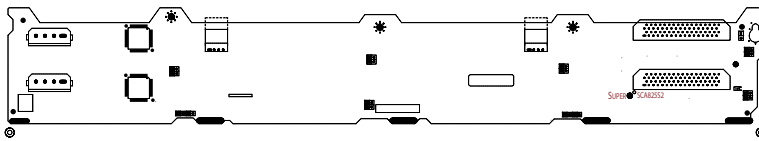
SUPER®



SCA825S2 Backplane

USER'S GUIDE

Rev. 1.0

Table of Contents

User's Guide Revision: Rev. 1.0
Release Date: 07/25/2006

Safety Information and Technical Specifications

1. Safety Guidelines

To avoid personal injury and property damage, please carefully follow all the safety steps listed below when accessing your system or handling the components:

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.

General Safety Guidelines

- Always disconnect power cables before installing or removing any components from the computer, including the SCA825S2 Backplane.
- Disconnect the power cable before installing or removing any cable from the SCA825S2 Backplane.
- Make sure that the SCA825S2 Backplane is securely and properly installed on the motherboard to prevent damage to the system due to power shortage.

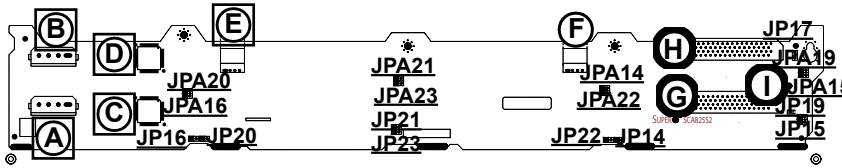
An Important Note to the User

- 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've received may or may not look exactly the same as the graphics shown in this manual.

2. Jumper Settings and Pin Definitions

A. Front Jumpers and Connectors

Front View



Front Jumper/Connector Locations

Front Panel Connectors

A/B. JP10/JPA10: Backplane Main (4-Pin) PWR Connectors
C/D. GEM318
E/F. CD-ROM/Floppy Drive (4-Pin) PWR Connectors
G. LVD1 SCSI Channel A
H. LVDA1 SCSI Channel B
I. D4: Overheat/Drive Fail LED Indicator

Front Panel Jumpers

(*See A-2 on Page 1-7)

Front Panel LED (D4)

(*See A-3 on Page 1-7)

A-2. Front Panel Connectors and Pin Definitions

A/B : SCA825S2 Backplane Main Power (JP10/JPA10)

Backplane Main Power Connector Pin Definitions

You must use the 4-pin power connectors (JP10/JPA10) to provide adequate power supply to the Backplane. See the table on the right for pin definitions.

Backplane Main PWR 4-pin Connector

Pins #	Definition
1	+12 V
2 & 3	Ground
4	+5V

C/D: GEM 318 (SAF-TE: SCSI Accessed Fault-Tolerant Enclosures)

This chip allows the system to use a set of pre-defined SCSI commands to monitor the status of disk drives and provide disk drive information to the user through LED indicators and buzzers. (*Note: This function is available only when a RAID controller with a RAID set is present and enabled. Please refer to the table below for the information on SAF-TE LED Indicators.)

SAF-TE LED Indicators

LED#	Location	Description
D4	Front	Overheat or Drive Failure (red light flashing, buzzer: on)
D5	Rear	Channel A ID#0 Failure LED (red light flashing, buzzer: on)
DA5	Rear	Channel B ID#0 Failure LED (red light flashing, buzzer: on)
D6	Rear	Channel A ID#1 Failure LED (red light flashing, buzzer: on)
DA6	Rear	Channel B ID#1 Failure LED (red light flashing, buzzer: on)
D16	Rear	Channel A ID#2 Failure LED (red light flashing, buzzer: on)
DA16	Rear	Channel B ID#2 Failure LED (red light flashing, buzzer: on)
D18	Rear	Channel A ID#3 Failure LED (red light flashing, buzzer: on)
DA18	Rear	Channel B ID#3 Failure LED (red light flashing, buzzer: on)

E/F: CD-ROM/Floppy Drive Power Connectors

CD-ROM/FDD Power Connector Pin Definitions

You must use the 4-pin power connectors to provide power supply to the CD-ROM and Floppy Drives. See the table on the right for pin definitions.

