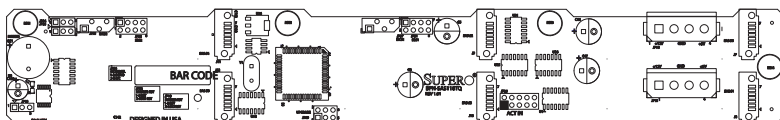


# SUPERO®



## SAS-118TQ 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 SAS-118TQ Backplane**

The SAS-118TQ 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-118TQ 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

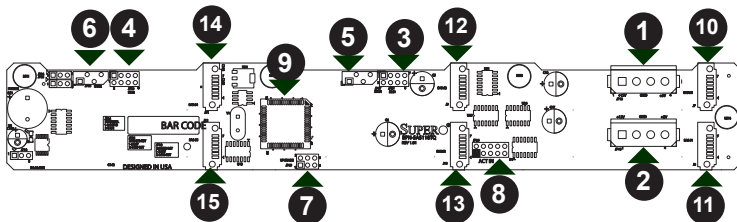


Figure 2-1: Front Connectors

- |                                       |                      |
|---------------------------------------|----------------------|
| 1. Main Power Connector (4-Pin): JP10 | 10. SAS Port #0: J7  |
| 2. Main Power Connector (4-pin): JP13 | 11. SAS Port #1: J8  |
| 3. Sideband Connector #1 (SB#1): JP51 | 12. SAS Port #2: J9  |
| 4. Sideband Connector #2 (SB#2): JP53 | 13. SAS Port #3: J10 |
| 5. I <sup>2</sup> C#1 Connector: JP37 | 14. SAS Port #4: J11 |
| 6. I <sup>2</sup> C#2 Connector: JP95 | 15. SAS Port #5: J12 |
| 7. Upgrade Connector: JP69            |                      |
| 8. ACT IN: JP26                       |                      |
| 9. AMI MG9072 Chip                    |                      |

## 2-2 Front Connector and 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	+12V
2 and 3	Ground
4	+5V

### #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 - #6 I<sup>2</sup>C Connectors

The I<sup>2</sup>C connectors, designated JP37 and JP95, are used to monitor HDD activity and status. See the table on the right for pin definitions.

I <sup>2</sup> C Connector Pin Definitions	
Pin#	Definition
1	Data
2	Ground
3	Clock
4	No Connection

### #7 Upgrade Connector

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

**#8 Activity LED Headers**

The activity LED header, designated JP26, is used to indicate the activity status of each hard drive. The Activity LED Header is located on the rear of the front panel. For the Activity LED Header to work properly, connect using a 10-pin LED cable.

SAS Activity LED Header Pin Definitions			
Pin # Definition		Pin # Definition	
1	ACT IN#0	6	ACT IN#4
2	ACT IN#1	7	ACT IN#5
3	ACT IN#2	8	ACT IN#6
4	ACT IN#3	9	ACT IN#7
5	Ground	10	Empty

**#9 MG9072 Chip**

The MG9072 is an enclosure management chip used in the SAS-118TQ backplane.

**#10 - #15 SAS Ports**

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

## 2-3 Front Jumper Locations and Pin Definitions

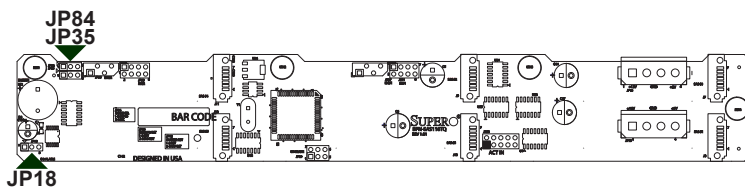
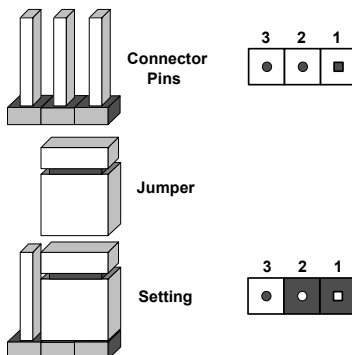


Figure 2-2: Front Jumpers

### 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
JP18	1 - 2 Reset 2 - 3 No reset (Default)	Buzzer reset*
JP35	1 - 2 Reset 2 - 3 No reset (Default)	Chip reset

\*The buzzer sound indicates that a condition requiring immediate attention has occurred.

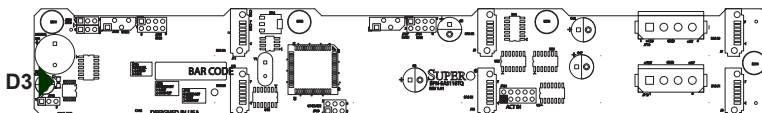
**The buzzer alarm is triggered by the following conditions:**

1. Hard drive failure
2. Fan failure
3. System temperature over 45° Celsius.

## I<sup>2</sup>C and SGPIO Modes and Jumper Settings

This backplane can utilize I<sup>2</sup>C 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 I<sup>2</sup>C mode or restore your backplane to SGPIO mode.

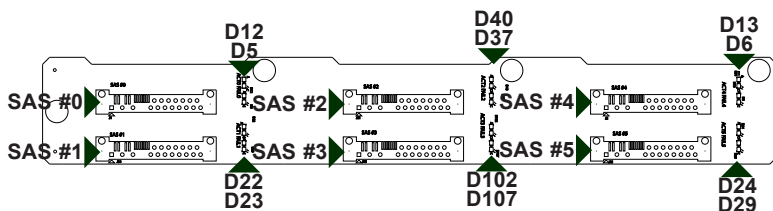
Mode Select		
Jumper	I2C Setting	SGPIO Setting
JP84	2-3	1-2 (Default)



## Backplane Front LED Indicator

Front LED Indicator	
Jumper	Description
D3	Alarm: Overheat/drive failure LED Indicator (Red light: flashing, Buzzer: On)

## 2-4 Rear Connectors and LED Indicators



**Rear SAS/SATA Connectors and LED Indicators**

Rear Connector	SAS/SATA Drive Number	Activity LED Indicator	Failure LED Indicator
SAS#0	SAS/SATA HDD #0	D12	D5
SAS#1	SAS/SATA HDD #1	D22	D23
SAS#2	SAS/SATA HDD #2	D40	D37
SAS#3	SAS/SATA HDD #3	D102	D107
SAS#4	SAS/SATA HDD #4	D13	D6
SAS#5	SAS/SATA HDD #5	D24	D29

## Notes

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