BPN-SAS-825MTQ Backplane

USER'S GUIDE

REV. 1.0a
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California Best Management Practices Regulations for Perchlorate Materials: This Perchlorate warning applies only to products containing CR (Manganese Dioxide) Lithium coin cells. “Perchlorate Material-special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate”

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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For faster service, RMA authorizations may be requested online at 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.

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Chapter 1

Guidelines

This chapter offers guidelines for personal and equipment safety, and notes about the BPN-SAS-825MTQ version documented in this manual.

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 Version Information

The BPN-SAS-825MTQ 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-825MTQ, Revision 1.10, the most current release available at the time of publication. Refer to the Supermicro website at www.supermicro.com for the latest updates, compatible parts and supported configurations.
Chapter 2

Connectors, Jumpers and LEDs

2-1 Rear Connector Locations

The following connectors are on the side of the backplane that faces the rear of the chassis. They are marked by silkscreen labels.

Figure 2-1. BPN-SAS-825MTQ Rear View

Rear Connectors

1. Main Power Connector: JP10
2. Sideband (SGPIO) Connector: JP51
3. DVD-ROM Drive Power Connector: J9
4. DVD-ROM Drive Power Connector: J10
5. MG9071 Chip
6. Upgrade Connector: JP46
7. J8: SAS Port #0
8. J7: SAS Port #1
9. J6: SAS Port #2
2-2 Rear Connector and Pin Definitions

1. Main Power Connector
The 4-pin connector, designated JP10, provides 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>

2. Sideband Connector
The sideband connector is designated JP51. For SES-2 to work properly, you must connect an 8-pin sideband cable to JP51. See the table to the right for pin definitions.

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>N/C</td>
</tr>
<tr>
<td>2</td>
<td>SDataIn (SGPIO Data In)</td>
</tr>
<tr>
<td>3</td>
<td>GND</td>
</tr>
<tr>
<td>4</td>
<td>SDataIn (SGPIO Data Out)</td>
</tr>
<tr>
<td>5</td>
<td>SLoad (SGPIO Load)</td>
</tr>
<tr>
<td>6</td>
<td>GND</td>
</tr>
<tr>
<td>7</td>
<td>SClock (SGPIO Clock)</td>
</tr>
<tr>
<td>8</td>
<td>N/C</td>
</tr>
</tbody>
</table>

3. DVD-ROM 4-Pin Connectors
The 4-pin connectors, designated J9 and J10, provide power to the DVD-ROM drive. 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>

4. MG9071 Chip
The MG9071 is an enclosure management chip used in the BPN-SAS-825MTQ backplane.

6. MG9071 Upgrade Header
The upgrade header is designated JP46 and is used for manufacturing purposes only.

7. SAS Ports
The SAS ports are used to connect the SAS drive cables. The three ports are designated #0 - #2 and are compatible with SAS/SATA drives.
2-3 Rear Jumper Locations and Pin Definitions

![Figure 2-2. BPN-SAS-825MTQ Rear Jumpers](image)

**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 two 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>J35</td>
<td>Open = Default Closed = Enabled</td>
<td>Activity LED Test</td>
</tr>
<tr>
<td>J29</td>
<td>Open = Default Closed = Reset</td>
<td>Chip Reset</td>
</tr>
</tbody>
</table>

2-4 Front Connectors and LED Indicators

**Front Connector Locations**

![Figure 2-3. BPN-SAS-825MTQ Front View](image)

**Front Connector/LED Indicator Descriptions**

<table>
<thead>
<tr>
<th>Rear Connector</th>
<th>SAS Drive Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAS#0</td>
<td>SAS/SATA HHD #0</td>
</tr>
<tr>
<td>SAS#1</td>
<td>SAS/SATA HHD #1</td>
</tr>
<tr>
<td>SAS#2</td>
<td>SAS/SATA HHD #2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rear LED Indicator</th>
<th>Hard Drive Activity and Failure LEDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>D12</td>
<td>SCA#0 Activity LED (Connected to HDD)</td>
</tr>
<tr>
<td>D13</td>
<td>SCA#1 Activity LED (Connected to HDD)</td>
</tr>
<tr>
<td>D14</td>
<td>SCA#2 Activity LED (Connected to HDD)</td>
</tr>
<tr>
<td>D5</td>
<td>SAS#0 Failure LED (Connected to HDD)</td>
</tr>
<tr>
<td>D6</td>
<td>SAS#1 Failure LED (Connected to HDD)</td>
</tr>
<tr>
<td>D7</td>
<td>SAS#2 Failure LED (Connected to HDD)</td>
</tr>
</tbody>
</table>
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