

BPN-SAS3-213A-N8 Backplane

USER'S GUIDE

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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Contacting Supermicro

Headquarters

Address: Super Micro Computer, Inc.
980 Rock Ave.
San Jose, CA 95131 U.S.A.

Tel: +1 (408) 503-8000

Fax: +1 (408) 503-8008

Email: marketing@supermicro.com (General Information)
support@supermicro.com (Technical Support)

Website: www.supermicro.com

Europe

Address: Super Micro Computer B.V.
Het Sterrenbeeld 28, 5215 ML
's-Hertogenbosch, The Netherlands

Tel: +31 (0) 73-6400390

Fax: +31 (0) 73-6416525

Email: sales@supermicro.nl (General Information)
support@supermicro.nl (Technical Support)
rma@supermicro.nl (Customer Support)

Website: www.supermicro.nl

Asia-Pacific

Address: Super Micro Computer, Inc.
3F, No. 150, Jian 1st Rd.
Zhonghe Dist., New Taipei City 235
Taiwan (R.O.C)

Tel: +886-(2) 8226-3990

Fax: +886-(2) 8226-3992

Email: support@supermicro.com.tw

Website: www.supermicro.com.tw

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 A Note to Users

All images and layouts in this user's guide are based upon the latest PCB revision available at the time of publishing. The card you have received may not look exactly the same as the graphics in this manual.

1-4 Introduction to the BPN-SAS3-213A-N8 Backplane

The BPN-SAS3-213A-N8 backplane has been designed to utilize the most up-to-date technology available, providing your system with reliable, high-quality performance.

Always refer to the Supermicro web site at www.supermicro.com for the latest updates, compatible parts, and supported configurations.

2-2 Front Connector and Pin Definitions

1. Backplane Main Power Connectors

The 4-pin connectors, designated JPW3, JPW2, JPW1, JPW6, JPW5, and JPW4, 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. Upgrade Connector

The upgrade connector is used for manufacturer diagnostic purposes only.

3. - 6. SAS IN Ports (Sideband included)

The SAS ports are used to connect the SAS3 drive cables. The four SAS IN ports are designated JSM1, JSM3, JSM2, and JSM4. Each port is also compatible with SATA drives. However, mixing SAS3 and SATA drives is not recommended.

Sideband Definitions (JSM1 - JSM4)			
Pin #	Definition	Pin #	Definition
A0	SB0	C1	SB4
B2	SB1	D1	SB5
C2	SB2	D2	SB6
B1	SB3	A1	SB7

7. - 10. NVMe IN Ports

The NVMe ports are used to connect the NVMe drive cables. OcuLink cable CBL-SAST-0820 should be used to connect these ports to the corresponding ports on add-on card AOC-SLG3-4E2P. The add-on card in slot 1 of the motherboard should have its ports CN1, CN2, CN3, and CN4 connected to the backplane's ports CN1, CN3, CN5, and CN7, respectively. The add-on card in slot 2 of the motherboard should have its ports CN1, CN2, CN3, and CN4 connected to CN2, CN4, CN6, and CN8, respectively.

2-3 Front Jumpers

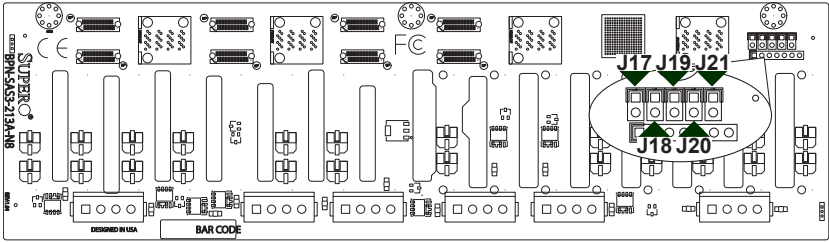
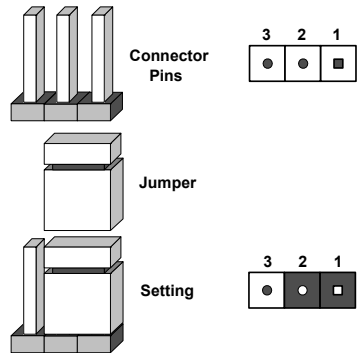


Figure 2-2. Front Jumpers

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 two pin jumpers, "Closed" means the jumper is on and "Open" means the jumper is off the pins.



Jumper Settings					
Jumper					Description
J17 CPU_SEL0	J18 CPU_SEL1	J19 CPU_SEL2	J20 I2C_SEL0	J21 I2C_SEL1	
0	0				NVMe drive connection 8+0
0	1				NVMe drive connection 4+4 (default for two 4-NVMe AOC interface)
1	0				NVMe drive connection 2+6
1	1				NVMe drive connection 6+2
		0			Reserved for future use. Open by default.
			0	0	BMC I2C address is 66h (default)
			0	1	BMC I2C address is 76h
			1	0	BMC I2C address is 6Eh
			1	1	BMC I2C address is 7Eh

2-4 Rear Components, Connectors, and LED Indicators

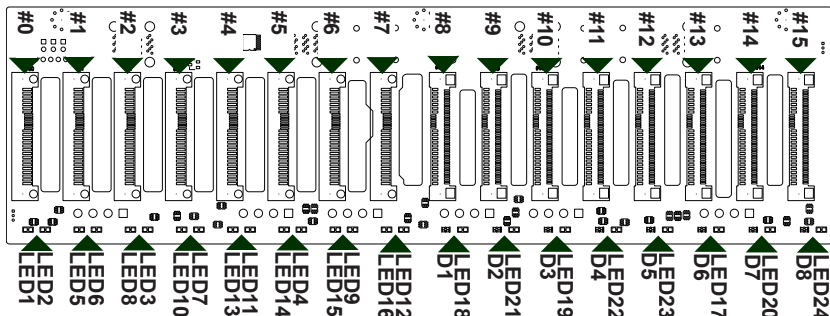


Figure 2-3. Rear SAS/SATA Connectors and LED Indicators

SAS/SATA/NVMe Connectors and LED Indicators			
Rear Connector	SAS Drive Number	Failure LED	Activity LED
#0	SAS3/SATA HDD #0	LED1	LED2
#1	SAS3/SATA HDD #1	LED5	LED6
#2	SAS3/SATA HDD #2	LED8	LED3
#3	SAS3/SATA HDD #3	LED10	LED7
#4	SAS3/SATA HDD #4	LED13	LED11
#5	SAS3/SATA HDD #5	LED14	LED4
#6	SAS3/SATA HDD #6	LED15	LED9
#7	SAS3/SATA HDD #7	LED16	LED12
#8	SAS3/SATA/NVMe HDD #8	D1	LED18
#9	SAS3/SATA/NVMe HDD #9	D2	LED21
#10	SAS3/SATA/NVMe HDD #10	D3	LED19
#11	SAS3/SATA/NVMe HDD #11	D4	LED22
#12	SAS3/SATA/NVMe HDD #12	D5	LED23
#13	SAS3/SATA/NVMe HDD #13	D6	LED17
#14	SAS3/SATA/NVMe HDD #14	D7	LED20
#15	SAS3/SATA/NVMe HDD #15	D8	LED24

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