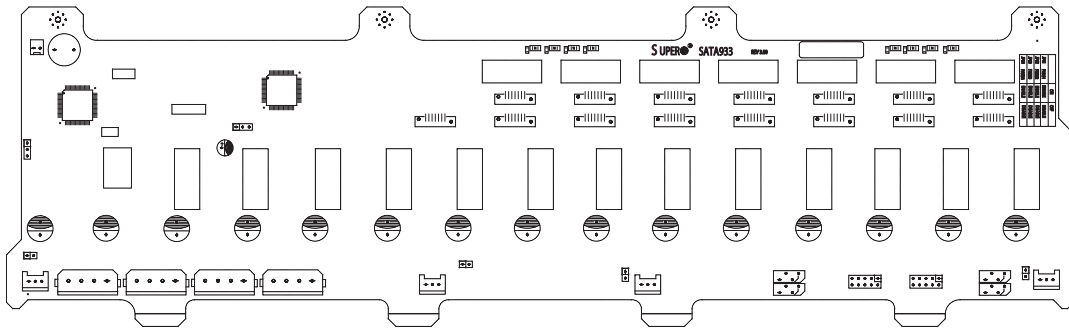# SUPER®

BPN-SATA-933 BACKPLANE

USER'S GUIDE

Rev. 1.0

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1-4   Contacting Supermicro

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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 RAID card 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.
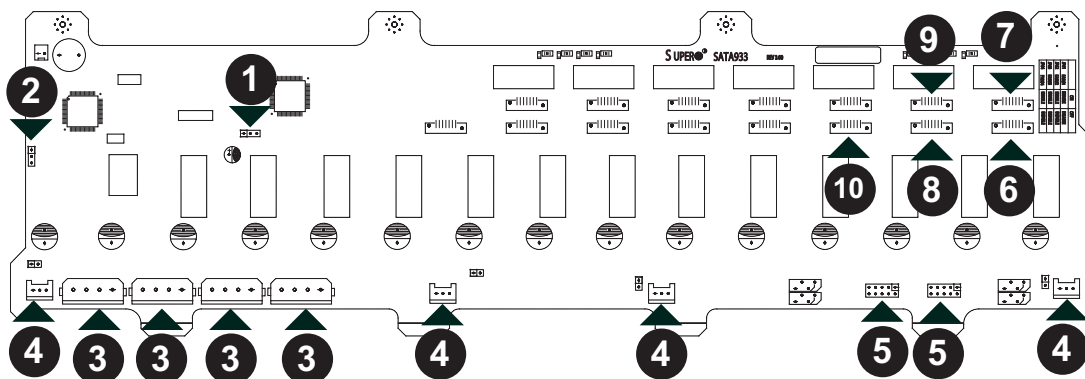
1-3   An Important Note to Users

- 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
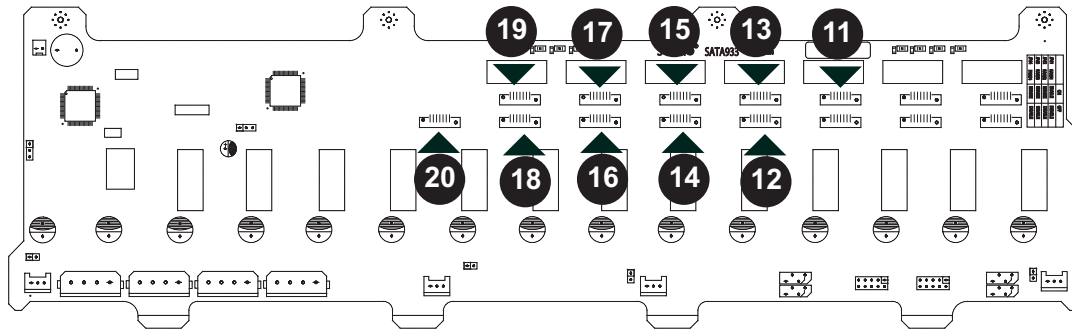
Jumper Settings and Pin Definitions

