

Syba SI-PEX40142

Syba SI-PEX40142 M.2 SATA SSD Expansion Card User Manual

Model: SI-PEX40142

Brand: Syba

1. INTRODUCTION AND OVERVIEW

The Syba SI-PEX40142 is a 5-slot M.2 B-Key SATA Base SSD PCI-e 3.0 x2 Bandwidth Expansion Card designed to enhance your computer's storage capabilities. Utilizing the JMB585 chipset, this card provides PCIe Gen3 x2 bandwidth to support up to five M.2 SATA B-Key SSDs. It is an ideal solution for storage needs involving multiple hard drives, featuring a newly added FIS-based switching design to overcome bottlenecks when operating several SATA storage devices simultaneously. The JMB585 chipset enables data transmission rates of up to 1700MB/s, which is the maximum transfer speed for PCIe Gen3 x2.

2. KEY FEATURES

- Adds 5 Next Generation Form Factor (NGFF) M.2 SATA SSDs to your computer via a PCIe x16 slot.
- Supports Plug and Play functionality, requiring no additional software installation or complex settings.
- Offers wide installation compatibility with virtually all M.2 NGFF drives, including sizes 22110, 2280, 2260, 2242, and 2230.
- Features a 2-Lane M.2 PCI-Express 3.0 interface (B key) and complies with PCI Express Base Specification Revision 3.1a.
- Designed exclusively for storage use; it cannot be used to boot any operating system or system drives.

3. PACKAGE CONTENTS

Please verify that all items are present and in good condition upon opening the package:

- 1 x Syba SI-PEX40142 5-Slot M.2 B-Key SATA SSD Expansion Card
- M.2 Mounting Screws (for securing SSDs)

- 5 x M.2 Thermal Pads (for optimal performance and heat dissipation)



Figure 3.1: Syba SI-PEX40142 Expansion Card with its protective aluminum alloy shell.

4. SPECIFICATIONS

| Attribute | Detail |
|--------------------|--|
| Brand | Syba |
| Model Number | SI-PEX40142 |
| Hardware Interface | PCI Express 3.0 x2 (requires x16 slot for physical fit) |
| Compatible Devices | M.2 NGFF SATA B-Key SSD drives (22110, 2280, 2260, 2242, 2230) |
| Chipset | JMB585 |

| | |
|--------------------------------|------------------------------|
| Max Transfer Speed | Up to 1700MB/s |
| Product Dimensions (LxWxH) | 8.5 x 4.5 x 0.3 inches |
| Item Weight | 4.8 ounces (approx. 0.3 lbs) |
| Operating System Compatibility | Windows (Plug and Play) |

5. SETUP AND INSTALLATION

Follow these steps to install your Syba SI-PEX40142 expansion card and M.2 SATA SSDs into your computer system:

1. **Prepare the Card:** Carefully remove the four screws located on the back of the expansion card. Gently lift and remove the advanced aluminum alloy shell to expose the M.2 slots.
2. **Install M.2 Standoffs:** Place the M.2 standoffs into the appropriate holes on the PCB for your M.2 SSD length (e.g., 2280, 2260).
3. **Insert M.2 SSDs:** Align your M.2 SATA B-Key SSD with the corresponding slot on the expansion card. Gently push the SSD into the slot until it is fully seated.
4. **Secure SSDs:** Once the SSD is inserted, gently press down the end of the SSD and secure it with the provided M.2 mounting screw into the standoff.
5. **Apply Thermal Pads:** For optimal performance and heat dissipation, apply the provided thermal pads onto the M.2 SSDs. Ensure good contact between the thermal pad and the SSD surface.
6. **Reassemble the Card:** Carefully place the aluminum alloy shell back onto the card, ensuring it aligns correctly with the screw holes. Re-insert and tighten the four screws on the back of the card.
7. **Install into PC:** Power off your computer and unplug it from the power source. Open your computer case. Locate an available PCI-e x16 slot on your motherboard. Gently insert the Syba SI-PEX40142 card into the slot, ensuring it is fully seated. Secure the card to your computer case with the retaining screw or latch.
8. **Power On:** Close your computer case, plug in the power cord, and power on your system. The card is plug-and-play, and your operating system (e.g., Windows) should automatically detect the new storage devices.

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Video 5.1: Installation guide for the M.2 PCIe Adapter, demonstrating the steps for installing M.2 SSDs and the card into a PC.

6. OPERATING INSTRUCTIONS

Once installed, the Syba SI-PEX40142 card functions as a storage expansion device. The M.2 SATA SSDs installed on the card will appear as individual storage drives within your operating system. You can then format these drives and use them for data storage, file transfers, and other general storage purposes.

Important Note:

- This card is designed exclusively for storage use. It cannot be used as a boot drive for your operating system.
- For optimal performance, ensure your motherboard's BIOS/UEFI settings are configured to recognize PCIe devices correctly.

7. MAINTENANCE

To ensure the longevity and optimal performance of your Syba SI-PEX40142 expansion card, consider the following maintenance tips:

- **Keep it Clean:** Periodically inspect the card for dust accumulation, especially around the fan and heatsink fins. Use compressed air to gently remove dust.
- **Ensure Airflow:** Make sure your computer case has adequate airflow to prevent overheating, particularly if multiple SSDs are installed.
- **Thermal Pads:** The thermal pads help with heat dissipation. Ensure they remain in good contact with the SSDs and the heatsink.

8. TROUBLESHOOTING

If you encounter issues with your Syba SI-PEX40142 card, refer to the following common troubleshooting steps:

- **SSDs Not Detected:**
 - Ensure the card is fully seated in the PCIe x16 slot.
 - Verify that the M.2 SSDs are correctly inserted and secured with their mounting screws.
 - Check your motherboard's BIOS/UEFI settings to ensure the PCIe slot is enabled and configured correctly. Some motherboards may require specific settings for PCIe bifurcation, though this card's design (SATA B-Key) typically simplifies detection.
 - Confirm that the M.2 SSDs are SATA B-Key compatible, not NVMe M-Key. This card only supports SATA M.2 SSDs.
 - Try testing the SSDs individually or in a different system if possible to rule out SSD failure.
- **Slow Performance:**
 - Ensure thermal pads are correctly applied to prevent thermal throttling.
 - Verify that your system's PCIe slot is operating at its full speed (PCIe 3.0 x16).
 - Check for background processes or other system bottlenecks that might be affecting storage performance.
- **Card Runs Hot:**
 - Ensure the internal fan on the card is spinning.
 - Confirm that the aluminum alloy shell is properly installed and making good contact with the thermal pads.
 - Improve overall case airflow by adding or repositioning case fans.

9. WARRANTY AND SUPPORT

The Syba SI-PEX40142 expansion card is backed by a Syba 3-Year hassle-free warranty. Syba is committed to providing lifetime customer service for this product. For technical support, warranty claims, or further assistance, please refer to the contact information provided on the official Syba website or your product's packaging.

For the latest drivers and support resources, please visit the official Syba website.

