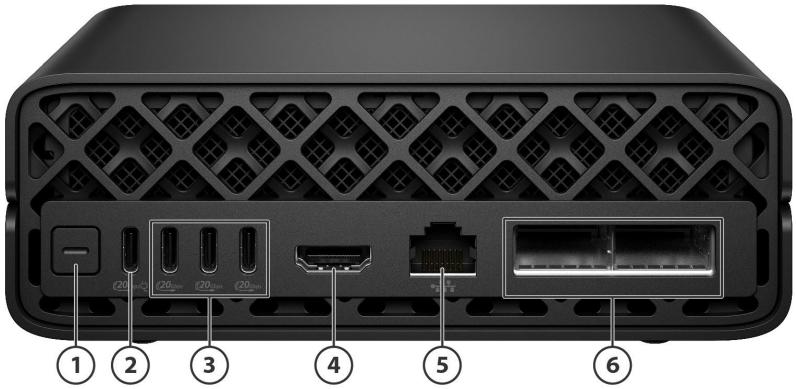
Overview

## HP ZGX Nano G1n AI Station

**Front View**

## Overview




**Rear View**

1. Power button
2. 1x USB Type-C (USB-C) power connector (240W)
3. 3x USB 3.2 Type-C (USB-C) 20Gbps (supports Alt mode DisplayPort 1.4a; total output power 30W)
4. 1x HDMI 2.1a
5. 1x RJ-45 (10GbE LAN)
6. 2x QSFP (200GbE LAN); Left port (Port0); Right port (Port1)

## Overview

| | |
|---|---|
| **Form Factor** | Mini |
| **Operating System** | NVIDIA DGX™ OS 7 / Ubuntu 24.04<br>**NOTE:** This product does not support Microsoft Windows. |
| **Color** | Black |
| **Processor** | NVIDIA GB10 Grace Blackwell Superchip<br>Blackwell Architecture GPU<br>20 core Arm, 10 Cortex-X925 + 10 Cortex-A725 CPU<br>Blackwell Generation CUDA Cores<br>5th Generation Tensor Cores<br>4th Generation RT Cores<br>1x NVEC<br>1x NVDEC |
| **Memory** | 128GB LPDDR5x, coherent unified system memory, 16 channels, soldered-down |
| **Memory Bandwidth** | 273 GB/s |
| **Internal I/O** | Internal Slot M.2-M: 1 PCIe Gen5 x4 |
| **Rear I/O** | 1x USB Type-C (USB-C) power connector (240W); 3x USB 3.2 Type-C (USB-C) 20Gbps (total output power 30W); 1x HDMI 2.1a; 1x RJ-45 (10GbE LAN); 2x QSFP (200GbE LAN) |
| **Chassis Dimensions (H x W x D)** | H (without feet): 2.01” (5.1cm)<br>H (with feet): 2.1" (5.45cm)<br>W: 5.9" (15cm)<br>D: 5.9" (15cm) (Standard desktop orientation) |
| **Packaged Dimensions (H x W x D)** | L: 8.5" (21.6cm)<br>W: 5.6" (14.2cm)<br>H: 10.7" (27.2cm) |
| **Rack Dimensions** | **NOTE:** This product is neither supported nor qualified for rack mounting. |
| **Weight** | Exact weights depend upon configuration (System weight only).<br>Starting at 1.25kg (2.76lbs.)<br>Exact weights depend upon configuration (Packaged weight).<br>Starting at 2.5kg (5.4lbs.) |
| **Power Adapter** | 240W external USB Type-C power adapter, 89% efficiency, active PFC<br>**NOTE:** For optimal performance and reliable operation, use only the power adapter supplied with the ZGX Nano system. Use of third-party or non-supplied adapters may result in degraded performance, boot failure, or unexpected system shutdowns.<br>**NOTE:** This product does not include a keyboard or mouse. |

