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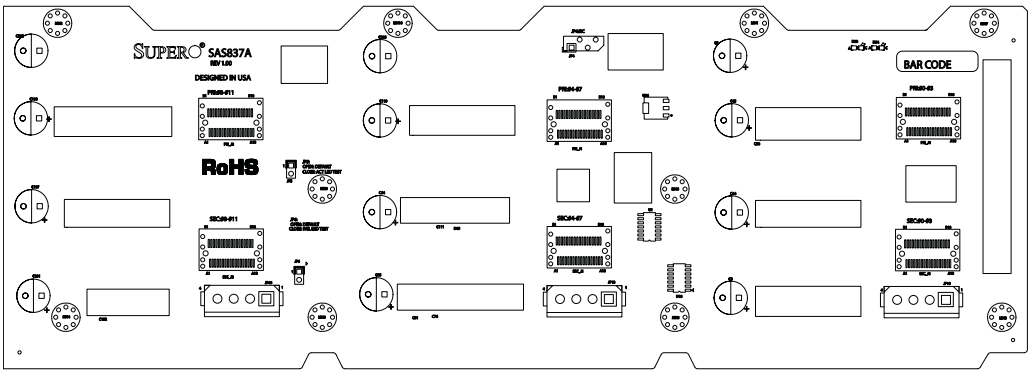

SAS-837A BACKPLANE

USER'S GUIDE

Rev. 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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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/).

Whenever possible, repack the backplane in the original Supermicro box, using the original packaging materials. If these are no longer available, be sure to pack the backplane in an anti-static bag and inside the box. Make sure that there is enough packaging material surrounding the backplane so that it does not become damaged during shipping.

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.

Notes

Chapter 1

Safety Guidelines

To avoid personal injury and property damage, carefully follow all the safety steps listed below when accessing your system or handling the components.

1-1 ESD Safety Guidelines

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

- Use a grounded wrist strap designed to prevent static discharge.
- Touch a grounded metal object before removing a component from the antistatic bag.
- Handle the backplane by its edges only; do not touch its components, peripheral chips, memory modules or gold contacts.
- When handling chips or modules, avoid touching their pins.
- Put the backplane and peripherals back into their antistatic bags when not in use.

1-2 General Safety Guidelines

- Always disconnect power cables before installing or removing any components from the computer, including the backplane.
- Disconnect the power cable before installing or removing any cables from the backplane.
- Make sure that the backplane is securely and properly installed on the motherboard to prevent damage to the system due to power shortage.

1-3 An Important Note to Users

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 manual.

1-4 Introduction to the SAS-837A Backplane

The SAS-837A backplane has been designed to utilize the most up-to-date technology available, providing your system with reliable, high-quality performance.

This manual reflects SAS-837A Revision 1.00, the most current release available at the time of publication. Always refer to the Supermicro Web site at www.supermicro.com for the latest updates, compatible parts and supported configurations.

Chapter 2

Connectors, Jumpers and LEDs

2-1 Front Connectors

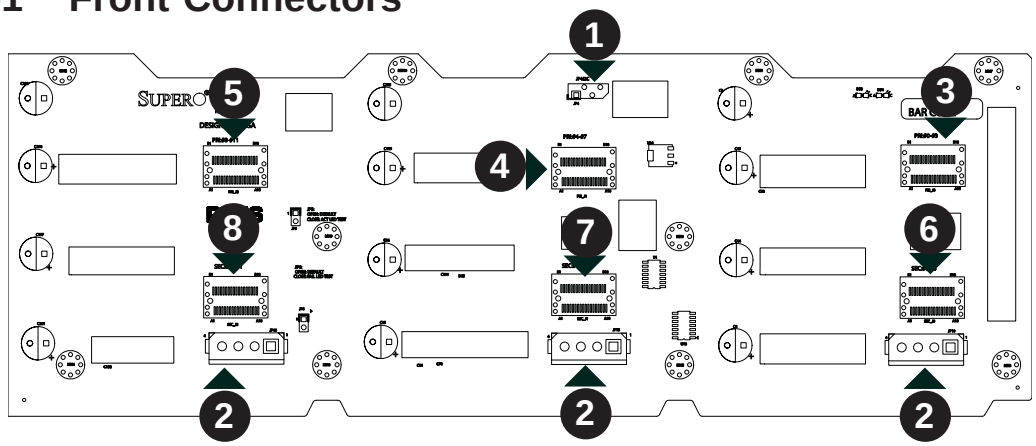

Figure 2-1: Front Connectors

Front Connectors

1. I²C connector: JP4:I2C
2. Power connectors: JP46, JP13 and JP10.
3. Primary SAS port: PRI_J0
4. Primary SAS port: PRI_J1
5. Primary SAS port: PRI_J2
6. Secondary SAS port: SEC_J0
7. Secondary SAS port SEC_J1
8. Secondary SAS port SEC_J2

