATA3 SATA3 SATA3



Item Specific Help

Option ROM Launch Policy

Configure Option ROM Launch Policy

Mini OROM Display





- Item Specific Help
- **1. Configure Option ROM Launch Policy** Configure the launching of EFI versus Legacy Option ROM's

Power Management Options

Runtime Power Management1Hardware P-States2

Energy/Performance Bias Control BIOS Energy/Performance Bias Idle Power Savings

S5 Maximum Power Savings 3
SATA Power Management
PCI Express Power Management
Unique Sleep State Blink Rates



HP Computer Setup

Item Specific Help

1. Runtime Power Management Enables Runtime Power Management.

2. Extended Idle Power States Increases the OS's Idle Power Savings.

3. SS Maximum Power Savings

Enabling this feature reduces the power of this system as much as possible in the SS state. Power is removed from the wake up circuit, the expansion slots and any management features while in SS.

4. PCI Express Power Management

Enabling this option permits the PCI Express links to use Active State Power Management (ASPM) to enter low power states while not in use.

Performance Options

Active CPU Cores Per Processor

Sub-NUMA Clustering

Isoc Mode

Workload Configuration



Item Specific Help

Remote Management Options

Intel Management Engine (ME) Intel Active Management Technology (AMT) **1** USB Key Provisioning Support USB Redirection Support

SOL Terminal Emulation Mode

Verbose Boot Messages Watchdog Timer **2** OS Watchdog Timer (min.) BIOS Watchdog Timer (min.) CIRA Timeout (min)





HP Computer Setup

Item Specific Help

1. Intel Active Management Technology (AMT) This option allows for a user to enable Intel Active Management Technology, which is tied to all ME-regulated remote management functions. Disabling AMT will still allow for ME firmware updates, which are recommended for receiving platform stability fixes.

2. Watchdog Timer

Enable/Disable WatchDog Timer.

3. OS & BIOS Watchdog Timer

Set OS Watching timer (Minutes).

Slot Settings

Slot 1 PCI Express x 16	
Option ROM download	
Current PCIe Speed	Gen1 (2.5Gbps)
Limit PCIe Speed	
Bifurcation	
Slot 2 PCI Express x 4	
Option ROM download	
Current PCIe Speed	Gen1 (2.5Gbps)
Limit PCIe Speed	
Slot 3 PCI Express x 16	
Option ROM download	
Current PCIe Speed	Gen1 (2.5Gbps)
Limit PCIe Speed	
Bifurcation	
Slot 4 PCI Express x 4	
Option ROM download	
Current PCIe Speed	Gen1 (2.5Gbps)
Limit PCIe Speed	



Item Specific Help

Slot Settings

Slot 5 PCI Express x 8	
Option ROM download	
Current PCIe Speed	Gen1 (2.5Gbps)
Limit PCIe Speed	
Bifurcation	
M.2 SSDO	
Option ROM download	
Current PCIe Speed	Gen1 (2.5Gbps)
Limit PCIe Speed	
M.2 SSD1	
Option ROM download	
Current PCIe Speed	Gen1 (2.5Gbps)
Limit PCIe Speed	



Item Specific Help		

Settings



1



HP Computer Setup

Item Specific Help

1. Diagnostics Download URL

Select between HP server URL and a custom server URL.

2. Custom Upload Address

Configure a URL for diagnostics logs upload.

3. Username

Configure the username for uploading diagnostics logs to the server, if authentication is required.

4. Password

Configure the password for uploading diagnostics logs to the server, if authentication is required.

5. Frequency

Select the frequency for scheduled execution of Remote HP PC Hardware Diagnostics.

6. Execute On Next Boot

Enable/disable the execution on next boot. The flag will be disabled after the diagnostics have run.

Custom Upload URL

There is no Custom Upload URL configured. Type a new Custom Upload URL and press ENTER to save. Press ESC to CANCEL



Upload Server Username

There is no Username configured. Type a new Username and press ENTER to save. Press ESC to CANCEL



Upload Server Password

There is no Upload Server Password configured. Type a new Upload Server Password and press ENTER to save. Press ESC to CANCEL



Remote HP PC Hardware Diagnostics Result

Remote HP PC Hardware Diagnostics was never executed.

Remote HP PC Hardware Diagnostics Execution

Status of last attempt to execute: Could not detect network link or network cable is unplugged

UEFI Drivers

Devices List



Item Specific Help			

UEFI Drivers



Item Specific Help			

UEFI Drivers

Configured



Item Specific Help			
Are you sure you want to save changes and exit?



