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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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Release Date: January 2, 2017

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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

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 Backplanes

The BPN-NVMe3-136NB-L/NB-R/PL/PL-J 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-NVMe3-136NB-L/NB-R/PL/PL-J 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 and Pin Definitions

2-1  Front Connectors

1. Amphenol Connector C: MCN3.
4. PCIe Slot 1: MJ1.
5. PCIe Slot 2: MJ3.

Figure 2-1. Front View of BPN-NVMe3-136NB-L

Figure 2-2. Front View of BPN-NVMe3-136NB-R

Figure 2-3. Front Connectors of BPN-NVMe-136PL
Figure 2-4. Front Connectors of BPN-NVMe-136PL-J

7. zCD Connectors: J2, J1, J4, and J3.
8. PCIe Slots: JPCIE1 and JPCIE2.
10. Amphenol Connector B: MCN5.
17. Fan Connectors: FAN1, FAN2, FAN3, FAN4, FAN5, FAN6, FAN7, and FAN8.
2-2 Front Connector Pin Definitions


The Amphenol ports are used to connect the Amphenol slim-line cables between BPN-NVMe-136PL and BPN-NVMe-136PL-J. They are designated MCN1, MCN2, and MCN3 for BPN-NVMe-136PL and MCN1, MCN2, MCN3, MCN4, MCN5, and MCN6 for BPN-NVMe-136PL-J. To connect two BPN-NVMe-136PL SSD trays to one BPN-NVMe-136PL-J JBOF/NVMF Controller, MCN1, MCN2, and MCN3 of the first BPN-NVMe-136PL should be linked to MCN1, MCN2, and MCN3 of the second BPN-NVMe-136PL should be linked to MCN4, MCN5, and MCN6 of BPN-NVMe-136PL-J.

#4. - 5. and #8. PCIe Slots

The PCIe slots are designated MJ1 and MJ3 for BPN-NVMe-136PL, and JPCIE1 and JPCIE2 for BPN-NVMe-136PL-J. The slots of the BPN-NVMe-136PL are where the NVMe daughter cards are installed, with BPN-NVMe3-136NB-L connecting to MJ1 and BPN-NVMe3-136NB-R connecting to MJ3. JPCIE1 and JPCIE2 can each support an NVMe over Fabrics card.

#6. and #15. - 16. Backplane Main Power Connectors

The power connectors, designated MP1 for BPN-NVMe-136PL and MP1, MP2, PSU1, and PSU2 for BPN-NVMe-136PL-J, provide power to the backplanes. MP1 of BPN-NVMe-136PL connects to MP1 or MP2 of BPN-NVMe-136PL-J. See the table on the right for pin definitions for the 12-pin connectors.

<table>
<thead>
<tr>
<th>Backplane Main Power 12-Pin Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pin#</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>1 - 6</td>
</tr>
<tr>
<td>7 - 12</td>
</tr>
</tbody>
</table>
#7. zCD Connectors

The zCD connectors, designated J1, J2, J3, and J4, connect to external hosts through zCD cables.

#17. Fan Connectors

These connectors, designated FAN1, FAN2, FAN3, FAN4, FAN5, FAN6, FAN7, and FAN8, provide power to the cooling fans.
2-3 Front Jumper Locations and Pin Definitions

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>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPB1</td>
<td>1-2: BMC enabled</td>
<td>BMC enabled is the default setting.</td>
</tr>
<tr>
<td></td>
<td>2-3: BMC disabled</td>
<td></td>
</tr>
</tbody>
</table>
2-4 Rear Connectors and LED Indicators

![Diagram of Rear Connectors and LED Indicators]

Figure 2-6. Rear Connectors & LED Indicators of BPN-NVMe3-136NB-L

<table>
<thead>
<tr>
<th>NVMe Connectors and LED Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear Connector</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>NVMe#0</td>
</tr>
<tr>
<td>NVMe#1</td>
</tr>
<tr>
<td>NVMe#2</td>
</tr>
<tr>
<td>NVMe#3</td>
</tr>
<tr>
<td>NVMe#4</td>
</tr>
<tr>
<td>NVMe#5</td>
</tr>
<tr>
<td>NVMe#6</td>
</tr>
<tr>
<td>NVMe#7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Rear LEDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>LED31</td>
</tr>
<tr>
<td>LED32</td>
</tr>
<tr>
<td>LED33</td>
</tr>
<tr>
<td>LED34</td>
</tr>
</tbody>
</table>
Figure 2-7. Rear Connectors & LED Indicators of BPN-NVMe3-136NB-R

<table>
<thead>
<tr>
<th>NVMe Connectors and LED Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rear Connector</strong></td>
</tr>
<tr>
<td>NVMe#8</td>
</tr>
<tr>
<td>NVMe#9</td>
</tr>
<tr>
<td>NVMe#10</td>
</tr>
<tr>
<td>NVMe#11</td>
</tr>
<tr>
<td>NVMe#12</td>
</tr>
<tr>
<td>NVMe#13</td>
</tr>
<tr>
<td>NVMe#14</td>
</tr>
<tr>
<td>NVMe#15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Rear LEDs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LED</strong></td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>LED31</td>
</tr>
<tr>
<td>LED32</td>
</tr>
<tr>
<td>LED33</td>
</tr>
<tr>
<td>LED34</td>
</tr>
</tbody>
</table>
Figure 2-8. Rear View of BPN-NVMe-136PL

Figure 2-9. Rear View of BPN-NVMe-136PL-J
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