



“Simple Mind”
“Smooth Mind”
“Smooth Mind (Dual Mogul)”

User's Manual

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This document describes Astek's "SimpleMind" and "Smooth Mind" (single and dual configurations)

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REGULATORY COMPLIANCE

Notice: FCC and CE testing is pending. This board is for ENGINEERING USE ONLY.

Note: The A8S20816-SBC, A8S20416-SBC, and A8S20216-SBC have been design to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These Limits are designed to provide reasonable protection against harmful interference when the equipment is operated in its installation. This equipment generates, uses, can radiate radio frequency energy, and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. If this equipment does cause harmful interference the user will be required to correct the interference.

The A8S2XX16-SBC has been designed to meet the safety requirements of IEC/EN 60950-1.

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1 Introduction

Variants

SimpleMind

SmoothMind (Single mogul)

SmoothMind (Dual Mogul)

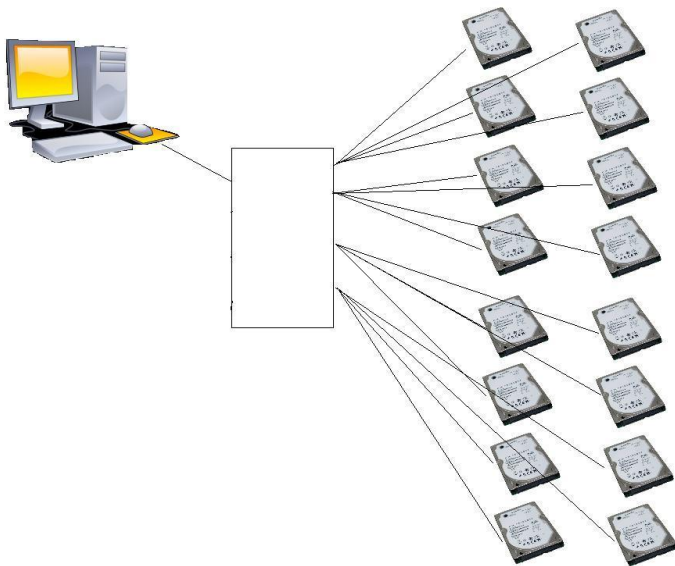
Common Features

Application Development

Common Setup

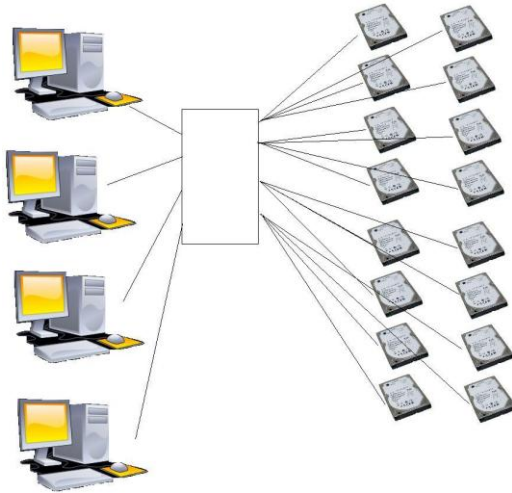
Single Computer

Plug in Mini SAS HD into the back of the case and connect the other end to the computer that will be using the SmoothMind enclosure.



Multiple Computers

Same configuration as a single computer but each of the four ports can be connected to different computers and still use the same drives.



Special Configurations

Special configurations include, connecting multiple cables from the enclosure to a single host for redundancy, limiting which ports can see which hard drives, Dual Mogul configurations with eight ports instead of the standard four, and other connection options.

See page 14 for detailed configuration setup.

