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› Silicon Power Ace A55 128GB SATA III 2.5-inch Internal SSD User Manual

SP Silicon Power SU128GBSS3A55S25AH

Silicon Power Ace A55 128GB SATA III 2.5-inch Internal SSD User Manual

Model: SU128GBSS3A55S25AH

INTRODUCTION

This manual provides instructions for the installation, operation, maintenance, and troubleshooting of your Silicon Power Ace A55 128GB SATA III 2.5-inch Internal Solid State Drive. Please read this manual thoroughly before using the product to ensure proper functionality and longevity.



Image: The Silicon Power Ace A55 128GB SSD, showcasing its compact 2.5-inch form factor and branding.

SETUP AND INSTALLATION

The Silicon Power Ace A55 SSD is designed for easy integration into compatible systems. Ensure your system supports a 2.5-inch SATA III drive before proceeding.

1. Physical Installation

- 1. Prepare your system:** Power off your computer and disconnect all cables. Open the computer case to access the drive bays.
- 2. Mount the SSD:** Secure the 2.5-inch SSD into an available drive bay using appropriate screws. Most desktop cases require a 2.5-inch to 3.5-inch adapter bracket (not included) for standard drive bays. Laptops typically have dedicated 2.5-inch bays.
- 3. Connect cables:**
 - Connect one end of a SATA data cable to the SSD and the other end to an available SATA port on your motherboard.
 - Connect a SATA power cable from your power supply unit (PSU) to the SSD.
- 4. Close the case:** Once connected, close your computer case and reconnect all cables.



Image: Physical dimensions of the Silicon Power Ace A55 SSD, illustrating its compact 2.5-inch form factor (0.28" height, 3.94" length, 2.75" width).

2. Initializing and Formatting the SSD

After physical installation, the SSD needs to be initialized and formatted by your operating system before use.

- **For Windows:**

- a. Boot your computer.
- b. Right-click on the Start button and select "Disk Management".
- c. Locate your new SSD (it will likely appear as "Unallocated Space").
- d. Right-click on the unallocated space and select "New Simple Volume". Follow the wizard to assign a drive letter and format the drive (NTFS is recommended for Windows).

- **For macOS:**

- a. Boot your computer.
- b. Open "Disk Utility" (Applications > Utilities > Disk Utility).
- c. Select your new SSD from the sidebar.
- d. Click "Erase", choose a name, format (APFS or Mac OS Extended (Journaled)), and scheme (GUID Partition Map). Click "Erase" again to confirm.

- **For Linux:**

- a. Boot your computer.
- b. Use a disk utility like GParted or the built-in Disks application.
- c. Select the SSD, create a new partition table (GPT is recommended), create partitions, and

format them with your desired file system (e.g., ext4).

OPERATING THE SSD

The Silicon Power Ace A55 SSD functions as a high-speed storage device for your operating system, applications, and data. Its solid-state nature provides faster boot times, quicker application loading, and improved overall system responsiveness compared to traditional hard disk drives.

The graphic features a dark blue background with a glowing blue hexagonal pattern on the left. On the right, the text '15x Faster Than a hard drive' is displayed in a large, bold font. Below this, two columns of performance metrics are shown: 'READ Up to 500 MB/s' and 'WRITE Up to 450 MB/s'. At the bottom, there is a detailed image of the SSD drive itself, which is black with a blue glow. The drive's label includes the 'SP' logo, 'SOLID STATE DRIVE', 'A55', and '30 NAND'. It also lists 'ROHS COMPLIANT' and 'MADE IN TAIWAN'. At the very bottom of the drive image, there are several certification logos: CE, FCC, RoHS (D33829), a triangle symbol, EAC, and a crossed-out X symbol.

Image: Performance metrics for the Ace A55 SSD, highlighting read speeds up to 500 MB/s and write speeds up to 450 MB/s.

Key Features:

- **SLC Cache Technology:** The A55 utilizes SLC Cache technology to enhance peak writing performance and extend the SSD's lifespan by reducing write amplification.
- **High Transfer Speeds:** Powered by a quality controller and synchronous NAND flash, the drive delivers high read and write speeds for efficient data handling.
- **Durability:** As a solid-state drive, it contains no moving parts, making it shock- and vibration-proof.

