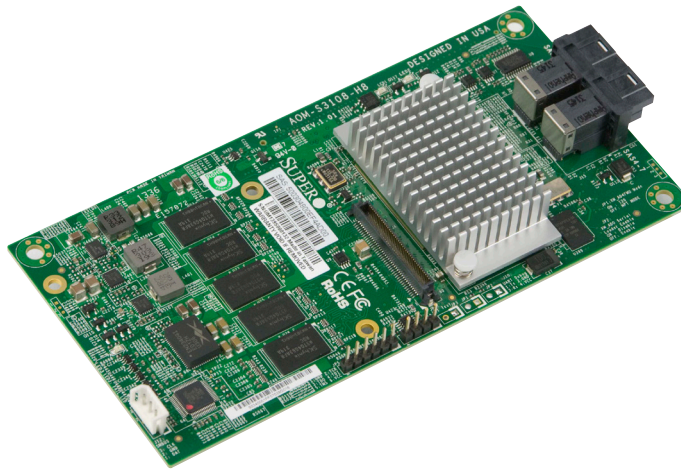
AOM-S3108-H8



User's Guide

Revision 1.0a

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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.

User's Guide Revision 1.0a

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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 AOM-S3108-H8 add-on module.

About this Add-on Module

The Supermicro AOM-S3108-H8 is a highly-efficient SAS controller that offers a high level of performance in today's server and storage environments. This card can directly support eight SSD devices and delivers SAS data transfer rates of up to 12Gb/s. Designed for use on the X9DRW-CF series motherboard, the AOM-S3108-H8 also supports Supercap, MegaRAID, and can run on Windows and Linux operating systems. Supermicro continues to be an industry leader with the introduction of the AOM-S3108-H8.

An Important Note to the User

Your card 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 motherboard 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/).

The manufacturer 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.

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

Conventions Used in the User's Guide

Pay special attention to the following symbols for proper system installation and for safety instructions to prevent damage to the system or injury to yourself:

Warning: Important information given to ensure proper system installation or to prevent damage to the components or injury to yourself.

Note: Additional information given for proper system setup.

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Table of Contents

Chapter 1

Overview

1-1 Overview

Congratulations on purchasing your add-on module 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 refer to our website at:

http://www.supermicro.com/products/accessories/addon/aom-s3108-h8.cfm.

1-2 Technical Specifications

General

- LSISAS 3108
- Supported motherboards: X9DRW-CF, X9DRW-CF31, X9DRW-CTF31
- Supports RAID 0, 1, 5, 6, 10, 50, 60
- Supports 16 Physical Devices with expander backplane
- Supports MegaRAID Storage Manager Software
- Supports 1.5, 3.0, 6.0, and 12.0 SAS data transfer rates and 3.0 and 6.0 Gb/s SATA data transfer rates
- Supports fastpath (Free) and cachecade (AOC-CHCD-PRO2-ESW)
- 2GB DDR3 on-card cache at 1866MHz
- Power Usage: 16W
- Compatible with: Supercap BTR-TFM8G-LSICVM02. Installation kit PN: MCP-240-00127-0N. Spacer Kit: MCP-410-00010-0N (2 Spacers and 4 Screws)

OS Support

- Windows® Server 2003 (x64 edition, 64-bit, and 32-bit)
- Windows® Server 2008 R2 (x64 edition and 64-bit)
- Windows® Server 2008 (x64 edition, 64-bit, and 32-bit)
- Windows® Vista (x64 edition and 32-bit)
- Windows® XP
- RedHat Enterprise, SuSe Linux

