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MINISFORUM DEG1

MINISFORUM DEG1 OCuLink eGPU Docking Station User Manual

Model: DEG1
Brand: MINISFORUM

1. PRODUCT OVERVIEW

The MINISFORUM DEG1 is an OCuLink eGPU docking station designed to significantly enhance the graphics performance of compatible mini PCs and SFF desktops. It features a high-speed OCuLink 4i (PCIe 4.0x4) interface, supporting data transfer rates up to 64Gbps for smooth graphics processing. The compact and portable design allows for easy integration into various setups.

PCIe4.0x4 Expansion Interface

Bandwidth up to 64GT/s,
lower performance loss

Minimalist Design

Signal Amplifier Chip

Built-in signal amplification chip,
more stable high speed

Compatible with ATX/SFX Standard Power Supplies

Widely Compatible with Unlimited Length of Video Cards

Open space without limiting the length of the graphics card. Supports up to NVIDIA RTX 4090 & AMD RX 7900 XTX

Follow the Startup

Follow the main power switch of the host computer to start, saving electricity and worry

*The follow, startup function only works with Minisforum machines and requires the use of original cables

Figure 1: MINISFORUM DEG1 Docking Station with an installed graphics card.

Key Features:

- **Compact & Portable Design:** Approximately 14 cm long, 6.5 cm wide, and 2 cm high, designed for easy transport.
- **OCuLink 4i Interface:** Equipped with PCIe 4.0x4 uplink and PCIe16 (PCIe 4.0x4) downlink, offering up to 64Gbps data transfer.
- **ATX/SFX Power Supply Compatible:** Supports standard ATX and SFX power supplies for flexible power solutions.

- **Wide Graphics Card Compatibility:** Accommodates various graphics card sizes without length restrictions.
- **Smart Startup Function:** Features Force Power On with LED, enabling one-click switching between forced startup and follow-up startup modes. Note: Startup tracking is compatible only with MINISFORUM mini PCs using original cables.
- **Safety and Protection:** Includes high-quality signal amplifier chips and an OCuLink connector locking mechanism to prevent accidental disconnections and port damage.

Important Note: The OCuLink interface does not support hot-plugging. The computer must be turned off before connecting or disconnecting the OCuLink cable.

2. SETUP INSTRUCTIONS

Follow these steps to set up your MINISFORUM DEG1 Docking Station:

1. **Install Power Supply Unit (PSU):** Place your ATX or SFX power supply into the designated slot on the DEG1 docking station. Ensure it is securely seated.
2. **Connect PSU to Dock:** Connect the 24-pin power cable from your PSU to the 'POWER' socket on the DEG1 docking station.
3. **Install Graphics Card (GPU):** Carefully insert your PCIe graphics card into the PCIe x16 slot on the DEG1. Ensure it is fully seated and locked into place.
4. **Secure GPU:** Use the provided GPU support brace and screws to secure the graphics card and prevent sagging.
5. **Connect GPU Power:** Connect the appropriate PCIe power cables (e.g., 8-pin or 6+2-pin) from your PSU to your graphics card.
6. **Connect OCuLink Cable:** With both the DEG1 and your mini PC/SFF desktop powered off, connect one end of the OCuLink cable to the OCuLink port on the DEG1 and the other end to the OCuLink port on your host device. Ensure the locking mechanism is engaged.
7. **Connect Display:** Connect your monitor to the display output ports (e.g., HDMI, DisplayPort) on your installed graphics card.