## Supported Components

| Processors | NVIDIA Grace Blackwell | Factory Configured | Option Kit |
|---|---|---|---|
| | NVIDIA GB10 Grace Blackwell Superchip | Y | N |

| PCIe Solid State Drives | | Factory Configured | Option Kit |
|---|---|---|---|
| | HP 1TB PCIe-4x4 2242 NVMe SED OPAL Value TLC M.2 SSD | Y | N |
| | HP 4TB PCIe-4x4 2242 NVMe SED OPAL Value TLC M.2 SSD | Y | N |

| Memory | | Factory Configured | Option Kit |
|---|---|---|---|
| | 128GB LPDDR5x coherent unified system memory | Y | N |

| Networking and Communications | | Factory Configured | Option Kit | Option Kit Part Number |
|---|---|---|---|---|
| | HP ZGX 0.4m QSFP112 Ethernet DAC Cable | Y | Y | C20MQAA |

| Keyboard/Mouse | | Factory Configured | Option Kit | Option Kit Part Number |
|---|---|---|---|---|
| | HP 425 Programmable Bluetooth Wireless Mouse | N | Y | 7M1D5AA |
| | HP 695 Qi-Charging Bluetooth Wireless Mouse | N | Y | 8F1Y4AA |
| | HP 705 Rechargeable Wireless Mouse | N | Y | AZ7B1AA |
| | HP 720 Multi-Device Rechargeable Wireless Keyboard and Mouse Combo | N | Y | 9T5A9AA |
| | HP 725 Multi-Device Rechargeable Wireless Keyboard | N | Y | 9T5B2AA |
| | HP 925 Ergonomic Vertical Bluetooth 5.0 + Wireless 2.4GHz Wireless Mouse | N | Y | 6H1A5AA |
| | HP Multi-Device Dual-Mode Keyboard 495K | N | Y | BD5F5AA |

## Supported Components

| Power | | Factory Configured | Option Kit | Option Kit Part Number |
|---|---|---|---|---|
| | HP ZGX 240W USB-C AC Adapter | Y | Y | CM5A0AA |

| Input/Output - Adapter | | Factory Configured | Option Kit | Option Kit Part Number |
|---|---|---|---|---|
| | HP USB-C to USB 3.0 Adapter | N | Y | N2Z63AA |
| | HP USB-C to USB-A Hub | N | Y | Z6A00AA |

| | |
|---|---|
| **Operating Systems** | NVIDIA DGX™ OS 7 / Ubuntu 24.04<br>**NOTE:** This product does not support Microsoft Windows. |

System Technical Specifications

## SOFTWARE COMPONENTS AND APPLICATIONS

**Pre-installed with NVIDIA DGX OS**

- NVIDIA Connect
- CUDA 13
- NVIDIA RTX Driver 580
- DGX Dashboard
- NVIDIA AI Workbench

**Ready to build?**
Install the ZGX Toolkit from hp.com/zgx-onboard to start prototyping and fine-tuning LLM models in minutes.

## System Board

| | | |
|---|---|---|
| **System Board Form Factor** | | 140mm X 122.455 mm |
| **Processor** | | 2970 Ball BGA |
| **Embedded Controller** | | Microchip |
| **Memory Type Supported** | | LPDDR5x, coherent unified system memory,16 channels, soldered-down |
| **Memory Speed Supported** | | 8533 MHz |
| **Memory Bandwidth** | | 273 GB/s |
| **Maximum Memory** | | 128GB |
| **Memory Configuration (Supported)** | | 128GB |
| **Supported Interfaces** | **Integrated Graphics** | NVIDIA Blackwell Architecture (GB10)<br>1x HDMI 2.1a port<br>• Maximum resolution, single display: 8K (7680 x 4320) at 30 Hz<br>3x USB 3.2 Type-C (USB-C) 20Gbps ports; supports Alt mode DisplayPort 1.4a |

