

BPN-SAS-733TQ

BACKPLANE USER'S GUIDE

Rev. 1.0a

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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.

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 BPN-SAS-733TQ backplane.
- Disconnect the power cable before installing or removing any cables from the backplane.
- Make sure that the BPN-SAS-733TQ 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 backplane 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-733TQ Backplane

The BPN-SAS-733TQ 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-733TQ Revision 1.02, the most current release available at the time of publication. Always refer to the Supermicro website at www.supermicro.com for the latest updates, compatible parts and supported configurations.

Chapter 2

Connectors, Jumpers and LEDs

2-1 Front Connectors

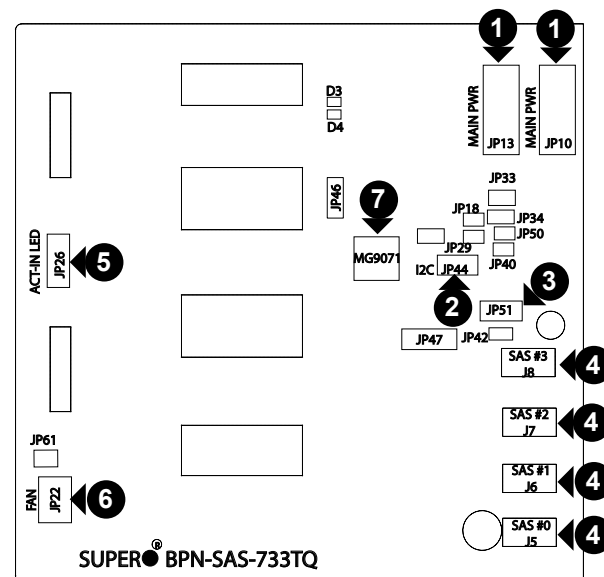


Figure 2-1. Front Connectors

Note: The drawings in this manual represent the general locations of the backplane components. Your actual backplane may differ from those illustrated.

Front Connectors and Jumpers

- | | |
|---|------------------------------|
| 1. Power Connectors (4-pin): JP10, JP13 | 5. Activity LED Header: JP26 |
| 2. I ² C Connector: JP44 | 6. Fan Header: JP22 |
| 3. Sideband Header: JP51 | 7. MG9071 Chip |
| 4. SAS Connectors: SAS #0: J5, SAS #1: J6, SAS #2: J7, SAS #3: J8 | |

2-2 Front Connector and Pin Definitions

1. Power Connectors

The 4-pin connectors are designated JP10 and JP13 and 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

2. I²C Connector

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

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

3. Sideband Header

The sideband header is designated JP51. 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	SDIN/ Backplane Addressing (SB5)	1	Controller ID (SB6)
4	SDOUT/I ² C Reset (SB4)	3	GND (SB2)
6	GND (SB3)	5	SLOAD/ SDA (SB1)
8	Backplane ID (SB7)	7	SCLOCK/ SCL (SB0)
10	No Connection	9	No Connection

4. SAS/SATA Connectors

The SAS/SATA connectors are numbered SAS#0, J5 through SAS#3, J8. Connect them to the system with a SAS or SATA cable.

5. Activity LED Header

The HDD activity LED header is designated ACT-IN LED, JP26.

SAS Activity LED			
	Pin#	Pin#	
Act In#0	1	6	NC
Act In#1	2	7	NC
Act In#2	3	8	NC
Act In#3	4	9	NC
NC	5	X	Empty

Note 1: NC = No Connection

Note 2: Connect to a 4-pin LED cable to Pin1-Pin4 of JP26 only

6. Fan Header

The fan header is designated FAN, JP22.

Fan Header Pin Definitions	
Pin#	Definition
1	Ground (Black)
2	+12V (Red)
3	Tachometer

Note: Fan headers are DC Power

7. MG9071 Chip

The MG9071 is an enclosure management chip that supports the SES-2 controller and protocols.

2-3 Front LEDs, Jumper Locations and Pin Definitions

Jumper Locations and Pin Definitions

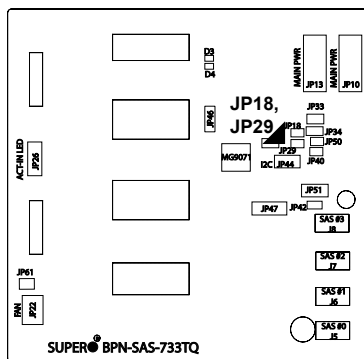
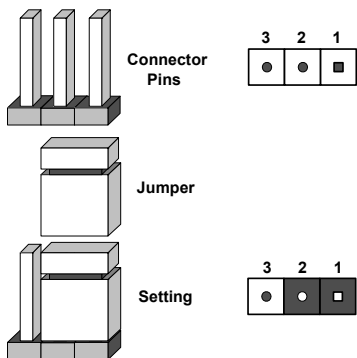


Figure 2-2. Jumper Locations

Jumper Settings		
Jumper	Jumper Settings	Note
JP18	Open: Default. Closed: Reset	Buzzer reset
JP29	Open: Default, Closed: Reset	MG9071 chip reset

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"



*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. System temperature over 45° Celsius.

I²C and SGPIO Modes and Jumper Settings

This backplane can utilize I²C or SGPIO. I²C 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.

