KIOXIA KCD6XLUL15T3

Kioxia KCD6XLUL15T3 CD6 15.36TB NVMe PCIe 4x4 SSD User Manual

1. INTRODUCTION

This manual provides essential instructions for the proper installation, operation, and maintenance of your Kioxia KCD6XLUL15T3 CD6 15.36TB NVMe PCIe 4x4 Solid State Drive (SSD). Please read this manual thoroughly before using the product to ensure optimal performance and longevity. Retain this manual for future reference.

2. PRODUCT OVERVIEW

The Kioxia KCD6XLUL15T3 CD6 is a high-capacity 15.36TB NVMe PCIe 4.0 x4 Solid State Drive designed for demanding data center and enterprise environments. It features a 2.5-inch, 15mm Z-height form factor, making it suitable for high-density storage deployments. This SSD offers robust performance, reliability, and data integrity for 24x7 operations.

Key Features:

- **Portable Design:** Compact 2.5-inch form factor.
- **High Speed Performance:** 15.36TB capacity with up to 4000MB/s write speed.
- **NVMe Interface:** Utilizes NVMe 4x4 interface for efficient data transfer.
- **Internal Installation:** Designed for internal integration into computer systems.
- **Reliable Storage:** Engineered for consistent performance and reliability in demanding environments.

An image showing the Kioxia KCD6XLUL15T3 CD6 15.36TB NVMe SSD. The drive features a 2.5-inch form factor with a black casing and a silver top plate. The label on the top plate displays the KIOXIA brand, model number KCD6XLUL15T3, NVMe Express logo, UK CA markings, Part No. SDFSU81GEB02T, Firmware 0107, Revision A5, and Date 20240311. A warning states 'WARRANTY VOID IF ANY LABEL/ SCREW IS REMOVED OR BROKEN.' Other details include 'SOLID STATE DRIVE', 'Rated +12V === 2.60A', HW Type: C62-01, various certifications (cURus, RoHS, CE, TÜV Rheinland), and 'MADE IN PHILIPPINES, Manufactured by KIOXIA Corporation'.

3. SETUP AND INSTALLATION

This section outlines the general steps for installing the Kioxia KCD6XLUL15T3 CD6 SSD. Professional installation is recommended for server environments.

3.1 System Requirements

- A host system (desktop or server) with an available 2.5-inch drive bay.
- A compatible NVMe-enabled PCIe 4.0 x4 interface.
- Operating system with NVMe driver support.
- Appropriate power connector (12V).

3.2 Physical Installation

1. **Power Off System:** Ensure the host system is completely powered off and disconnected from the power source.
2. **Open Chassis:** Open the computer or server chassis according to the manufacturer's instructions.
3. **Locate Drive Bay:** Identify an available 2.5-inch drive bay. The KCD6XLUL15T3 has a 15mm Z-height, so ensure adequate clearance.
4. **Mount SSD:** Securely mount the SSD into the drive bay using appropriate screws or mounting hardware.
5. **Connect Cables:** Connect the NVMe data cable and the 12V power cable to the SSD. Ensure connections are firm.
6. **Close Chassis:** Close the chassis and reconnect the power source.

3.3 Initializing the SSD

1. **Boot System:** Power on the host system.
2. **Operating System Detection:** The operating system should detect the new NVMe SSD.
3. **Initialize and Format:** Use your operating system's disk management tools to initialize the SSD, create partitions, and format them for use. Refer to your operating system's documentation for detailed steps.

4. OPERATING THE SSD

Once installed and initialized, the Kioxia KCD6XLUL15T3 CD6 SSD operates like any other storage device within your system. It is optimized for high-performance data storage and retrieval.

4.1 Data Storage and Transfer

Utilize the SSD for storing operating systems, applications, and large datasets that require fast access. Its high read/write speeds (up to 5500 MBps read / 4000 MBps write) and IOPS (400,000 random read / 75,000 random write) ensure rapid data transfer and application responsiveness.

4.2 Performance Considerations

- The SSD is designed for consistent performance in demanding 24x7 environments.
- Ensure your system's PCIe slot and drivers are configured for optimal NVMe performance.
- Avoid filling the drive to its absolute maximum capacity, as this can sometimes impact performance.