ACE A55 SATA III 6Gb/s SSD

CONSUMER GRADE

2.5"
SSD

7MM
HEIGHT

FULL
CAPACITY

SLC
CACHING

3D
NAND



Image: Overview of the Ace A55 SSD's consumer-grade features, including 2.5" form factor, 7mm height, full capacity, SLC caching, and 3D NAND technology.

MAINTENANCE

To ensure optimal performance and longevity of your Silicon Power Ace A55 SSD, consider the following maintenance practices:

- **SP Toolbox Software:** Download the free SP Toolbox Software from the official Silicon Power website. This tool allows you to monitor the SSD's health status, run performance tests, and view detailed information such as used space, temperature, total bytes written, S.M.A.R.T. status, and erase count.
- **Bad Block Management:** The SSD features built-in Bad Block Management, which continuously monitors and replaces faulty blocks to maintain system stability and prolong the drive's lifespan.
- **S.M.A.R.T. Monitoring:** The Self-Monitoring, Analysis, and Reporting Technology (S.M.A.R.T.) system is integrated to provide early warnings of potential drive issues. Monitor S.M.A.R.T. status via the SP Toolbox.
- **ECC Technology:** Error Correcting Code (ECC) technology is employed to ensure higher data transmission safety and integrity.
- **TRIM Command:** Ensure your operating system's TRIM command is enabled. TRIM helps the

SSD manage data more efficiently, preventing performance degradation over time. Modern operating systems (Windows 7+, macOS 10.6.8+, Linux kernel 2.6.33+) typically enable TRIM automatically for SSDs.

- **Avoid Defragmentation:** Unlike HDDs, SSDs do not benefit from defragmentation. Defragmenting an SSD can reduce its lifespan due to unnecessary write cycles.
- **Maintain Free Space:** It is recommended to keep at least 10-15% of the SSD's capacity free to allow for optimal performance and wear leveling.

TROUBLESHOOTING

If you encounter issues with your Silicon Power Ace A55 SSD, refer to the following common troubleshooting steps:

- **SSD Not Detected:**
 - Check all SATA data and power cable connections to ensure they are secure.
 - Verify that the SATA port on your motherboard is enabled in the BIOS/UEFI settings.
 - Ensure the drive is initialized and formatted in Disk Management (Windows) or Disk Utility (macOS/Linux).
 - Test the SSD with different SATA cables and ports, or in another computer if possible, to rule out cable or motherboard issues.
- **Slow Performance:**
 - Confirm the SSD is connected to a SATA III (6Gb/s) port for optimal speed. Connecting to a SATA II (3Gb/s) port will limit performance.
 - Ensure TRIM is enabled and functioning correctly (usually automatic).
 - Check the SSD's health using the SP Toolbox Software.
 - Verify that the SSD is not nearly full; maintaining free space is crucial for performance.
 - Update your motherboard's SATA drivers.
- **Operating System Errors:**
 - If experiencing frequent crashes or errors, check the SSD's S.M.A.R.T. status for indicators of failure.
 - Ensure your operating system and drivers are up to date.
- **Data Loss Prevention:** Regularly back up important data to another storage device. While SSDs are reliable, no storage medium is immune to failure.

SPECIFICATIONS

Feature	Detail
Model Number	SU128GBSS3A55S25AH
Capacity	128 GB
Form Factor	2.5 Inches
Interface	SATA III (6Gb/s)

Feature	Detail
NAND Flash Type	3D NAND
Controller	High quality controller
Dimensions (LxWxH)	3.94 x 2.75 x 0.28 inches
Weight	2.12 ounces
Special Features	Shock Resistant, SLC Cache Technology, Bad Block Management, S.M.A.R.T. Monitoring, ECC Technology
Compatible Devices	Laptop, Desktop PCs
Operating Temperature	0°C to 70°C (32°F to 158°F)

WARRANTY

The Silicon Power Ace A55 SSD is backed by a **3-year warranty**. To ensure you receive complete manufacturer warranty services and product support, please register your product via the official Silicon Power website. The warranty covers defects in materials and workmanship under normal use.

For detailed warranty terms and conditions, please visit the official SP Silicon Power website.

SUPPORT

For further assistance, technical support, or to download the SP Toolbox Software, please visit the official Silicon Power website:

www.silicon-power.com

You can also find FAQs and contact information for customer service on their website.