



AOC-S3008L-L8i

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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Release Date: Sept. 22, 2015

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## Preface

### About this User's Guide

This user's guide is written for system integrators, IT professionals, and knowledgeable end users. It provides information for the installation and use of the AOC-S3008L-L8i add-on card.

### 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 of this user's guide. The add-on 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 to the manufacturer, the RMA number should be prominently displayed on the outside of the shipping carton and 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, RMA authorizations may be requested online (<http://www.supermicro.com/support/rma/>).

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

During the warranty period, contact your distributor first for any product problems.

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### Conventions Used in the User's Guide

Pay special attention to the following symbols for proper system installation:

**Warning:** Important information given to ensure proper system installation and to avoid possible damage done to the components or injury to yourself.



**Note:** Additional information given for proper system setup.

## Important Links

For your system to work properly, please follow the links below to download all necessary drivers/utilities and the user's manual for your server.

- Supermicro product manuals: <http://www.supermicro.com/support/manuals/>
- Product drivers and utilities: <ftp://ftp.supermicro.com>
- Product safety info: [http://www.supermicro.com/about/policies/safety\\_information.cfm](http://www.supermicro.com/about/policies/safety_information.cfm)
- If you have any questions, please contact our support team at: [support@supermicro.com](mailto:support@supermicro.com)

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# Chapter 1

## Introduction

### 1-1 Overview

Congratulations on purchasing your add-on 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.

### 1-2 About this Add-on Card (Used for IR mode support)

The Supermicro AOC-S3008L-L8i is the most cost-effective internal SAS RAID Adapter in today's market. With the Avago 3008 SAS controller, eight 12Gb/s SAS connectors, and a low-profile PCI-E Gen. 3 x8 slot built in, this add-on card offers high-performance connectivity with enormous storage capacity to meet the growing needs of high-end server platforms.

Featuring the Avago SAS 3008 I/O processor with Fusion-MPT (Message Passing Technology) support, the AOC-S3008L-L8i offers optimal RAID performance, and a PCI-E host interface with increased I/O bandwidth, delivering an intelligent and robust RAID solution to the market. For more information regarding product support or updates, please refer to our website at <http://www.supermicro.com/products/accessories/addon/AOC-S3008L-L8i.cfm>.

### 1-3 Key Features

The key features of this add-on card include the following:

- Standard PCI-E Gen3 x8 lanes host interface
- Eight internal SAS3 ports w/two mini SAS HD cabling
- Avago SAS 3008 SAS-3.0 controller
- Supports RAID 0, 1, and 10
- Onboard hardware I/O processor at 1.2 GHz
- Software RAID supports up to 63 devices
- Low profile PCI-E support

- Enlarged venting hole mounting bracket for improved air flow
- Power management support at 13 watts
- Port-independent auto-negotiation
- Capable of automatic-negotiation for PCI-E (1x, 2x, and 3x) link widths
- Power management support
- Supports MegaRAID Storage Manager software
- Supports SSP, SMP, STP, and SATA products
- Zoning capability w/SAS2 expanders
- Supports 3.0, 6.0 and 12.0 Gb/s SAS and SATA data transfer rates
- OS support: Windows 2012, 2008, RedHat Enterprise, and SUSE Linux
- Operation temperatures: 0°C to 55°C
- Power requirement at 18W
- Dimensions 2.7" (H) x 6.6" (L) (68.83cm (H) x 167.64cm (L))

## **1-4 Supermicro Motherboard Support**

This add-on card supports the following motherboards:

- X10SRD-F
- X10SDV-TLN4F
- X10SLA-F
- X10SLX-F
- X10SRA-F
- X10SRG-F
- X10SRH-CF



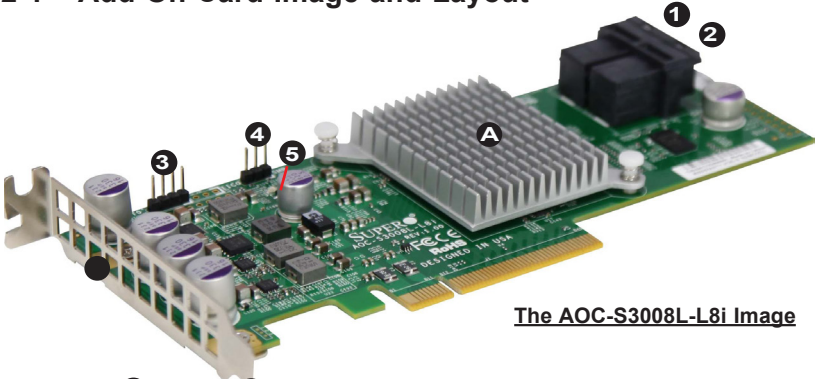
- X10SRH-CLN4F
- X10SRI-F
- X10SRL-F
- X10SRW-F
- X10DAi
- X10DAC
- X10DAX
- X10DAL-i
- X10DRC-T4+
- X10DRC-LN4+
- X10DRI-T4+
- X10DRI-LN4+
- X10DRT-P
- X10DRD-iNTP
- X10DRD-LTP
- X10DRFF-C
- X10DRFR-T
- X10DRG-Q
- X10DRH-C
- X10DRH-iT
- X10DRI-T
- X10DRL-CT

