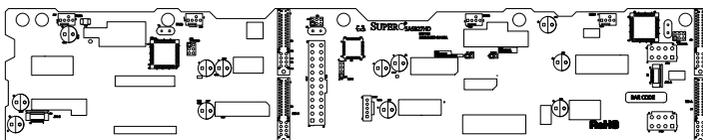


SUPERO[®]



SAS-827HD 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

SAS-827HD 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 SAS-827HD backplane.
- Disconnect the power cable before installing or removing any cables from the SAS-827HD backplane.
- Make sure that the SAS-827HD 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 SAS-827HD Backplane

The SAS-827HD 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-827HD 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

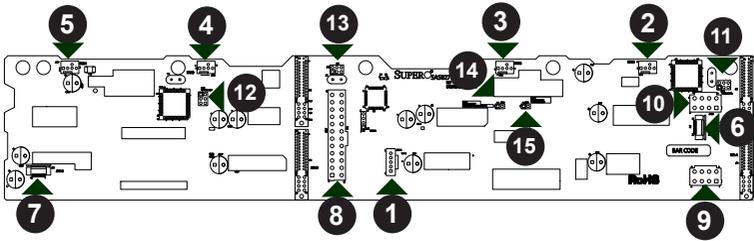


Figure 2-1: Front Connectors

- | | |
|---------------------------------|---------------------------------|
| 1. Power Connector: JPI²C1 | 9. Power Connector: JPW2 |
| 2. Fan1 Connector JP54 | 10. Power Connector: JPW3 |
| 3. Fan2 Connector: JP55 | 11. Upgrade-A: JP70 |
| 4. Fan3 Connector: JP56 | 12. Upgrade -B: JP71 |
| 5. Fan4 Connector: JP57 | 13. SPI: JP69 |
| 6. Front Panel Connector: JF5-A | 14. Power Button Settings: JP36 |
| 7. Front Panel Connector: JF6-B | 15. LED Test: JP35 |
| 8. Power Connector: JPW1 | |

1. Power Supply Connector

The 5-pin connector, designated JPI²C1 provides power to the SMBUS and power control signals.

2. - 5. Chassis Fan Connectors

These connectors, designated FAN1, FAN2, FAN3 and FAN4 supply power to the chassis cooling fans.

8. - 10. Power Connectors

These connectors, designated JPW1, JPW2 and JPW3 supply power to the two motherboard nodes in the chassis.

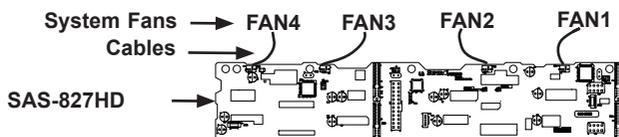


Figure 2-2: Default Configuration - Fans Connected Directly to the Backplane

11. - 12. Upgrade Connectors

These connectors are designated JP70 and JP71 and are for manufacturing purposes only.

13. SPI Connector

This connector is designated JP69.

14. Power Button Settings

This jumper is designated JP36 and controls the power button functionality.
Open: Default, multiple power button functionality
Closed: Single power button functionality

15. LED Test

This jumper is designated JP35 and it is used to test the LEDs. Open is the default setting, closed is the LED test setting.

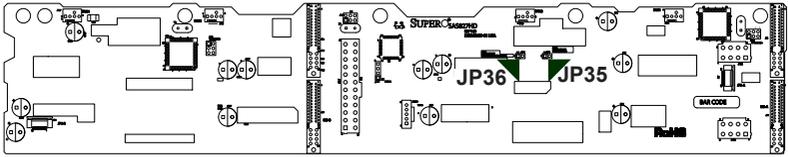
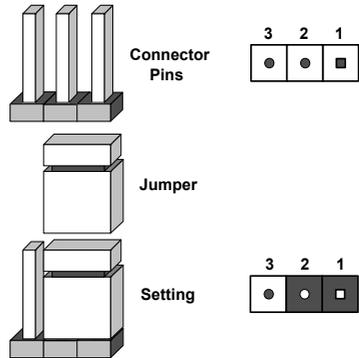


Figure 2-3: Front Jumpers

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 two pin jumpers, "Closed" means the jumper is on and "Open" means the jumper is off the pins.