## System Technical Specifications

| | | |
|---|---|---|
| | | • Maximum resolution, single display: 8K (7680 x 4320) at 60 Hz<br>**NOTE:** For 8K (7860 × 4320) resolutions, displays should be connected using direct cables. Using adapters, a hub, or a dock may lead to inconsistent performance or degraded video output.<br>**NOTE:** For optimal compatibility and performance, users should connect displays via HDMI or USB Type-C ports. Users may experience limited compatibility or functionality when connecting displays through Thunderbolt ports. |
| | **Network Controller** | Realtek RTL8127-CG 10GbE Ethernet Controller<br>NVIDIA Mellanox ConnectX-7 200GbE Ethernet Controller |
| **USB Connector(s)** | **Rear** | 1x USB Type-C power connector (240W); 3x USB 3.2 Type-C (USB-C) 20Gbps (supports Alt mode DisplayPort 1.4a; total output power 30W) |
| **Integrated Audio** | Yes | |
| **Display Connectors** | HDMI 2.1a | |
| **Flash ROM** | Yes | |
| **System Fan Header** | Yes | |
| **Front PCI Fan Header** | None | |
| **Front Control Panel/Speaker Header** | None | |
| **CMOS Battery Holder – Lithium** | Y | |
| **Integrated Trusted Platform Module** | Integrated TPM 2.0<br>Convertible to FIPS 140-2 Certified mode<br>The TPM module disabled where restricted by law | |
| **Keyboard/Mouse** | **NOTE:** This product does not include a keyboard or mouse. | |
| **Power Supply** | 240W external USB Type-C power adapter, 89% efficiency, active PFC<br>**NOTE:** For optimal performance and reliable operation, use only the power adapter supplied with the ZGX Nano system. Use of third-party or non-supplied adapters may result in degraded performance, boot failure, or unexpected system shutdowns. | |

### System Configurations

| | | |
|---|---|---|
| HP ZGX Nano G1n Configuration #1 | Processor | NVIDIA GB10 Grace Blackwell Superchip |
| | Memory | 128GB LPDDR5x, coherent unified system memory |
| | Graphics | Integrated Graphics |
| | Disks/Optical/Floppy | 1x 1TB PCIe 2242 Val M.2 SSD |
| | Power Supply | 240W external USB Type-C power adapter, 89% efficiency, active PFC |

## System Technical Specifications

| Energy Consumption | 115VAC, 60Hz | 230VAC, 50Hz | 100VAC, 50Hz |
|---|---|---|---|
| Normal Operation (Short idle) | 37.810 | 36.740 | 37.890 |
| Normal Operation (Long idle) | 36.630 | 35.510 | 36.830 |
| Normal Operation (Busy Max) | 226.270 | 223.810 | 228.580 |
| Sleep | 36.630 | 35.510 | 36.830 |
| Off | 1.340 | 1.280 | 1.350 |

| Heat Dissipation* | 115VAC, 60Hz | 230VAC, 50Hz | 100VAC, 50Hz |
|---|---|---|---|
| Normal Operation (Short idle) | 129.280 | 125.621 | 129.553 |
| Normal Operation (Long idle) | 125.245 | 121.416 | 125.929 |
| Normal Operation (Busy Max) | 773.662 | 765.251 | 781.561 |
| Sleep | 125.245 | 121.416 | 125.929 |
| Off | 4.582 | 4.377 | 4.616 |

***NOTE:** Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

| HP ZGX Nano G1n Configuration #2 | | |
|---|---|---|
| | Processor | NVIDIA GB10 Grace Blackwell Superchip |
| | Memory | 128GB LPDDR5x, coherent unified system memory |
| | Graphics | Integrated Graphics |
| | Disks/Optical/Floppy | 1x 4TB PCIe 2242 Val M.2 SSD |
| | Power Supply | 240W external USB Type-C power adapter, 89% efficiency, active PFC |

| Energy Consumption | 115VAC, 60Hz | 230VAC, 50Hz | 100VAC, 50Hz |
|---|---|---|---|
| Normal Operation (Short idle) | 37.860 | 36.780 | 37.950 |
| Normal Operation (Long idle) | 36.710 | 35.520 | 36.850 |
| Normal Operation (Busy Max) | 227.840 | 223.960 | 228.310 |
| Sleep | 36.710 | 35.520 | 36.850 |
| Off | 1.340 | 1.280 | 1.350 |

| Heat Dissipation* | 115VAC, 60Hz | 230VAC, 50Hz | 100VAC, 50Hz |
|---|---|---|---|
| Normal Operation (Short idle) | 129.451 | 125.758 | 129.759 |
| Normal Operation (Long idle) | 125.519 | 121.450 | 125.998 |
| Normal Operation (Busy Max) | 779.031 | 765.764 | 780.638 |
| Sleep | 125.519 | 121.450 | 125.998 |
| Off | 4.582 | 4.377 | 4.616 |

