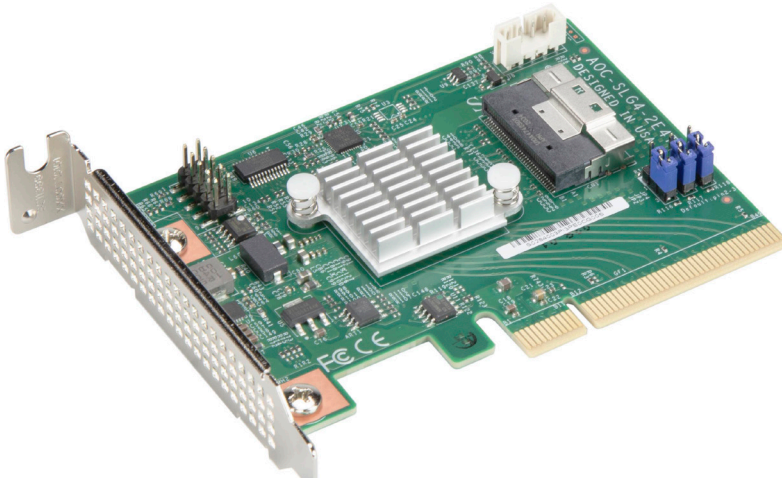
AOC-SLG4-2E4T



User's Guide

Revision 1.0

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Manual Revision 1.0

Release Date: April 21, 2021

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-SLG4-2E4T expansion card.

About this Expansion Card

The Supermicro NVMe AOC-SLG4-2E4T features one internal NVMe SlimSAS connector for high-performance storage connectivity. This card is built on the latest PCIe NVMe retimer technology. Streamlined for the growing demand for increased data throughput and scalability requirements across the enterprise-class server platforms, this is a cost-effective storage solution that delivers maximum performance and reliability.

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-SLG4-2E4T 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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Table of Contents

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

- Dual port PCIe x8 Gen4 standard low profile NVMe controller
- SlimSAS white connectors
- Supports up to two physical NVMe devices
- Ambient operating temperature is system dependent (55°C or higher if there is sufficient airflow)

OS Support

Windows, Linux, VMWare

Physical Dimensions

Card PCB dimensions: 3.79" x 2.71 " (L x H)

Power Consumption

4.63 Watts

Compatible Systems

X12/H12-based systems (Check the product page for a validated platform list.)

Notes

Chapter 2

Hardware Components

2-1 Expansion Card Layout and Components

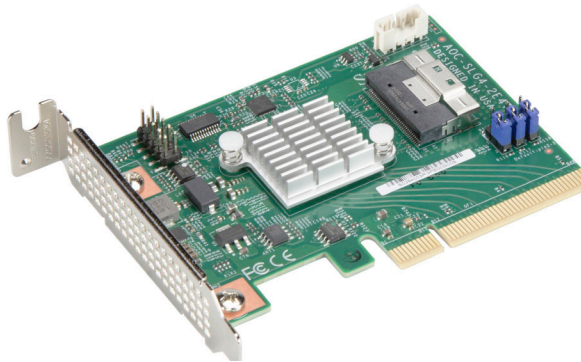


Figure 2-1. AOC-SLG4-2E4T

The AOC-SLG4-2E4T is a low-profile expansion card with an aggregate dual-port NVMe internal Host Bus Adapter. The following pages describe the components and settings for the AOC-SLG4-2E4T.

2-2 Major Components

The following are the major components that make up the AOC-SLG4-2E4T expansion card:

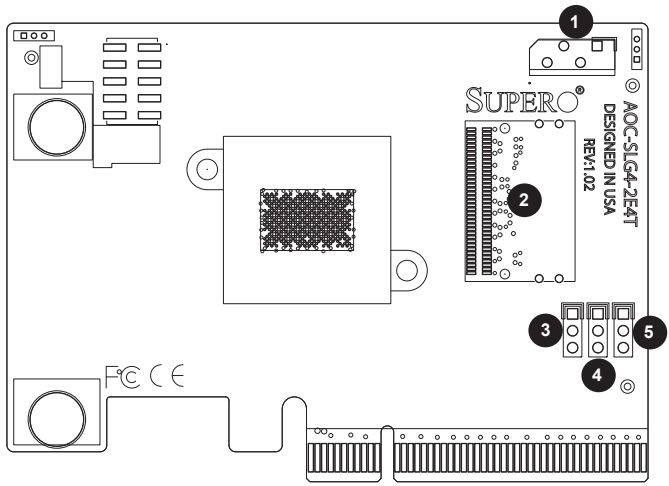


Figure 2-2. AOC-SLG4-2E4T Layout

AOC-SLG4-2E4T Components	
Item	**Description**
1	VPP I²C Connector for JNVI2C
2	NVMe Connector CN1
3	Jumper JP2
4	Jumper JP3
5	Jumper JP4

2-3 Connectors

NVMe Connector

There is one NVMe connector on the expansion card, designated for two ports.

