



# **EdgeXpert Series**

## **Small Scale Server**

MS-C931

User Guide

# Contents

|  |    |
|--|----|
| Getting Started .....  | 3  |
| Package Contents .....   | 3  |
| Safety & Comfort Tips.....   | 3  |
| System Dimension .....   | 4  |
| System Overview .....  | 5  |
| Hardware Setup .....   | 7  |
| Placing the System .....   | 8  |
| Stacking the System .....  | 9  |
| Initial Setup.....   | 10 |
| What is NVIDIA DGX™ OS.....  | 10 |
| Features.....  | 10 |
| First Boot Setup Wizard .....  | 11 |
| Upgrading the NVIDIA DGX™ OS.....                                      | 12 |
| Reimaging the NVIDIA DGX™ OS.....                                      | 12 |
| Obtaining and Activating an AI Model from NVIDIA Official Website..... | 13 |
| Safety Instructions .....  | 20 |
| Regulatory Notices.....  | 23 |

## Revision

V1.0, 2025/08

# Getting Started

This chapter provides you with the information on hardware setup procedures. While connecting devices, be careful in holding the devices and use a grounded wrist strap to avoid static electricity.

## Package Contents

|                           |                   |
|---------------------------|-------------------|
| <b>Small Scale Server</b> | <b>MS-C931</b>    |
| <b>Documentation</b>      | Quick Start Guide |
| <b>Accessories</b>        | USB PD Adapter    |
|                           | Power Cord        |



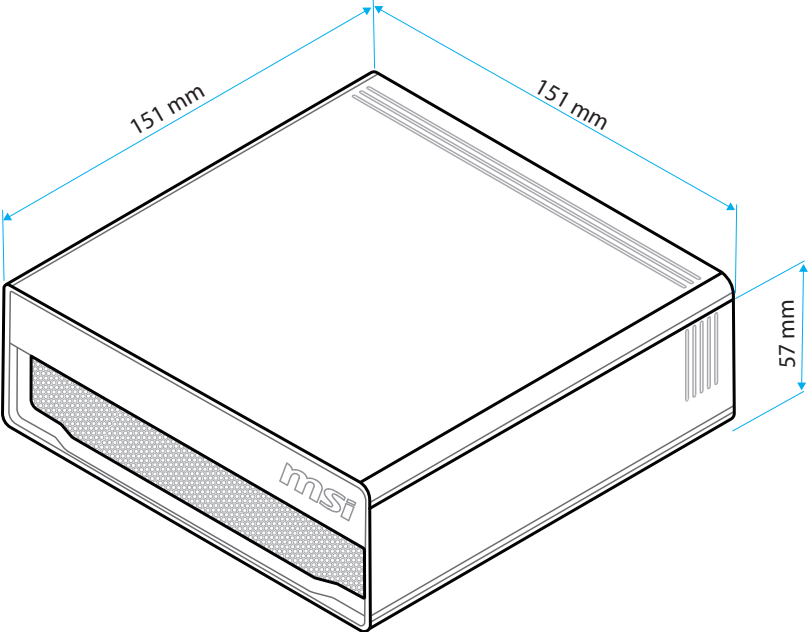
### **Important**

- *Contact your place of purchase or local distributor if any of the items is damaged or missing.*
- *Package contents may vary by country and model.*
- *The included power cord is exclusively for this device and should not be used with other products.*

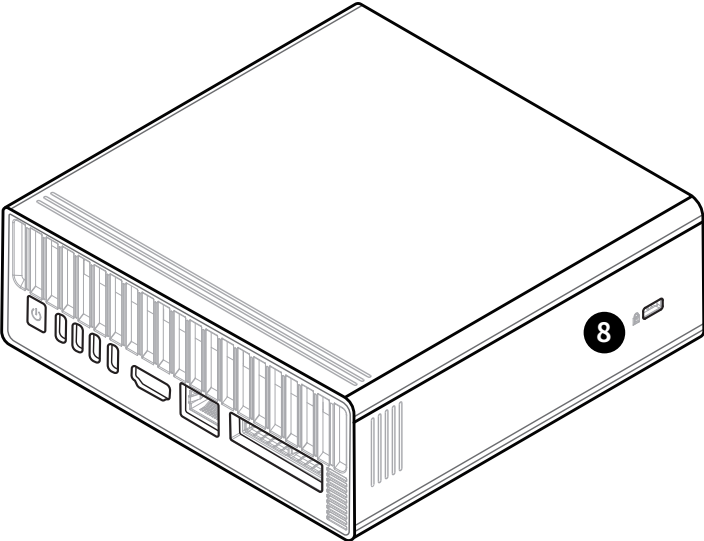
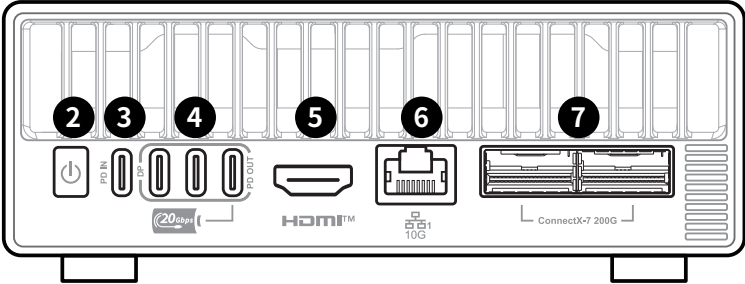
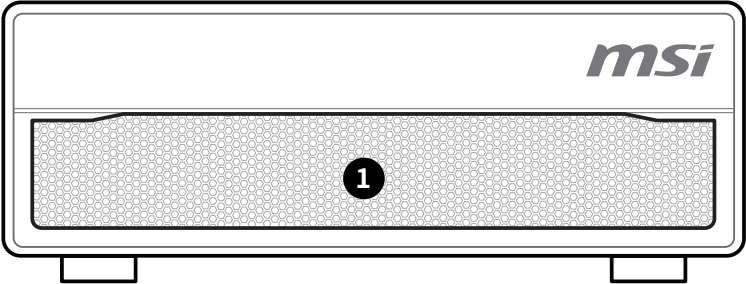
## Safety & Comfort Tips


- Choosing a good workspace is important if you have to work with this device for a long period of time.
- Your work area should have enough illumination.
- Choose the proper desk and chair and adjust their height to fit your posture when operating.
- When sitting on the chair, sit straight and keep a good posture. Adjust the chair's back (if available) to support your back comfortably.
- Place your feet flat and naturally on the floor, so that your knees and elbows have the proper position (about 90-degree) when operating.
- Put your hands on the desk naturally to support your wrists.
- Avoid using this device in a place where discomfort may occur (such as on the bed).
- This device is an electrical device. Please treat it with great care to avoid personal injury.