2-2 Front Connector and Pin Definitions

1. I²C Connector

The I²C connector is used to monitor the power supply status and to control the fans. See the table on the right for pin definitions.

I²C Connector Pin Definitions

Pin#	Definition
1	Data
2	Ground
3	Clock
4	No Connection

2. Backplane Main Power Connectors

The 4-pin connectors, designated JP46, JP13 and JP10 provide power to the backplane. See the table on the right for pin definitions.

Backplane Main Power 4-Pin Connector

Pin#	Definition
1	+12V
2 and 3	Ground
4	+5V

3. - 8. SAS Ports

The primary and secondary sets of SAS ports provide expander features including cascading and failover. From right to left the ports are Primary 0 through Primary 2 and Secondary 0 through Secondary 2.

2-3 Front LED Indicators

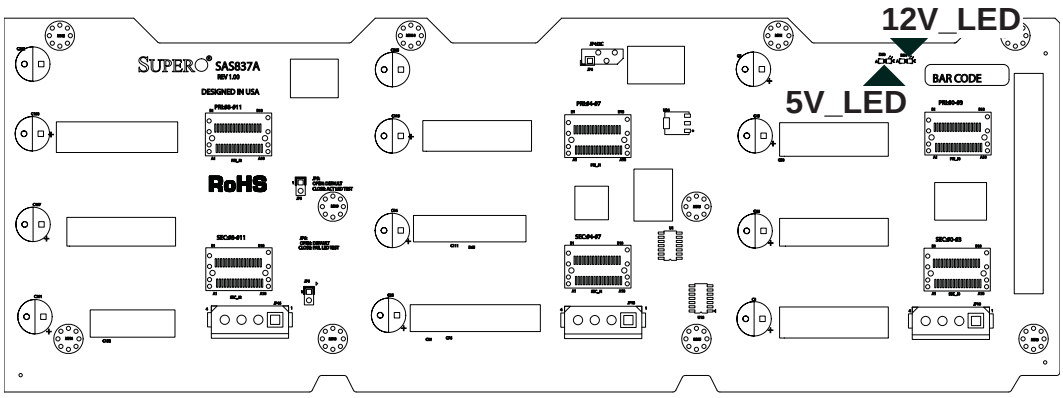

Figure 2-2: Front LED Indicators

Front LEDs		
LED	**Default State**	**Specification**
5V_LED1	On	Green LED indicates backplane power activity. Light is on during normal operation
12V_LED2	On	Green LED indicates backplane power activity. Light is on during normal operation.

