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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.
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
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.

<table>
<thead>
<tr>
<th>Pin#</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Data</td>
</tr>
<tr>
<td>2</td>
<td>Ground</td>
</tr>
<tr>
<td>3</td>
<td>Clock</td>
</tr>
<tr>
<td>4</td>
<td>No Connection</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Pin#</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>+12V</td>
</tr>
<tr>
<td>2 and 3</td>
<td>Ground</td>
</tr>
<tr>
<td>4</td>
<td>+5V</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Front LEDs</th>
<th>Default State</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>5V_LED1</td>
<td>On</td>
<td>Green LED indicates backplane power activity. Light is on during normal operation.</td>
</tr>
<tr>
<td>12V_LED2</td>
<td>On</td>
<td>Green LED indicates backplane power activity. Light is on during normal operation.</td>
</tr>
</tbody>
</table>
2-4 Rear Connectors and LED Indicators

![Rear Connectors Diagram]

Figure 2-3: Rear Connectors

<table>
<thead>
<tr>
<th>Rear Connector</th>
<th>SAS Drive Number</th>
<th>Rear Connector</th>
<th>SAS Drive Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAS #0</td>
<td>SAS/SATA HDD #0</td>
<td>SAS #6</td>
<td>SAS/SATA HDD #6</td>
</tr>
<tr>
<td>SAS #1</td>
<td>SAS/SATA HDD #1</td>
<td>SAS #7</td>
<td>SAS/SATA HDD #7</td>
</tr>
<tr>
<td>SAS #2</td>
<td>SAS/SATA HDD #2</td>
<td>SAS #8</td>
<td>SAS/SATA HDD #8</td>
</tr>
<tr>
<td>SAS #3</td>
<td>SAS/SATA HDD #3</td>
<td>SAS #9</td>
<td>SAS/SATA HDD #9</td>
</tr>
<tr>
<td>SAS #4</td>
<td>SAS/SATA HDD #4</td>
<td>SAS #10</td>
<td>SAS/SATA HDD #10</td>
</tr>
<tr>
<td>SAS #5</td>
<td>SAS/SATA HDD #5</td>
<td>SAS #11</td>
<td>SAS/SATA HDD #11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rear LED Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear Connector</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>SAS #0</td>
</tr>
<tr>
<td>SAS #1</td>
</tr>
<tr>
<td>SAS #2</td>
</tr>
<tr>
<td>SAS #3</td>
</tr>
<tr>
<td>SAS #4</td>
</tr>
<tr>
<td>SAS #5</td>
</tr>
</tbody>
</table>
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](image1)

![Figure 3-2: SAS-837A Backplane](image2)
Configuring Dual Backplanes

Configure the SAS-2-837EL2 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.

<table>
<thead>
<tr>
<th>Column A SAS2-837EL Port</th>
<th>Column B SAS-837A Port</th>
<th>Column C Cable Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary SAS port PRI_J2</td>
<td>Primary SAS port PRI_J0</td>
<td>CBL-0421L</td>
</tr>
<tr>
<td>Primary SAS port PRI_J3</td>
<td>Primary SAS port PRI_J1</td>
<td>CBL-0421L</td>
</tr>
<tr>
<td>Primary SAS port PRI_J4</td>
<td>Primary SAS port PRI_J2</td>
<td>CBL-0421L</td>
</tr>
<tr>
<td>Secondary SAS port SEC_J2</td>
<td>Secondary SAS port SEC_J0</td>
<td>CBL-0421L</td>
</tr>
<tr>
<td>Secondary SAS port SEC_J3</td>
<td>Secondary SAS port SEC_J1</td>
<td>CBL-0421L</td>
</tr>
<tr>
<td>Secondary SAS port SEC_J4</td>
<td>Secondary SAS port SEC_J2</td>
<td>CBL-0421L</td>
</tr>
<tr>
<td>Primary I2C connector PRI_I2C1 (optional)</td>
<td>12C connector JP4:I2C (optional)</td>
<td>CBL-0102L</td>
</tr>
</tbody>
</table>

Figure 3-3: SAS2-837EL Above, SAS-837A Backplane Below
Disclaimer (cont.)
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