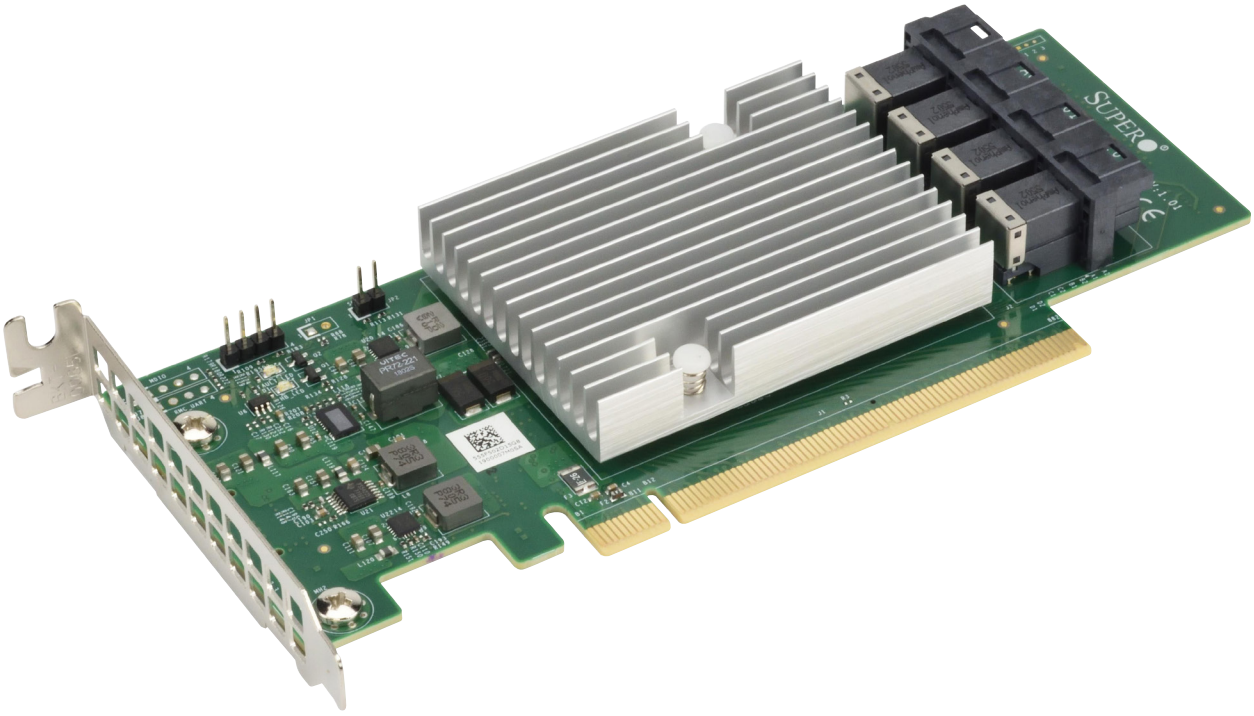
SAS Controller Card

AOC-S3616L-L16iT



USER'S MANUAL

Revision 1.0

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Manual Revision 1.0

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Preface

About this Manual

This manual is written for professional system integrators and PC technicians. It provides information for the installation and use of the controller card. Installation and maintenance should be performed by experienced technicians only.

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. This manual may be periodically updated without notice. Please check the Supermicro website for possible updates to the manual revision level.

Notes

If you have any questions, contact our support team at: support@supermicro.com.

Warnings

Special attention should be given to the following symbols used in this manual.

Warning! Indicates important information given to prevent equipment/property damage or personal injury.

Warning! Indicates high voltage may be encountered when performing a procedure.

Contents

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Chapter 1

Introduction

1.1 Overview

The Supermicro SAS AOC-S3616L-L16iT internal controller card features sixteen internal SAS3 ports with four internal min-SAS HD connectors. It utilizes a Broadcom SAS3616 SAS3 controller chip and features a 1.2 GHz processor. The AOC-S3616L-L16iT can provide support for JBOD systems of up to 1024 devices. It is streamlined to meet the growing demand for increased data throughput and scalability requirements across the enterprise-class server platforms. It is a low power and cost-effective near-line storage solution that delivers maximum performance and reliability.

1.2 Unpacking the Card

Inspect the box in which the product was shipped and note if it was damaged. If any equipment appears damaged, file a claim with the carrier who delivered it.

1.3 System Features

The following is an overview of the main features.

System Features
General
Gen3 PCI Express x16 Broadcom SAS3616 SAS3 controller Sixteen internal SAS3 ports with four mini-SAS HD connectors 1.2 GHz processor HBA supports 1024 devices Supports JBOD Enlarged venting hole for improved airflow Supports 12, 6 and 3 Gb/s SAS and 6 and 3 Gb/s SATA data transfer rates Operates up to 45ºC
OS Support
Windows 2012 and 2008; RedHat Enterprise and SUSE Linux
Power Consumption
15.1 Watts
Physical Dimensions
Low-profile (L x H) 6.1" x 2.7 " (15.5 cm x 6.9 cm)