2-4 Rear Connectors and LED Indicators

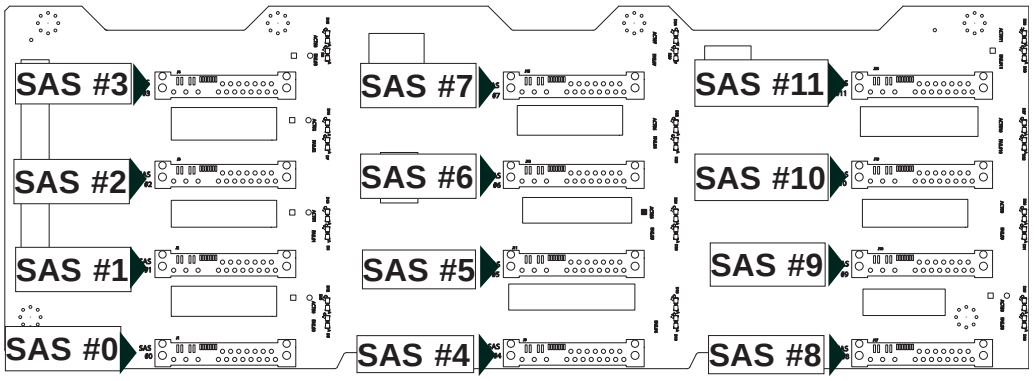

Figure 2-3: Rear Connectors

Rear SAS/SATA Connectors			
Rear Connector	**SAS Drive Number**	**Rear Connector**	**SAS Drive Number**
SAS #0	SAS/SATA HDD #0	SAS #6	SAS/SATA HDD #6
SAS #1	SAS/SATA HDD #1	SAS #7	SAS/SATA HDD #7
SAS #2	SAS/SATA HDD #2	SAS #8	SAS/SATA HDD #8
SAS #3	SAS/SATA HDD #3	SAS #9	SAS/SATA HDD #9
SAS #4	SAS/SATA HDD #4	SAS #10	SAS/SATA HDD #10
SAS #5	SAS/SATA HDD #5	SAS #11	SAS/SATA HDD #11

Rear LED Indicators					
Rear Connector	**Hard Drive Activity LED**	**Failure LED**	**Rear Connector**	**Hard Drive Activity LED**	**Failure LED**
SAS #0	ACT #0	FAIL #0	SAS #6	ACT #6	FAIL #6
SAS #1	ACT #1	FAIL #1	SAS #7	ACT #7	FAIL #7
SAS #2	ACT #2	FAIL #2	SAS #8	ACT #8	FAIL #8
SAS #3	ACT #3	FAIL #3	SAS #9	ACT #9	FAIL #9
SAS #4	ACT #4	FAIL #4	SAS #10	ACT #10	FAIL #10
SAS #5	ACT #5	FAIL #5	SAS #11	ACT #11	FAIL #11

Chapter 3

Connecting the SAS2-837A and SAS-837EL Backplanes

3-1 Connecting Dual Backplanes

The SAS2-837EL and SAS-837A backplanes are designed to work together. The following configurations show how the SAS2-837EL and SAS-837A may be connected together.

Identifying the Backplanes

Examine the diagrams below and identify the SAS2-837EL and SAS-837A backplanes. Identify the locations of the SAS ports on each board. Also note the location of the primary I²C connectors, if the optional I²C configuration is desired.

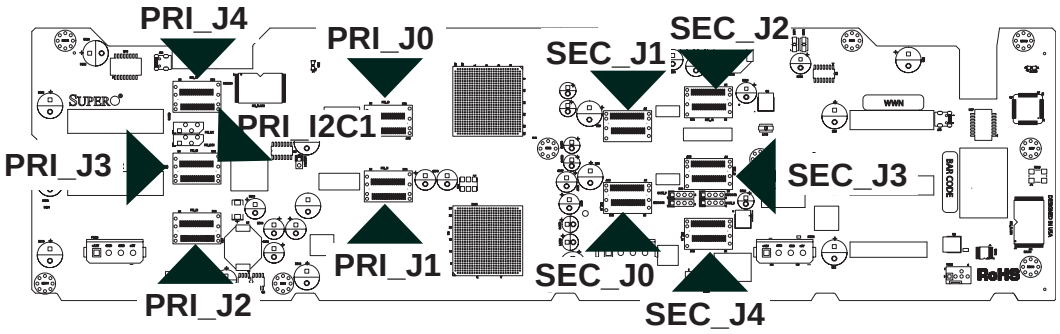

Figure 3-1: SAS2-837EL Backplane

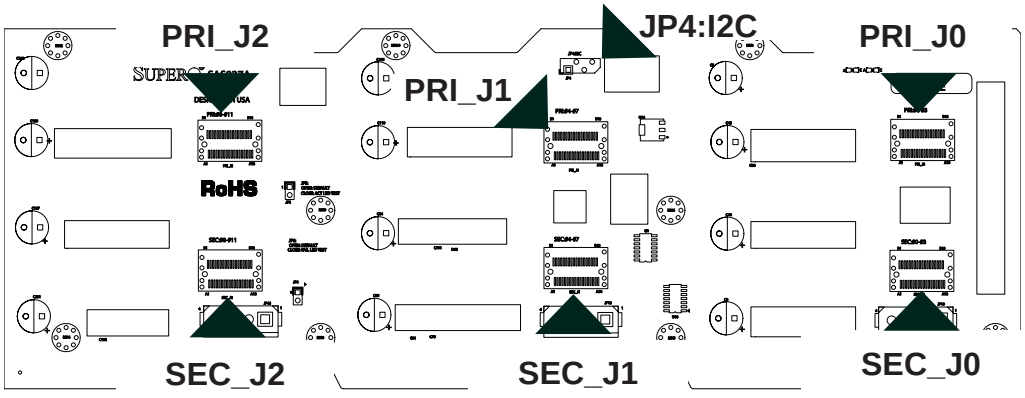

Figure 3-2: SAS-837A Backplane

Configuring Dual Backplanes

Configure the SAS2-837EL2 and SAS-837A as shown in the chart below. Connect the port in Column A to the port in the Column B using the cable in Column C.

