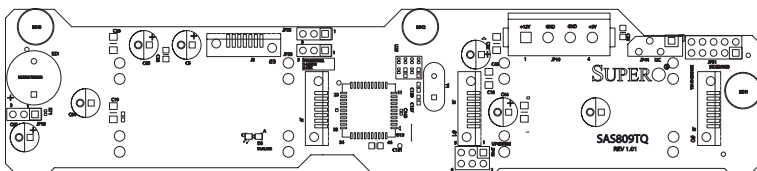


SUPERO®



SAS-809T/TQ

SAS-809T/TQ BACKPLANE

USER'S GUIDE

Rev. 1.0

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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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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

Electric Static 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.

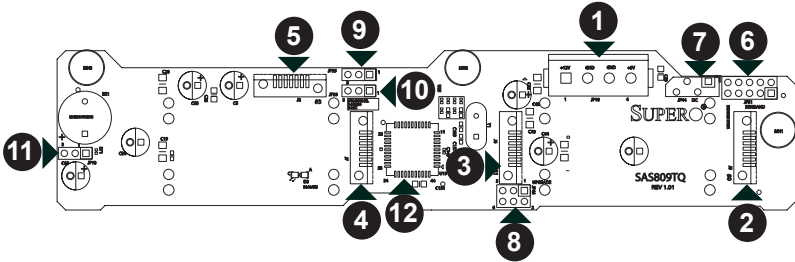
1-3 An Important Note to Users

- 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.

Chapter 2

Jumper Settings and Pin Definitions

2-1 Front Connectors and Jumpers



The SAS-809T and SAS-809TQ model backplanes have the same printed circuit board, except that the SAS-809T model does not include the MG9071 AMI chip and its supporting components.

Front Connectors

1. Power Connector (4-pin) JP10
2. SAS Port #0 J5
3. SAS Port #1 J6
4. SAS Port #2 J7
5. SAS Port #3 J8
6. Sideband JP51 (Not included on the SAS-809T backplane)
7. I²C JP44 (Not included on the SAS-809T backplane)
8. Upgrade JP46 (Not included on the SAS-809T backplane)
9. Chip Reset JP35 (Not included on the SAS-809T backplane)
10. Mode Select JP33 (Not included on the SAS-809T backplane)
11. Buzzer Reset JP18
12. MG9071 Chip (not included on the SAS-809T backplane)

2-2 Front Connector and Pin Definitions

1. Backplane Main Power Connectors

The 4-pin connectors designated JP10 provides power to the backplane. See the table on the right for pin definitions.

Backplane Main Power 4-Pin Connector (JP10)	
Pin#	Definition
1	+12V
2 and 3	Ground
4	+5V

2. - 5. SAS Ports

The SAS ports are used to connect the SAS drive cables. The four ports are designated #0 - #3. Each port is also compatible with SATA drives.

6. Sideband Header

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

Sideband Headers (JP51)			
Pin #	Definition	Pin #	Definition
2	SDIN/ Backplane Addressing (SB5)	1	Controller ID (SB6)
4	SDOUT/I ² C Reset (SB4)	3	GND (SB2)
6	GND (SB3)	5	SDA (SB1)
8	Backplane ID (SB7)	7	SCL (SB0)
10	No Connection	9	No Connection

7. I²C Connectors

The I²C Connector, designated JP44, is used to monitor HDD activity and status. See the table on the right for pin definitions.

I ² C Connector Pin Definitions (JP44)	
Pin#	Definition
1	Data
2	Ground
3	Clock
4	No Connection

8. Upgrade Connectors

The upgrade connector, designated JP46, is only included on the SAS-809TQ backplane and is used for manufacturer's diagnostic purposes only.

9. MG9071 Chip Reset

The chip reset, designated JP35, is only included on the SAS-809TQ backplane and is used to reset the MG9071 chip. For details, see the jumper settings section of this manual.

10. Mode Select

Mode select, designated JP33, is only included on the SAS-809TQ backplane. It allows switching between I2C and SGPIO modes. For details, see the I2C and SGPIO settings section of this manual.

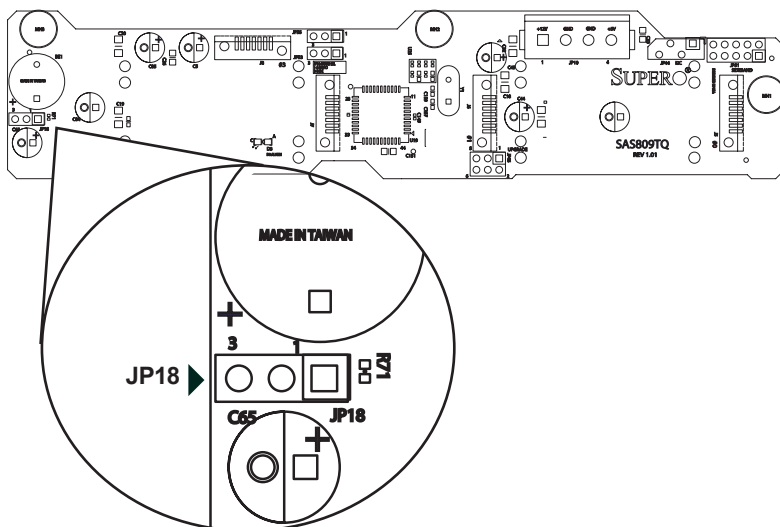
11. Buzzer Reset

The buzzer reset is designated as JP18. It is used to reset the buzzer after it has been activated.

