**KIOXIA LRD10Z002TG8**

# KIOXIA Exceria Plus NVMe Series M.2 SSD User Manual

Model: LRD10Z002TG8

## 1. INTRODUCTION

The KIOXIA EXCERIA PLUS G2 SSD series is engineered to provide high-performance storage for demanding applications such as gaming and professional workstations. It leverages an 8-channel controller and BiCS FLASH 3D flash memory to deliver enthusiast-class PCIe performance. This series offers capacities up to 2TB in a compact M.2 2280 form factor, making it suitable for integration into both desktop and mobile computing systems.



An overhead view of the KIOXIA Exceria Plus NVMe M.2 SSD, showing its compact form factor, the KIOXIA branding, and the NVMe SSD label on the heat spreader.

## 2. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance and system stability. Please follow these steps carefully:

1. **Pre-installation Checks:**
   - Ensure your motherboard has an available M.2 slot that supports NVMe PCIe SSDs. Refer to your motherboard's manual for compatibility.

- Power down your computer completely and disconnect it from the power source.
- Discharge any static electricity by touching a grounded metal object before handling the SSD.

2. **Physical Installation:**
   - Locate the M.2 slot on your motherboard. It typically resembles a small horizontal slot with a screw hole at the end.
   - Gently insert the KIOXIA Exceria Plus NVMe SSD into the M.2 slot at a slight angle (approximately 30 degrees) until the gold contacts are fully seated.
   - Press the SSD down towards the motherboard and secure it with the small screw provided with your motherboard or PC case.

3. **System Setup:**
   - Reconnect power and boot your computer.
   - Access your system's BIOS/UEFI settings (usually by pressing Del, F2, or F10 during startup) to ensure the NVMe SSD is recognized.
   - Once recognized, boot into your operating system. For a new SSD, you will need to initialize and format it through Disk Management (Windows) or Disk Utility (macOS) before it can be used.
   - Install the latest NVMe drivers for your operating system if not automatically detected or if performance issues arise.

## 3. OPERATION

Once installed and configured, the KIOXIA Exceria Plus NVMe SSD operates as a high-speed storage device within your system. Its design focuses on minimizing latency and maximizing data throughput.

- **NVMe 1.3c Technology:** This advanced interface significantly reduces the I/O path latency between the SSD and your CPU, leading to a more responsive computing experience compared to traditional SATA-based storage.

- **High Performance:** The drive is capable of sequential read speeds up to 3,400 MB/s and sequential write speeds up to 3,200 MB/s, enabling faster boot times, quicker application loading, and rapid file transfers.

- **BiCS FLASH 3D Memory:** Built with KIOXIA's cutting-edge BiCS FLASH technology, the SSD utilizes a vertically stacked cell structure to enhance durability and performance.

## 4. MAINTENANCE AND OPTIMIZATION

To ensure the longevity and sustained performance of your KIOXIA Exceria Plus NVMe SSD, consider the following maintenance practices:

- **KIOXIA SSD Utility:** Utilize the official KIOXIA SSD Utility software. This GUI-based tool allows you to monitor the SSD's health, update firmware, and manage various settings to optimize performance.

- **TRIM Command:** Ensure that the TRIM command is enabled in your operating system. TRIM helps the SSD manage its free space efficiently, preventing performance degradation over time. Modern operating systems typically enable this by default.

- **Firmware Updates:** Periodically check for and install the latest firmware updates for your SSD using the KIOXIA SSD Utility. Firmware updates can improve performance, enhance compatibility, and fix bugs.

- **Avoid Defragmentation:** Unlike traditional hard drives, SSDs do not benefit from defragmentation. Running defragmentation tools on an SSD can reduce its lifespan without offering any performance

benefits.

- **Maintain Free Space:** While not strictly necessary, keeping some free space (e.g., 10-15%) on your SSD can help maintain optimal performance, especially for write-intensive tasks.
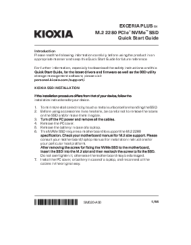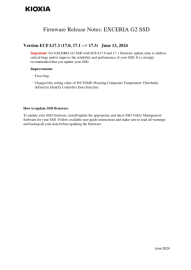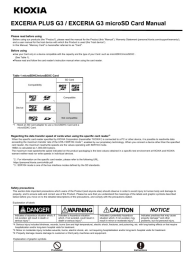
## 5. TROUBLESHOOTING