2-1 Front Connectors and Jumpers

Front Connectors

1. OH#1: JP25

2. OH#2: JP45

3. Power Connectors (4-pin): JP10, JP13, JP46 and JP48

4. Fan Connectors: JP54, JP56, JP58 and JP60

5. ACT_IN#0-7: JP26 and ACT_IN#8-14: JP47

6. SATA Port #0: J5

7. SATA Port #1: J6

8. SATA Port #2: J7

9. SATA Port #3: J8

10. SATA Port #4: J10

11. SATA Port #5: J12

12. SATA Port #6: J14

13. SATA Port #7: J16

14. SATA Port #8: J22

15. SATA Port #9: J23

16. SATA Port #10: J24

17. SATA Port #11: J25

18. SATA Port #12: J26

19. SATA Port #13: J29

20. SATA Port #14: J30

2-2   Front Connector and Pin Definitions

1. OH Temperature Connector

OH#1: JP25 and OH#2: JP45
Open: 45 degrees Celcius
1-2: 50 degrees Celcius
2-3: 55 degrees Celcius

2. Backplane Main Power Connectors

The 4-pin connectors designated JP10, JP13, JP46 and JP48 provide power to the backplane. See the table on the right for pin definitions.

Backplane Main Power 4-Pin Connector (JP10, JP13, JP46 and JP48)	
Pin# Definition	
1	+12V
2 and 3	Ground
4	+5V

5. Fan Connectors

The 3-pin connectors, designated JP61, JP62, JP63 and JP60, provide power to the fans. See the table on the right for pin definitions.

| Fan Connectors (JP54, JP56, and JP60)	
Pin# Definition	
1	Ground
2	+12V
3	Tachometer

6. Activity LED Connector

The activity LED connectors, designated JP26 and JP47 are used to indicate the activity status of each SAS drive. The Activity LED Connector is located on the front panel. For the Activity LED Header to work properly, connect using a 10-pin LED cable.

SAS Activity LED Header Pin Definitions (JP26)			
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

7. SATA Ports

The SAS ports are used to connect the SAS drive cables. The 8 ports are designated #0 - #14. Each port is also compatible with SATA drives.

2-3   Front Jumper Locations and Pin Definitions
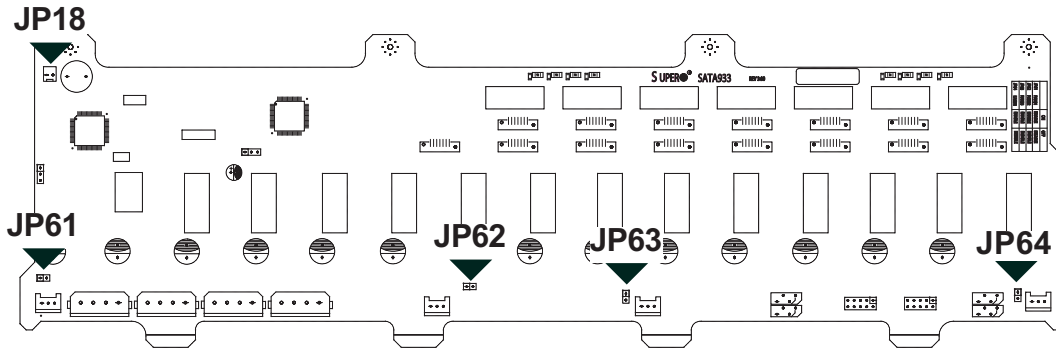
| Socket Settings		
Socket	**Socket Setting**	**Note**
JP18	Connected to front panel	Buzzer Reset Press once to disable buzzer; Press twice to enable buzzer

Fan Jumper Settings

This backplane supports up to four fans. To utilize each fan, you must configure **both jumpers** as instructed below.

Fan Jumper Settings		
Jumper	**Jumper Settings**	**Fan Number**
JP61	1-2 On: Enable 2-3 Off: Disable	FAN #1
JP62	1-2 On: Enable 2-3 Off: Disable	FAN #2
JP63	1-2 On: Enable 2-3 Off: Disable	FAN #3
JP64	1-2 On: Enable 2-3 Off: Disable	FAN #4