Installation Procedures

Hardware Installation

CAUTION

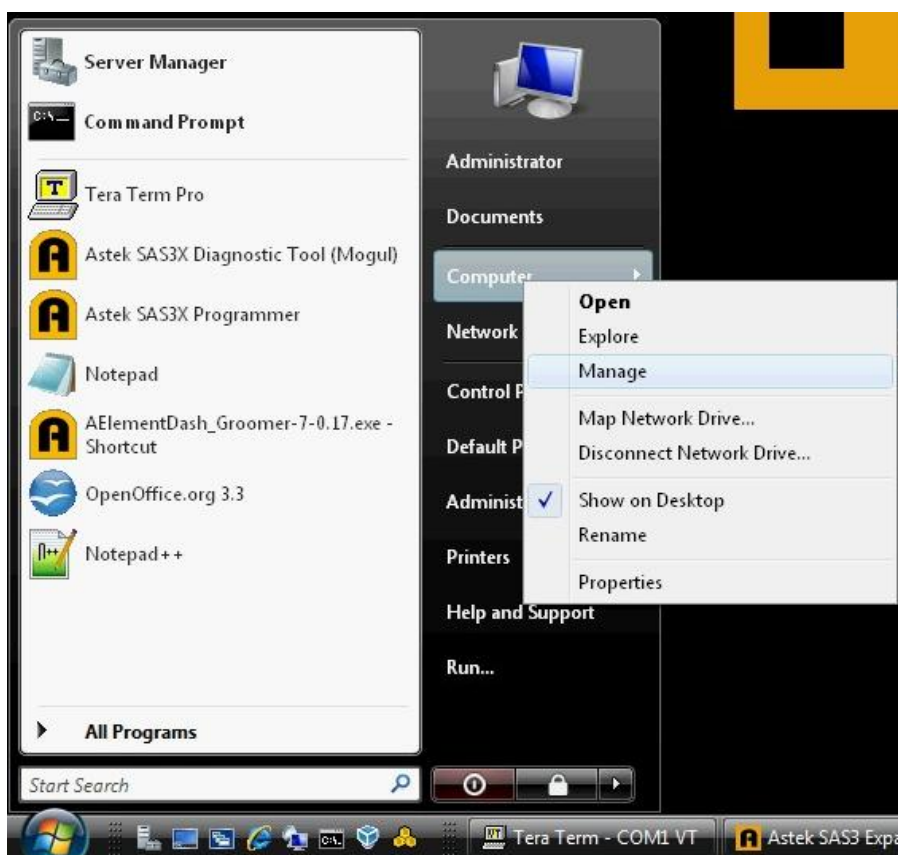
Use proper ESD safety procedures whenever working with electronic equipment or parts.

1.0: Make Sure JBOD is connected to computer and power on.

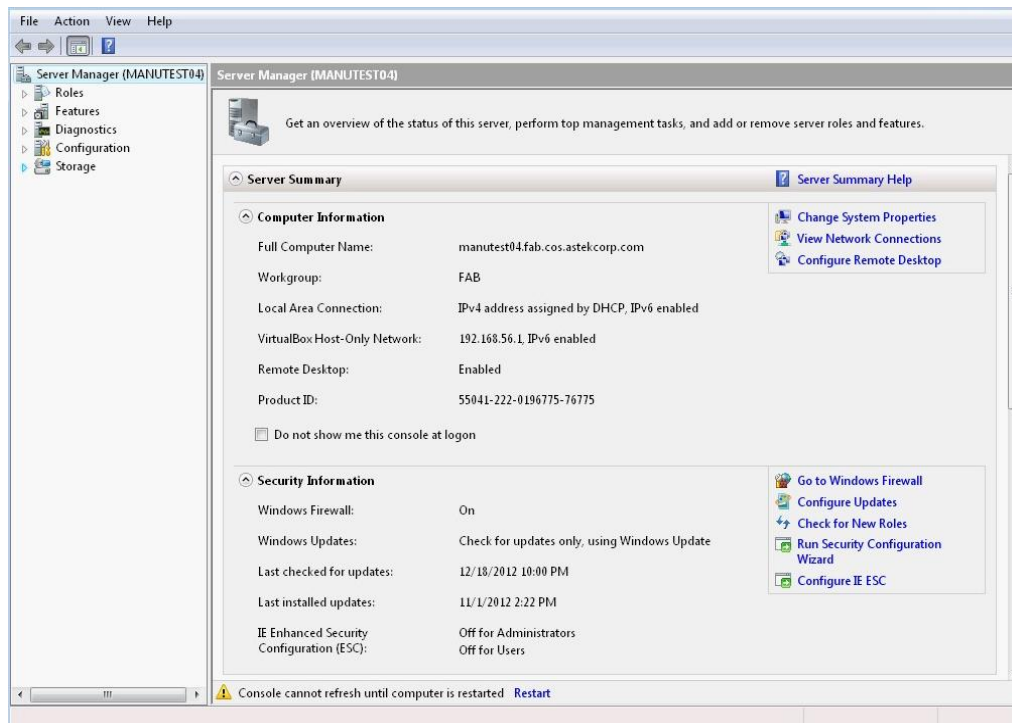
1.1 Ignore the box that pops up saying drivers have been installed. There are no drivers.