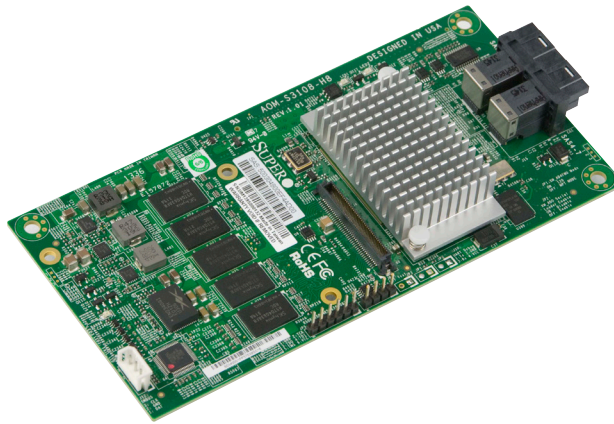
Physical Dimensions

- Dimensions: 6" x 3" (LxH)

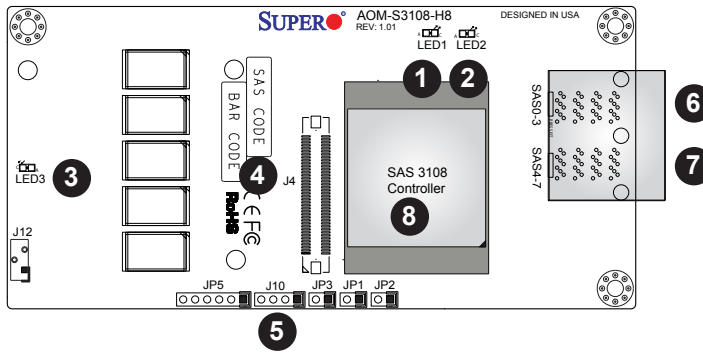
Chapter 2

Hardware Components

2-1 Add-On Module Image and Layout



The AOM-3108-H8 Image



The AOM-3108-H8 Layout

2-2 Major Components

The following major components are on the AOM-S3108-H8:

Major Components			
#	**Description**	**#**	**Description**
1	LED1 - Active LED	5	J10 - UART Header
2	LED2 - Host HB LED	6	SAS Ports 0-3
3	LED3 - Fail LED	7	SAS Ports 4-7
4	Module Connector	8	SAS 3108 Controller

2-3 SAS 3.0 Ports

SAS 3.0 Ports

Eight SAS 3.0 ports, supported by the Avago 3108 SAS controller, are located on the add-on module.

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

2-4 Headers

UART Header

The universal serial asynchronous receiver/transmitter (UART) header is located at J10. 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 table below for pin definitions.

UART Header Pin Definitions

Pin#	Definition
1	Tx
2	Rx
3	GND
4	VCC

2-5 LED Indicators

Active LED

The Active LED at LED1 indicates there is activity with the SAS ports. When the LED is green, there is activity with the SAS ports.

Active LED Indicator	
LED Color	**Definition**
Off	No Activity
Green	SAS Port Activity

Host HB LED

The Host Heartbeat LED at LED2 shows the firmware heartbeat information. When this LED is green, there is activity with the firmware heartbeat.

Host HB LED Indicator	
LED Color	**Definition**
Off	No Activity
Green	Heartbeat Activity

Fail LED

The Fail LED at LED3 shows the firmware fault handling. When this LED is red, there is a failure with the firmware.

Fail LED Indicator	
LED Color	**Definition**
Off	No Activity
Red	Firmware Fail

Notes

Chapter 3

Installation

3-1 Static-Sensitive Devices

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

Unpacking

The add-on module is shipped in antistatic packaging to avoid static damage. When unpacking your component or your system, make sure that 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 add-on module properly, follow the instructions below.