# System Dimension



# System Overview

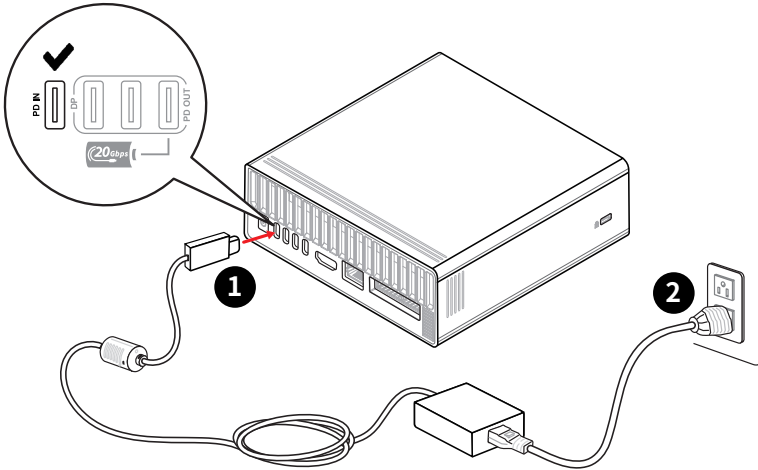


|                 |   |
|-----------------|---|
| <p><b>1</b></p> | <p><b>Ventilator</b></p> <p>The ventilator on the enclosure is used for air convection and to prevent the equipment from overheating. Do not cover the ventilator.</p>  |
| <p><b>2</b></p> | <p><b>Power Button</b></p> <p>Press the power button to turn the system on and off.</p>   |
| <p><b>3</b></p> | <p><b>Power Jack</b></p> <p>This jack supplies power to your system.</p>  |
| <p><b>4</b></p> | <p><b>USB 20Gbps Type-C Port</b></p> <p>Each connector can provide up to 5V/3A of power, with a maximum combined output of 30W for three connected devices.</p>   |
| <p><b>5</b></p> | <p><b>HDMI™ Connector</b>  <small>HIGH-DEFINITION MULTIMEDIA INTERFACE</small></p> <p>Supports HDMI™ 2.1.</p>  |
| <p><b>6</b></p> | <p><b>10 Gbps LAN Jack</b></p> <p>The standard RJ-45 LAN jack is provided for connection to the Local Area Network (LAN). You can connect a network cable to it.</p>  |
| <p><b>7</b></p> | <p><b>200 Gbps QSFP LAN Port</b></p> <p>Use DAC/AOC cables to connect with compatible systems.</p>  |
| <p><b>8</b></p> | <p><b>Kensington Lock Port</b></p> <p>This device provides a Kensington lock port, which allows users to secure the device in place with a key or some mechanical PIN device and attached through a rubberised metal cable. The end of the cable has a small loop which allows the whole cable to be looped around a permanent object, such as a heavy table or other similar equipment, thus securing the device in place.</p> |

# Hardware Setup

## Connect the Power Supply

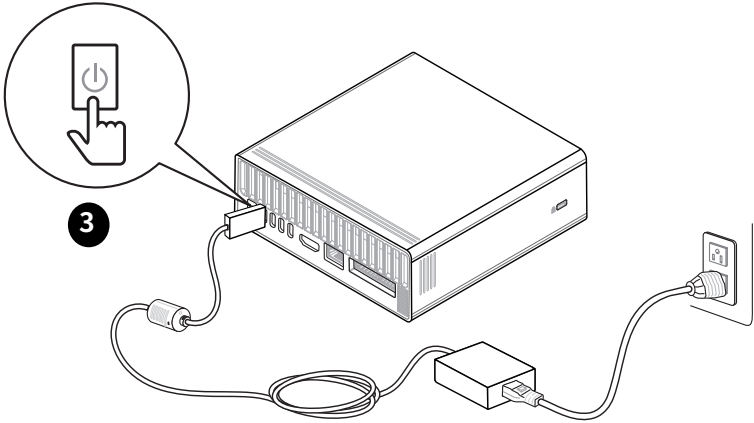
- External Power Supply: 240W, 48.0V
  - Input: 110~120Vac, 50/60Hz,3.5A / 200~240Vac, 50/60Hz,2.5A
  - Output: 48.0V  $\equiv$  5.0A



### **Important**

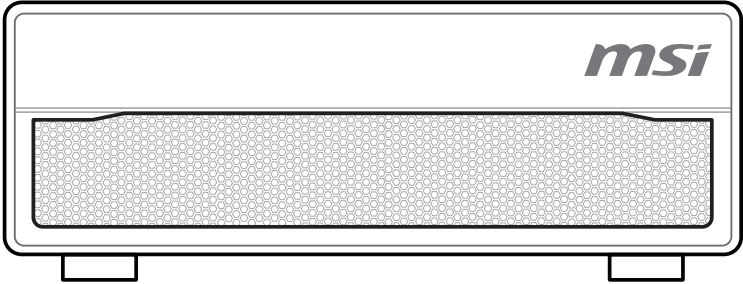
- Use the adapter and power cord that shipped with your device only.
- Always be aware of heat coming from the in-use adapter.
- When unplugging the AC power cord, always hold the connector part of the cord. Never pull the cord directly.

## Power on the System



## Placing the System

Users can place the system horizontally.

