

SCA 818S Backplane

USER'S GUIDE

Rev. 1.0

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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

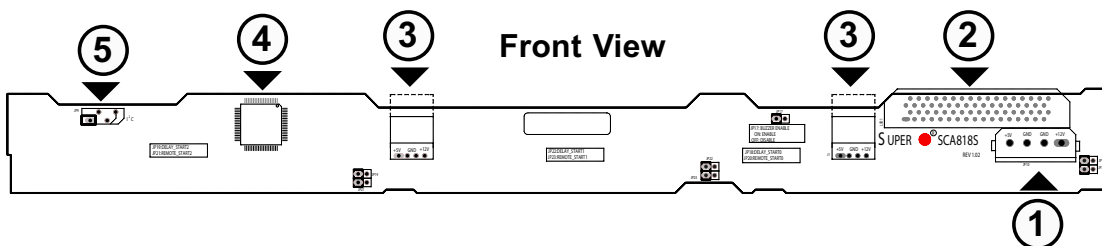
- All images and layouts shown in this user's guide are based upon the latest PCB Revision available at the time of publishing. The card you have received may or may not look exactly the same as the graphics shown in this manual.

Notes

Chapter 2

Jumper Settings and Pin Definitions

2-1 Front Connectors and Jumpers



Front Connectors

1. JP10: Backplane Main (4-Pin) PWR
2. LVD1: SCSI Channel
3. J1 and J2: CD-ROM/Floppy Drive (4-Pin) PWR Connector
4. GEM 318 Chip
5. JP9: I²C Connector

2-2 Front Connector and Pin Definitions

#1. Backplane Main Power Connectors

The 4-pin connector, designated JP10, provides power to the backplane. See the table on the right for pin definitions.

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

#3. CD-ROM/Floppy 4-Pin Connectors

The 4-pin connectors, designated J1 and J2, provide power to the CD-ROM and floppy drives. See the table on the right for pin definitions.

| CD-ROM/FDD Power 4-Pin Connector (J1 and J2) | |
|--|------------|
| Pin# | Definition |
| 1 | +5V |
| 2 and 3 | Ground |
| 4 | +12V |

#4. GEM Chip (SAF-TE: SCSI Accessed Fault-Tolerant Enclosures)

The GEM chip allows the system to monitor the status of the disk drives and provides disk drive information to the user through the LED indicators and buzzers.

This function is only available when a RAID controller with a Raid set is present and enabled.

| SAF-TE LED Indicators | | |
|-----------------------|----------|--|
| LED # | Location | Description |
| D4 | Front | Overheat or Drive Failure (red light, flashing, buzzer on) |
| D5 | Rear | SCA#0 Fail LED (red light, flashing, buzzer on) |
| D6 | Rear | SCA#1 Fail LED (red light, flashing, buzzer on) |
| D16 | Rear | SCA#2 Fail LED (red light, flashing, buzzer on) |

#5. I²C Connector

The I²C Connector, designated JP9, is used to monitor HDD activity and status. See the table on the right for pin definitions.

| I ² C Connector Pin Definitions (JP9) | |
|--|---------------|
| Pin# | Definition |
| 1 | Data |
| 2 | Ground |
| 3 | Clock |
| 4 | No Connection |

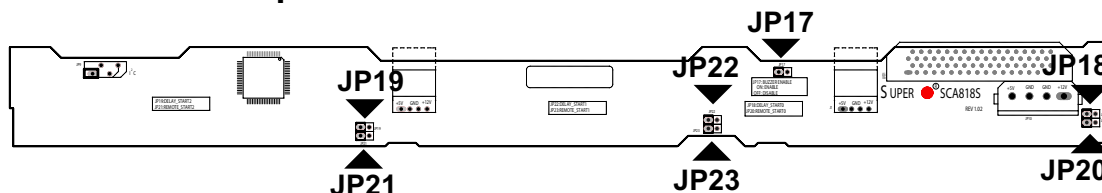
#2. Ultra 320 SCSI Connector (LVD1)

The Ultra 320 SCSI connector, designated J28, connects the backplane to the server motherboard.

| Ultra320 SCSI Drive Connector Pin Definitions (J28) | | | |
|--|------------|-------|------------|
| 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) |

2-3 Front Jumper Locations and Pin Definitions

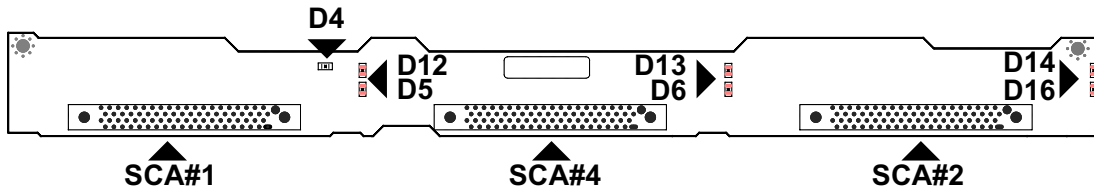
Front Jumper Locations



| SCA 818S Jumper Settings | | |
|--------------------------|------------------|---------------------------------|
| Jumper | Description | Definition |
| JP17 | Closed (Default) | Buzzer Enabled |
| JP17 | Open | Buzzer Disabled |
| JP18 | Closed | Delay Start for SCA#0 Enabled |
| JP18 | Open (Default) | Delay Start for SCA#0 Disabled |
| JP20 | Closed | Remote Start for SCA#0 Enabled |
| JP20 | Open (Default) | Remote Start for SCA#0 Disabled |
| JP22 | Closed | Delay Start for SCA#1 Enabled |
| JP22 | Open (Default) | Delay Start for SCA#1 Disabled |
| JP23 | Closed | Remote Start for SCA#1 Enabled |
| JP23 | Open (Default) | Remote Start for SCA#1 Disabled |
| JP19 | Closed | Delay Start for SCA#2 Enabled |
| JP19 | Open (Default) | Delay Start for SCA#2 Disabled |
| JP21 | Closed | Remote Start for SCA#2 Enabled |
| JP21 | Open (Default) | Remote Start for SCA#2 Disabled |

2-4 Rear Connectors and LED Indicators

Rear Connector Locations



Rear Connector/LED Indicator Descriptions

| Rear Connectors | |
|-----------------|---------------|
| Rear Connector | Specification |
| SCA #1 (Rear) | SCSI HDD#0 |
| SCA #4 (Rear) | SCSI HDD#1 |
| SCA #2 (Rear) | SCSI HDD#2 |

| Rear LED Indicators | |
|---------------------|--------------------------|
| LED Indicator | Specification |
| D12 (Rear) | SCSI HDD #1 Activity LED |
| D13 (Rear) | SCSI HDD #4 Activity LED |
| D14 (Rear) | SCSI HDD #2 Activity LED |
| D5 (Rear) | SCSI HDD #1 Failure LED |
| D6 (Rear) | SCSI HDD #4 Failure LED |
| D16 (Rear) | SCSI HDD #2 Failure LED |

| Backplane LED | |
|----------------------|---|
| Diagnostic Indicator | Specification |
| D4 | Overheat/Drive Failure LED Indicator (Red light: flashing, Buzzer: On) |

2-5 SCSI (Super) GEM Installation Instructions for the Windows Operating System

The following instructions describe how to install the SCSI GEM Driver for the Windows OS systems. 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/SCSI_Backplanes/Qlogic/

Use ONE of the following Windows installation procedures to install the drivers to your system.

Windows Driver Installation Procedure A

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

Windows Driver Installation Procedure B

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 both devices have question marks, 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