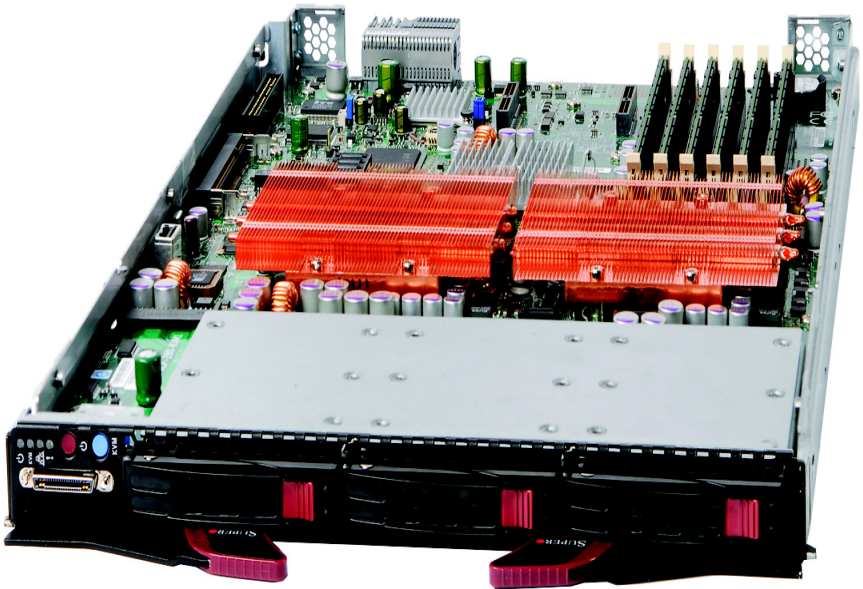


# SUPERMICRO®

## SBI-7425C-S3 Blade Module



## RAID Setup Procedure

Revision 1.0

## SBI-7425C-S3 Blade Module RAID Setup Procedure

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# SBI-7425C-S3

## RAID Setup Procedure

### 1. Installing the Operating System

An operating system (OS) must be installed on each blade module. Unlike most blade systems, blades with Microsoft Windows OS and blades with Linux OS can both occupy and operate within the same blade enclosure. Refer to the Supermicro web site for a complete list of supported operating systems.

There are several methods of installing an OS to the blade modules.

#### Installing with an External USB CD-ROM Drive

The most common method of installing the OS is with an external USB CD-ROM drive. Take the following steps to install the OS to a blade module:



**WARNING:** Installing the OS from an external CD-ROM drive may take several hours to complete.

1. Connect an SUV cable (Serial port/USB port/Video port cable) to the KVM connector on the front of the blade module. You will then need to attach a USB hub to the USB port on this cable to provide multiple USB ports.
2. Connect the external CD-ROM drive, a USB keyboard and a mouse to the USB hub. You will also need to connect a monitor to the video connector on the SUV cable. Turn on the blade module.
3. Insert the CD containing the OS into the CD-ROM drive.
4. Follow the prompts to begin the installation.

#### Installing via PXE Boot

PXE (Preboot Execution Environment) is used to boot a computer over a network. To install the OS via PXE, the following conditions must be met:

1. The PXE BOOT option in BIOS must be enabled.
2. A PXE server has been configured (this can be another blade in the system).
3. The PXE server must be connected over a network to the blade to be booted.
4. The blade has only non-partitioned/unformatted hard drives installed and no bootable devices attached to it.

Once these conditions are met, make sure the PXE server is running then turn on the blade you wish to boot and/or install the OS to. The BIOS in the blade will look at all

bootable devices and finding none will connect to the PXE server to begin the boot/install.

### **Installing via Virtual Media (Drive Redirection)**

You can install the OS via Virtual Media through either the IPMI or the Web-based Management utility. With this method, the OS is installed from an ISO image that resides on another system/blade. Refer to the appropriate Appendix in the *SuperBlade User's Guide* for the Virtual Media (CD-ROM or Drive Redirection) sections in either of the two utility programs.

