SAS-937 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.
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 SAS-937 backplane.

• Disconnect the power cable before installing or removing any cables from the SAS-937 backplane.

• Make sure that the SAS-937 backplane is securely and properly installed on the motherboard to prevent damage to the system due to a 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 backplane you have received may or may not look exactly the same as the graphics shown in this manual.

1-4  Introduction to the SAS-937 Backplane

The SAS-937 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-937 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. Primary Power Connector: J23  
2. Secondary Power Connector: J24  
3. Primary Fan1 Connector: P_FAN1  
4. Primary Fan2 Connector: P_FAN2  
5. Primary Fan3 Connector: P_FAN3  
6. Secondary Fan1 Connector: S_FAN1  
7. Secondary Fan 2 Connector: S_FAN2  
8. Secondary Fan 3 Connector: S_FAN3  
10. Front Panel Connector: JP1  
11. SBB Connector: J29  
12. SBB Connector: J17  
13. SBB Connector: J31  
14. SBB Connector: J19  
15. SBB Connector: J21  
16. SBB Connector: J30  
17. SBB Connector: J18  
18. SBB Connector: J32  
19. SBB Connector: J20  
20. SBB Connector: J22  
21. SBB Connector: J25  
22. SBB Connector: J26  
23. SBB Connector: J27  
24. SBB Connector: J28  
25. Primary Guide Pin: GP1  
1. - 2. Power Connectors
These connectors, designated J23 and J24 supply power the two motherboard nodes in the chassis.

3. - 8. Chassis Fan Connectors
These connectors, designated P-FAN1, P_FAN2, P_FAN3, S_FAN1, S_FAN2, and S_FAN3 supply power to the chassis cooling fans.

Figure 2-2: Default Configuration - Fans Connected Directly to the Backplane

9. - 10. Front Panel Connectors
These connectors are designated JP1 and JP2. They connect the backplane to the front LED panels on the chassis. JP2 connects to the LED display panel for motherboard B. JP1 connects to the LED display panel for motherboard A.

11. - 24. SBB Connectors
The SBB connectors connect the motherboards to the backplane in the chassis and are designated as follows:

MB_A: J29, J17, JP31, J25, J19, J21, J26, and GP1.

MB_B: J30, J18, J32, J27, J20, J22, J28, GP2
2-2 Front LED Indicators

<table>
<thead>
<tr>
<th>LED</th>
<th>State</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVERHEATFAIL1</td>
<td>Solid on</td>
<td>Indicates an overheat condition on the right side of the SAS-937 backplane, which supports MB-A.</td>
</tr>
<tr>
<td>OVERHEATFAIL2</td>
<td>Solid on</td>
<td>Indicates an overheat condition on the left side of the SAS-937 backplane, which supports MB-B</td>
</tr>
</tbody>
</table>

2-3 Rear Connectors and LED Indicators

Figure 2-3: Motherboard Locations in the Chassis

Figure 2-4: Front LEDs

Figure 2-5: Rear Connectors and LEDs
### Rear SAS Connectors

<table>
<thead>
<tr>
<th>Rear Connector</th>
<th>SAS Drive Number</th>
<th>Reference</th>
<th>Rear Connector</th>
<th>SAS Drive Number</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAS #0</td>
<td>HDD 0</td>
<td>J1</td>
<td>SAS #8</td>
<td>HDD 8</td>
<td>J9</td>
</tr>
<tr>
<td>SAS #1</td>
<td>HDD 1</td>
<td>J2</td>
<td>SAS #9</td>
<td>HDD 9</td>
<td>J10</td>
</tr>
<tr>
<td>SAS #2</td>
<td>HDD 2</td>
<td>J3</td>
<td>SAS #10</td>
<td>HDD 10</td>
<td>J11</td>
</tr>
<tr>
<td>SAS #3</td>
<td>HDD 3</td>
<td>J4</td>
<td>SAS #11</td>
<td>HDD 11</td>
<td>J12</td>
</tr>
<tr>
<td>SAS #4</td>
<td>HDD 4</td>
<td>J5</td>
<td>SAS #12</td>
<td>HDD 12</td>
<td>J13</td>
</tr>
<tr>
<td>SAS #5</td>
<td>HDD 5</td>
<td>J6</td>
<td>SAS #13</td>
<td>HDD 13</td>
<td>J14</td>
</tr>
<tr>
<td>SAS #6</td>
<td>HDD 5</td>
<td>J7</td>
<td>SAS #14</td>
<td>HDD 14</td>
<td>J15</td>
</tr>
<tr>
<td>SAS #7</td>
<td>HDD 7</td>
<td>J8</td>
<td>SAS #15</td>
<td>HDD 15</td>
<td>J16</td>
</tr>
</tbody>
</table>

### Rear LED Indicators

<table>
<thead>
<tr>
<th>Rear LED</th>
<th>Activity</th>
<th>Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAS #15</td>
<td>ACT16</td>
<td>FAIL16</td>
</tr>
<tr>
<td>SAS #14</td>
<td>ACT15</td>
<td>FAIL15</td>
</tr>
<tr>
<td>SAS #13</td>
<td>ACT14</td>
<td>FAIL14</td>
</tr>
<tr>
<td>SAS #12</td>
<td>ACT13</td>
<td>FAIL13</td>
</tr>
<tr>
<td>SAS #11</td>
<td>ACT12</td>
<td>FAIL12</td>
</tr>
<tr>
<td>SAS #10</td>
<td>ACT11</td>
<td>FAIL11</td>
</tr>
<tr>
<td>SAS #9</td>
<td>ACT10</td>
<td>FAIL10</td>
</tr>
<tr>
<td>SAS #8</td>
<td>ACT9</td>
<td>FAIL9</td>
</tr>
<tr>
<td>SAS #7</td>
<td>ACT8</td>
<td>FAIL8</td>
</tr>
<tr>
<td>SAS #6</td>
<td>ACT7</td>
<td>FAIL7</td>
</tr>
<tr>
<td>SAS #5</td>
<td>ACT6</td>
<td>FAIL6</td>
</tr>
<tr>
<td>SAS #4</td>
<td>ACT5</td>
<td>FAIL5</td>
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<td>ACT3</td>
<td>FAIL3</td>
</tr>
<tr>
<td>SAS #1</td>
<td>ACT2</td>
<td>FAIL2</td>
</tr>
<tr>
<td>SAS #0</td>
<td>ACT1</td>
<td>FAIL1</td>
</tr>
</tbody>
</table>
2-4 SAS Ports

The SAS-937 backplane is designed with two separate sections, which support from one to two motherboards independently of each other. The SAS ports are used to connect the SAS drive cables.

<table>
<thead>
<tr>
<th>Number of Motherboards</th>
<th>SAS Port Connectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using 1 MB</td>
<td>J1 to J16</td>
</tr>
<tr>
<td>Using 2 MBs</td>
<td>J1 to J16 (Dual port)</td>
</tr>
</tbody>
</table>
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