5. MAINTENANCE

Proper maintenance helps ensure the long-term reliability and performance of your Kioxia SSD.

5.1 Firmware Updates

Periodically check the Kioxia website for firmware updates for your KCD6XLUL15T3 SSD (current firmware version: 0107). Firmware updates can improve performance, stability, and address potential issues. Follow Kioxia's instructions carefully when performing firmware updates.

5.2 Data Backup

Regularly back up critical data stored on the SSD to another storage device. While SSDs are highly reliable, no storage device is immune to failure.

5.3 S.M.A.R.T. Monitoring

Utilize S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology) tools to monitor the health and status of your SSD. This can provide early warnings of potential issues.

5.4 Physical Handling

Handle the SSD with care. Avoid dropping or subjecting it to physical shock. As stated on the product label: **WARRANTY VOID IF ANY LABEL/ SCREW IS REMOVED OR BROKEN.**

6. TROUBLESHOOTING

If you encounter issues with your Kioxia KCD6XLUL15T3 CD6 SSD, consider the following troubleshooting steps:

6.1 SSD Not Detected

- **Check Connections:** Ensure the NVMe data cable and power cable are securely connected to both the SSD and the motherboard/power supply.
- **BIOS/UEFI Settings:** Verify that the NVMe slot is enabled in your system's BIOS/UEFI settings.
- **Drivers:** Ensure your operating system has the correct and up-to-date NVMe drivers installed.
- **Compatibility:** Confirm that your motherboard supports PCIe 4.0 NVMe SSDs.

6.2 Slow Performance

- **System Load:** High CPU or RAM usage can impact SSD performance.
- **Thermal Throttling:** Ensure adequate airflow within your system to prevent the SSD from overheating and throttling performance.
- **Firmware:** Check for and apply any available firmware updates.
- **Driver Updates:** Update your NVMe drivers.

6.3 Data Corruption

- **Check File System:** Run disk check utilities (e.g., CHKDSK on Windows, fsck on Linux) to identify and repair file system errors.
- **S.M.A.R.T. Status:** Check the SSD's S.M.A.R.T. data for any indicators of impending failure.

If issues persist after attempting these steps, contact Kioxia technical support.

7. SPECIFICATIONS

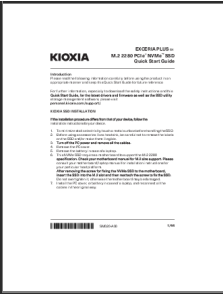| Feature	Specification
Model Number	KCD6XLUL15T3
Part Number	SDFSU81GEB02T
Capacity	15.36 TB

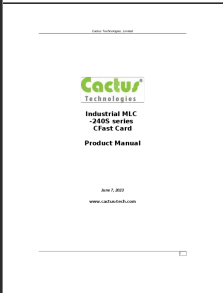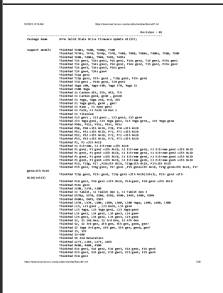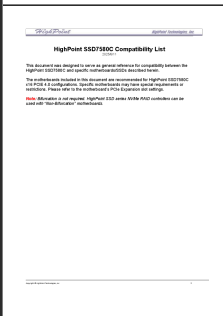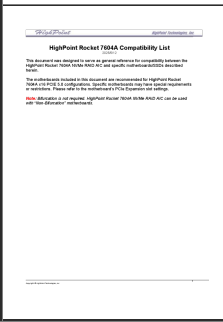| Feature	Specification
Form Factor	2.5-inch, 15mm Z-height
Interface	PCIe 4.0, NVMe 1.4
Interface Speed	64 GT/s Gen4 x4
NAND Flash Memory Type	BiCS FLASH TLC
Internal Data Rate (Read)	5500 MBps
Internal Data Rate (Write)	4000 MBps
4KB Random Read	400,000 IOPS
4KB Random Write	75,000 IOPS
Drive Writes Per Day (DWPD)	1
Supply Voltage	12 V ±10%, 3.3 Vaux ±15%
Rated Current	2.60A (+12V)
Power Consumption	19 W
Weight	Approximately 1 lbs
Manufacturer	Kioxia Corporation
Country of Origin	Made in Philippines
First Available Date	November 13, 2020
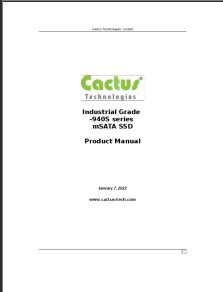
8. WARRANTY AND SUPPORT