12. MG9071 Chip

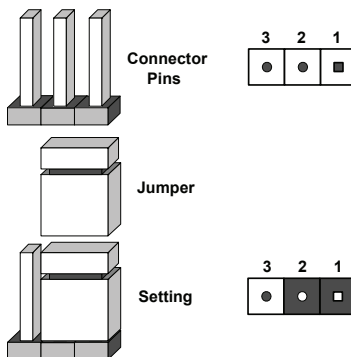
The MG9071 chip, is only included on the SAS-809TQ backplane. It is an enclosure management chip that supports the SES-2 controller and SES-2 protocols.

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.



Jumper Settings		
Jumper	Jumper Settings	Note
JP18	2-3: Enabled 1-2: Disabled	Buzzer Reset
JP35	2-3: Default 1-2: Reset	MG9071 Reset

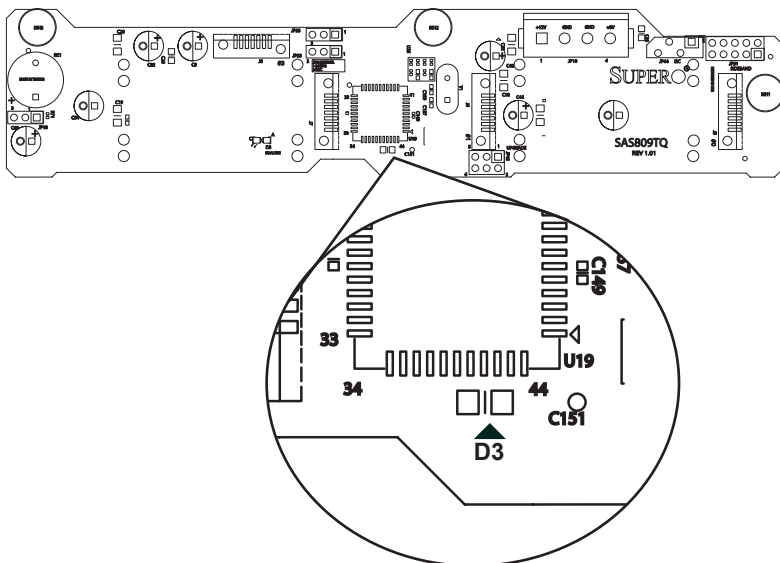
I²C and SGPIO Modes and Jumper Settings

This backplane can utilize I²C or SGPIO. SGPIO is the default mode and can be used without making changes to your jumpers. The following information details which jumpers must be configured to use I²C mode or restore your backplane to SGPIO mode. This feature is only available with the SAS-809TQ backplane.

I ² C Setting		
Jumper	Jumper Setting	Note
JP33	2-3	Controller ID

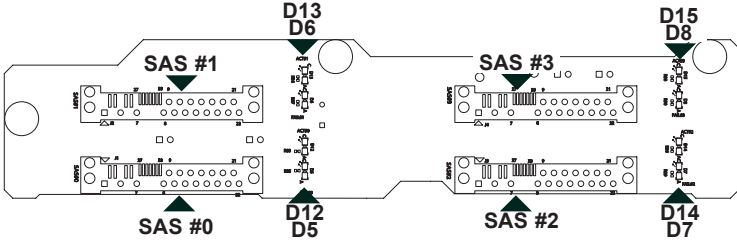
SGPIO (Default)		
Jumper	Jumper Setting	Note
JP33	1-2	Controller ID

Front LED Indicators



Front Panel LEDs		
LED	STATE	SPECIFICATION
D3	ON	Overheat/ Drive Failure LED Indicator (Red light: flashing, Buzzer: On)

2-4 Rear Connectors and LED Indicators



Rear SAS/SATA Connectors		
Rear Connector	Connector Number	SAS Drive Number
SAS #0	J1	SAS/SATA HDD #0
SAS #1	J2	SAS/SATA HDD #1
SAS #2	J3	SAS/SATA HDD #2
SAS #3	J4	SAS/SATA HDD #3

Rear LED Indicators		
Rear Connector	Hard Drive Activity	Failure LED (Not included on SAS-809T)
SAS #0	D12	D5
SAS #1	D13	D6
SAS #2	D14	D7
SAS #3	D15	D8

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Notes