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XPG ASX8200PNP-512GT-C

XPG SX8200 Pro 512GB NVMe PCIe M.2 SSD User Manual

Model: ASX8200PNP-512GT-C

1. Introduction

The XPG SX8200 Pro 512GB 3D NAND NVMe Gen3x4 PCIe M.2 2280 Solid State Drive is engineered for high-performance computing. It offers ultra-fast read/write speeds, making it suitable for demanding applications such as 3D animation, video editing, and gaming. This manual provides essential information for the proper installation, operation, and troubleshooting of your new SSD.

XPG SX8200 Pro NVMe PCIe M.2 SSD, showcasing its compact form factor and high-speed interface.

2. Package Contents

- 1 x XPG SX8200 Pro 512GB NVMe PCIe M.2 SSD (Model: ASX8200PNP-512GT-C)

3. Specifications

Brand	XPG
Series	XPG SX8200 Pro
Model Number	ASX8200PNP-512GT-C
Capacity	512 GB
Form Factor	M.2 2280

Interface	PCIe Gen3x4 NVMe 1.3
Sequential Read Speed	Up to 3500 MB/s
Sequential Write Speed	Up to 3000 MB/s
Dimensions (L x W x H)	3.15 x 0.87 x 0.14 inches (80 x 22 x 3.5 mm)
Weight	1.06 ounces (30g)
Operating Temperature	0°C to 70°C
Storage Temperature	-40°C to 85°C
Shock Resistance	1500G/0.5ms
MTBF (Mean Time Between Failures)	2,000,000 hours
Features	3D NAND Flash, SLC Caching, DRAM Cache Buffer, E2E Data Protection, LDPC ECC, AES 256-bit Encryption, RAID Engine, Data Shaping

**Performance may vary based on SSD capacity, host hardware and software, operating system, and other system variables.*

4. Installation

Installing the XPG SX8200 Pro SSD requires careful handling. Always ensure your system is powered off and disconnected from the power source before beginning installation. It is recommended to wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage.

4.1. Pre-Installation Checklist

- Ensure your motherboard or laptop has a compatible M.2 slot that supports PCIe NVMe (M-Key). This SSD is not compatible with SATA M.2 slots. Consult your system's manual for compatibility.
- Gather necessary tools, typically a small Phillips head screwdriver.
- Back up any important data from your existing drive before proceeding.

4.2. Installation Steps (General Guide)

1. **Power Off System:** Shut down your computer completely and disconnect all power cables.
2. **Open Chassis/Laptop:** Carefully open your computer case or laptop back cover. Refer to your system's manual for specific instructions on how to safely open it.
3. **Locate M.2 Slot:** Identify the M.2 slot on your motherboard. It is typically labeled.
4. **Remove Mounting Screw:** If present, remove the small screw at the end of the M.2 slot, which is used to secure the SSD.
5. **Insert SSD:** Gently insert the XPG SX8200 Pro SSD into the M.2 slot at a slight angle (approximately 30 degrees). The gold contacts should disappear into the slot.
6. **Secure SSD:** Push the SSD down until it is parallel with the motherboard. Reinsert and tighten the mounting screw to secure the SSD in place.
7. **Close Chassis/Laptop:** Carefully reattach the back cover or close your computer case.
8. **Power On System:** Reconnect power and boot your system.

4.3. Visual Installation Guide

Your browser does not support the video tag.

This video demonstrates the general procedure for installing a PCIe M.2 SSD into a laptop. Always refer to your specific laptop's service manual for detailed instructions and safety precautions.

Top view of the XPG SX8200 Pro 512GB M.2 SSD, displaying the product label with model number ASX8200PNP-512GT-C. Serial Number: 2G0123456789

Angled view of the XPG SX8200 Pro 512GB M.2 SSD, highlighting the M.2 2280 form factor and keying. Serial Number: 2G0123456789

5. Initial Setup and Operation

After physical installation, a new SSD typically requires initialization and formatting before it can be used by your operating system. This process prepares the drive for data storage.

5.1. For Windows Operating Systems

1. **Access Disk Management:** Right-click on the 'Start' button and select 'Disk Management'.
2. **Initialize Disk:** A dialog box will appear prompting you to initialize the new SSD. Select 'GPT (GUID Partition Table)' for modern systems and drives larger than 2TB, then click 'OK'.
3. **Create New Simple Volume:** Right-click on the 'Unallocated' space of your new SSD and select 'New Simple Volume'.
4. **Follow Wizard:** Follow the on-screen wizard to specify the volume size, assign a drive letter, and format the drive (NTFS is recommended for Windows).
5. **Completion:** Once the formatting is complete, your new SSD will appear in 'File Explorer' and be ready for use.

5.2. For Other Operating Systems

For Linux or macOS, please consult the respective operating system documentation for instructions on how to initialize and format new storage devices.

6. Maintenance

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

- **Keep Firmware Updated:** Periodically check the XPG official website for firmware updates for your SSD. Firmware updates can improve performance, stability, and fix bugs.
- **Enable TRIM:** Ensure TRIM is enabled in your operating system. TRIM helps the SSD manage its storage space efficiently, preventing performance degradation over time. Most modern operating systems enable TRIM by default for SSDs.
- **Avoid Filling to Capacity:** Try to avoid filling your SSD to its absolute maximum capacity. Leaving some free space (e.g., 10-15%) allows the SSD's wear-leveling algorithms to function optimally.
- **Regular Backups:** While SSDs are reliable, no storage device is immune to failure. Regularly back up your important data to another storage medium.

7. Troubleshooting

If you encounter issues with your XPG SX8200 Pro SSD, refer to the following common troubleshooting tips:

- **Issue: I cannot find the new SSD in my system.**
  Solution: New SSDs are usually blank. You will need to initialize the new drive and format it after allocating the new volume

in Disk Management (Windows) or equivalent utility in other operating systems. Ensure the SSD is correctly seated in the M.2 slot.

- **Issue: The new drive is smaller than the advertised capacity.**
  Solution: The advertised capacity uses 1GB = 1 billion bytes and 1TB = 1 trillion bytes. Actual user capacity may be less depending on the operating system's calculation method and reserved space for system functions.
- **Issue: The SSD is not recognized or performing slowly.**
  Solution: Ensure your motherboard's M.2 slot supports PCIe NVMe or M Key with NVMe. This SSD is not compatible with SATA M.2 slots. Consult your motherboard manual for compatibility. Check if the SSD is properly seated and the mounting screw is secure. Update your motherboard's BIOS/UEFI and chipset drivers.
- **Issue: System instability or crashes after installation.**
  Solution: Verify that your system's power supply is adequate. Ensure all connections are secure. If you are using an adapter for a Mac system, ensure it is fully compatible and correctly installed.

8. Warranty and Support

The XPG SX8200 Pro SSD is backed by a 5-year warranty, providing peace of mind regarding its durability and performance. The warranty covers defects in materials and workmanship under normal use.

For detailed warranty terms, technical support, or customer service inquiries, please visit the official XPG website or contact their support channels. Keep your proof of purchase for warranty claims.