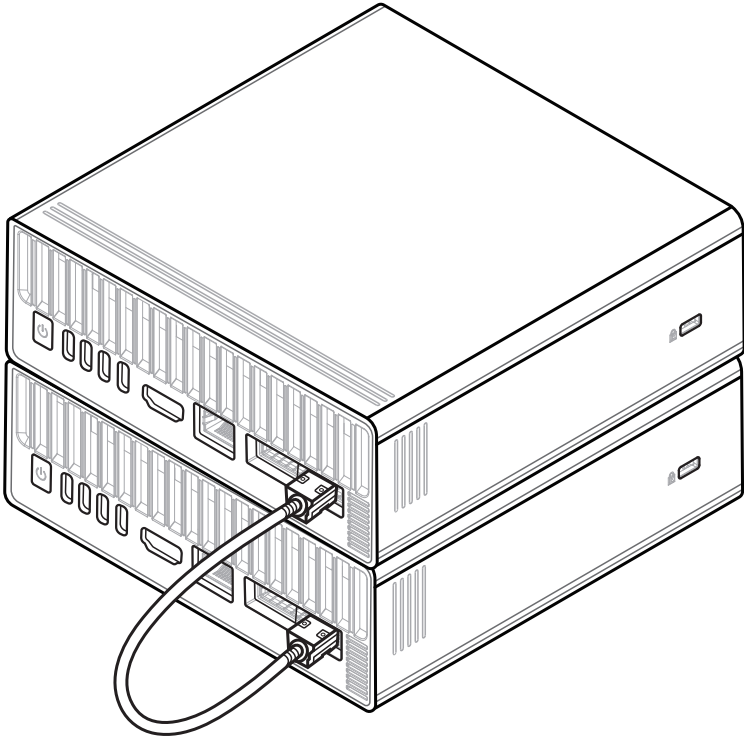


## Stacking the System

Up to two systems can be stacked by using the optional QSFP cable.

### **Important**

*The second system and the connected QSFP cable shown are for illustration purposes only and are not included in the package.*



# Initial Setup



*All information and screenshots are subject to change without prior notice.*

## What is NVIDIA DGX™ OS

This device is preinstalled with NVIDIA DGX™ OS to provide a turnkey solution for running AI and analytics workloads. Initial system configuration is deferred to a setup wizard that runs after the first boot. The setup wizard offers users a fast onboarding experience for using DGX™ systems.

NVIDIA DGX™ OS provides a customized installation of Ubuntu Linux with system-specific optimizations and configurations, additional drivers, and diagnostic and monitoring tools. It provides a stable, fully tested, and supported OS to run AI, machine learning, and analytics applications on this device.

## Features

- Pre-installed NVIDIA drivers and CUDA toolkit
- Built-in deep learning frameworks (e.g., TensorFlow, PyTorch)
- Containerized support (NVIDIA GPU Cloud Containers + Docker)
- System monitoring and diagnostic tools (e.g., Data Center GPU Manager, NVIDIA System Management)
- Support for NGC cloud resource integration. Enables developers to efficiently and seamlessly run AI/ML (Machine Learning) workloads in the cloud.
- Optimized kernel, network stack, and I/O to enhance overall performance.

# First Boot Setup Wizard

When you power on your device for the first time, you are prompted to accept end user license agreements for NVIDIA software (EULA). You are then guided through the process to complete the initial Ubuntu OS configuration.

1. Accept the EULA and click Continue.
2. Select your language and click Continue.
3. Select your keyboard and click Continue.
4. Select your location and click Continue.
5. Enter your username and password, enter the password again to confirm it, and click Continue.



## **Important**

- *The username must be composed of lower-case letters.*
  - *The username will be used instead of the root account for administrative activities.*
  - *It is also used as the GRUB username.*
  - *Ensure you enter a strong password.*
  - *If the password that you entered is weak, a warning appears.*
6. During the configuration process, to prevent unauthorized users from using non-default boot entries and modifying boot parameters, you need to enter a GRUB password. Enter the GRUB password and click OK.



## **Important**

- *Your GRUB password must have at least 8 characters.*
  - *If it has less than 8 characters, you cannot click Continue.*
  - *If you do not enter a password, GRUB password protection will be disabled.*
7. If you perform the automated encryption install, you will be prompted to create a new passphrase for your root filesystem.



## **Important**

- *The default password was seeded with nvidia3d which will be disabled after you complete this step.*
- *This new passphrase will unlock your root filesystem when the system boots.*

## Upgrading the NVIDIA DGX™ OS

Intend to upgrade to the latest OS or software package, please refer to

[https://ipc.msi.com/product\\_download/Industrial-Computer-Box-PC/AI-Supercomputer/EdgeXpert-MS-C931](https://ipc.msi.com/product_download/Industrial-Computer-Box-PC/AI-Supercomputer/EdgeXpert-MS-C931)

## Reimaging the NVIDIA DGX™ OS



### **Important**

*Reimaging the system erases all data stored on the OS drives. This includes the /home partition, where all users' documents, software settings, and other personal files are stored.*

NVIDIA DGX™ OS is already preinstalled in your device and only requires reinstalling in limited cases, such as

- Replace storage devices.
- Rebuild cluster nodes.
- Recover from system failures.

## Creating a Bootable USB Flash Drive

On Windows system, please refer to

[https://ipc.msi.com/product\\_download/Industrial-Computer-Box-PC/AI-Supercomputer/EdgeXpert-MS-C931](https://ipc.msi.com/product_download/Industrial-Computer-Box-PC/AI-Supercomputer/EdgeXpert-MS-C931)

## Booting the NVIDIA DGX™ OS ISO Image

1. Plug the USB flash drive containing the OS image into the system.
2. Connect a monitor and keyboard directly to the system.
3. Boot the system and then press F2 when the NVIDIA logo appears to access the boot menu.
4. Select the USB volume name that corresponds to the inserted USB flash drive and boot the system from it.