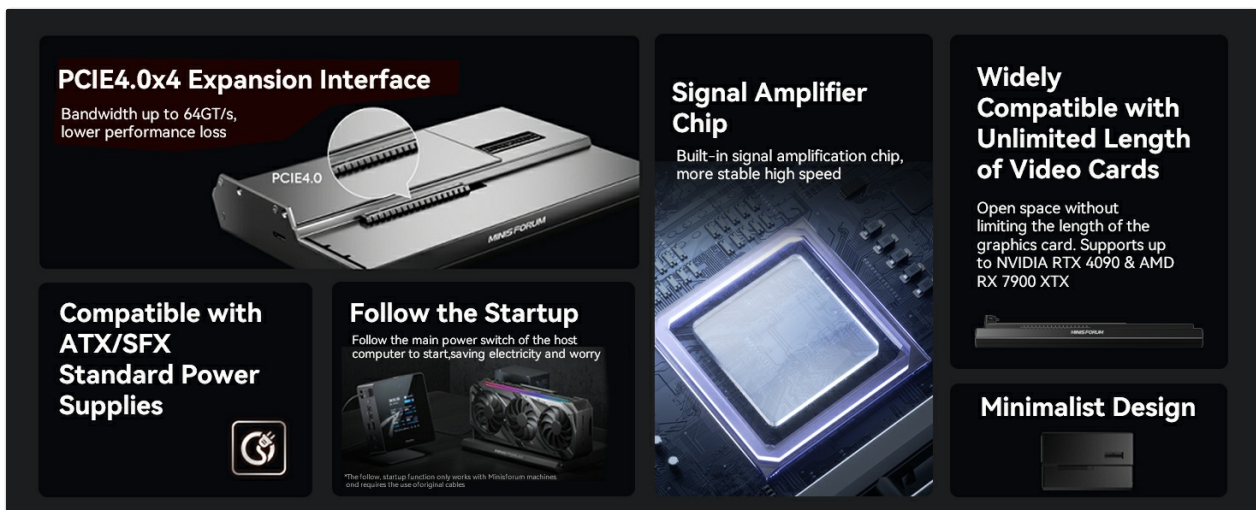


Figure 2: Key features and connection points of the DEG1 Docking Station.

3. OPERATING INSTRUCTIONS

Once the DEG1 Docking Station is set up, follow these steps for operation:

- **Power On Sequence:** First, ensure your power supply is switched on. Then, power on your mini PC or SFF desktop. The DEG1 will either power on automatically (if using a compatible MINISFORUM mini PC with original cables and 'follow-up startup' mode) or you may need to press the 'Force Power On' button on the DEG1.
- **Driver Installation:** After booting your computer, Windows 11 (or compatible OS) should detect the new graphics card. Install the latest drivers for your specific GPU from the manufacturer's website (AMD or NVIDIA).
- **Using the Smart Startup Function:** The 'Force Power On' button with LED allows you to switch between forced startup (dock powers on independently) and follow-up startup modes (dock powers on with the host PC). This feature is optimized for MINISFORUM mini PCs with original cables.
- **Safe Shutdown:** Always shut down your computer completely before disconnecting the OCuLink cable or making any hardware changes to the DEG1.

4. MAINTENANCE

To ensure optimal performance and longevity of your MINISFORUM DEG1 Docking Station, consider the following maintenance tips:

- **Dust Management:** As the DEG1 features an open-air design, it is susceptible to dust accumulation. Regularly clean the graphics card fans and heatsinks using compressed air to prevent overheating.
- **Cable Management:** Ensure all cables are neatly routed and not obstructing airflow or causing strain on the ports.
- **Environmental Conditions:** Operate the docking station in a well-ventilated area, away from direct sunlight and excessive humidity.

5. TROUBLESHOOTING

If you encounter issues with your DEG1 Docking Station, refer to the following common troubleshooting steps:

- **Graphics Card Not Detected:**
 - Ensure the OCuLink cable is securely connected at both ends and the locking mechanism is engaged.
 - Verify that the graphics card is fully seated in the PCIe slot and all necessary power cables are connected from the PSU.

- Check your computer's BIOS/UEFI settings to ensure external GPU detection is enabled, if applicable.
 - Update or reinstall the graphics card drivers.
- **Performance Issues:**
 - Ensure your mini PC/SFF desktop supports PCIe 4.0x4 via OCuLink for optimal bandwidth.
 - Verify that your power supply provides sufficient wattage for your graphics card.
 - Monitor GPU temperatures during heavy loads to rule out thermal throttling.
 - **Docking Station Not Powering On:**
 - Check if the PSU is switched on and the 24-pin power cable is correctly connected to the DEG1.
 - If using 'follow-up startup' mode, ensure your MINISFORUM mini PC is powered on first. Try 'Force Power On' mode if available.
 - **OCuLink Hot-Plugging:** Remember that the OCuLink interface does not support hot-plugging. Always power off your computer before connecting or disconnecting the OCuLink cable to prevent damage.

6. SPECIFICATIONS

Feature	Detail
Brand	MINISFORUM
Model Number	DEG1
Color	Black
Hardware Interface	PCI Express 4.0 (OCuLink 4i)
Compatible Devices	ATX/SFX Power Supplies, Various PCIe Graphics Cards
Product Dimensions (L x W x H)	5.51" x 2.56" x 0.79" (14cm x 6.5cm x 2cm)
Wattage	65W (Docking Station, PSU dependent for GPU)
Minimum Required Operating System	Windows 11
Manufacturer	Micro Computer (HK) Tech Limited

7. WARRANTY AND SUPPORT

The MINISFORUM DEG1 Docking Station comes with a 2-year warranty. For warranty claims or technical support, please contact MINISFORUM customer service through their official website or the retailer where the

product was purchased.

Please have your model number (DEG1) and proof of purchase ready when contacting support.