***NOTE:** Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

## System Technical Specifications

| Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296) | Sound Power ($L_{WAd}$, bels) | Sound Pressure ($L_{pAm}$, decibels) |
|---|---|---|
| Idle | 3.4 | 22.0 |
| Fixed Disk – Random writes | 3.9 | 27.6 |

| | |
|---|---|
| **Operating Voltage Range** | 90-264 VAC |
| **Rated Voltage Range** | 100-120 VAC<br>200-240 VAC |
| **Rated Line Frequency** | 50-60 Hz |
| **Operating Line Frequency Range** | 47-63 Hz |
| **Rated Input Current** | 100-120 VAC; 3.1A<br>200-240 VAC; 1.56A |

## System Technical Specifications

| | | |
|---|---|---|
| **Environmental Requirements** | **Temperature** | Operating: 5° to 30° C (40° to 86° F)<br>Above 1524 m (5,000 feet) altitude, the maximum operating temperature is reduced by 1° C (1.8° F) for every 305 m (1,000 feet) increase in elevation<br>Non-operating: -30° to 60° C (-22° to 140° F)<br>Maximum rate of change: 10°C/hr |
| | **Humidity** | Operating: 8% to 85% RH, non- condensing, 35° C maximum wet bulb<br>Non-operating: 8% to 90% RH, non-condensing, 35° C maximum wet bulb |

System Technical Specifications

## Physical Security and Serviceability

| | |
|---|---|
| **Access Panel** | #1 Phillips screwdriver is needed for top and bottom panel |
| **Memory** | Soldered Down |
| **System Board** | Screw-In |
| **CPUs and Heatsinks** | #1 Phillips screwdriver is needed to remove the heatsink |
| **Rear Power Button** | Yes |
| **Front Power LED** | Yes, green (system powered on) |
| **System/Emergency ROM Flash Recovery** | Recovers corrupted system BIOS. |
| **Cooling Solution** | Air cooled forced convection |
| **ACPI-Ready Hardware** | Advanced Configuration and Power Management Interface (ACPI).<br>• Allows the system to wake from a low power mode.<br>• Controls system power consumption, making it possible to place individual cards and peripherals in a low-power or powered-off state without affecting other elements of the system. |
| **Flash ROM** | Yes |
| **CMOS Battery Holder** | Yes |

System Technical Specifications

## BIOS

| | |
|---|---|
| **BIOS 64-bit Services** | BIOS supports 64-bit Operating systems. |
| **PCI 4.0 Support** | Full BIOS support for PCI Express through industry standard interfaces. |
| **ROM Based Computer Setup Utility (F10)** | AMI standard BIOS setup |
| **Boot Control** | Disables the ability to boot from removable media on supported devices. |
| **Ownership Tag** | None |
| **Remote Wakeup/Remote Shutdown** | None |
| **Remote System Installation via F12 (PXE 2.1) (Remote Boot from Server)** | Allows a new or existing system to boot over the network and download software, including the operating system. |
| **ROM revision levels** | Reports the system BIOS revision level in Computer Configuration Utility. Version is available through an industry standard interface so that management SW applications can use and report this information. |
| **Keyboard-less Operation** | The system can be booted without a keyboard. |
| **Asset Tag** | The user or MIS to set a unique tag string in non-volatile memory. |
| **UEFI Specification Revision** | 2.8 |
| **ACPI** | Advanced Configuration and Power Management Interface, Version 6.0 |
| **xHCI** | eXtensible Host Controller Interface for Universal Serial Bus, Revision 1.2 |
| **PCI** | PCI Local Bus Specification, Revision 2.3<br>PCI Power Management Specification, Revision 1.1<br>PCI Firmware Specification, Revision 3.0, Draft .7 |
| **PCI Express** | PCI Express Base Specification, Revision 3.0<br>PCI Express Base Specification, Revision 4.0 |
| **TPM** | Trusted Computing Group TPM Specification Version 2.0<br>Common Criteria EAL4+ certified.<br>FIPS 140-2 Certification<br>TCG TPM Certified products list:<br>http://www.trustedcomputinggroup.org/certification/tpm-certified-products/ |
| **USB** | Universal Serial Bus Revision 1.1 Specification<br>Universal Serial Bus Revision 2.0 Specification<br>Universal Serial Bus Revision 3.2 Specification<br>Universal Serial Bus Revision 4.0 Specification |
| **SMBIOS** | System Management BIOS Reference Specification, Version 3.4<br>External BIOS simulator found at: http://csrsml.itcs.hp.com/ |