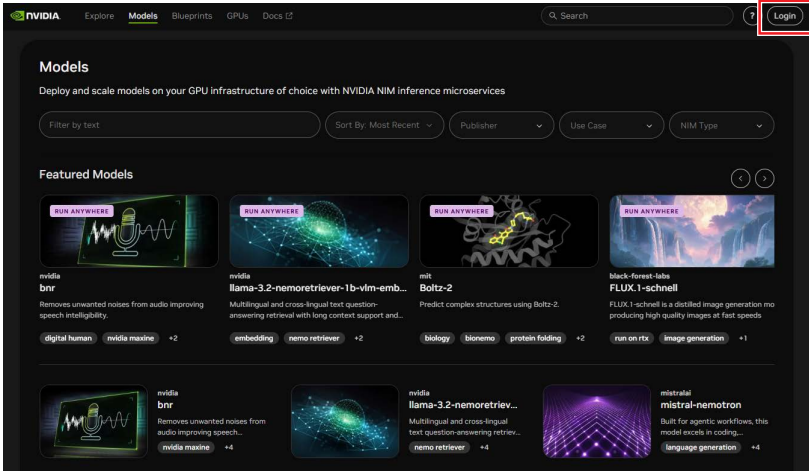
# Obtaining and Activating an AI Model from NVIDIA Official Website



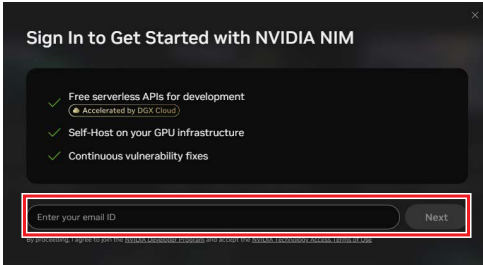
**Important**

- Some AI models are free and some are authorized.
- Here is an example by using NVIDIA Enterprise Support account.

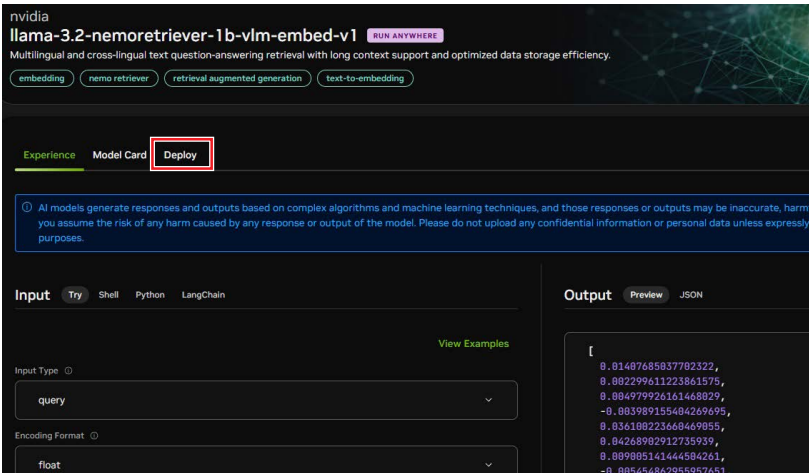
1. Go to NVIDIA AI model webpage and login. <https://build.NVIDIA.com/models>



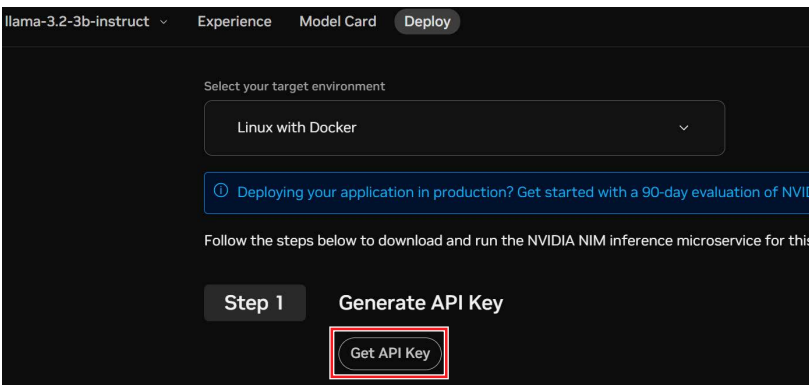
2. Enter your ID and click Next.



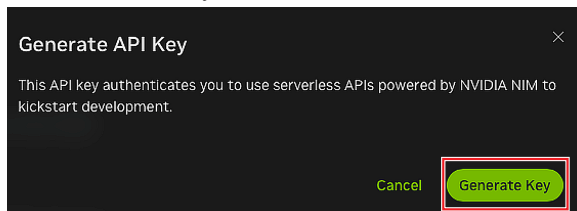
3. Select an AI model and click Deploy.



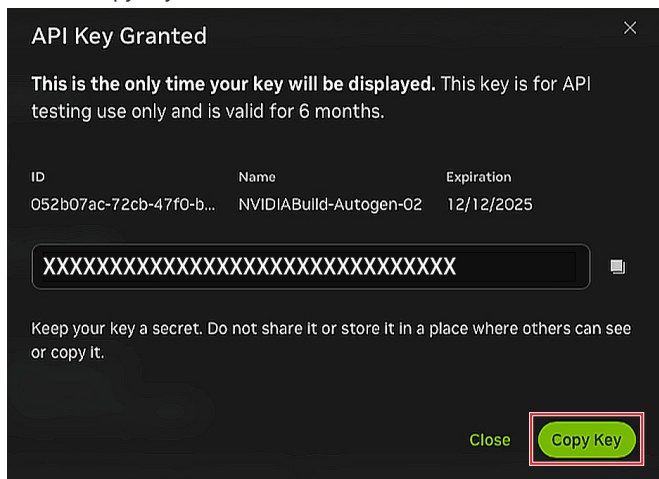
4. Click Get API Key.



5. Click Generate Key.

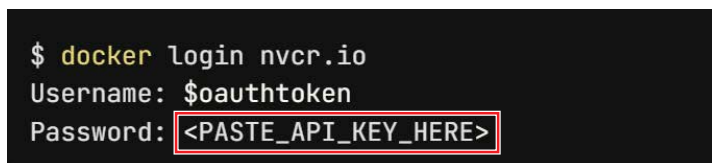


6. Click Copy Key for later use.



7. Input the following command and paste the API key in the terminal.

```
$ docker login nvcr.io
Username: $oauthtoken
Password: <PASTE_API_KEY_HERE>
```