For warranty information, please refer to the official Kioxia warranty policy available on their website. Please note the warning on the product label: **WARRANTY VOID IF ANY LABEL/ SCREW IS REMOVED OR BROKEN.**
For technical support, product inquiries, or service, please contact Kioxia customer support through their official channels. You may also find resources and contact information on the Kioxia website.
KIOXIA Europe GmbH: Hansaallee 181, 40549 Dusseldorf, Germany

Related Documents - KCD6XLUL15T3

[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.

	[Cactus Technologies Industrial Grade -940S Series mSATA SSD Product Manual](#) This product manual provides comprehensive details on the Cactus Technologies Industrial Grade - 940S Series mSATA SSDs, covering specifications, features, interface, electrical characteristics, ATA commands, S.M.A.R.T. attributes, ordering information, and warranty details.
	[Cactus Technologies Industrial MLC -240S Series CFast Card Product Manual](#) This product manual provides comprehensive technical details for the Cactus Technologies Industrial MLC -240S Series CFast Card, covering features, specifications, interface protocols, command sets, ordering information, and warranty.
	[Lenovo NVMe SSD Firmware Update Utility FWNVA61 - Supported Models and Installation Guide](#) Official Lenovo ReadMe file for the FWNVA61 NVMe Solid State Drive Firmware Update Utility. Lists supported ThinkPad models, installation instructions, and release notes for firmware updates.
	[HighPoint SSD7580C Compatibility List - Motherboards and NVMe SSDs](#) Comprehensive compatibility list for the HighPoint SSD7580C NVMe RAID controller, detailing compatible motherboards, chipsets, PCIe slots, and U.2 NVMe SSDs. Includes certified cable accessories.
	[HighPoint Rocket 7604A Compatibility List - Motherboards and SSDs](#) Find compatible motherboards and NVMe SSDs for the HighPoint Rocket 7604A NVMe RAID AIC. This list details recommended PCIe slots, RAID support, and SSD specifications.

Documents - KIOXIA – KCD6XLUL15T3
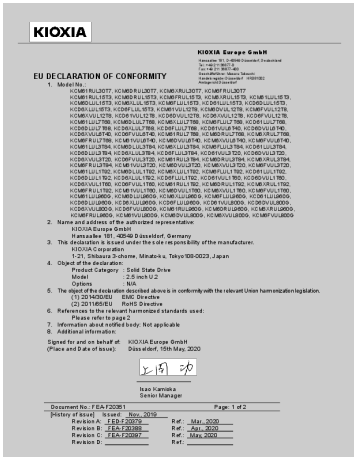
[pdf] Decleration of Conformity

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KIOXIA Europe GmbH EU DECLARATION OF CONFORMITY 1. Model No.: Hansaallee 181, D-40549 Dsseldorf, D ... KCM6XRUL15T3, KCM61LUL15T3, KCM6DLUL15T3, KCM6XLUL15T3, KCM6FLUL15T3, KCD61LUL15T3, KCD6DLUL15T3, **KCD6XLUL15T3**, KCD6FLUL15T3, KCM61VUL12T8, KCM6DVUL12T8, KCM6FVUL12T8, KCM6XVUL12T8, KCD61VUL12T8, K...

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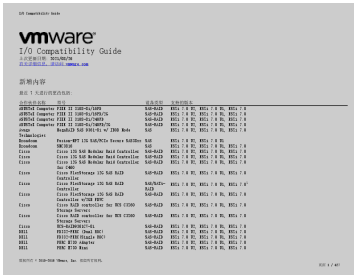
VMware I/O

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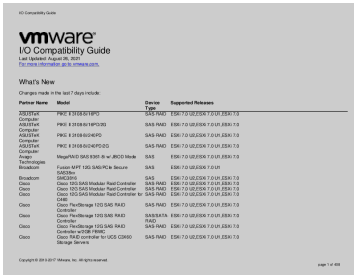
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