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.
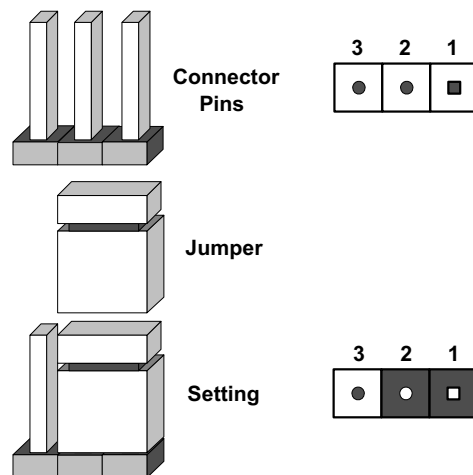
Front LED Indicators
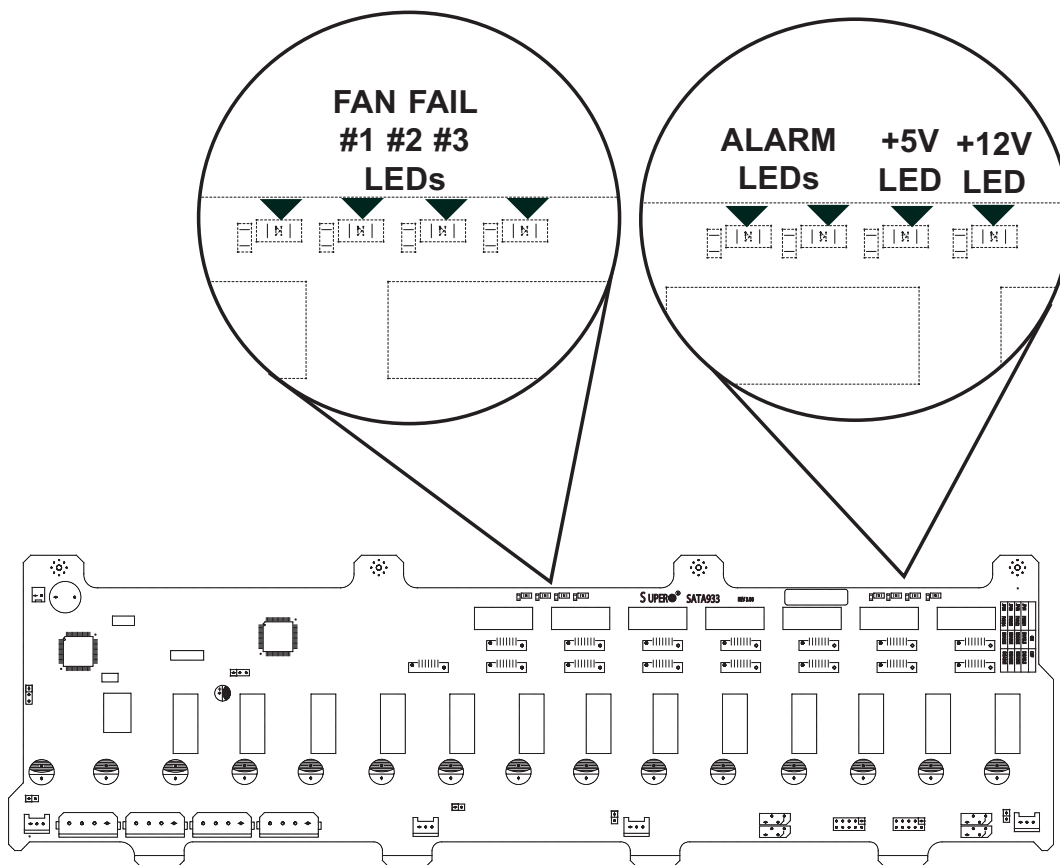
Front Panel LEDs		
LED	**Normal State**	**Specification**
Fan #1 Fail	Off	Failure in Fan #1
Fan #2 Fail	Off	Failure in Fan #2
Fan #3 Fail	Off	Failure in Fan #3
Fan #4 Fail	Off	Failure in Fan #4
Alarm #1	Off	Overheat/Fan Failure
Alarm #2	Off	Overheat/Fan Failure
+5V	On	Backplane power failure. Light is on during normal operation.
+12V	On	Backplane power failure. Light is on during normal operation.