Item Specific Help	



Item Specific Help		

Interface Name: Interface Type: MAC address: Host addresses: **Route Table:** Gateway addresses: DNS addresses: Interface ID: DAD Transmit Count: Policy

eth1 Ethernet 88-88-88-88-87-88 FE80::8A88:88FF:FE88:8788/64 FE80::/64>>::

8A:88:88:FE:FE:88:87:88 0000001



Item Specific Help		



Item Specific Help		

Create New VLAN VLAN ID Priority

0000 00

Configured VLAN List



Item Specific Help		

PORT CONFIGURATION MENU

Blink LEDs

PORT CONFIGURATION INFORMATION

UEFI Driver:

Adapter PBA::

Chip Type:

PCI device ID:

PCI address:

Link Status:

MAC Address::

0000

Intel(R) Gigabit 0.0.17 FFFFFF-0FF Intel PCH SPT 15B7 00:1F:06

88:88:88:88:87:88



Item Specific Help		

Link Speed:

Wake On LAN:



Item Specific Help		



Item Specific Help		

Interface Name: Interface Type: MAC address: Host addresses: Route Table: Gateway addresses: DNS addresses: Interface ID: DAD Transmit Count: Policy

eth0 Ethernet A0-8C-FD-DD-D4-49

AZ-8C-FD-FF-FE-DD-D4-49 00000001



Item Specific Help		

Blink LEDs

UEFI Driver: Adapter PBA:: Device Name: Chip Type: PCI device ID: PCI address: Link Status: MAC Address:: Virtual MAC Address:: 0000

Intel(R) PRO/1000 7.5.11 PCI-E 000400-000 Intel(R) I210 Gigabit Network Connection Intel(R) I210 1533 01:00:00

A0:8C:FD:DD:D4:49

00:00:00:00:00:00



Item Specific Help		



Item Specific Help		

Interface Name: Interface Type: MAC address: Host addresses: **Route Table:** Gateway addresses: DNS addresses: Interface ID: DAD Transmit Count: Policy

eth1 Ethernet 88-88-88-88-87-88 FE80::8A88:88FF:FE88:8788/64 FE80::/64>>::

8A:88:88:FE:FE:88:87:88 0000001



Item Specific Help		

UUID	00000000000000000000000000000000000000	
Card Name	Intel(R) RSTe SATA Controller	
Manufacturer	Intel	
Serial Number	N/A	
Part Number	N/A	
Model	N/A	
Card SKU	N/A	
FoD UID	N/A	
Max Data Width	0000000	
Connector Layout		
Package Type		
Other Package Type	N/A	
AIM Spec Version	2.0	
UMC Version	2.0	



Item Specific Help		

Firmware Name: Version String Description **Release Date** Manufacturer Classification Software ID

Intel(R) RSTe 5.3.0.1052 N/A N/A Intel 80862826



Item Specific Help		



Item Specific Help		

Port Number Port Type **Controller** Name 00



Item Specific Help		

Location	bay 0
Drive Type	
Media Type With Rotation Rate	7200
Lenovo BS FRU PN	N/A
Lenovo BS L2 PN	N/A
Lenovo BS SN	ZA40YE3A
Model Number	ST500DM002-15B10A
Universal Identifier	00000000000000000000000000000000000000
Manufacturer	ST500DM00465.BGB
FW Version	РНЗН
Drive Capacity	465.8GB
Disk Size	0000500107862016
Disk Status	
Logical Block Size	00000512



Item Specific Help		

Location	
Drive Type	
Media Type With Rotation Rate	0000
Lenovo BS FRU PN	N/A
Lenovo BS L2 PN	N/A
Lenovo BS SN	
Model Number	
Universal Identifier	
Manufacturer	
FW Version	
Drive Capacity	
Disk Size	000000000000000000000000000000000000000
Disk Status	
Logical Block Size	0000000



Item Specific Help		

Intel(R) RSTe 5.3.0.1052 SATA Driver

Non-RAID Physical Disks:



Item Specific Help		

PHYSICAL DISK INFO

Disk Actions:

Port:	0	
Controller:	SATA	
Model Number:	ST500DM002-1SB10A	
Serial Number:	ZA400YE3A	
Size:	465.8GB	
Status:	Non-RAID	
Block Size:	512	



Item Specific Help		

Mark as Spare?

Are you sure you want to mark the disk as Spare?

Marking disk as Spare will remove all data on the disk.



Item Specific Help				

Mark as Journaling Drive?

Are you sure you want to mark the disk as Journaling Drive?

Marking disk as Journaling Drive will remove all data on the disk.



Item Specific Help				

Intel(R) VROC with VMD Technology 5.3.0.1052

No RAID volumes on the system.

No Intel VMD Controllers on the system.



Item Specific Help				