BPN-SAS-F424-B12 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.
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 card 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 BPN-SAS-F424-B12 Backplane

The BPN-SAS-F424-B12 backplane has been designed to utilize the most up-to-date technology available, providing your system with reliable, high-quality performance.

This manual reflects BPN-SAS-F424-B12 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
Jumpers, Connectors and LEDs

2-1 Front Connectors

1. Main Power Connector (4-pin): JP702
2. Main Power Connector (4-pin): JP700
3. Main Power Connector (4-pin): JP701
4. Upgrade Connector #1: JP102
5. Upgrade Connector #2: JP202
6. SAS Connector #0: JS1
7. SAS Connector #1: JS2
8. SAS Connector #2: JS3
9. SAS Connector #3: JS4
10. iPass Connector: J400
11. iPass Connector: J500
2-2  Front Connector Pin Definitions

1. - 3. Backplane Main Power Connectors

The 4-pin connectors, designated JP700, JP701 and JP702 provide power to the backplane. JP701 and JP702 must be connected to the power supply. It is optional for JP700 to be connected to the power supply. See the table on the right for pin definitions.

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

4. - 5. Upgrade Connector

The upgrade connectors, designated JP102 and JP202 are firmware upgrade ports.

6. - 9. SAS Connectors

SAS connectors #0 - #3 are used to connect the SAS/SATA cables. The four ports are designated #0 - #3 and are compatible with both SAS and SATA drives.

10. - 11. iPass Connectors

The iPass connectors connect to the motherboard or the controller and are designated J400 and J500.
2-3  Front Jumper Locations and Pin Settings

Figure 2-2: Front Jumpers

Explanation of Jumpers

To modify the operation of the backplane, jumpers can be used to choose between optional settings. Jumpers create shorts between two pins to change the function of the connector. Pin 1 is identified with a square solder pad on the printed circuit board.

Note: On 2-pin jumpers, "Closed" means the jumper is on and "Open" means the jumper is off the pins.

<table>
<thead>
<tr>
<th>Jumper</th>
<th>Jumper Settings</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>JP101</td>
<td>Pins 1 - 2 Reset</td>
<td>Chip reset, Amtel chip on the rear of the backplane.</td>
</tr>
<tr>
<td></td>
<td>Pins 2 - 3 No reset (Default)</td>
<td></td>
</tr>
<tr>
<td>JP201</td>
<td>Pins 1 - 2 Reset</td>
<td>Chip reset, Amtel chip on the rear of the backplane.</td>
</tr>
<tr>
<td></td>
<td>Pins 2 - 3 No reset (Default)</td>
<td></td>
</tr>
</tbody>
</table>
2-4 Rear Connectors and LED Indicators

![Rear Connectors and LED Indicators Diagram]

Figure 2-3: Rear Connectors and LED Indicators

<table>
<thead>
<tr>
<th>Ports</th>
<th>SAS/SATA Drive Number</th>
<th>Rear Connectors</th>
<th>Failure LED Indicator</th>
<th>Activity LED Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAS#0</td>
<td>SAS/SATA HDD #0</td>
<td>J1</td>
<td>D305</td>
<td>D301</td>
</tr>
<tr>
<td>SAS#1</td>
<td>SAS/SATA HDD #1</td>
<td>J2</td>
<td>D306</td>
<td>D302</td>
</tr>
<tr>
<td>SAS#2</td>
<td>SAS/SATA HDD #2</td>
<td>J3</td>
<td>D307</td>
<td>D303</td>
</tr>
<tr>
<td>SAS#3</td>
<td>SAS/SATA HDD #3</td>
<td>J4</td>
<td>D308</td>
<td>D304</td>
</tr>
<tr>
<td>SAS#4</td>
<td>SAS/SATA HDD #4</td>
<td>J5</td>
<td>D405</td>
<td>D401</td>
</tr>
<tr>
<td>SAS#5</td>
<td>SAS/SATA HDD #5</td>
<td>J6</td>
<td>D406</td>
<td>D402</td>
</tr>
<tr>
<td>SAS#6</td>
<td>SAS/SATA HDD #6</td>
<td>J7</td>
<td>D407</td>
<td>D403</td>
</tr>
<tr>
<td>SAS#7</td>
<td>SAS/SATA HDD #7</td>
<td>J8</td>
<td>D408</td>
<td>D404</td>
</tr>
<tr>
<td>SAS#8</td>
<td>SAS/SATA HDD #8</td>
<td>J9</td>
<td>D505</td>
<td>D501</td>
</tr>
<tr>
<td>SAS#9</td>
<td>SAS/SATA HDD #9</td>
<td>J10</td>
<td>D506</td>
<td>D502</td>
</tr>
<tr>
<td>SAS#10</td>
<td>SAS/SATA HDD #10</td>
<td>J11</td>
<td>D507</td>
<td>D503</td>
</tr>
<tr>
<td>SAS#11</td>
<td>SAS/SATA HDD #11</td>
<td>J12</td>
<td>D508</td>
<td>D504</td>
</tr>
</tbody>
</table>
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