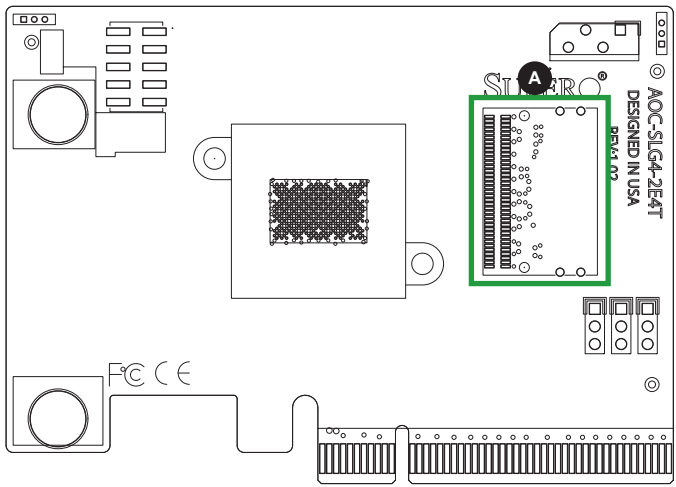


Figure 2-3. NVMe Connector

AOC-SLG4-2E4T Connectors	
Component	**Description**
A	NVMe connector, designated NVMe 0 and NVMe 1

2-4 Jumpers

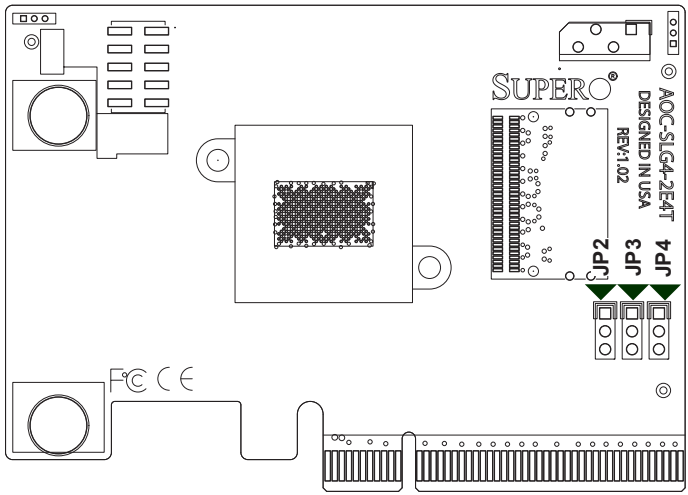
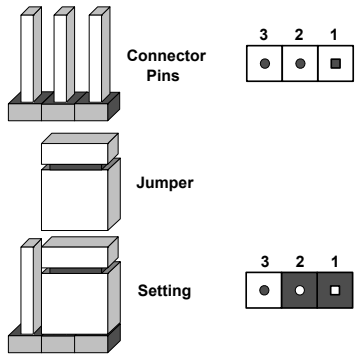


Figure 2-4. Front Jumpers

Explanation of Jumpers

To modify the operation of the add-on card, 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. On this card, the default setting for jumpers is on pins 2 and 3.



Note: Unless explicitly instructed otherwise by the manufacturer, do not move the jumpers from their default location. Doing so will likely cause the card to become disabled. Jumpers not detailed below are unpopulated.

JP4, JP3, and JP2 are used to configure the SMBus address at which the card is discovered by the BIOS. By default, it is set to "A0" and can be configured to another value to avoid an address conflict with other devices on the SMBus. It should never be changed unless explicitly instructed by Supermicro.

SMB Address			
JP4 A2	**JP3 A1**	**JP2 A0**	**Hex Address**
0	0	0	A 0
0	0	1	A 2
0	1	0	A 4
0	1	1	A 6
1	0	0	A 8
1	0	1	A A
1	1	0	A C
1	1	1	A E

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-SLG4-2E4T.

1. Power down the system, remove the power cords from the rear of the power supply and remove the system cover.

2. The AOC-SLG4-2E4T expansion card has a low-profile bracket pre-installed. A full-length bracket is included in the packaging if needed.

3. Consult your motherboard manual for any special instructions regarding expansion card installation.

4. Connect the white (85-ohm characteristic impedance) SlimSAS cable to the expansion card. The cable latch will click into the locked position when connected properly.