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

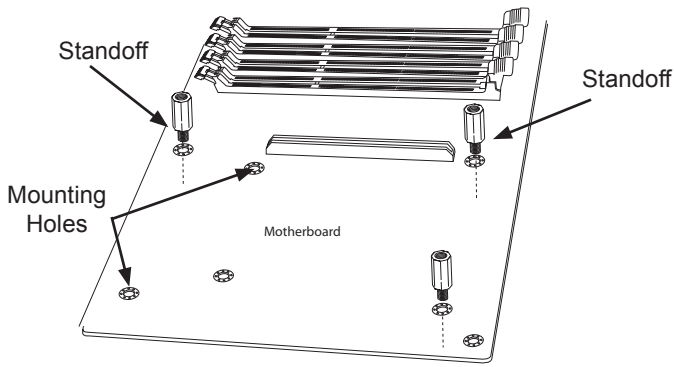
3-3 Installing the Add-on Module

The following items are needed to complete the installation:

- AOM-S3108-H8 Add-on Module
- Supercap: BTR-TFM8G-LSICVM02
- Installation Kit PN: MCP-240-00127-0N
- Spacer Kit: MCP-410-00010-0N (two spacers and four screws)

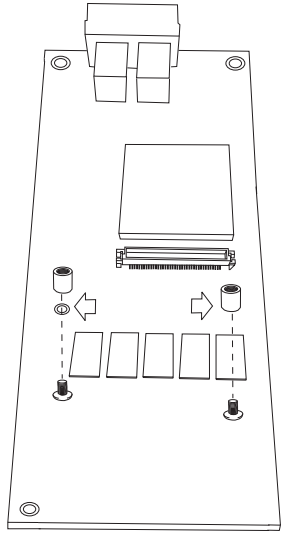
Follow the steps below to install the add-on module in your system.

1. Remove the system cover and set aside any screws for later use.
2. Install standoffs into the mounting holes.



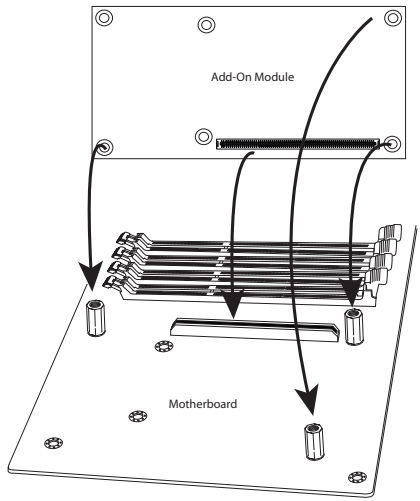
Note: Module graphics in this manual are based on the latest revision. Your module and motherboard may or may not look exactly the same as the graphics shown.

3. Before installing the AOM-S3108-H8 module onto the motherboard, install the spacers onto the middle set of holes on the module. Secure the spacers by tightening the screws on the bottomside of the module.

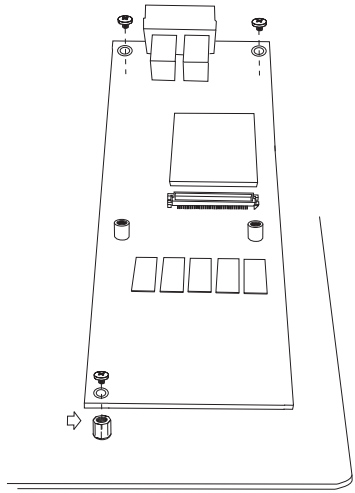


4. Align the connector on the bottom of the add-on module with the PCI-E 3.0 slot on the motherboard.

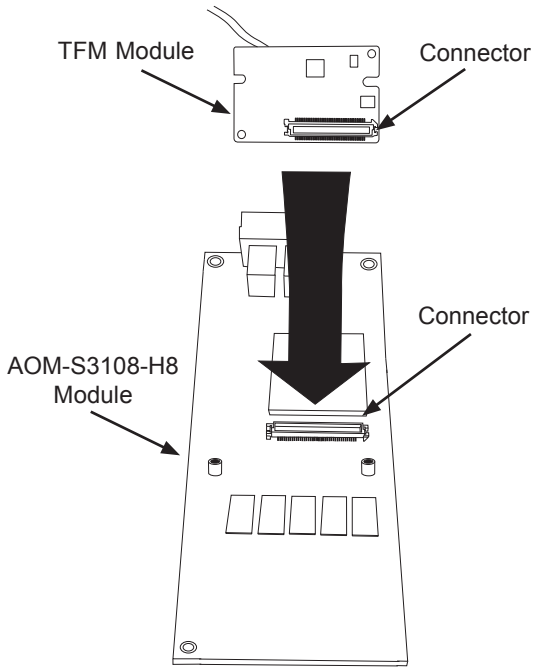
5. With both hands, press the add-on module down firmly into the slot.