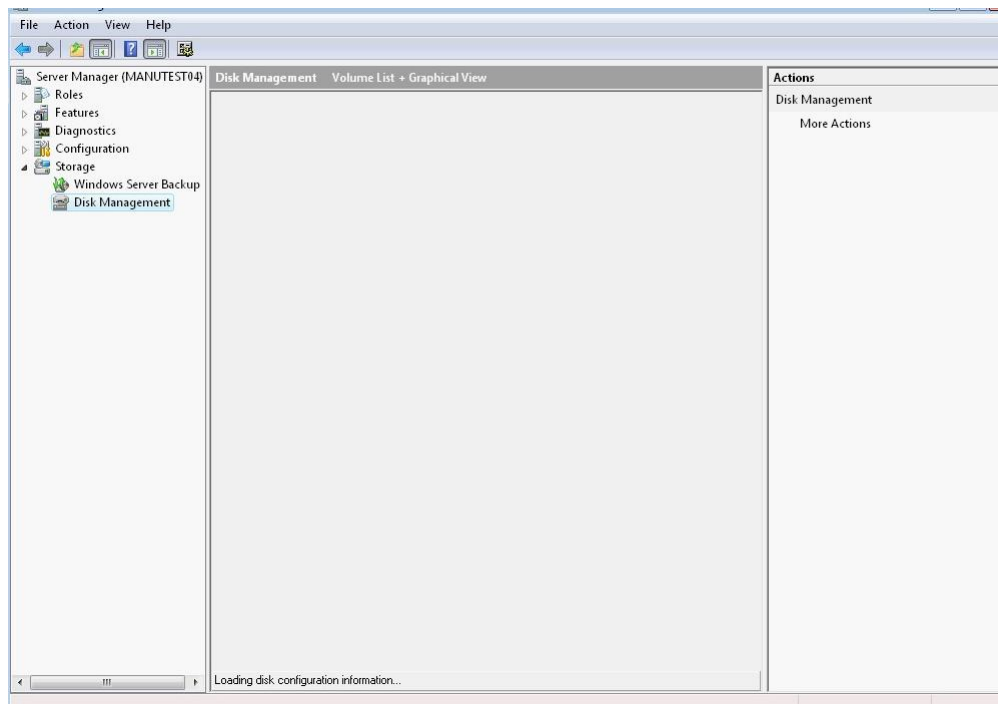
2.0 Navigate to the start menu, right click on Computer and click manage.



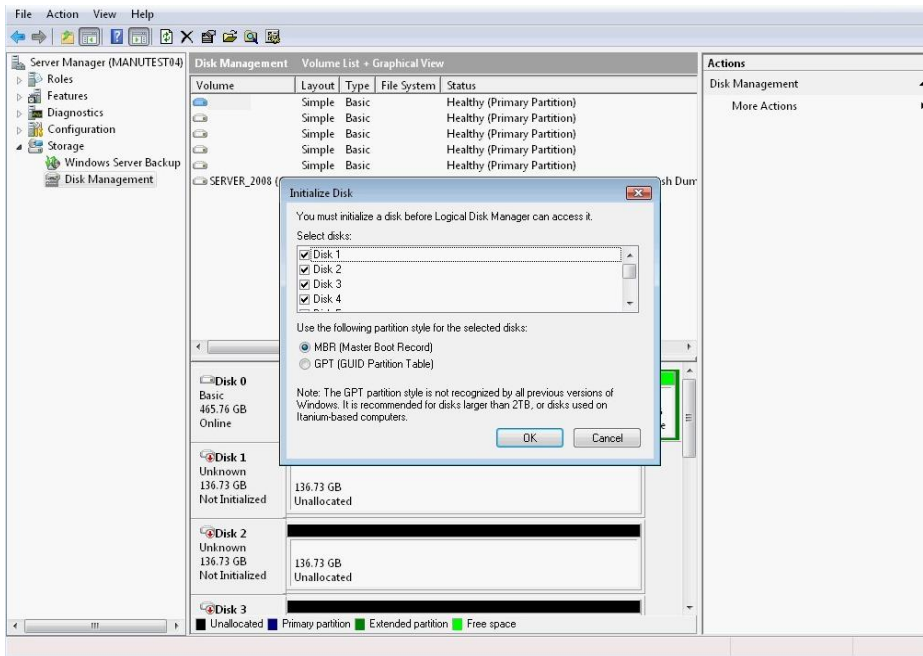
3.0 A window should pop up similar to this.