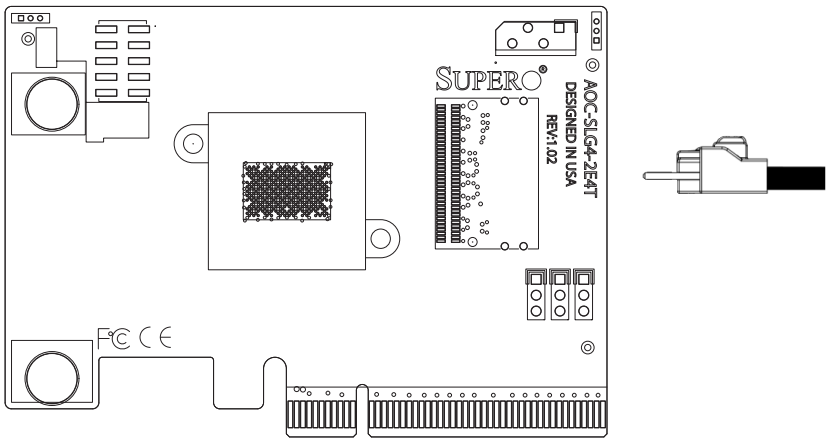


Figure 3-2. Connecting the Cable

Chapter 4

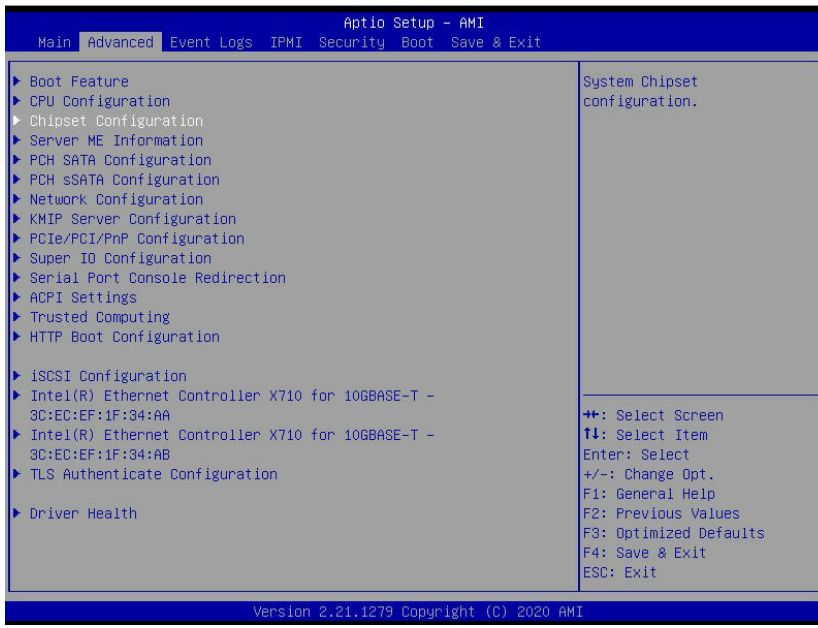
BIOS Settings

Depending on the system, motherboard, and BIOS version, the following BIOS settings may be necessary for the proper operation of NVMe drives.

4-1 Changing Retimer Settings

Follow the steps below to use the Configuration Utility.

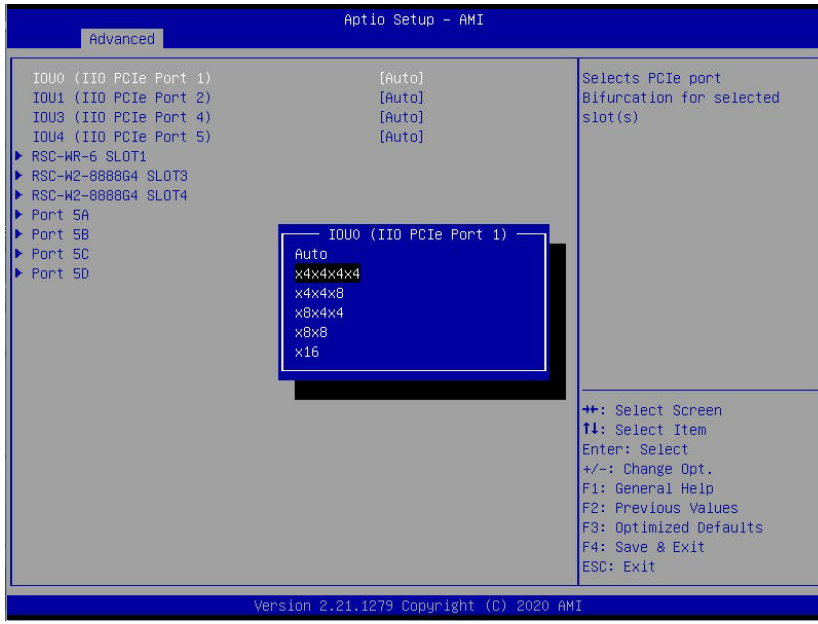
1. Reset the system.
2. Press <DEL> to enter the BIOS Setup Utility.
3. Navigate to the Advanced menu.
4. Enter the Chipset Configuration submenu.



5. Select North Bridge.

6. Select IIO Configuration.

7. Select the appropriate IOU option and then select x4x4x4x4.



8. Enter the IIO DFX Configuration menu.

9. Select CPU1 Configuration.

10. Select the appropriate port option.

11. Under Preset Settings, select DN Tx Preset and modify it to P7.

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