Dual Backplane Configuration Chart		
Column A SAS2-837EL Port	**Column B SAS-837A Port**	**Column C Cable Name**
Primary SAS port PRI_J2	Primary SAS port PRI_J0	CBL-0421L
Primary SAS port PRI_J3	Primary SAS port PRI_J1	CBL-0421L
Primary SAS port PRI_J4	Primary SAS port PRI_J2	CBL-0421L
Secondary SAS port SEC_J2	Secondary SAS prot SEC_J0	CBL-0421L
Secondary SAS port SEC_J3	Secondary SAS prot SEC_J1	CBL-0421L
Secondary SAS port SEC_J4	Secondary SAS prot SEC_J2	CBL-0421L
Primary I^2C connector PRI_I2C1 (optional)	1^2C connector JP4:I2C (optional)	CBL-0102L

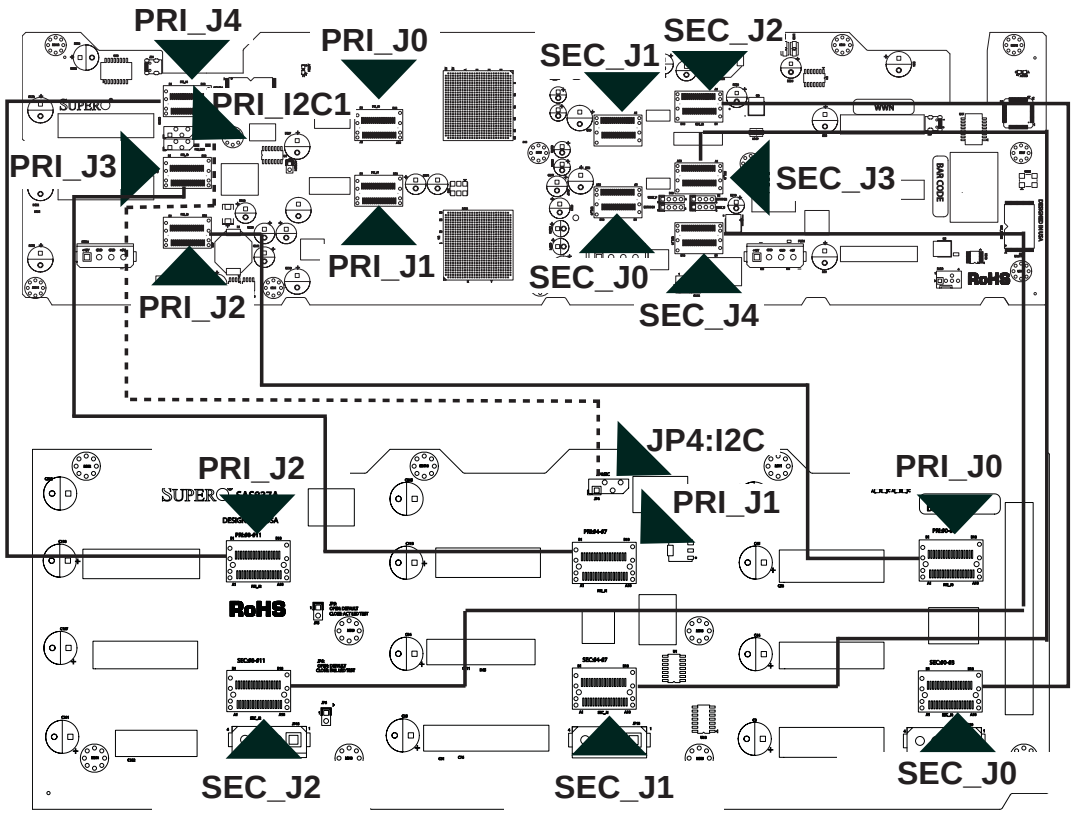

Figure 3-3: SAS2-827EL Above, SAS-837A Backplane Below

Notes

Disclaimer (cont.)

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