

Orico IG740PRO

ORICO IG740-PRO M.2 NVMe SSD User Manual

Model: IG740PRO

1. INTRODUCTION

The ORICO IG740-PRO is a high-performance M.2 NVMe Solid State Drive designed for demanding applications. Utilizing the PCIe 4.0 interface and NVMe 2.0 protocol, it offers exceptional data transfer speeds and robust reliability for both personal and industrial use. This manual provides essential information for the proper installation, operation, and maintenance of your SSD.



Image 1.1: The ORICO IG740-PRO SSD showcasing its high sequential read/write speeds of up to 7450MB/s and 6500MB/s respectively, and random read/write IOPS of 1000K and 900K.

Key features include:

- **Blazing-Fast Transfer Performance:** Up to 7450 MB/s read and 6500 MB/s write speeds with 1000K IOPS.
- **Industrial-Grade Reliability:** Engineered with multi-level testing, exceeding 1.5 million hours MTBF.
- **Advanced Data Security:** Features power-loss protection, LDPC ECC error correction, flash management, and AES encryption.
- **Efficient Heat Dissipation:** Includes a copper cooling vest, silicone thermal pads, and a graphene heat spreader.

- **Wide Compatibility:** Suitable for laptops, desktops, game consoles (PS5), POS terminals, and automotive systems.

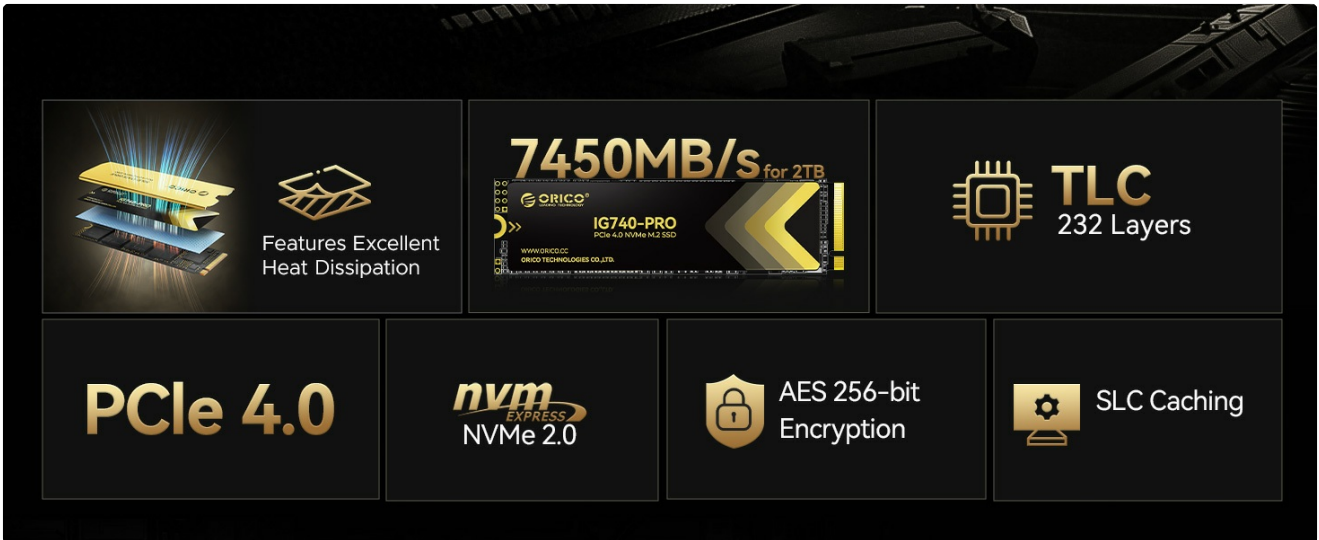


Image 1.2: The ORICO IG740-PRO SSD depicted in an industrial setting, emphasizing its rigorous testing including vibration, full load, 48-hour aging, and constant temperature/humidity tests for industrial-grade reliability.

2. SETUP AND INSTALLATION

Before installation, ensure your system is powered off and disconnected from the power source. It is recommended to wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage to components.

2.1 Package Contents

Verify that all items are present in the package:

- ORICO IG740-PRO SSD
- Silicone Thermal Pad
- Copper Heatsink
- Mounting Screw
- Screwdriver
- Packing Box



Image 2.1: Contents of the ORICO IG740-PRO package, including the SSD, thermal pad, copper heatsink, screw, and screwdriver.

2.2 Installation Steps

1. **Prepare Your System:** Open your computer case or laptop to access the M.2 slot. Consult your system's manual for specific instructions on accessing the M.2 slot.
2. **Install Thermal Components:** Apply the silicone thermal pad to the SSD, then attach the copper heatsink. Ensure proper contact for optimal heat dissipation.
3. **Insert SSD:** Gently insert the ORICO IG740-PRO SSD into the M.2 slot at a 30-degree angle. Push it in until it is fully seated.
4. **Secure SSD:** Push the SSD down until it is parallel with the motherboard. Use the provided screw and screwdriver to secure the SSD in place.
5. **Close System:** Reassemble your computer or laptop.
6. **Power On and Initialize:** Power on your system. The SSD may need to be initialized and formatted through your operating system's Disk Management utility (Windows) or Disk Utility (macOS) before it can be used. Refer to your operating system's documentation for detailed instructions.