8. Login Succeeded.

```
Login Succeeded  
(base) rc3@rc3:~$ █
```

9. Pull and run the NVIDIA NIM with the command below. This will download the optimized model for your infrastructure.

```
export NGC_API_KEY=<PASTE_API_KEY_HERE>  
export LOCAL_NIM_CACHE=~/.cache/nim  
mkdir -p "$LOCAL_NIM_CACHE"  
docker run -it --rm \  
  --gpus all \  
  --shm-size=16GB \  
  -e NGC_API_KEY \  
  -v "$LOCAL_NIM_CACHE:/opt/nim/.cache" \  
  -u $(id -u) \  
  -p 8000:8000 \  
  nvcr.io/nim/meta/llama-3.2-3b-instruct:latest
```

```
export NGC_API_KEY=<PASTE_API_KEY_HERE>  
export LOCAL_NIM_CACHE=~/.cache/nim  
mkdir -p "$LOCAL_NIM_CACHE"  
docker run -it --rm \  
  --gpus all \  
  --shm-size=16GB \  
  -e NGC_API_KEY \  
  -v "$LOCAL_NIM_CACHE:/opt/nim/.cache" \  
  -u $(id -u) \  
  -p 8000:8000 \  
  nvcr.io/nim/meta/llama-3.2-3b-instruct:latest
```

## 10. Downloading.

```
rc3@rc3:~$ sudo docker run -it --rm \
--gpus all \
--shm-size=16GB \
-e NGC_API_KEY=$NGC_API_KEY \
-v "$LOCAL_NIM_CACHE:/opt/nim/.cache" \
-u $(id -u) \
-p 8000:8000 \
nvcr.io/nim/meta/llama-3.2-3b-instruct:latest
Unable to find image 'nvcr.io/nim/meta/llama-3.2-3b-instruct:latest' locally
latest: Pulling from nim/meta/llama-3.2-3b-instruct
8a49af5f9845: Pulling fs layer
5a7e430f96ec: Pulling fs layer
dc9e02c573d5: Pulling fs layer
f59d6eb2c245: Waiting
69a2b9c38e00: Pulling fs layer
4397f0d4f59f: Waiting
a86d164c64ba: Waiting
4e9f661082fc: Waiting
69a2b9c38e00: Waiting
ff6c6c701902: Waiting
38ed7fbc6701: Waiting
bdb7462cbb97: Waiting
3f955f899066: Waiting
474075394bf2: Waiting
27a2b624bf5e: Waiting
fb00c809bb91: Waiting
22e12f30f4dd: Waiting
459dee64b7ed: Waiting
38c04d3213e1: Waiting
988fc097120c: Waiting
```

## 11. Executing container.

```
rc3@rc3:~$ sudo docker run -it --rm \
nvcr.io/nim/meta/llama-3.2-3b-instruct:latest
83f6376e4186: Pull complete
634e6ebc8251: Pull complete
Digest: sha256:b16e4ac585cd3e3d99044c1927d44d9b175ab926b248b1d15c2f78b19ebd9bd6
Status: Downloaded newer image for nvcr.io/nim/meta/llama-3.2-3b-instruct:latest

=====
== NVIDIA Inference Microservice LLM NIM ==
=====

NVIDIA Inference Microservice LLM NIM Version 1.8.4
Model: meta/llama-3.2-3b-instruct

Container image Copyright (c) 2016-2025, NVIDIA CORPORATION & AFFILIATES. All rights reserved.

The NIM container is governed by the NVIDIA Software License Agreement (https://www.nvidia.com/en-us/agreements/enterprise-software/nvidia-software-license-agreement/) and Product-Specific Terms for AI Products (https://www.nvidia.com/en-us/agreements/enterprise-software/product-specific-terms-for-ai-products/)

A copy of this license can be found under /opt/nim/LICENSE.

The use of this model is governed by the NVIDIA Community Model License (found at https://www.nvidia.com/en-us/agreements/enterprise-software/nvidia-community-models-license/)

ADDITIONAL INFORMATION: Llama 3.2 Community License Agreement (https://www.llama.com/llama3\_2/license/). Built with Llama.
```

12. The server will be placed on `http://0.0.0.0:8000`

```
root@kali:~#
INFO 2025-06-09 03:48:20.480 api_server.py:214] Available routes are:
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /openapi.json, Methods: GET, HEAD
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /docs, Methods: GET, HEAD
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /docs/oauth2-redirect, Methods: GET, HEAD
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/chat/completions, Methods: POST
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/completions, Methods: POST
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /experimental/ls/inference/chat_completion, Methods: POST
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /experimental/ls/inference/completion, Methods: POST
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/health/ready, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/health/live, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/models, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/metadata, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/version, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/health/live, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/health/ready, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/metrics, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/license, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/metadata, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/manifest, Methods: GET
INFO 2025-06-09 03:48:20.686 server.py:82] Started server process [61]
INFO 2025-06-09 03:48:20.686 on.py:48] Waiting for application startup.
INFO 2025-06-09 03:48:20.723 on.py:62] Application startup complete.
INFO 2025-06-09 03:48:20.767 server.py:214] Uvicorn running on http://0.0.0.0:8000 (Press CTRL+C to quit)
```

13. Test the NIM. You can now make a local API call using this curl command in the second terminal.

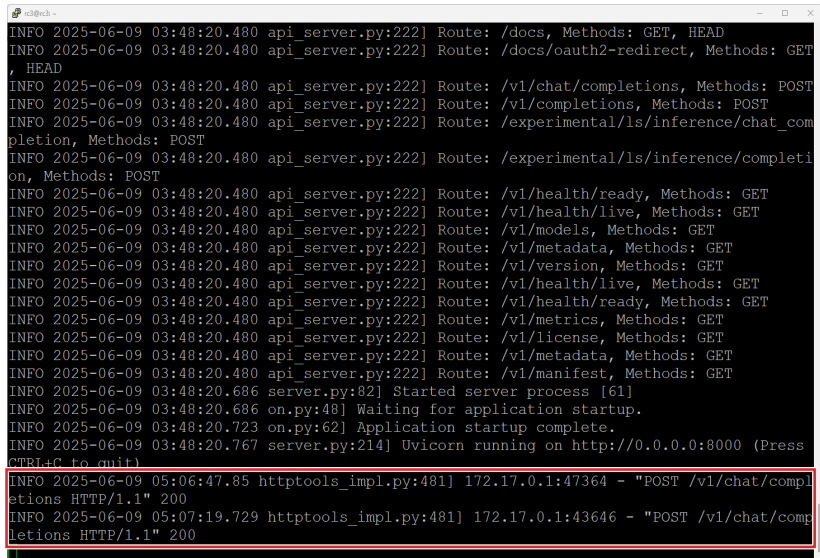
```
curl -X 'POST' \
'http://0.0.0.0:8000/v1/chat/completions' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "model": "meta/llama-3.2-3b-instruct",
  "messages": [{"role": "user", "content": "Write a limerick about the wonders of GPU computing."}],
  "max_tokens": 64
}'
```

```
curl -X 'POST' \
'http://0.0.0.0:8000/v1/chat/completions' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "model": "meta/llama-3.2-3b-instruct",
  "messages": [{"role": "user", "content": "Write a limerick about the wonders of GPU computing."}],
  "max_tokens": 64
}'
```

