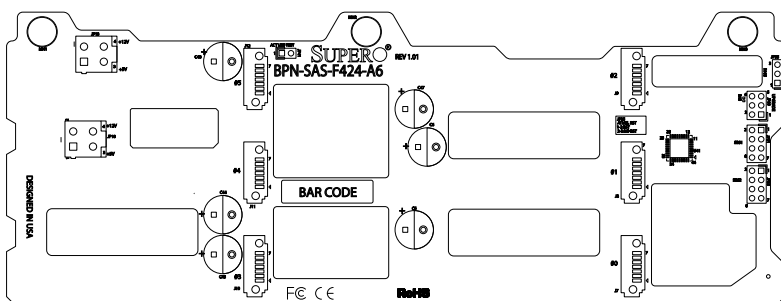


# SUPERO®



## BPN-SAS-F424-A6 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.

## Notes

## 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-A6 Backplane**

The BPN-SAS-F424-A6 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-A6 Revision 1.01, the most current release available at the time of publication. Always refer to the Supermicro Web site at [www.supermicro.com](http://www.supermicro.com) for the latest updates, compatible parts and supported configurations.



## Chapter 2

### Jumpers, Connectors and LEDs

#### 2-1 Front Connectors

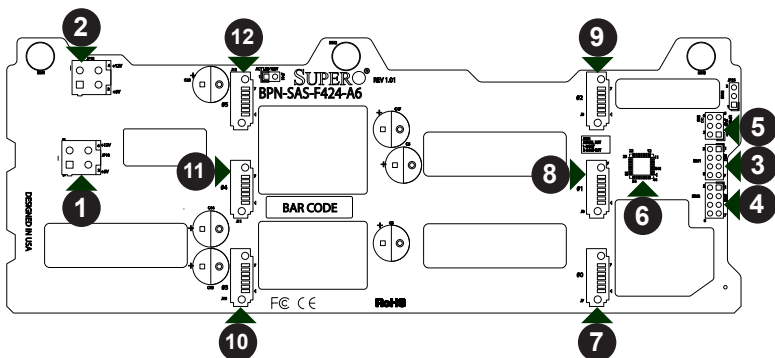


Figure 2-1: Front Connectors

- |                                       |                            |
|---------------------------------------|----------------------------|
| 1. Main Power Connector (4-pin): JP10 | 7. SATA Connector #0: J7   |
| 2. Main Power Connector (4-pin): JP13 | 8. SATA Connector #1: J8   |
| 3. Sideband Connector #1 (SB#1): JP51 | 9. SATA Connector #2: J9   |
| 4. Sideband Connector #2 (SB#2): JP53 | 10. SATA Connector #3: J10 |
| 5. Upgrade Connector: JP69            | 11. SATA Connector #4: J11 |
| 6. ATMEL Chip                         | 12. SATA Connector #5: J12 |

## 2-2 Front Connector Pin Definitions

### 1. - 2. Backplane Main Power Connectors

The 4-pin connectors, designated JP10 and JP13 provide power to the backplane. See the table on the right for pin definitions.

Backplane Main Power 4-Pin Connector	
Pin#	Definition
1 and 2	Ground
3	+5V
4	+12V

### 3. - 4. Sideband Connectors

The sideband connectors are designated JP51 and JP53. For SES-2 to work properly, an 8-pin sideband cable must be connected to JP51 and JP53. See the table to the right for pin definitions.

Sideband Connector			
Pin #	Definition	Pin #	Definition
2	Backplane Addressing (SB5)	1	Controller ID (SB6)
4	Reset (SB4)	3	GND (SB2)
6	GND (SB3)	5	SDA (SB1)
8	Backplane ID (SB7)	7	SCL (SB0)
10	No Connection	9	No Connection

### 5. Upgrade Connector

The upgrade connector, designated JP69 is a firmware upgrade port.

### 6. ATMEL Chip

The ATMEL chip is an enclosure management chip used in the BPN-SAS-F424-A6 backplane.

### 7. - 12. SATA Connectors

SATA connectors #0 - #5 are used to connect the SATA cables. The six ports are designated #0 - #5 and are compatible with both SAS and SATA drives.

## 2-3 Front Jumper Locations and Pin Settings

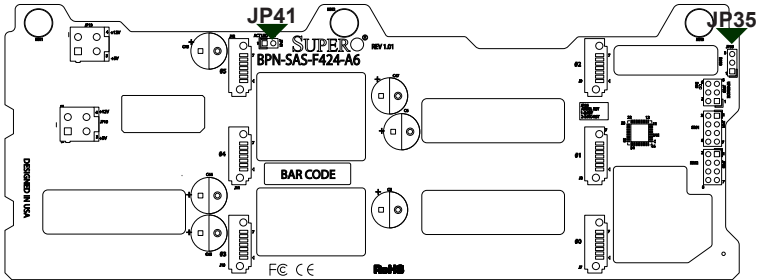
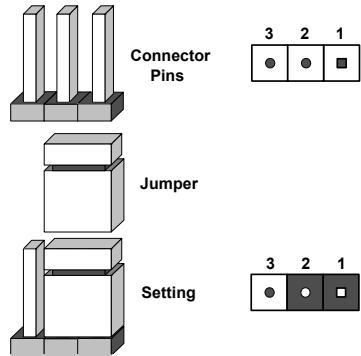


Figure 2-2: Front Jumpers

### 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.

Jumper Settings		
Jumper	Jumper Settings	Note
JP41	---	For manufacturer's diagnostic purposes only
JP35	1 - 2 Reset 2 - 3 No reset (Default)	Chip reset

## 2-4 Rear Connectors and LED Indicators

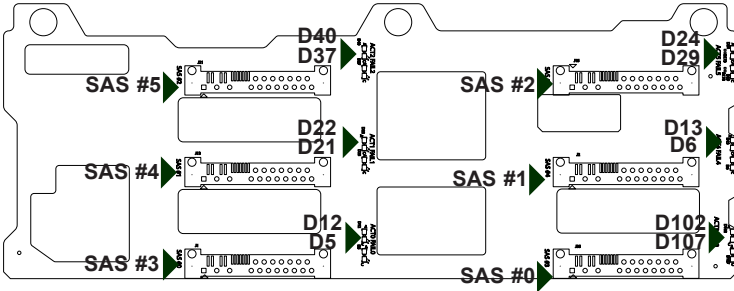


Figure 2-3: Rear Connectors and LED Indicators

Rear SAS/SATA Connectors and LED Indicators				
Ports	SAS/SATA Drive Number	Rear Connectors	Failure LED Indicator	Activity LED Indicator
SAS#0	SAS/SATA HDD #0	J1	D5	D12
SAS#1	SAS/SATA HDD #1	J13	D23	D22
SAS#2	SAS/SATA HDD #2	J21	D37	D40
SAS#3	SAS/SATA HDD #3	J35	D107	D102
SAS#4	SAS/SATA HDD #4	J2	D6	D13
SAS#5	SAS/SATA HDD #5	J15	D29	D24

## Notes

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