1.4 Connectors and Indicators

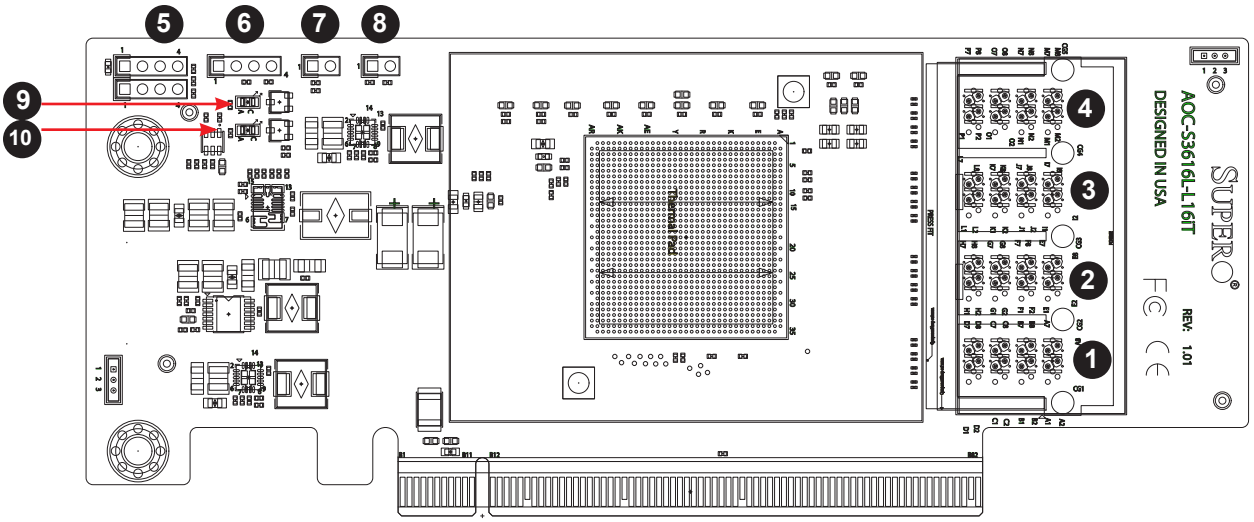

Figure 1-1. Layout

Components		
Item	**Feature**	**Description**
1	SAS Connector	SAS 0 – 3
2	SAS Connector	SAS 4 – 7
3	SAS Connector	SAS 8 – 11
4	SAS Connector	SAS 12 – 15
5	MDIO (J7)	Header (manufacturer use only)
6	UART0 (J5)	Debug port (manufacturer use only)
7	JP1	Internal test (engineering use only)
8	SBL_DIS (JP2)	Boot loader (manufacturer use only)
9	FAULT_LED	System fault LED: Solid ON red when system fault occurs
10	HB_LED	Heart beat LED: Blinking green indicates firmware is loaded and running on the controller chip

Chapter 2

Installation

2.1 Static-Sensitive Devices

Electrostatic Discharge (ESD) can damage electronic components. To avoid damaging your controller 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 controller card from the antistatic bag.
- Handle the expansion card by its edges only; do not touch its components or peripheral chips.
- Put the controller 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 controller card.

Unpacking

The controller 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.

2.2 Installing the Controller Card

Depending upon which system configuration is used, a riser card may or may not be required .

Installing the Controller Card

1. Power down the system, remove the power cords from the rear of the power supply and remove the system cover.
2. Verify that the PCI-E chassis slots in your system are low-profile. If your system has full-height PCI-E slots, replace the low-profile bracket on your card with a full-height bracket.
3. Insert the controller card into a x16 PCI-E slot.
4. Connect the mini-SAS HD cables from the controller card to either the direct attached storage target devices or the cable sockets on the backplanes.
5. The cable latch will click into the locked position when connected properly.
6. Replace the system cover, plug in the power cord and power up the system.

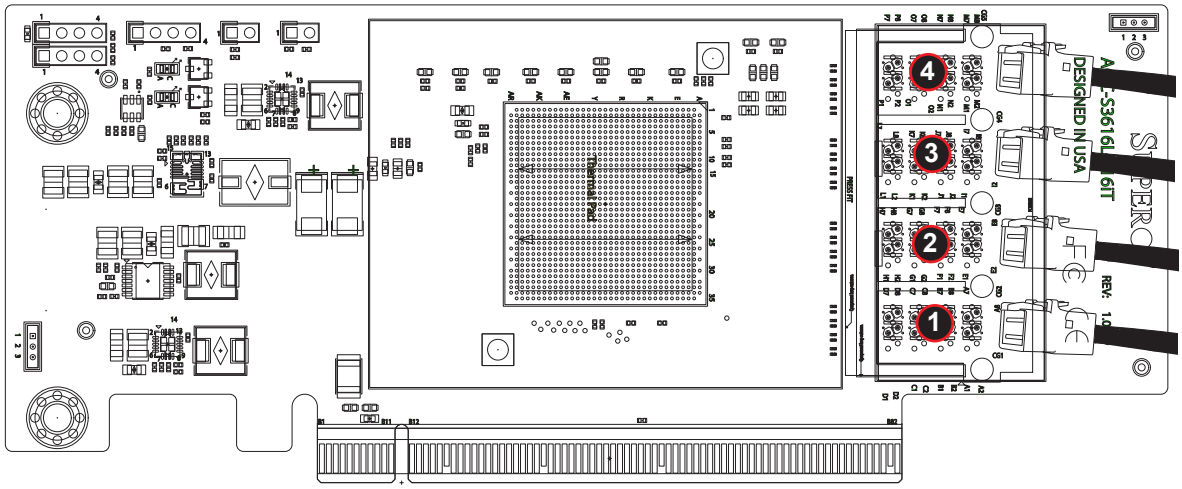

Figure 2-1. Connecting the Cables

2.4 Installing the Drivers in Windows

Refer to the instructions that came with your controller card and follow the manufacturer's recommended steps for installing the operating system driver. Download the latest drivers from the Supermicro project board at https://www.supermicro.com/wftp/driver/SAS/LSI/3616.