System Technical Specifications

## Warranty

HP Customer Support: One-year hardware limited warranty in most regions; Optional HP Care Packs[1] are available and are extended service contracts that go beyond your standard limited warranties; for more details visit http://www.hp.com/go/cpc

[1]HP Care Packs are sold separately. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit www.hp.com/go/cpc. HP services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.

For current drivers, firmware, BIOS, utilities, and documentation, including Customer Advisories, security bulletins, and release notes, visit www.hp.com/support and enter the product name. Availability of updates may vary by configuration and region; HP recommends routinely checking the Support site for the latest advisories and releases.

**Certification and Compliance**

Environmental Sustainability questions concerning:

- Ecolabels
- California Energy Commission (CEC)
- Compliance with Environmental legislation (EU ErP, China CECP, EU RoHS and other countries)
- Supply Chain Social Environmental Responsibility (SER) (conflict minerals; human rights, etc.)
- Product specific environmental features (material content, packaging content, recycled content, etc.)
- China Energy Label (CEL)

Please contact sustainability@hp.com

For country specific Regulatory Compliance approval documents or Regulatory and Safety questions concerning:

- Declarations of Conformity (for self-service, go to https://www.hp.com/uk-en/certifications/technical/regulations-certificates.html?jumpid=ex_r135_uk/en/any/corp/hpuk-mu_chev/certificates)
- GS Certificates
- Product Safety Certificates (UL, CB, BIS, etc.)
- EMC Certificates, Declarations of Conformity, or Certificates of Conformity (CE, FCC, ICES, etc.)
- CCC Certificates
- Ergonomics

Please contact techregshelp@hp.com

## Social and Environmental Responsibility

| | |
|---|---|
| **Eco-Label Certifications & declarations** | This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks: |

## System Technical Specifications

- IT ECO declaration
- California Energy Commission (CEC) – Small Scale Servers
- Japan PC Green label*
- Japan Top Runner
- Australia and New Zealand MEPS

**Sustainable Impact Specifications**

- Product Carbon Footprint
- At least 25% ITE-Derived closed loop plastic[1]
- 40% post-consumer recycled plastic[1]
- 20% recycled steel[2]
- 75% recycled aluminum[2]
- 100% of HP paper-based packaging is from recycled or certified sustainable sources[3]

**Longevity and Upgrading**

This product cannot be upgraded.

Spare parts are available throughout the warranty period and or for up to “5” years after the end of production.

**Additional Information**

- This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive – 2011/65/EC.
- This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC.
- This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).
- This product is in compliance with the IEEE 1680.1 (EPEAT) standard at the Gold level, see www.epeat.net
- Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.
- This product is 96.8% recycle-able when properly disposed of at end of life.

**Packaging Materials**

| | | |
|---|---|---|
| **External:** | PAPER/Corrugated | 327 g |
| **Internal:** | PLASTIC/Polyethylene low density – LDPE | 6 g |

The plastic packaging material contains at least 30% recycled content.

The corrugated paper packaging materials contains at least 93.0% recycled content.

**RoHS Compliance**

HP Inc. complies fully with materials regulations. We were among the first companies to extend the restrictions in the European Union (EU) Restriction of Hazardous Substances (RoHS) Directive to our products worldwide through the HP GSE. HP has contributed to the development of related legislation in Europe, as well as China, India, and Vietnam.

We believe the RoHS directive and similar laws play an important role in promoting industry-wide elimination of substances of concern. We have supported the inclusion of additional substances—including PVC, BFRs, and certain phthalates—in future RoHS legislation that pertains to electrical and electronics products.