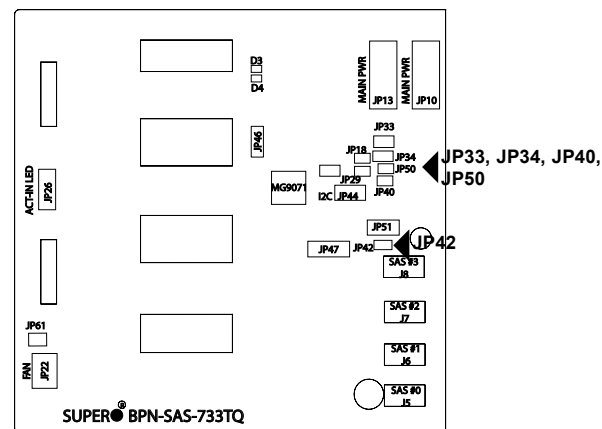


Figure 2-3. I²C Jumper Locations

I ² C and SGPIO Settings			
Jumper	I ² C Jumper Setting	SGPIO Jumper Setting	Note
JP33	Pins 2-3 (Default)	Pins 1-2	Controller ID
JP34	Pins 1-2 (Default)	Pins 2-3	Backplane ID
JP40	Open: (Default)	Closed	I ² C Reset/SDIM
JP42	Pins 2-3 (Default)	Pins 1-2	BPID/SDIM
JP50	Closed (Default)	Open	I ² C Reset

Front LED Indicators

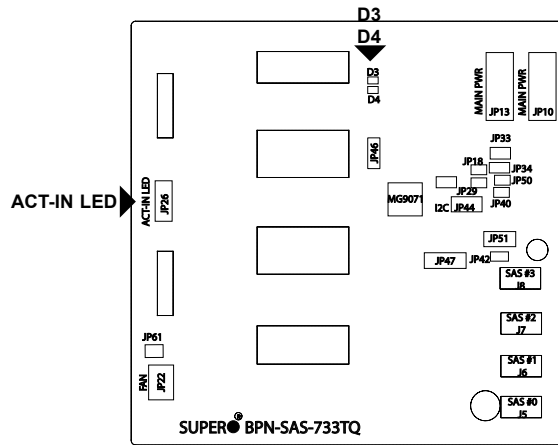


Figure 2-4. LED Indicators

LED Indicators		
LED	Status	Description
D3	On	Overheated condition, drive failure or fan failure
D4	On	Fan failure
ACT-IN LED	Blinking	HDD activity

2-4 Rear Connectors and LED Indicators

Rear Connectors

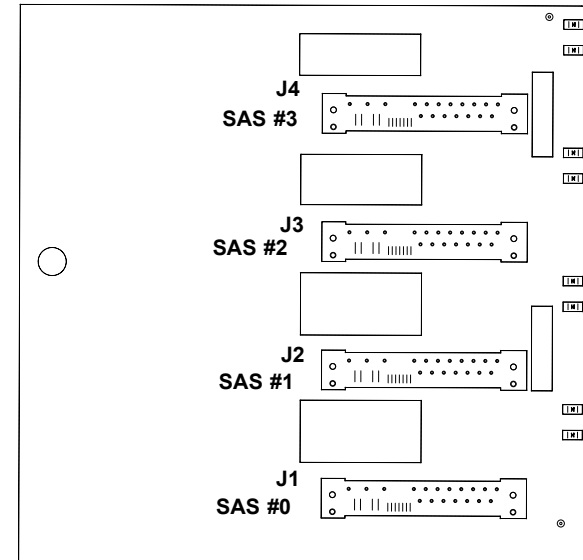


Figure 2-5. Rear Connectors

Rear SAS/SATA Connectors		
Rear Connector	Connector Number	SAS/SATA 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

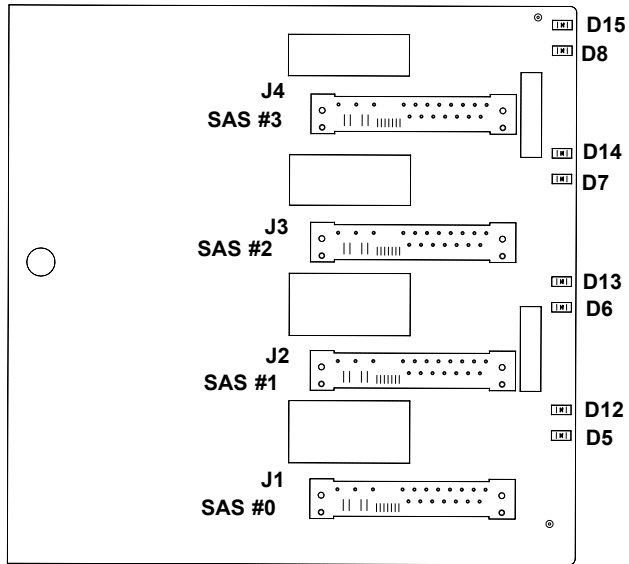


Figure 2-6. Rear LED Indicators

Notes

Rear LED Indicators		
Rear Connector	Hard Drive Activity	Failure LED
SAS #0	D12	D5
SAS #1	D13	D6
SAS #2	D14	D7
SAS #3	D15	D8

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