If you encounter issues with your KIOXIA Exceria Plus NVMe SSD, refer to the following common problems and their potential solutions:

| Issue | Possible Cause | Solution |
|---|---|---|
| SSD not detected by system/BIOS | Incorrect installation, M.2 slot disabled in BIOS, incompatible motherboard. | Ensure SSD is fully seated. Check BIOS/UEFI settings to enable the M.2 slot and set it to NVMe mode. Verify motherboard compatibility. |
| Slow performance | Drive nearly full, outdated NVMe drivers, TRIM not enabled, thermal throttling. | Free up disk space. Update NVMe drivers. Verify TRIM is enabled. Ensure adequate system cooling. |
| System instability or crashes | Outdated firmware, driver conflicts, power delivery issues. | Update SSD firmware using KIOXIA SSD Utility. Ensure all system drivers are up to date. Check power supply stability. |
| Cannot format or initialize SSD | Corrupted partition table, drive errors. | Try initializing the disk in Disk Management (Windows) or Disk Utility (macOS). If issues persist, consider using the KIOXIA SSD Utility for advanced diagnostics. |

## 6. TECHNICAL SPECIFICATIONS

Detailed specifications for the KIOXIA Exceria Plus NVMe Series M.2 SSD:

| Feature | Detail |
|---|---|
| Digital Storage Capacity | 2048 GB (2 TB) |
| Hard Disk Interface | NVMe |
| Form Factor | M.2 2280 |
| Sequential Read Speed | Up to 3,400 MB/s |
| Sequential Write Speed | Up to 3,200 MB/s |
| Flash Memory Type | BiCS FLASH 3D |
| Controller | 8-channel |

| Feature | Detail |
| --- | --- |
| Item Model Number | LRD10Z002TG8 |
| Product Dimensions | 3.94 x 2.76 x 0.28 inches |
| Item Weight | 0.353 ounces |
| Hardware Platform | PC |
| Color | Black |
| First Available Date | April 20, 2020 |

## 7. WARRANTY AND SUPPORT

KIOXIA products are manufactured to high standards and undergo rigorous testing. For specific warranty terms and conditions applicable to your region, please refer to the official KIOXIA website or the warranty information included with your product packaging.

For technical support, troubleshooting assistance, or to download the latest drivers and firmware, please visit the official KIOXIA support portal. The KIOXIA SSD Utility software is also a valuable resource for managing and monitoring your SSD.

**Online Resources:**
KIOXIA Global Support

## Related Documents - LRD10Z002TG8



KIOXIA EXCERIA PRO G2 M.2 2280 PCIe NVMe SSD Quick Start Guide
Quick start guide for the KIOXIA EXCERIA PRO G2 M.2 2280 PCIe NVMe SSD, covering installation, setup, formatting, and support resources. Essential information for users to get started with their high-performance storage solution.

[KIOXIA EXCERIA PLUS G4 M.2 NVMe SSD Quick Start Guide](#)

This Quick Start Guide provides essential information for the KIOXIA EXCERIA PLUS G4 M.2 2280 NVMe SSD, including installation steps, safety precautions, disposal information, and technical support contacts. Learn how to safely install and use your high-performance SSD.

[KIOXIA EXCERIA G2 SSD Firmware Release Notes ECFA17.3](#)

Firmware release notes for the KIOXIA EXCERIA G2 SSD, version ECFA17.3, released on June 13, 2024. Details improvements including bug fixes and changes to the WCTEMP setting.

[KIOXIA EXCERIA PLUS G3 / EXCERIA G3 microSD Card Manual - User Guide](#)

Official user manual for KIOXIA EXCERIA PLUS G3 and EXCERIA G3 microSD cards. Provides essential information on product usage, safety precautions, data transfer speeds, technical specifications, support, and warranty.

[KIOXIA EXCERIA PRO G2 NVMe SSD - High-Performance PCIe 5.0 Storage](#)

Discover the KIOXIA EXCERIA PRO G2 NVMe SSD, featuring PCIe 5.0 technology for extreme read/write speeds, AI, gaming, and creative workloads. Available in 1024GB, 2048GB, and 4096GB capacities.

[KIOXIA EXCERIA G3 NVMe SSD: PCIe 5.0 Performance & Specifications](#)

Explore the KIOXIA EXCERIA G3 NVMe SSD, featuring PCIe 5.0 speeds up to 10,000 MB/s, BICS FLASH™ 3D memory, and advanced heat dissipation for gaming and AI applications. View full specifications.