3. OPERATING INSTRUCTIONS

Once installed and formatted, the ORICO IG740-PRO SSD functions as a standard storage device. Its high-speed capabilities are particularly beneficial for:

- **Operating System Drive:** Install your operating system for faster boot times and overall system responsiveness.
- **Gaming:** Reduce game loading times and improve in-game asset streaming.
- **Professional Applications:** Accelerate data-intensive tasks such as video editing, 3D rendering, and large file transfers.
- **Industrial Use:** Reliable performance for edge computing, AI, big data, and POS terminals.



Sequential read speed up to

7450MB/s

ORICO
IG740-PRO
PCIe 4.0 NVMe M.2 SSD

WWW.ORICO.CC
ORICO TECHNOLOGIES CO.,LTD.

Sequential read	Sequential write	Sequential read	Sequential write
Up to 7450MB/s	Up to 6500MB/s	Up to 1000k	Up to 900k

2TB High-Speed Industrial-Grade SSD

Featuring **NVMe 2.0**, this SSD reaches incredible read/write speeds of 7450/6500MB/s, setting a new standard for industrial use.

Beyond work environments, it also accelerates game loading and file transfers, offering high-speed efficiency for home users.

Image 3.1: The ORICO IG740-PRO SSD shown in diverse applications, including an enterprise data center, industrial PC, and a personal gaming setup, illustrating its wide compatibility and utility.

To maximize performance, ensure your system's motherboard supports PCIe 4.0 and that the SSD is installed in a compatible slot. Regularly check for driver and firmware updates for your motherboard and SSD.

4. MAINTENANCE

Solid State Drives generally require less maintenance than traditional Hard Disk Drives. However, certain practices can help ensure optimal performance and longevity.

4.1 Heat Management

The ORICO IG740-PRO includes a copper cooling vest, silicone thermal pads, and a graphene heat spreader to manage heat. Ensure proper airflow within your system to prevent thermal throttling, which can reduce performance.



Image 4.1: Diagram illustrating the efficient heat dissipation system of the ORICO IG740-PRO SSD, featuring a copper cooling vest, silicone thermal pad, and graphene heat spreader, alongside power efficiency management and adaptive thermal control.

4.2 Data Integrity and Security

The SSD incorporates advanced features to protect your data:

- **LDPC ECC:** Low-Density Parity-Check Error Correction Code helps detect and correct data errors.
- **AES Encryption:** Advanced Encryption Standard provides hardware-level data security.
- **Power-Loss Protection:** Safeguards data during unexpected power outages.
- **TRIM Command:** Ensure your operating system's TRIM command is enabled to maintain write performance over time.
- **Firmware Updates:** Periodically check the ORICO website for firmware updates to improve performance and stability.



Image 4.2: Visual representation of the ORICO IG740-PRO SSD's enhanced data integrity and security features, including Dynamic Cache, Secure Erase, Power Loss Protection, AES Encryption, and LDPC ECC.

4.3 Data Backup

While the ORICO IG740-PRO is highly reliable, regular data backups are crucial to prevent data loss from unforeseen circumstances such as system failures or accidental deletion.

5. TROUBLESHOOTING

If you encounter issues with your ORICO IG740-PRO SSD, refer to the following common troubleshooting steps:

- **SSD Not Detected:**

- Ensure the SSD is correctly seated in the M.2 slot.
- Check your system's BIOS/UEFI settings to confirm the M.2 slot is enabled and configured correctly (e.g., NVMe mode).
- Verify that your motherboard drivers are up to date.
- If using an adapter card, ensure it is properly installed and compatible.

- **Slow Performance:**

- Confirm the SSD is installed in a PCIe 4.0 compatible M.2 slot (if your system supports it). Using a PCIe 3.0 slot will limit speeds.
- Check for thermal throttling. Ensure the heatsink is properly installed and your system has adequate cooling.
- Verify that the TRIM command is enabled in your operating system.
- Ensure your system's power management settings are not limiting performance.

- **Data Corruption or Errors:**

- Run a disk check utility (e.g., `chkdsk` on Windows) to identify and repair file system errors.
- Update SSD firmware to the latest version.
- If issues persist, consider backing up data and performing a secure erase or reformatting the drive.

If these steps do not resolve the issue, please contact ORICO customer support.

6. SPECIFICATIONS

The following table outlines the key specifications of the ORICO IG740-PRO M.2 NVMe SSD:



Image 6.1: Detailed specifications for the ORICO IG740-PRO SSD, including capacity, read speed, write speed, and TBW (Total Bytes Written) for different capacities, along with a 5-year warranty.

Feature	Detail
Model Number	IG740PRO

Feature	Detail
Digital Storage Capacity	2 TB
Hard Disk Interface	NVMe
Connectivity Technology	PCIe 4.0 x4
Form Factor	M.2 2280
Read Speed (Max)	7450 MB/s
Write Speed (Max)	6500 MB/s
IOPS (Random Read)	1000K
IOPS (Random Write)	900K
MTBF	1.5 Million Hours
Special Features	LDPC ECC, AES Encryption, Power-Loss Protection, Copper Heatsink
Compatible Devices	Game Console (PS5), Laptop, Desktop, Industrial PC
Dimensions	12.8 x 8.7 x 1.9 cm (Parcel)
Item Weight	0.06 Kilograms

7. WARRANTY AND SUPPORT

7.1 Warranty Information

The ORICO IG740-PRO SSD comes with a **5-year limited warranty** or up to the specified Total Bytes Written (TBW), whichever comes first. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims.

7.2 Customer Support

For technical assistance, troubleshooting, or warranty inquiries, please contact ORICO customer support through their official website or the retailer where the product was purchased. You may need to provide your product model number (IG740PRO) and purchase details.

For more information, visit the official ORICO website: www.orico.cc