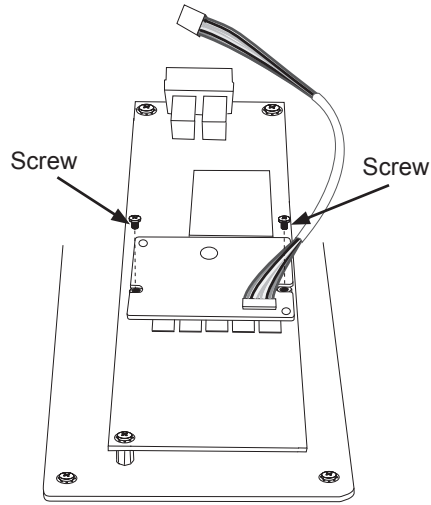
6. With the add-on module securely seated in the slot, insert Pan Head #6 screws into the standoff holes and tighten them with a Phillips screwdriver.



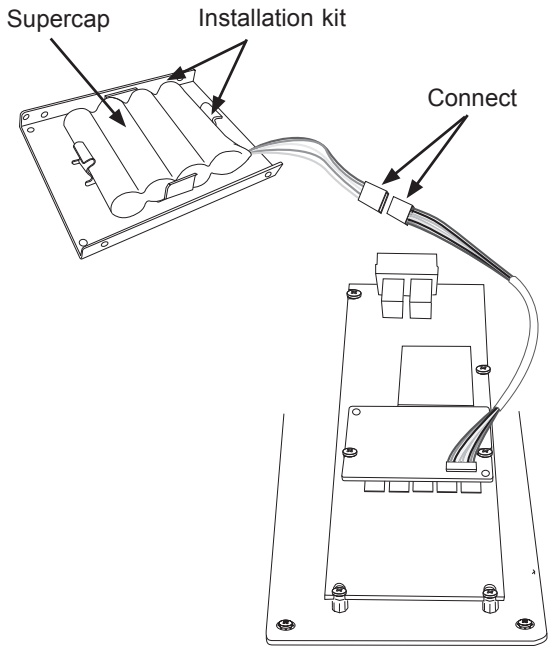
7. Align the connector on the bottom of the TFM module with the connector on the AOM-S3108-H8 module.



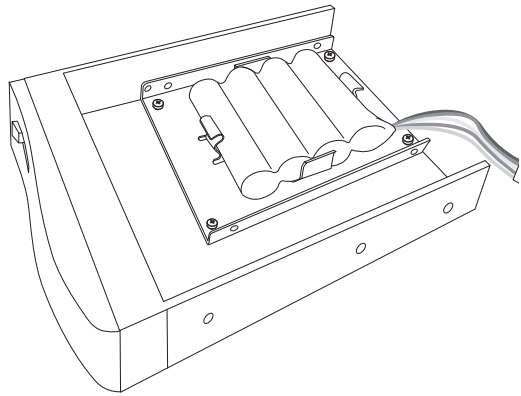
8. Press the TFM module down firmly to seat the module correctly in the slot. Insert two screws provided in the spacer kit and tighten them to secure the TFM module.



9. With the TFM module seated in the AOM-S3108-H8 module, place the Supercap battery in the installation kit. Connect the Supercap wire with the TFM module wire.



10. Mount the installation kit into a 2.5 inch hard disk drive bay. Insert the drive bay back into the system. Reinstall the system cover, reattach the power cord and power on the system.



(Disclaimer Continued)

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