14. When the following message appears, the installation is successful.

```
639, "model": "meta/llama-3.2-3b-instruct", "choices": [{"index": 0, "message": {"role": "assistant", "content": "There once was a GPU so fine,\nProcessing tasks with great speed and design,\nIt learned with each test,\nAnd mastered the rest,\nA powerful computing machine divine."}]
```

15. Switch back to the first terminal to confirm whether the command entered in the second terminal is received.



```
api_server.py:222] Route: /docs, Methods: GET, HEAD
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /docs/oauth2-redirect, Methods: GET, HEAD
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/chat/completions, Methods: POST
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/completions, Methods: POST
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /experimental/ls/inference/chat_completion, Methods: POST
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /experimental/ls/inference/completion, Methods: POST
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/health/ready, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/health/live, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/models, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/metadata, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/version, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/health/live, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/health/ready, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/metrics, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/license, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/metadata, Methods: GET
INFO 2025-06-09 03:48:20.480 api_server.py:222] Route: /v1/manifest, Methods: GET
INFO 2025-06-09 03:48:20.686 server.py:82] Started server process [61]
INFO 2025-06-09 03:48:20.686 on.py:48] Waiting for application startup.
INFO 2025-06-09 03:48:20.723 on.py:62] Application startup complete.
INFO 2025-06-09 03:48:20.767 server.py:214] Uvicorn running on http://0.0.0.0:8000 (Press CTRL+C to quit)
INFO 2025-06-09 05:06:47.85 httptools_impl.py:481] 172.17.0.1:47364 - "POST /v1/chat/completions HTTP/1.1" 200
INFO 2025-06-09 05:07:19.729 httptools_impl.py:481] 172.17.0.1:43646 - "POST /v1/chat/completions HTTP/1.1" 200
```

For more details on getting started with NIM, please refer to:

<https://docs.NVIDIA.com/nim/large-language-models/latest/getting-started.html#getting-started>

# Safety Instructions

- Read the safety instructions carefully and thoroughly.
- All cautions and warnings on the device or User Guide should be noted.
- Refer servicing to qualified personnel only.
- IEC 60825-1 :2014 transfer to FDA/CDRH Complies with FDA performance standards for laser products except for conformance with IEC 60825-1 Ed.3., as described in Laser Notice No. 56, dated May 8, 2019.
- The SFP ports should use UL Listed Optional Transceiver product, Rated 3.3Vdc, Laser Class 1.

## Power

- Make sure that the power voltage is within its safety range and has been adjusted properly to the value of 100~240V before connecting the device to the power outlet.
- If the power cord comes with a 3-pin plug, do not disable the protective earth pin from the plug. The device must be connected to an earthed mains socket-outlet.
- Please confirm the power distribution system in the installation site shall provide the circuit breaker rated 120/240V, 20A (maximum).
- Always unplug the power cord before installing any add-on card or module to the device.
- Always disconnect the power cord or switch the wall socket off if the device would be left unused for a certain time to achieve zero energy consumption.
- Place the power cord in a way that people are unlikely to step on it. Do not place anything on the power cord.
- If this device comes with an adapter, use only the MSI provided AC adapter approved for use with this device.

## Battery

Please take special precautions if this device comes with a battery.

- Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.
- Avoid disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, which can result in an explosion.
- Avoid leaving a battery in an extremely high temperature or extremely low air pressure environment that can result in an explosion or the leakage of flammable liquid or gas.
- Do not ingest battery. If the coin/button cell battery is swallowed, it can cause severe internal burns and can lead to death. Keep new and used batteries away from children.

### European Union:



Batteries, battery packs, and accumulators should not be disposed of as unsorted household waste. Please use the public collection system to return, recycle, or treat them in compliance with the local regulations.

### Battery Recycle:



For better environmental protection, waste batteries should be collected separately for recycling or special disposal.

廢電池請回收

### California, USA:



The button cell battery may contain perchlorate material and requires special handling when recycled or disposed of in California. For further information please visit: <https://dtsc.ca.gov/perchlorate/>

## ⚠ WARNING

- **INGESTION HAZARD:** This product contains a button cell or coin battery.
- **DEATH** or serious injury can occur if ingested.
- A swallowed button cell or coin battery can cause **Internal Chemical Burns** in as little as **2 hours**.
- **KEEP** new and used batteries **OUT OF REACH OF CHILDREN**
- **Seek immediate medical attention** if a battery is suspected to be swallowed or inserted inside any part of the body.



- Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children. Do NOT dispose of batteries in household trash or incinerate.
- Even used batteries may cause severe injury or death. Call a local poison control center for treatment information.
- Battery type: CR2032
- Battery voltage: 3V
- Non-rechargeable batteries are not to be recharged.
- Do not force discharge, recharge, disassemble, heat above (manufacturer's specified temperature rating) or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.
- This product contains an irreplaceable battery.
- This icon indicates that a swallowed button battery can cause serious injury or death. Please keep batteries out of sight or reach of children.

## Environment Information

- To reduce the possibility of heat-related injuries or of overheating the device, do not place the device on a soft, unsteady surface or obstruct its air ventilators.
- Use this device only on a hard, flat and steady surface.
- To prevent fire or shock hazard, keep this device away from humidity and high temperature.
- Do not leave the device in an unconditioned environment with a storage temperature above 60°C or below -20°C, which may damage the device.
- The operating temperature range is approximately 0°C to 35°C.
- When cleaning the device, be sure to remove the power plug. Use a piece of soft cloth rather than industrial chemical to clean the device. Never pour any liquid into the opening; that could damage the device or cause electric shock.
- Always keep strong magnetic or electrical objects away from the device.
- If any of the following situations arises, get the device checked by service personnel:
  - The power cord or plug is damaged.
  - Liquid has penetrated into the device.
  - The device has been exposed to moisture.
  - The device does not work well or you can not get it working according to the User Guide.
  - The device has dropped and damaged.
  - The device has obvious sign of breakage.