We met our voluntary objective to achieve worldwide compliance with the new EU RoHS requirements for virtually all relevant products by July 2013, and we will continue to extend the scope of the

commitment to include further restricted substances as regulations continue to evolve.

To obtain a copy of the HP RoHS Compliance Statement, see HP RoHS position statement.

**Material Usage**

This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at https://h20195.www2.hp.com/v2/GetDocument.aspx?docname=c05998906):

- Asbestos
- Certain Azo Colorants
- Certain Brominated Flame Retardants – may not be used as flame retardants in plastics
- Cadmium
- Chlorinated Hydrocarbons
- Chlorinated Paraffins
- Bis(2-Ethylhexyl) phthalate (DEHP)
- Benzyl butyl phthalate (BBP)
- Dibutyl phthalate (DBP)
- Diisobutyl phthalate (DIBP)
- Formaldehyde
- Halogenated Diphenyl Methanes
- Lead carbonates and sulfates
- Lead and Lead compounds
- Mercuric Oxide Batteries
- Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user.
- Ozone Depleting Substances
- Polybrominated Biphenyls (PBBs)
- Polybrominated Biphenyl Ethers (PBBEs)
- Polybrominated Biphenyl Oxides (PBBOs)
- Polychlorinated Biphenyl (PCB)
- Polychlorinated Terphenyls (PCT)
- Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.
- Radioactive Substances
- Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)

**Packaging Usage**

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

## System Technical Specifications

**End-of-life Management and Recycling**

HP offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to:
https://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c05403198
or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: HP Product Disassembly Instruction Website. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

**HP Inc. Corporate Environmental Information**

For more information about HP's commitment to the environment:

- Sustainable Impact Report
  - https://h20195.www2.hp.com/v2/GetDocument.aspx?docname=c06040843
- Eco-label certifications
  - https://www.hp.com/us-en/sustainable-impact/document-reports.html#filters_documents_reports-=document_type-type_energy_star,type_epeat,type_tcoISO
- ISO 14001 certificates
  - https://h20195.www2.hp.com/v2/GetDocument.aspx?docname=c04777932

**Footnotes**

1. Recycled plastic is expressed as a percentage of the total weight plastic. Post-consumer recycled is based on the definition set in the EPEAT standard for computers, IEEE 1680.1-2018 standard.
2. Recycled metal is expressed as a percentage of the total weight of the metal according to ISO 14021 definitions for metal parts over 25 grams.
3. HP paper and fiber-based packaging for PCs, displays, home and office print, and supplies is reported by suppliers as recycled or certified, with a minimum of 97% by volume verified by HP. Packaging is the box that comes with the product and all paper-based materials inside the box. Packaging for personal systems accessories and spare parts is not included. Plastic cushions are made from >90% recycled plastic.

Technical Specifications - Storage Drives

## STORAGE

### PCIe SSDs for HP ZGX Nano G1n AI Station

| | | |
|---|---|---|
| **HP M.2 2242 PCIE-4X4 1TB SED Value TLC PCIe SSD** | **Capacity** | 1TB |
| | **Protocol** | PCIe |
| | **Form Factor** | M.2 in native slot on motherboard |
| | **Controller** | NVMe |
| | **NAND Type** | 3D TLC |
| | **Endurance** | 600TBW (TB Written) |
| | **Reliability** | 1.5M Hours |
| | **Interface** | PCI Express 4.0 x4 electrical |
| | **Operating Temperature** | 32° to 158° F (0° to 70° C) |
| | **Performance** | |
| | **Sequential Read** | 7000MB/s* |
| | **Sequential Write** | 6000MB/s* |
| | **Random Read** | 950K IOPS* |
| | **Random Write** | 950K IOPS* |
| | *Actual performance may vary. | |
| | NOTE: For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36GB of system disk (for Windows) is reserved for system recovery software. | |