## **2. Management Software**

System management may be performed with either of two software packages: IPMI or a Web-based Management utility. Both are designed to provide an administrator with a comprehensive set of functions and monitored data to keep tabs on the system and perform management activities.

Refer to *Chapter 8, SuperBlade User's Guide* for details on the various functions provided by these management programs.

## **3. Installing RAID in the SBI-7425C-S3 Blade Module**

Each SBI-7425C-S3 blade module supports up to three hard drives, which may be used to create a RAID 0, RAID 1 or Enhance RAID1 array. For RAID setup use the procedure below. This blade's BIOS has an IR mode F/W (integrated RAID mode) utility available in its setup.

### **RAID Configurations**

With two or hard drives per blade, the following RAID configurations are supported:

- RAID 0 (Data Striping): this writes data in parallel, interleaved ("striped") sections on two hard drives. Data transfer rate is doubled over using a single disk.
- RAID1 (Data Mirroring): an identical data image from one drive is copied to another drive. The second drive must be the same size or larger than the first drive.
- Enhanced RAID1 (Data Mirroring): as RAID1 with data mirrored from one or more disks to one or more disks of a second, larger size. You can couple the disks from the source to create a virtual volume and use one or more disks of a second, larger size to provide a single larger volume (or multiple larger volumes) that serve as the mirroring drive or drives for the array.

### **Preparing for Setup**

Before you begin the installation, verify the following:

1. The SBI-7425C-S3 blade module has two or more hard drives installed.
2. These drives must not have an OS installed and must be non-partitioned (formatted is ok).

3. The installation procedure is done via KVM, so have a KVM cable (CBL-0218L) connected to the KVM connector on the blade module with a keyboard, mouse and monitor attached.



**NOTE:** You may also instead use IPMI or the Web-based Management utility to access the blade.

## RAID Setup Procedure

Do the following to setup RAID for the SBI-7425C-S3 blade:

1. Boot the SBI-7425C-S3 blade and hit the <DELETE> key to enter the LSI BIOS SETUP screen.
2. In the BIOS screen, press <CTRL+C> to bring up the LSI LOGIC CONFIG UTILITY screen.
3. In the screen, select ADAPTER LIST GLOBAL PROPERIES select the default adapter listed and press <ENTER> to enable it.

The ADAPTER PROPERIES screen appears.

4. Go to RAID PROPERTIES in the screen and press <ENTER>. The RAID PROPERTIES screen appears.
5. From the three options listed, choose the RAID option you want and press <ENTER>:
  - RAID0 (IS Volume)
  - RAID1 (IM Volume)
  - Enhance RAID1 (IME Volume)
6. The next screen will list the hard drives installed on your system. Go to RAID Disk and press the <SPACEBAR>.
7. If data is on the disk, a message appears asking you to confirm your choice of it for a RAID disk by pressing a letter on your keyboard: <M> for keeping the data and <D> for overwriting the data.

If no data is on the disk, then a confirmation message to create the RAID disk is shown. Press the <SPACEBAR> to confirm the message or <Esc> to exit without selecting a RAID disk.

8. Repeat [step 7](#) for other drives depending upon your RAID configuration and level chosen.
9. When finished with your RAID disk configuration, press <C> in the RAID PROPERTIES screen to create the RAID array.
10. Go to the EXIT Menu, highlight SAVE CHANGES AND EXIT and hit <ENTER> to exit the utility.

## **Other LSI BIOS RAID Management Utilities**

The LSI BIOS for the SBI-7425C-S3 blade module contains other utilities for RAID array and drive management.

From the LSI BIOS SETUP screen select RAID PROPERTIES → MANAGE ARRAYS to bring up the MANAGE ARRAYS screen. This screen allows you to manage RAID arrays on your SBI-7425C-S3 blade module.

Also in the LSI BIOS SETUP screen select SAS TOPOLOGY → DIRECT ATTACH DEVICES → LIST DRIVES to bring up a screen with a drive list showing all drives installed on your SBI-7425C-S3 blade module.