# Regulatory Notices

## CE Conformity

Products bearing the CE marking comply with one or more of the following EU Directives as may be applicable:



- RED 2014/53/EU
- Low Voltage Directive 2014/35/EU
- EMC Directive 2014/30/EU
- RoHS Directive 2011/65/EU
- Implementing measure Directive 2009/125/EC of ESPR Regulation (EU) 2024/1781

Compliance with these directives is assessed using applicable European Harmonized Standards.

The point of contact for regulatory matters is MSI-Europe: Eindhoven 5706 5692 ER Son, the Netherlands.

For any support regarding the EU General Product Safety Regulation (GPSR), please contact MSI Computer Europe B.V. via [gpsr@msi.com](mailto:gpsr@msi.com) Science Park Eindhoven 5706 5692 ER Son, the Netherlands.

## Products with Radio Functionality (EMF)

This product incorporates a radio transmitting and receiving device. For computers in normal use, a separation distance of 20 cm ensures that radio frequency exposure levels comply with EU requirements. Products designed to be operated at closer proximities, such as tablet computers, comply with applicable EU requirements in typical operating positions. Products can be operated without maintaining a separation distance unless otherwise indicated in instructions specific to the product.

## Restrictions for Products with Radio Functionality (select products only)



**CAUTION:** IEEE 802.11x wireless LAN with 5.15~5.35 GHz frequency band is restricted for indoor use only in all European Union member states, EFTA (Iceland, Norway, Liechtenstein), and most other European countries (e.g., Switzerland, Turkey, Republic of Serbia). Using this WLAN application outdoors might lead to interference issues with existing radio services.



### Radio frequency bands and maximum power levels

- Features: Wi-Fi 7, BT
- Frequency Range:
  - 2.4 GHz: 2.412~2.484GHz
  - 5 GHz: 5.180~5.895GHz
  - 6 GHz: 5.925~7.125GHz
- Max Power Level:
  - 2.4 GHz: 20dBm
  - 5 GHz: 23dBm
  - 6 GHz: 23dBm

# FCC-B Radio Frequency Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the measures listed below:



- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

## Notice 1

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## Notice 2

Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- this device may not cause harmful interference, and
- this device must accept any interference received, including interference that may cause undesired operation.

MSI Computer Corp.

901 Canada Court, City of Industry, CA 91748, USA

(626) 913-0828

[www.msi.com](http://www.msi.com)

- Any changes or modifications not expressly approved by the party responsible for compliance could void the authority to operate equipment.
- This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.
- End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

- In the users manual of the end product, the end user has to be informed to keep at least 20cm separation with the antenna while this end product is installed and operated. The end user has to be informed that the FCC radio frequency exposure guidelines for an uncontrolled environment can be satisfied. The end user has to also be informed that any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.
- If the size of the end product is smaller than 8x10cm, then additional FCC part 15.19 statement is required to be available in the users manual: This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.
- FCC regulations restrict the operation of this device to indoor use only. Operation prohibited on oil platforms, cars, trains, boats, and aircraft, except that operation of this device is permitted in large aircraft while flying above 10,000 feet.

## WEEE Statement

European Union: This symbol on the product indicates that this product cannot be discarded as municipal waste. Instead, it is your responsibility to dispose of your waste electrical and electronic equipment by handing it over to a designated collection point for recycling. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.



## Thailand Compliance Statement

“เครื่องวิทยุคมนาคมนี้มีระดับการแผ่คลื่นแม่เหล็กไฟฟ้าสอดคล้องตามมาตรฐานความปลอดภัยต่อสุขภาพของมนุษย์จากการใช้เครื่องวิทยุคมนาคมที่คณะกรรมการกิจการโทรคมนาคมแห่งชาติประกาศกำหนด”

## NCC無線設備警告聲明

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前述合法通信，指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

## Canadian Compliance Statement

This device complies with Industry Canada license-exempt RSSs. Operation is subject to the following two conditions:

- 1) This device may not cause interference, and
- 2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d' Industrie Canada applicables aux appareils radio exempts de licence. L' exploitation est autorisée aux deux conditions suivantes :

- 1) l' appareil ne doit pas produire de brouillage ;
- 2) l' utilisateur de l' appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d' en compromettre le fonctionnement .

### Caution

- 1) Any devices capable of operating in the band 5150–5250 MHz shall only be used indoors to reduce the potential for harmful interference to co-channel mobile satellite systems (this requirement does not apply to OEM devices installed in vehicles by vehicle manufacturers);
- 2) For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit;
- 3) For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits as appropriate; and
- 4) Where applicable, antenna type(s), antenna models(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in section 7.3.2.4 or 7.3.5.3 shall be clearly indicated.

### Avertissement

- 1) tout dispositif capable de fonctionner dans la bande de 5150 à 5250 MHz ne doit être utilisé qu' à l' intérieur des bâtiments afin de réduire les risques d' interférences nuisibles avec les systèmes mobiles par satellite à canaux multiples (cette exigence ne s' applique pas aux dispositifs FEO installés dans les véhicules par les constructeurs automobiles);
- 2) pour les dispositifs munis d' antennes amovibles, le gain maximal d' antenne permis pour les dispositifs utilisant les bandes de 5 250 à 5 350 MHz et de 5 470 à 5 725 MHz doit être conforme à la limite de la p.i.r.e;
- 3) pour les dispositifs munis d' antennes amovibles, le gain maximal d' antenne permis (pour les dispositifs utilisant la bande de 5 725 à 5 850 MHz) doit être conforme à la limite de la p.i.r.e. spécifiée, selon le cas;
- 4) lorsqu' il y a lieu, les types d' antennes (s' il y en a plusieurs), les numéros de modèle de l' antenne et les pires angles d' inclinaison nécessaires pour rester conforme à l' exigence de la p.i.r.e. applicable au masque d' élévation, énoncée à la section 7.3.2.4 ou 7.3.5.3, doivent être clairement indiqués.