3.1 Click storage and navigate to Disk Management



3.2 When Disk Management is clicked, a popup should appear if you have unallocated drives plugged in.

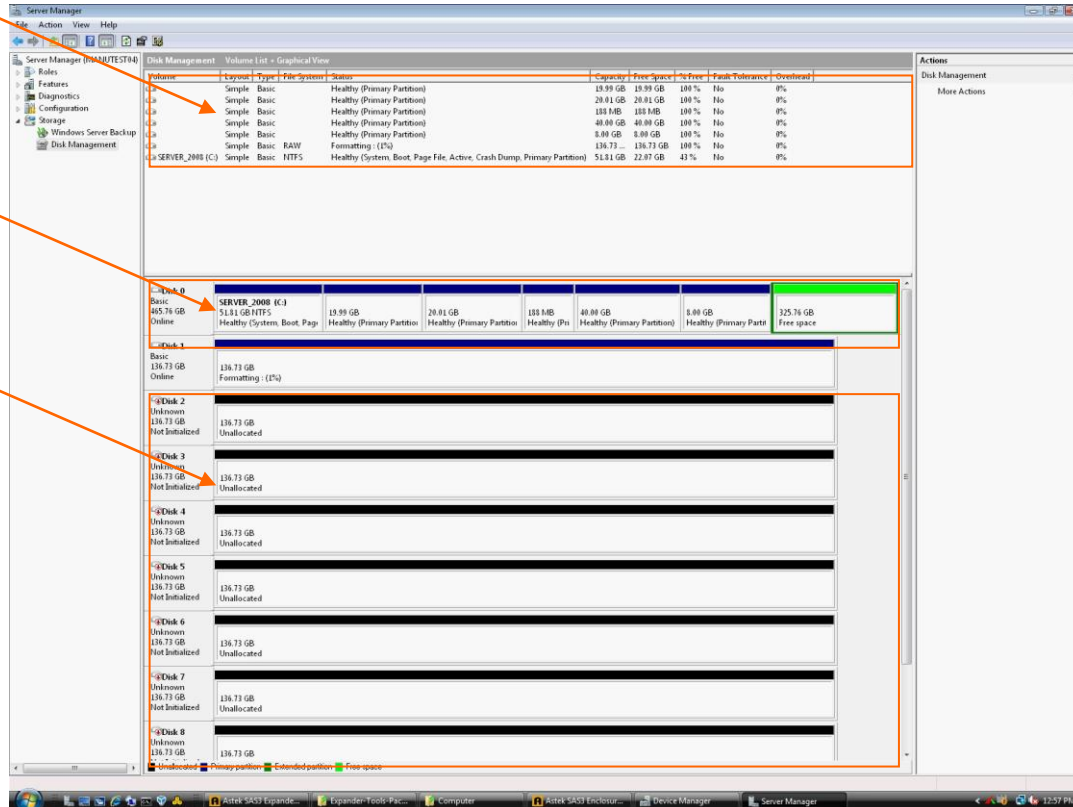


3.3 Choose what type you would like to make the drives and select which drives you would like this to effect. You should end up with a window similar to this after pressing enter. None of the drives will appear and be usable by the computer at this point.

Current Available
Drives

Partitioned HD

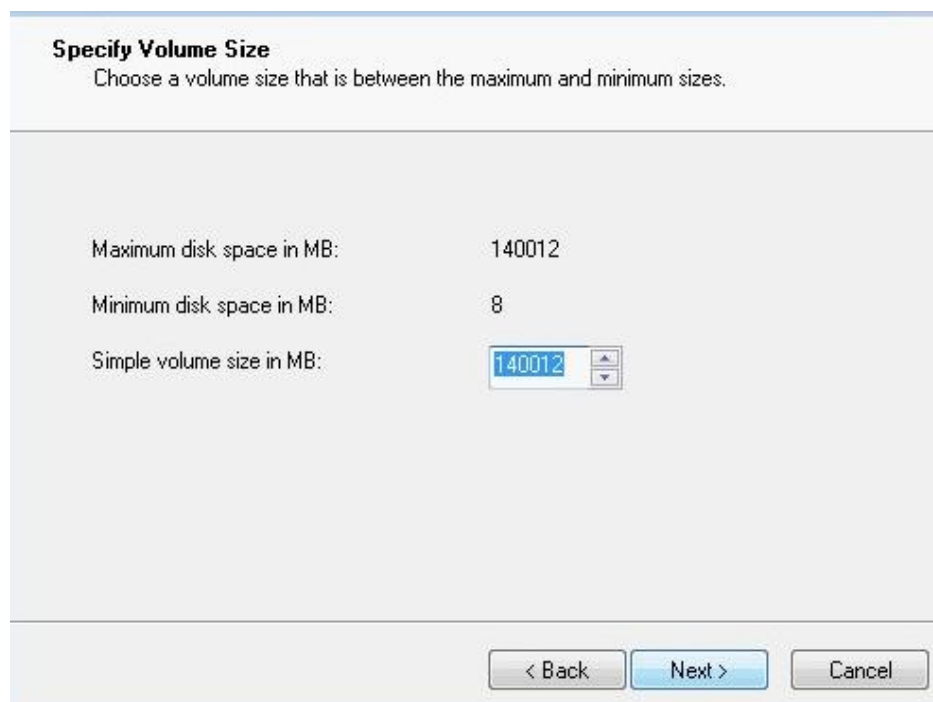
Unallocated HD



- 4.1** To set allocate one or multiple hard drives to be usable, Right click on the drive or selected drives and select, New Simple Volume, New Striped Volume, or any other raid setup option you would like. This example uses a new Simple Volume. A window should pop up to set up the volume.