Jumper Settings		
Jumper	Jumper Settings	Notes
JP35	Open: Default Closed: LED test	LED test
JP36	Open: Default, multiple power button functionality Closed: Single power button functionality	Any power button

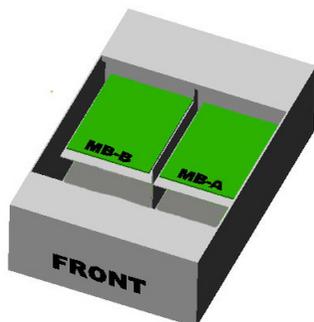


Figure 2-4: Motherboard Locations In the Chassis

2-2 Front LED Indicator

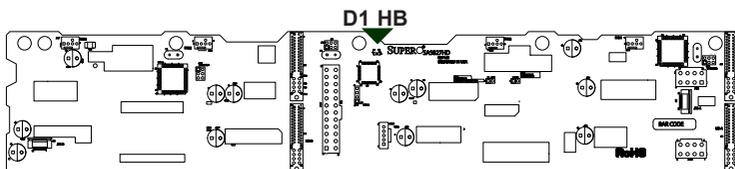


Figure 2-5: Front LED

Front Panel LED		
LED	State	Specification
D1 HB	Blinking	Micro controller heartbeat.

2-3 Rear Connectors and LED Indicators

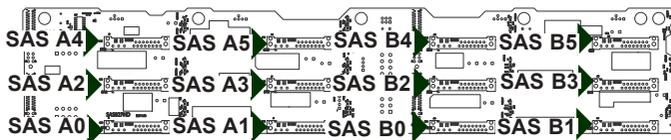


Figure 2-6: Rear Connectors

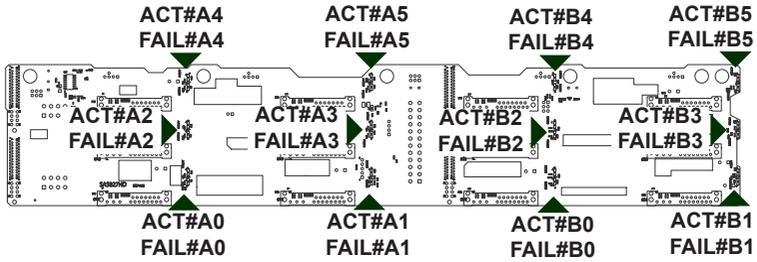


Figure 2-7: Rear LED Indicators

Rear SAS Connectors					
Rear Connector	SAS Drive Number	LEDs	Rear Connector	SAS Drive Number	LEDs
SAS #A0	HDD 0	D12, D5	SAS #B0	HDD 5	D22, D23
SAS #A1	HDD 1	D15, D8	SAS #B1	HDD 6	D26, D31
SAS #A2	HDD 2	D13, D6	SAS #B2	HDD 7	D27, D32
SAS #A3	HDD 3	D18, D19	SAS #B3	HDD 8	D27, D32
SAS #A4	HDD 4	D14, D7	SAS #B4	HDD 9	D25, D30
SAS #A5	HDD 5	D21, D20	SAS #B5	HDD 10	D28, D33

Rear LED Indicators		
Rear LED	Activity	Failure
SAS #B5	ACT#B5	FAIL#B5
SAS #B4	ACT#B4	FAIL#B4
SAS #B3	ACT#B3	FAIL#B3
SAS #B2	ACT#B2	FAIL#B2
SAS #B1	ACT#B1	FAIL#B1
SAS #B0	ACT#B0	FAIL#B0
SAS #A5	ACT#A5	FAIL#A5
SAS #A4	ACT#A4	FAIL#A4
SAS #A3	ACT#A3	FAIL#A3
SAS #A2	ACT#A2	FAIL#A2
SAS #A1	ACT#A1	FAIL#A1
SAS #A0	ACT#A0	FAIL#A0

2-4 SAS Ports

The SAS-827HD 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.

SAS Port to Motherboard Configurations		
Number of Motherboards	SAS Port Connectors	Connect to Motherboard
Using 1 MB	A0, A1, A2, A3, A4, A5	MB-A
Using 2 MBs	A0, A1, A2, A3, A4, A5 B0, B1, B2, B3, B4, B5	MB-A MB-B

Notes

Disclaimer (cont.)

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