CD-ROM/FDD PWR 4-pin Connectors

Pins #	Definition
1	+5 V
2 & 3	Ground
4	+12V

G/H: Ultra 320 SCSI Connectors (LVD1/LVDA1)

SCSI Connector Pin Definitions

There are two Ultra 320 SCSI connectors on the backplane. SCSI Channel A is located at LVD1 and Channel B is located on LVDA1. Refer to the table below for the pin definitions for the SCSI connectors.

Ultra320 SCSI Drive Connector Pin Definitions

Pin#	Definition	Pin #	Definition
1	+DB (12)	35	-DB (12)
2	+DB (13)	36	-DB (13)
3	+DB (14)	37	-DB (14)
4	+DB (15)	38	-DB (15)
5	+DB (P1)	39	-DB (P1)
6	+DB (0)	40	-DB (0)
7	+DB (1)	41	-DB (1)
8	+DB (2)	42	-DB (2)
9	+DB (3)	43	-DB (3)
10	+DB (4)	44	-DB (4)
11	+DB (5)	45	-DB (5)
12	+DB (6)	46	-DB (6)
13	+DB (7)	47	-DB (7)
14	+DB (P)	48	-DB (P)
15	Ground	49	Ground
16	DIFFSENS	50	Ground
17	TERMPWR	51	TERMPWR
18	TERMPWR	52	TERMPWR
19	Reserved	53	Reserved
20	Ground	54	Ground
21	+ATN	55	-ATN
22	Ground	56	Ground
23	+BSY	57	-BSY
24	+ACK	58	-ACK
25	+RST	59	-RST
26	+MSG	60	-MSG
27	+SEL	61	-SEL
28	+C/D	62	-C/D
29	+REQ	63	-REQ
30	+I/O	64	-I/O
31	+DB (8)	65	-DB (8)
32	+DB (9)	66	-DB (9)
33	+DB (10)	67	-DB (10)
34	+DB (11)	68	-DB (11)

A-2. Backplane Front Jumpers

Front Jumper Descriptions and Pin Definitions

Jumper	Description	Definition
JP17	On (*Default)	Buzzer Enable
	Off	Buzzer Disable
JP16	On	Remote Start-Channel A#3 Enable
	Off (*Default)	Remote Start- Channel A#3 Disable
JP20	On	Delay Start- Channel A#3 Enable
	Off (*Default)	Delay Start- Channel A#3 Disable
JPA16	On	Remote Start-Channel B#3 Enable
	Off (*Default)	Remote Start- Channel B#3 Disable
JPA20	On	Delay Start- Channel B#3 Enable
	Off (*Default)	Delay Start- Channel B#3 Disable
JP23	On	Remote Start- Channel A#2 Enable
	Off (*Default)	Remote Start- Channel A#2 Disable
JP21	On	Delay Start- Channel A#2 Enable
	Off (*Default)	Delay Start- Channel A#2 Disable
JPA23	On	Remote Start- Channel B#2 Enable
	Off (*Default)	Remote Start- Channel B#2 Disable
JPA21	On	Delay Start- Channel B#2 Enable
	Off (*Default)	Delay Start- Channel B#2 Disable
JP22	On	Remote Start- Channel A#1 Enable
	Off (*Default)	Remote Start- Channel A#1 Disable
JP14	On	Delay Start- Channel A#1 Enable
	Off (*Default)	Delay Start- Channel A#1 Disable
JPA22	On	Remote Start- Channel B#1 Enable
	Off (*Default)	Remote Start- Channel B#1 Disable
JPA14	On	Delay Start- Channel B#1 Enable
	Off (*Default)	Delay Start- Channel B#1 Disable
JP15	On	Remote Start- Channel A#0 Enable
	Off (*Default)	Remote Start- Channel A#0 Disable
JP19	On	Delay Start- Channel A#0 Enable
	Off (*Default)	Delay Start- Channel A#0 Disable
JPA15	On	Remote Start- Channel B#0 Enable
	Off (*Default)	Remote Start- Channel B#0 Disable
JPA19	On	Delay Start- Channel B#0 Enable
	Off (*Default)	Delay Start- Channel B#0 Disable