- X10DRL-i
- X10DRT-L
- X10DRT-LIBQ
- X10DRT-LIBF
- X10DRU-i+
- X10DRW-E
- X10DRW-N
- X10DRX
- X10DRD-iNT
- X10DRD-L

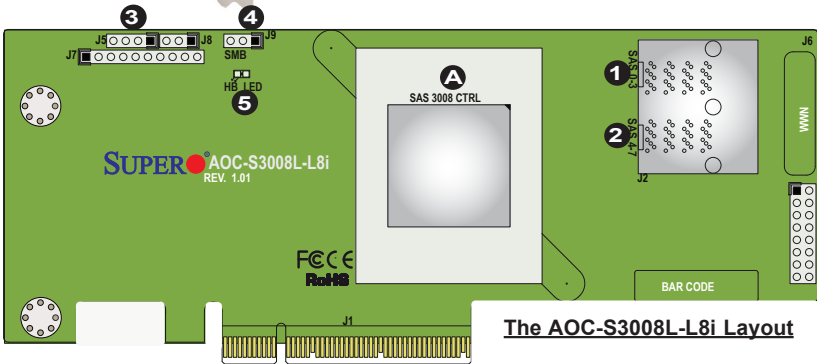
## Chapter 2

### Hardware Components

#### 2-1 Add-On Card Image and Layout



**The AOC-S3008L-L8i Image**



**The AOC-S3008L-L8i Layout**

#### 2-2 Major Onboard Components

The following major components are installed on the AOC-S3008L-L8i:

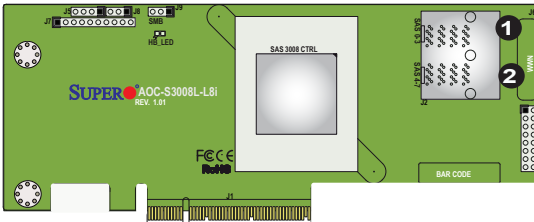
Major Components					
No	Component Name	No	Component Name	No	Component Name
A	3008 SAS CTRL	1	SAS ports 0~3	4	J9: System Management Bus (SMB)
		2	SAS ports 4~7	5	System Heartbeat LED
		3	J5: UART0		

## 2-3 SAS 3.0 Ports

### SAS Ports

Eight SAS ports, supported by the Avago 3008 SAS controller, are located on the add-on card. SAS 0-3 and SAS 4-7 support SAS 3.0 connections. See the table below for pin definitions.

SAS 3.0 Pin Definitions	
Pin#	Signal
1	Ground
2	SATA_TXP
3	SATA_TXN
4	Ground
5	SATA_RXN
6	SATA_RXP
7	Ground



- 1. SAS Ports 0~3
- 2. SAS Ports 4~7

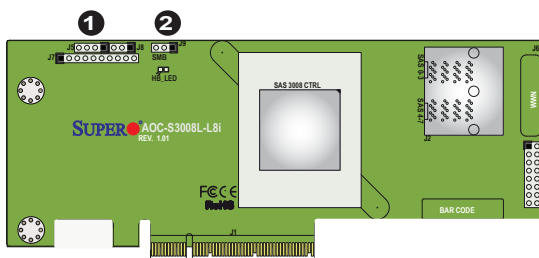
## 2-4 Connectors & Headers

### UART0 Header

The universal asynchronous receiver/transmitter (UART) header is located on J5 on the AOC-S3008L-L8i. Connect a cable on this header for UART support, which will provide serial communications over a computer, a peripheral device, or a serial port. See the layout below for the location.

### System Management Bus (SMB) Header

The SMB header (J9) is used to monitor critical parameters on the add-on card to enhance overall system performance. See the layout below for the location.



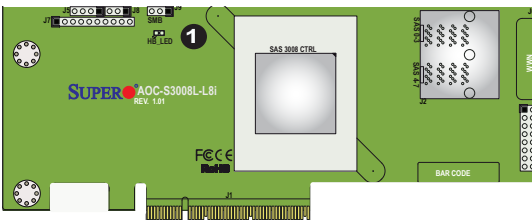
1. UART0 Header
2. SMB Header

## 2-5 LED Indicators

### System Heartbeat LED

The System Heartbeat LED is located below the SMB header on the add-on card. When this LED is blinking, the system is functioning normally. See the table below for more information.

System Heartbeat LED Status	
Color/State	Definition
Green: Blinking	System: Normal
Off or Red	System: Disabled or Failed



### 1. System Heartbeat LED

## Chapter 3

### Installation



**Note:** Your system came with the AOC--S3008L-L8i add-on card pre-installed as a part of an integrated solution. We do not recommend that any part of your system components be removed and re-installed. However, if you do need to remove or re-install a system component, including this add-on card, please follow the instructions below to ensure proper system setup. Also, be sure to remove the power cord first before adding, removing or changing any hardware components to avoid damaging the system or components.

#### 3-1 Static-Sensitive Devices

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

## **3-2 Before Installation**

To install the add-on card properly, be sure to follow the instructions below.

1. Power down the system.
2. Remove the power cord from the wall socket.
3. Use industry-standard anti-static equipment (such as gloves or wrist strap) and follow the instructions listed on Page 3-1 to avoid damage caused by ESD.
4. Familiarize yourself with the server, motherboard, and/or chassis documentation.
5. Confirm that your operating system includes the latest updates and hotfixes.

## **3-3 Installing the Add-on Card**

Follow the steps below to install the add-on card into your system.

1. Remove the server cover and, if necessary, set aside any screws for later use.
2. Remove the add-on card slot cover. If the case requires a screw, place the screw aside for later use.
3. Position the add-on card in the slot directly over the connector, and gently push down on both sides of the card until it slides into the PCI connector.
4. Secure the add-on card to the chassis. If required, use the screw that you previously removed.
5. Attach any necessary external cables to the add-on card.
6. Replace the chassis cover.
7. Plug the power cord into the wall socket, and power up the system.



(Disclaimer Continued)

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