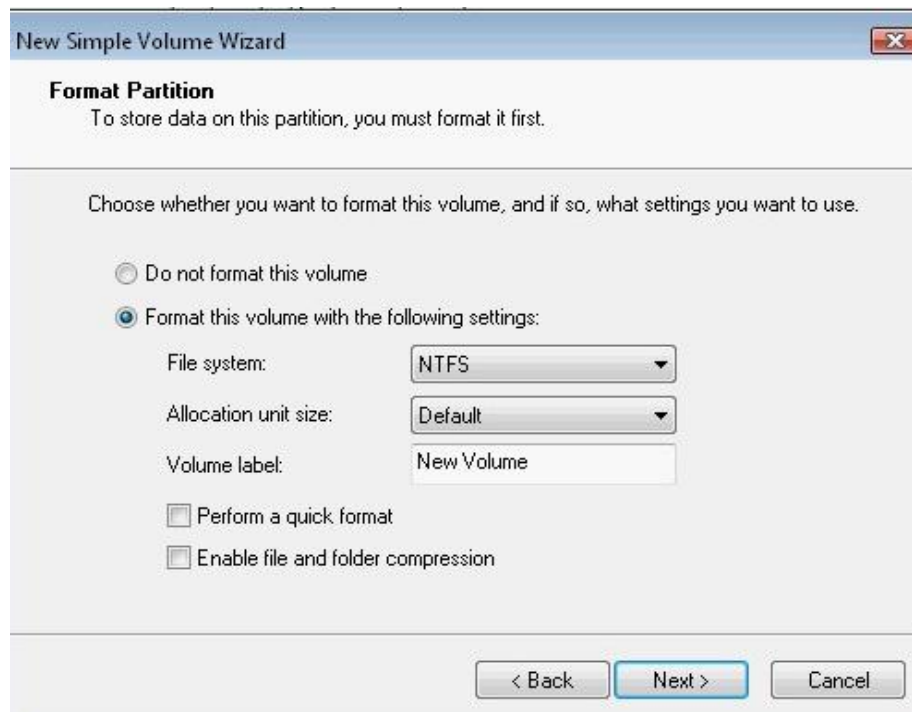
- 4.2** Choose how large you would like the volume to be and click next.



- 4.3** Choose the volume label for that drive/ RAID and click next.



- 4.4 Choose if you do not want to format the HD or if you do and specify options and click next.



- 4.5 The setup will show you all of the options you selected. If they are correct click finish, if not, go back and follow Step 4 again.



Once you click finish the drive will pop up and start formatting.



Once finished the drive should be formatted and usable and will appear in My Computer as a normal hard drive.



Typical Use Cases

Special Configurations

Multiple connections to single host (Single Mogul)

For redundancy and security, up to 4 ports on a single mogul can be connected to a single host. The computer decides which connection to use and if any failure occurs the host automatically switches to a different connection and the Mogul lights inside the chassis display the failure.

Multiple connections to multiple hosts (Single Mogul)

Each output port can be used to connect to different hosts for drive sharing.

Dual mogul configuration

Unless the host has ALUA capabilities, **DO NOT CONNECT MULTIPLE MOGULS TO A SINGLE HOST**, doing so could potentially destroy the drives and **WILL** confuse the computer making the drives un useable. Only use ports right next to each other to connect to a single host unless the host has ALUA.

If the host has ALUA, connecting any number of ports to a single computer will make for up to 8 redundancy ports that the computer will choose between.

There is also the optional configuration of connecting the single chassis to up to 8 computers.

Drive Limiting

Drive limiting is available for all uses. To limit which drives are visible to specific output ports contact Astek or your chassis provider for custom firmware

2 A8S2XX16-SBC Single Board Computer Characteristics

General Board Outline

Key Component Pinouts

Activity/Fault LEDs

Specifications

Electrical Specifications

Environmental Specifications

CAUTION

Do not operate the A8S2XX16-SBC continuously without sufficient cooling. The default configuration does NOT support auto-shutdown due to exceeding thermal limits, and as such, damage may occur to your board if operated continuously without airflow.



Mechanical Specifications

3 Troubleshooting

Diagnostics

Support