



AOC-SLG3-4E2P



User's Guide

Revision 1.0

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WARNING: Handling of lead solder materials used in this product may expose you to lead, a chemical known to the State of California to cause birth defects and other reproductive harm.

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Preface

About this User's Guide

This user's guide is written for system integrators, IT technicians, and knowledgeable end users. It provides information for the installation and use of the AOC-SLG3-4E2P expansion card.

About this Expansion Card

The Supermicro NVMe AOC-SLG3-4E2P features four internal NVMe OcuLink connectors for high-performance storage connectivity. This HBA card is built around a PLX PEX9733 PCIe switch IC, which is a proven NVMe technology with optimum performance for increased bandwidth. Streamlined for the growing demand for increased data throughput and scalability requirements across the enterprise-class server platforms, this appeals most to embedded/IPC solutions and desktop/gaming solutions that must leverage maximum performance and reliability. Designed for port extension, high performance peer-to-peer transfers, and error isolation. In contrast to retimer and redriver NVMe AOC solutions, the AOC-SLG3-4E2P is capable of enabling hot-plug without the use of a Vpp header. Ideal for near-line cache storage solutions.

Comes with both full height and low profile mounting brackets.

An Important Note to the User

All images and layouts shown in this user's guide are based upon the latest PCB revision available at the time of publishing. The card you have received may or may not look exactly the same as the graphics shown in this user's guide.

Returning Merchandise for Service

A receipt or copy of your invoice marked with the date of purchase is required before any warranty service will be rendered. You can obtain service by calling your vendor for a Returned Merchandise Authorization (RMA) number. When returning the AOC-SLG3-4E2P card to the manufacturer, the RMA number should be prominently displayed on the outside of the shipping carton, and the shipping package is mailed prepaid or hand-carried. Shipping and handling charges will be applied for all orders that must be mailed when service is complete. For faster service, you can also request a RMA authorization online <http://www.supermicro.com/RmaForm/>.

This warranty only covers normal consumer use and does not cover damages incurred in shipping or from failure due to the alternation, misuse, abuse or improper maintenance of products.

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Chapter 1

Overview

1-1 Overview

Congratulations on purchasing your expansion card from an acknowledged leader in the industry. Supermicro products are designed with the utmost attention to detail to provide you with the highest standards in quality and performance. For product support and updates, please visit our website at <http://www.supermicro.com/>

1-2 Technical Specifications

General

- Quad port PCIe x8 Gen-3 NVMe controller
- Four internal lanes per OCuLink port, 6.4GB/s aggregate performance
- Supports four physical NVMe devices
- Pure HBA
- Ambient operating temperature from 10°C - 55°C

OS Support

Windows, Linux

Power Consumption

24 Watts

Physical Dimensions

Card PCB dimensions: 6.1" x 2.71" (L x H)

Notes

Chapter 2

Hardware Components

2-1 Expansion Card Layout and Components



Figure 2-1. AOC-SLG3-4E2P

The AOC-SLG3-4E2P is a low-profile 4-port expansion card with an aggregate performance of 6.4 GB/s. The following pages describe the components and settings for the AOC-SLG3-4E2P.

2-2 Major Components

The following are the major components that make up the AOC-SLG3-4E2P expansion card:

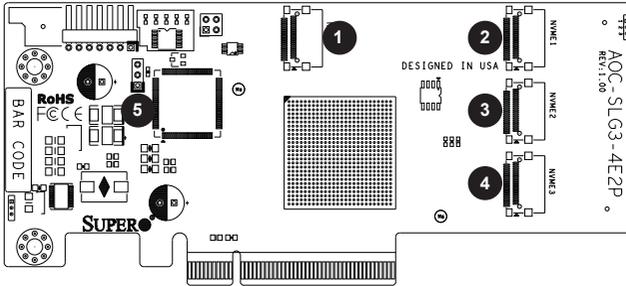


Figure 2-2. AOC-SLG3-4E2P Layout

AOC-SLG3-4E2P	
Component	Description
1	NVMe Connector NVMe0
2	NVMe Connector NVMe1
3	NVMe Connector NVMe2
4	NVMe Connector NVMe3
5	Jumper J1

2-3 Front Connectors

NVMe Connectors

There are four NVMe connectors on the expansion card. Together these connectors provide a transfer rate speed of up to 25.6 GB/s.

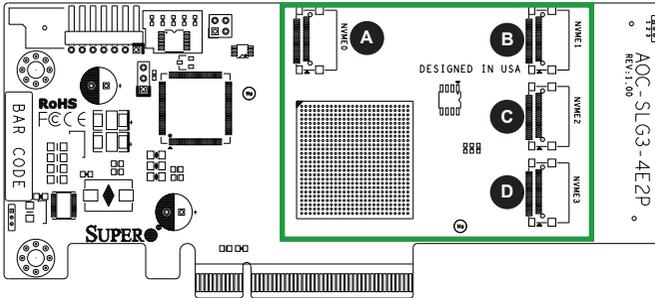


Figure 2-3. NVMe Connectors

AOC-SLG3-4E2P	
Component	Description
A	NVMe connector, designated NVMe 0
B	NVMe connector, designated NVMe 1
C	NVMe connector, designated NVMe 2
D	NVMe connector, designated NVMe 3