A-3. Backplane Front LED

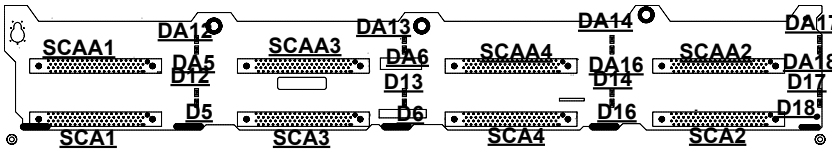
Front Overheat LED Indicator

Front LED Indicator	Specification
D4 (Front)	Overheat/Drive Failure LED Indicator (Red light: flashing, Buzzer: On)

B. Rear Connectors and LED Indicators

B-1 Rear Connector/LED Indicator Locations

Rear View



(*See below for rear connector/LED descriptions.)

B-2 Connector/LED Indicator Descriptions

B-2.1 Backplane Rear Connectors

Rear Connector	Specification
SCA1	SCSI Channel A #0
SCA3	SCSI Channel A #1
SCA4	SCSI Channel A #2
SCA2	SCSI Channel A #3
SCAA1	SCSI Channel B #0
SCAA3	SCSI Channel B #1
SCAA4	SCSI Channel B #2
SCAA2	SCSI Channel B #3

B-2.2 Backplane Rear LED Indicators

Rear LED	Specification
D12	SCSI Channel A #0 Activity LED
D13	SCSI Channel A #1 Activity LED
D14	SCSI Channel A #2 Activity LED
D17	SCSI Channel A #3 Activity LED
DA12	SCSI Channel B #0 Activity LED
DA13	SCSI Channel B #1 Activity LED
DA14	SCSI Channel B #2 Activity LED
DA17	SCSI Channel B #3 Activity LED
D5	SCSI Channel A #0 Failure LED
D6	SCSI Channel A #1 Failure LED
D16	SCSI Channel A #2 Failure LED
D18	SCSI Channel A #3 Failure LED
DA5	SCSI Channel B #0 Failure LED
DA6	SCSI Channel B #1 Failure LED
DA16	SCSI Channel B #2 Failure LED
DA18	SCSI Channel B #3 Failure LED

3. SCSI (Super) GEM Installation Instructions for the Windows Operating System

Please refer to the following instructions to install the SCSI GEM Driver for the Windows OS systems.

(*Note: This driver is not necessary for other Operating Systems. If you have two SCA backplanes, you will need to install the driver twice.)

The driver is located on the Super Micro motherboard driver CD or is available for download from our FTP site: ftp://ftp.supermicro.com/driver/Qlogic/

Follow the procedure below to install this driver to your system.

Installing the driver:

1) Right click on “My Computer” and choose “Property”.
2) Select “Hardware” tab and click on “Device Manager”.
3) Open “Other Devices” or wherever “GEM318” is on.
4) Right click on this device and choose “Property”.
5) Click on “Driver” tab and choose “Update Driver”.
6) Click “Next” 2 times, uncheck both “Floppy disk drives” and “CD-ROM drives”. Then, select the item- “Specify a location,” and choose “Next”.
7) Click on “Browse” and choose D drive or wherever Supermicro Setup CD is in.
8) Choose “Qlogic” folder and click on “Open”.
9) System will automatically detect GEM318 and install the drive from this point on.

or,

1) Right click the "My Computer" icon on your desktop and choose Properties.
2) Click on the Hardware tab and click on "Device Manager" to bring up the list of system devices.
3) You may see one or two yellow question marks (?) that read QLogic GEM354 or GEM318 SCSI Processor Device. Right click on these, and choose to uninstall. If two such question marks are present, uninstall both.
4) Click on Action tab and choose "Scan for Hardware Changes". The Hardware Wizard program should start up. Click "Next".
5) At the first prompt, choose “Display a list of known device drivers for the device so that I can choose a specific driver” and click "Next".
6) Choose “Other Devices” and click Next.
7) Choose “Have Disk”, and specify your floppy drive location in the options box. Then, click "Next".
8) Highlight “Enclosure Services Device” and click "Next".
9) Ignore the warning prompt by clicking "Yes".

Notes