Mastercard Makerspace

Dell Precision 7960 Tower GPU Workstation

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Mastercard Makerspace Technical Manual

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Dell Precision 7960 Tower GPU Workstation User Manual

Overview

Model: Precision 7960 Tower
Manufacturer: Dell Technologies
Category: Computing

The Dell Precision 7960 Tower features NVIDIA GPUs with up to 36,352 CUDA cores and 96GB VRAM. It's built for deep learning, data visualization, and 3D rendering workloads that demand exceptional GPU performance.

1\. Setup

1. Ensure proper ventilation and power supply.
2. Connect monitor, keyboard, and network.
3. Boot into Windows or Linux.
4. Install NVIDIA drivers and CUDA toolkit.

2\. Operation

Use for AI model training, simulations, and GPU rendering. Launch workloads via Docker, TensorFlow, or PyTorch environments.

3\. Safety

Avoid blocking air vents. Do not open chassis during operation.

4\. Maintenance

Clean filters quarterly. Update drivers regularly.

5\. Troubleshooting

If GPU overheats, check fan speeds. If boot fails, verify PSU connections.

Dell Precision 7960 Tower GPU Workstation Manual

Overview and Specifications

The Dell Precision 7960 Tower is a high-performance GPU workstation designed for demanding tasks such as deep learning, data visualization, and 3D rendering. It is equipped with NVIDIA GPUs offering up to 36,352 CUDA cores and 96GB of VRAM, making it ideal for professionals requiring exceptional computational power.

Specifications

Dimensions : 18.54" x 8.58" x 20.39" (HxWxD)
Weight : 50 lbs (22.7 kg)
Power Supply : 1300W Platinum-rated PSU
Processor : Intel Xeon W-3300 series
Memory : Up to 1TB DDR4 ECC
Storage : Up to 8TB SSD
Operating System : Windows 10 Pro or Linux (Ubuntu certified)
GPU : NVIDIA RTX A6000 (or equivalent)
Network : Dual 10GbE ports

Safety and Compliance Information

Ventilation : Ensure proper ventilation around the workstation. Maintain at least 6 inches of clearance from any obstructions.

Electrical Safety : Use only the power cable provided with the workstation. Ensure the power outlet is properly grounded.

Operating Conditions : Operate the device in a temperature-controlled environment (10 C to 35 C).

Compliance : This product complies with FCC, CE, and RoHS standards.

Installation / Setup

1. Unpack the Workstation : Carefully remove the workstation from its packaging. Inspect for any visible damage.
2. Select a Location : Place the workstation on a stable, flat surface with adequate ventilation.
3. Connect Peripherals :

Attach the monitor to the GPU's display port.

Connect the keyboard and mouse to USB ports.

Connect to a network via Ethernet cable.

4. Power Connection : Plug the power cable into the workstation and then into a grounded electrical outlet.

5. Initial Boot :

Press the power button to start the workstation.

Follow on-screen instructions to set up Windows or Linux.

6. Driver Installation :

Install the latest NVIDIA drivers and CUDA toolkit from the NVIDIA website.

Operating Modes and Usage Examples

AI Model Training : Utilize TensorFlow or PyTorch environments to train machine learning models.

Simulations : Run complex simulations using Docker containers optimized for GPU workloads.

GPU Rendering : Use software like Blender or Autodesk Maya for rendering 3D models.

Maintenance Schedule

Task | Frequency

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Clean air filters | Quarterly

Update GPU drivers | Monthly

Inspect power cables | Annually

Check for software updates | Bi-monthly

Troubleshooting

Problem | Cause | Solution

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GPU overheats | Insufficient cooling | Check fan speeds and clean air filters

Boot fails | Power supply issue | Verify PSU connections

No display output | Incorrect monitor connection | Ensure monitor is connected to GPU port

Slow performance | Outdated drivers | Update to the latest drivers

Accessories or Compatible Components

Monitors : Dell UltraSharp series

Keyboards and Mice : Dell Premier Wireless Keyboard and Mouse

External Storage : Dell Thunderbolt 3 external SSDs

Docking Stations : Dell WD19TB Thunderbolt Dock

Warranty and Support Notes

The Dell Precision 7960 Tower comes with a 3-year limited hardware warranty. For technical support, contact Dell Support via their official website or by calling the support hotline. Ensure you have your service tag available for faster assistance.

For more detailed information, visit the [Dell Support Website](https://www.dell.com/support).

This manual is subject to change without notice. Dell Technologies assumes no responsibility for any errors or omissions in this document.

Resources:

End of Manual - For updates, please check the latest version at:

https://mpandey-mastercard.github.io/makerspace-manuals/manuals/tool_004_manual.pdf

- Manual Pdf Local: /manuals/tool_004_manual.pdf

- Manual Pdf Public: https://mpandey-mastercard.github.io/makerspace-manuals/manuals/tool_004_manual.pdf

- Tutorial Video: https://www.youtube.com/watch?v=YEbWObE0m7Y

- Qr Code: https://mpandey-mastercard.github.io/makerspace-manuals/qrcodes/tool_004_qr.png