2-4   Rear Connectors and LED Indicators

SATA#0   SATA#2   SATA#4   SATA#6   SATA#8   SATA#10   SATA#12   SATA#14
J1   J3   J9   J13   J17   J19   J21   J28

SATA#1   SATA#3   SATA#5   SATA#7   SATA#9   SATA#11   SATA#13
J2   J4   J11   J15   J18   J20   J27
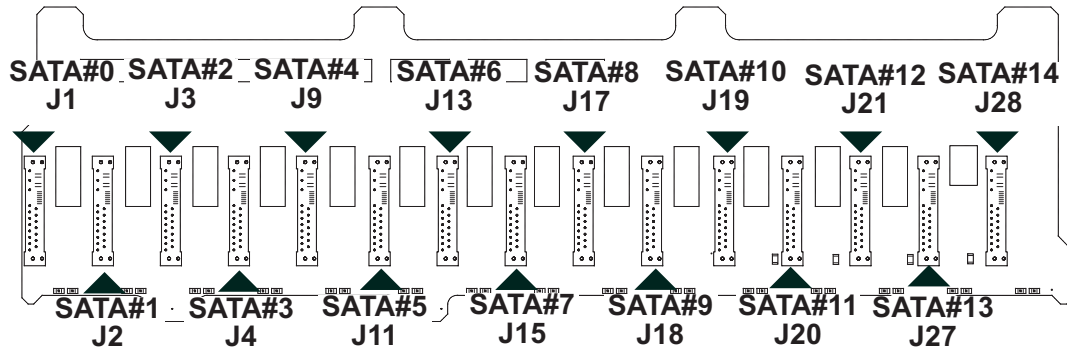
Rear SATA Connectors	
Rear Connector	**SATA Drive Number**
SATA #0	SATA HDD #0
SATA #1	SATA HDD #1
SATA #2	SATA HDD #2
SATA #3	SATA HDD #3
SATA #4	SATA HDD #4
SATA #5	SATA HDD #5
SATA #6	SATA HDD #6
SATA #7	SATA HDD #7
SATA #8	SATA HDD #8
SATA #9	SATA HDD #9
SATA #10	SATA HDD #10
SATA #11	SATA HDD #11
SATA #12	SATA HDD #12
SATA #13	SATA HDD #13
SATA #14	SATA HDD #14

FAIL #0 D12/D5 FAIL #2 D14/D7 FAIL #4 D18/D19 FAIL #6 D22/D23 FAIL #8 D25/D30 FAIL #10 D27/D32 FAIL #12 D40/D37 FAIL #14 D42/D39

FAIL #1 D13/D6 FAIL #3 D15/D8 FAIL #5 D21/D20 FAIL #7 D24/D29 FAIL #9 D26/D31 SATA#11 D28/D33 SATA#13 D41/D38
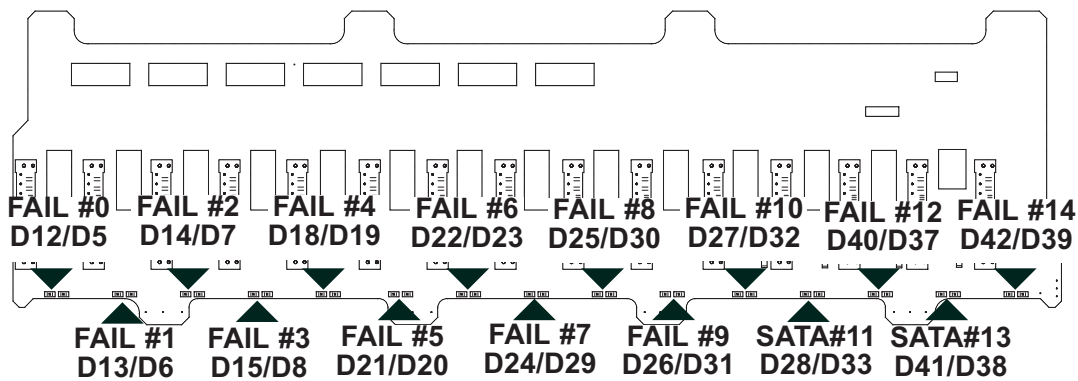
Rear LED Indicators		
Rear LED	**Hard Drive Activity**	**Failure LED**
FAIL #0	D12	D5
FAIL #1	D13	D6
FAIL #2	D14	D7
FAIL #3	D15	D8
FAIL #4	D18	D19
FAIL #5	D21	D20
FAIL #6	D22	D23
FAIL #7	D24	D29
FAIL #8	D25	D30
FAIL #9	D26	D31
FAIL #10	D27	D32
FAIL #11	D28	D33
FAIL #12	D40	D37
FAIL #13	D41	D38
FAIL #14	D42	D39

Notes