2-4 Front Jumper Location and Settings

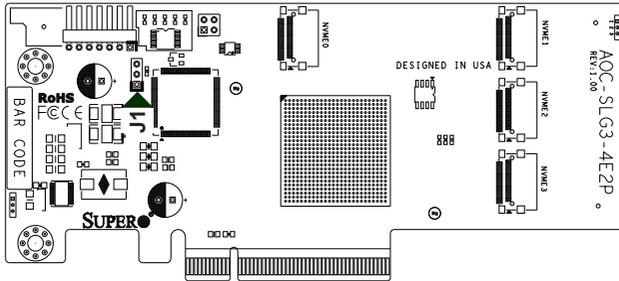
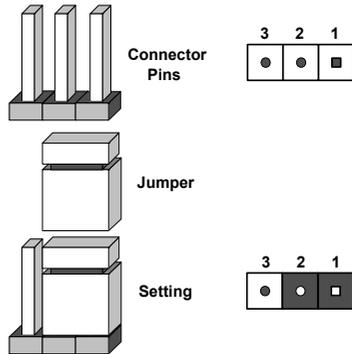


Figure 2-4. Front Jumpers

Explanation of Jumpers

To modify the operation of the backplane, jumpers can be used to choose between optional settings. Jumpers create shorts between two pins to change the function of the connector. Pin 1 is identified with a square solder pad on the printed circuit board. Note: On two pin jumpers, "Closed" means the jumper is on and "Open" means the jumper is off the pins.



Note: Unless explicitly instructed otherwise by the manufacturer, do not move the jumper from its default location of pins 1-2. Doing so will likely cause the card to become disabled.

J1 is for manufacturing purposes only and should never be changed unless explicitly instructed by Supermicro.

Chapter 3

Installation

3-1 Static-Sensitive Devices

Electrostatic Discharge (ESD) can damage electronic components. To avoid damaging your expansion card, it is important to handle it very carefully. The following measures are generally sufficient to protect your equipment from ESD.

Precautions

- Use a grounded wrist strap designed to prevent static discharge.
- Touch a grounded metal object before removing the expansion card from the antistatic bag.
- Handle the expansion card by its edges only; do not touch its components or peripheral chips.
- Put the expansion card back into the antistatic bags when not in use.
- For grounding purposes, make sure that your system chassis provides excellent conductivity between the power supply, the case, the mounting fasteners, and the expansion card.

Unpacking

The expansion card is shipped in antistatic packaging to avoid static damage. When unpacking your component, make sure you are static protected.

Note: To avoid damaging your components and to ensure proper installation, be sure to always connect the power cord last, and always remove it before adding, removing, or changing any hardware components.

3-2 Before Installation

To install the expansion card properly, follow the steps below.

Prior to Installation

1. Power down the system and unplug the power cord.
2. Use industry-standard anti-static equipment (such as gloves or wrist strap) and follow the precautions on page 3-1 to avoid damage caused by ESD.

3-3 Installing the Expansion Card

Depending upon which motherboard is used and which slot in the motherboard is selected, a riser card may or may not be required to install the AOC-SLG3-4E2P. This is the procedure for installation:

1. Once the system is fully powered down, remove the power cords from the rear of the power supply, and remove the system cover.
2. Verify that your expansion card is equipped with the correct length of PCIe slot bracket for your system. AOC-SLG3-4E2P expansion cards include a low-profile PCIe bracket. However, if your system features full-height PCIe locations, replace the low-profile bracket with a full-height bracket.
3. Install the add-on card into the appropriate PCIe slot on your motherboard and secure the bracket with the hardware provided.

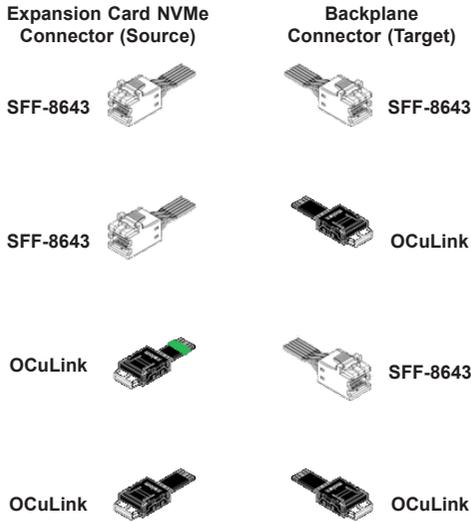


Figure 3-1. Cable Types

- Using the above chart, verify that the cable provided is appropriate for the expansion card connectors and the backplane connectors. Note that the MiniSAS HD to OCuLink cables and the OCuLink to MiniSAS HD cables may physically look the same but are wired differently and may not work if the wrong cable is used. Verify that the appropriate cable was included. For example, if your expansion card has OCuLink connectors and is plugging into a MiniSAS HD backplane, a cable with a green marking at the OCuLink end must be used.

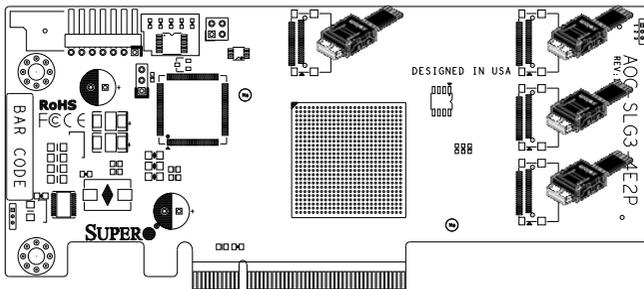


Figure 3-2. Connecting the Cables

- Connect the cables to the expansion card. The cable latch will click into the locked position when connected properly.
- Replace the system cover, plug in the power cord, and power up the system.

3-4 Installing and Uninstalling NVMe Drivers

If the operating system doesn't have a native NVMe driver already installed, refer to the instructions that came with your NVMe drive(s) and follow the manufacturer's recommended steps for installing or uninstalling the NVMe driver.

Notes

(Disclaimer Continued)

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