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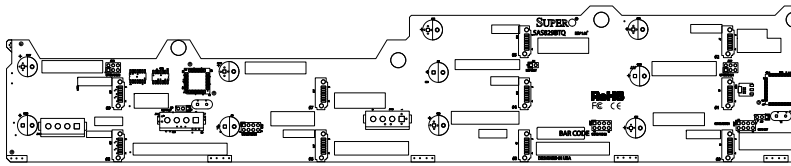

SAS-829BTQ Backplane

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-829BTQ 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 backplane, 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-829BTQ backplane.
- Disconnect the power cable before installing or removing any cables from the SAS-829BTQ backplane.
- Make sure that the SAS-829BTQ 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-829BTQ Backplane

The SAS-828BTQ backplane has been designed to untilize the most up-to-date technology available, providing your sysstem with reliable, high-quality performance.

This manual reflects SAS-829BTQ Revision 1.01 the most current release available at the time of publication. Always refer to the Supermicro Web site at www.supermicro.com for compatible parts and supported configurations.

Chapter 2

Connectors and Jumpers

2-1 Front Connectors

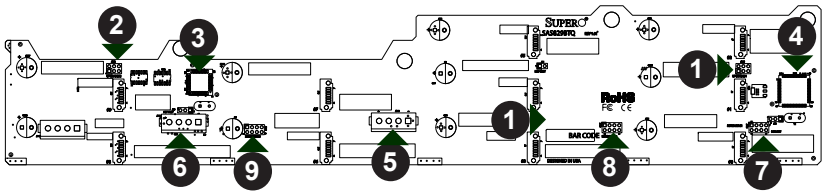


Figure 2-1: Front Connectors

Front Connectors	SAS Ports
1. Upgrade1: JP69	11. SAS Port #1 J6
2. Upgrade2: JP78	12. SAS Port #2 J7
3. Chip: MG9071	13. SAS Port #3 J8
4. Chip: MG9072	14. SAS Port #4 J10
5. Power Connector (4-pin): JP10	15. SAS Port #5 J12
6. Power Connector (4-pin) JP13	16. SAS Port #6 J14
7. SideBand Connector#1 JP66	17. SAS Port #7 J16
8. SideBand Connector#2 JP68	18. SAS Port #8 J22
9. SideBand Connector#3 JP75	19. SAS Port #9 J23
10. SAS Port #0 J5	

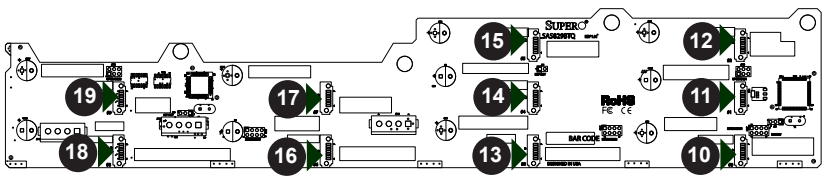


Figure 2-2: Front SAS Ports

2-2 Front Connector and Pin Definitions

1., 2. Upgrade Connectors

These connectors are designated JP69 and JP78. Upgrade connectors are for the manufacturer's use only.

3., 4. MG9071 and MG9072 Chips

The MG9071 and MG9072 are enclosure management chips that support the SES-2 controller and SES-2 protocols.

5., 6. 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	+12V
2 and 3	Ground
4	+5V

7., 8., 9. Sideband Headers

SGPIO is the default mode setting. The sideband headers are designated JP66, JP68, and JP75. For SES-2 to work properly, you must connect an 8-pin sideband cable. See the table to the right for pin definitions.

Sideband Headers

Pin #	Definition	Pin #	Definition
2	SGPIO: SDIN; I^2C: Backplane Addressing	1	Controller ID (SB6)
4	SGPIO: SDOUT; I^2C: Reset	3	GND (SB2)
6	GND (SB3)	5	SGPIO: SLOAD; I^2C: SDA
8	Backplane ID (SB7)	7	SGPIO: SCLOCK; 1^2C: SCL
10	No Connection	9	No Connection

10. - 19. SAS Ports

The SAS ports are used to connect the SAS drive cables. These ten ports are designated #0 - #9. Each port is also compatible with SATA drives.

2-3 Front Jumper Locations and Pin Definitions

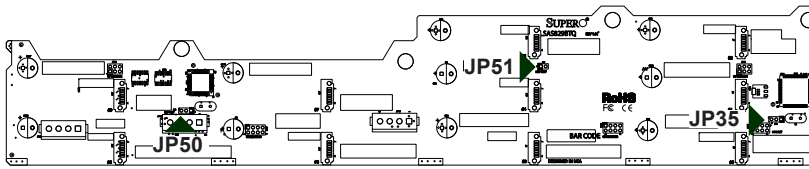
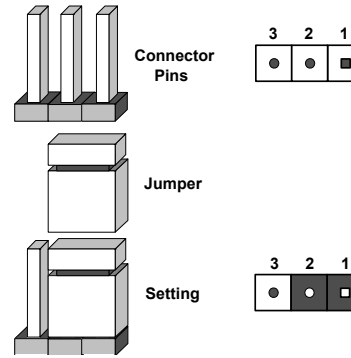


Figure 2-3: Front Jumpers

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**	**Note**
JP35	Open: Default Closed: Reset	MG9072 Chip Reset #1
JP50	Open: Default Closed: Reset	MG9071 Chip Reset #2
JP51	Open: Default Closed: Reset	LED Test

SAS Port Connections

Use the following table when connecting this backplane. If the SAS ports are connected out of order, it is not easy to identify drives using the LED function.

SAS Port Connections	
SAS Port #	**Sideband Connector**
# 0 - 3	Sideband #1
# 4 - 7	Sideband #2
# 8 - 9	Sideband #3

2-4 Rear Connectors and LED Indicators

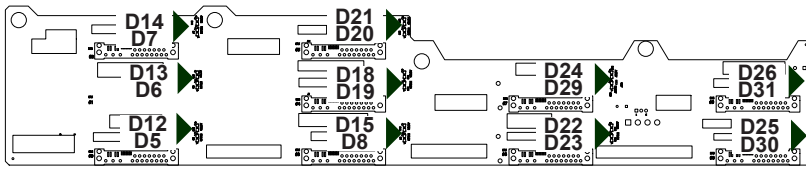


Figure 2-4: Rear Connectors and LEDs

Rear SAS/SATA Connectors			
Rear Connector	**SAS Drive Number**	**Rear Connector**	**SAS Drive Number**
SAS #0	SAS/SATA HHD #0	SAS #5	SAS/SATA HHD #5
SAS #1	SAS/SATA HHD #1	SAS #6	SAS/SATA HHD #6
SAS #2	SAS/SATA HHD #2	SAS #7	SAS/SATA HHD #7
SAS #3	SAS/SATA HHD #3	SAS #8	SAS/SATA HHD #8
SAS #4	SAS/SATA HHD #4	SAS #9	SAS/SATA HHD #9

Rear LED Indicators		
Rear LED	**Hard Drive Activity**	**Failure LED**
SAS #0	D12	D5
SAS #1	D13	D6
SAS #2	D14	D7
SAS #3	D15	D8
SAS #4	D18	D19
SAS #5	D21	D20
SAS #6	D22	D23
SAS #7	D24	D29
SAS #8	D25	D30
SAS #9	D26	D31

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