| | | |
|---|---|---|
| **HP M.2 2242 PCIE-4X4 4TB SED Value TLC PCIe SSD** | **Capacity** | 4TB |
| | **Protocol** | PCIe |
| | **Form Factor** | M.2 in native slot on motherboard |
| | **Controller** | NVMe |
| | **NAND Type** | 3D TLC |
| | **Endurance** | 2400TBW (TB Written) |
| | **Reliability** | 1.5M Hours |
| | **Interface** | PCI Express 4.0 x4 electrical |
| | **Operating Temperature** | 32° to 158° F (0° to 70° C) |
| | **Performance** | |
| | **Sequential Read** | 7000MB/s* |
| | **Sequential Write** | 6000MB/s* |
| | **Random Read** | 950K IOPS* |
| | **Random Write** | 1400K IOPS* |
| | *Actual performance may vary. | |
| | NOTE: For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36GB of system disk (for Windows) is reserved for system recovery software. | |

Technical Specifications - Networking and Communications

## NETWORKING / COMMUNICATION (Onboard)

| | | |
|---|---|---|
| **Realtek RTL8127-CG (Integrated)** | **Connector** | RJ-45 (Single Port) |
| | **Cabling** | Twisted Pair Cabling, up to 100 meter, 10GbE on CAT6 or CAT6a, 5GbE & 2.5GbE on CAT 5e UTP and up, 1GbE/10Mbps on CAT 5 UTP and up |
| | **Controller** | Realtek RTL8127-CG 10GbE LAN networking controller |
| | **Data Rates Supported** | 10/100/1000 M/2.5G/5G/10Gbps |
| | **Compliance** | 802.1as/1588, 802.1p, 802.1Q, 802.3, 802.3ab, 802.1ad, 802.3az, 802.3x, 802.3bz |
| | **Bus Architecture** | PCI Express |
| | **Boot ROM Support** | Yes |
| | **Network Transfer Mode** | Full-duplex; Half-duplex |
| | **Network Transfer Rate** | 10G BASE-T Full-Duplex<br>5G BASE-T Full-Duplex<br>2.5G BASE-T Full-Duplex<br>1000BASE-T Full-Duplex<br>100BASE-TX Full-Duplex<br>100BASE-TX Half-Duplex<br>10BASE-T Full-Duplex<br>10BASE-T Half-Duplex |
| | **Management Capabilities** | WOL, PXE, UEFI, |
| **NVIDIA ConnectX-7 (Integrated)** | **Connector** | 2x QSFP112 form factor |
| | **Cabling** | QSFP112 400G DAC Cable, 400mm, 30AWG |
| | **Controller** | NVIDIA CX07-V000S4N04C 200GbE networking controller |
| | **Data Rates Supported** | Ethernet 200Gbps per port. |
| | **Compliance** | 802.3ck |
| | **Bus Architecture** | PCI Express |
| | **Boot ROM Support** | Yes |
| | **Network Transfer Mode** | Full-duplex; Half-duplex |
| | **Network Transfer Rate** | 200Gbps |

## Technical Specifications - Networking and Communications

| | | |
|---|---|---|
| **AzureWave AW-EM637 IEEE 802.11 a/b/g/n/ac/ax/be Wireless LAN 2T2R and Bluetooth 5.4 Combo Module (Integrated)** | **WLAN Standards** | IEEE 802.11 a/b/g/n/ac/ax/be compliant<br>Support 20/40 MHz bandwidth in 2.4 GHz band<br>Support 20/40/80/160 MHz bandwidth in 5 GHz band and 6 GHz band<br>Support MU-MIMO RX<br>IEEE 802.11 d/e/h/i/k/mc/r/v/w support<br>Security support for WFA WPA/WPA2/WPA3 personal/enterprise, WPS2.0, FIPS<br>QoS support of WFA WMM, WMM PS |
| | **Antenna** | 2x2 Dual-Band |
| | **Bluetooth Standards** | 5.4 |

| Date of change | Version History | | Description of change |
|---|---|---|---|
| October 27, 2025 | From v1 to v2 | Changed | Changed notes for Power Adapter and Integrated Graphics, part number for power adapter option kit, list of Input/Output adapters, link to ZGX Toolkit installation web page, Energy Consumption, Heat Dissipation, and Declared Noise Emissions data, Front Power LED to Physical Security and Serviceability section, HP Support site recommendation language to Warranty section, details for WLAN/Bluetooth module in Technical Specifications - Networking and Communications section |