### **Radiation Exposure Statement**

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

### **Déclaration d' exposition aux radiations**

Cet équipement est conforme aux limites d' exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

This product meets the applicable Innovation, Science and Economic Development Canada technical specifications.

Devices shall not be used for control of or communications with unmanned aircraft systems.

Les dispositifs ne doivent pas être utilisés pour commander des systèmes d' aéronef sans pilote ni pour communiquer avec de tels systèmes.

### **Chemical Substances Information**

In compliance with chemical substances regulations, such as the EU REACH Regulation (Regulation EC No. 1907/2006 of the European Parliament and the Council), MSI provides the information of chemical substances in products at:  
<https://csr.msi.com/global/index>

## RoHS Statement

### 日本JIS C 0950材質宣言

日本工業規格JIS C 0950により、2006年7月1日以降に販売される特定分野の電気および電子機器について、製造者による含有物質の表示が義務付けられます。

<https://csr.msi.com/tw/Japan-JIS-C-0950-Material-Declarations>

### India RoHS

This product complies with the “India E-waste (Management and Handling) Rule 2016” and prohibits use of lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers in concentrations exceeding 0.1 weight % and 0.01 weight % for cadmium, except for the exemptions set in Schedule 2 of the Rule.

### Türkiye EEE yönetmeliği

Türkiye Cumhuriyeti: EEE Yönetmeliğine Uygundur

### Україна обмеження на наявність небезпечних речовин

Обладнання відповідає вимогам Технічного регламенту щодо обмеження вмісту деяких небезпечних речовин в електричному та електронному обладнанні, затвердженого постановою Кабінету Міністрів України від 3 грудня 2008 № 1057.

### Việt Nam RoHS

Kể từ ngày 01/12/2012, tất cả các sản phẩm do công ty MSI sản xuất tuân thủ Thông tư số 30/2011/TT-BCT quy định tạm thời về giới hạn hàm lượng cho phép của một số hóa chất độc hại có trong các sản phẩm điện, điện tử”

产品中有害物质的名称及含有信息表

| 部件名称      | 有害物质 |    |    |        |      |       |     |      |     |      |
|-----------|------|----|----|--------|------|-------|-----|------|-----|------|
|           | Pb   | Hg | Cd | Cr(VI) | PBBs | PBDEs | DBP | DIBP | BBP | DEHP |
| 电路板组件*    | ×    | ○  | ○  | ○      | ○    | ○     | ○   | ○    | ○   | ○    |
| 处理器和散热器   | ×    | ○  | ○  | ○      | ○    | ○     | ○   | ○    | ○   | ○    |
| 内存条/硬盘    | ×    | ○  | ○  | ○      | ○    | ○     | ○   | ○    | ○   | ○    |
| 电缆/连接器    | ×    | ○  | ○  | ○      | ○    | ○     | ○   | ○    | ○   | ○    |
| 输出输入设备    | ×    | ○  | ○  | ○      | ○    | ○     | ○   | ○    | ○   | ○    |
| 电源供应器/适配器 | ×    | ○  | ○  | ○      | ○    | ○     | ○   | ○    | ○   | ○    |
| 金属机构件     | ×    | ○  | ○  | ○      | ○    | ○     | ○   | ○    | ○   | ○    |

注1：○：表示该有害物质在该部件所有均质材料中的含量均不超出电器电子产品有害物质限制使用国家标准要求。  
 ×：表示该有害物质至少在该部件的某一均质材料中的含量超出电器电子产品有害物质限制使用国家标准要求。  
 注2：以上未列出的部件，表明其有害物质含量均不超出电器电子产品有害物质限制使用国家标准要求。  
 注3：上述表格标注“×”之部件，皆符合达标管理目录限用物质应用例外清单之限值要求。  
 \* 电路板组件：包括印刷电路板及其构成的零部件。

限用物質含有情況標示聲明書

| 單元         | 限用物質及其化學符號 |        |        |                         |            |              |
|------------|------------|--------|--------|-------------------------|------------|--------------|
|            | 鉛 (Pb)     | 汞 (Hg) | 鎘 (Cd) | 六價鉻 (Cr <sup>6+</sup> ) | 多溴聯苯 (PBB) | 多溴二苯醚 (PBDE) |
| 電路板總成      | —          | ○      | ○      | ○                       | ○          | ○            |
| 儲存裝置       | —          | ○      | ○      | ○                       | ○          | ○            |
| 輸出/入裝置     | —          | ○      | ○      | ○                       | ○          | ○            |
| 電源供應器      | —          | ○      | ○      | ○                       | ○          | ○            |
| 金屬機構件      | —          | ○      | ○      | ○                       | ○          | ○            |
| 塑膠機構件      | ○          | ○      | ○      | ○                       | ○          | ○            |
| 風扇         | —          | ○      | ○      | ○                       | ○          | ○            |
| 配件(例:電源線等) | —          | ○      | ○      | ○                       | ○          | ○            |

備考1. “超出0.1 wt %”及“超出0.01 wt %”係指限用物質之百分比含量超出百分比含量基準值。  
 備考2. “○”係指該項限用物質之百分比含量未超出百分比含量基準值。  
 備考3. “—”係指該項限用物質為排除項目。

## Environmental Policy

- The product has been designed to enable proper reuse of parts and recycling and should not be thrown away at its end of life.
- Users should contact the local authorized point of collection for recycling and disposing of their end-of-life products.
- Visit the MSI website <[https://csr.msi.com/global/pevn\\_ewaste](https://csr.msi.com/global/pevn_ewaste)> and locate a nearby distributor for further recycling information.
- Please visit <<https://us.msi.com/page/recycling>> for information regarding the recycling of your product in the US.



## Warranty

For any further information about the product users purchased, please contact the local dealer. Do not attempt to upgrade or replace any component of the product.

## Copyright and Trademarks Notice



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The terms HDMI™, HDMI™ High-Definition Multimedia Interface, HDMI™ Trade dress and the HDMI™ Logos are trademarks or registered trademarks of HDMI™ Licensing Administrator, Inc.

## Technical Support

If a problem arises with your system and no solution can be obtained from the user's manual, please contact your place of purchase or local distributor. Alternatively, please try the following help resources for further guidance. Visit the MSI website for technical guide, BIOS updates, driver updates and other information via <https://www.msi.com/support/>