



Altos G540 Installation Configuration Guide

Abstract

This document provides you a quick OS installation guide on Altos G540, including Windows Server 2008, Windows Server 2008 x64 Edition, Windows Server 2003, Windows Server 2003 x64 Edition, Windows 2000, Red Hat Enterprise Linux 4.0 (32-bit & 64-bit), SuSE Linux Enterprise Server 9 (32-bit & 64-bit), SuSE Linux Enterprise Server 10 (32-bit & 64-bit) and NetWare 6.5.

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INTRODUCTION

This article describes the Altos G540 Installation Configuration guide:

- Hardware parts give you a briefly and quick hardware information about Altos G540
- The operating system installation tips.

Where Can I Download the Latest Altos G540 Installation Configuration Guide

1. The Altos R720 Installation Configuration Guide would be updated on a monthly basis. Please download the latest release from the support Website.

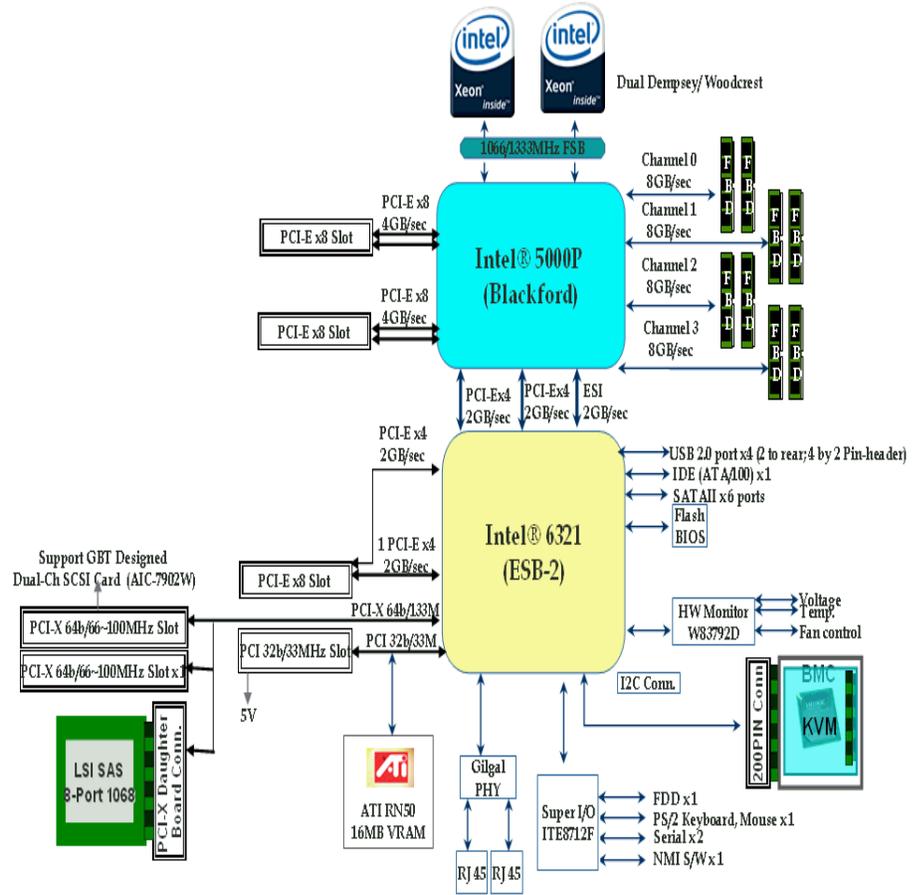
HARDWARE SPECIFICATION

Model	Altos G540
Processor	Dual-Core Intel Xeon processors 5000/5100 sequence (Dempsey or Woodcrest) at 2.66Hz or above Frequency
Front Side Bus	<ul style="list-style-type: none"> • 667 MHz • 1066MHz • 1333MHz
Cache	<ul style="list-style-type: none"> • 2 x 2MB L2 cache • 4MB L2 cache
Chipset	Intel chipset <ul style="list-style-type: none"> • North Bridge: Intel 5000P (Blackford) • South Bridge: Intel 6321ESB
Memory	<ul style="list-style-type: none"> • Quad FB-DIMM memory channels • 8 x DIMM sockets support 512MB/1GB/2GB FB-DIMM 667 • Maximum memory of 12GB • Up to 21 GB/s maximum b/w for FB-DIMM 677 • Support memory sparing and memory mirroring (2006 Q3)
Storage Interface	<ul style="list-style-type: none"> • Six SATA2-300 ports • Option LSI SAS 1068 3Gb/s SAS daughter card • Option LSI ZCR (MegaRAID SAS 8300XLP) • One ATA-100 port
Expansion Slots	Total 6 slots <ul style="list-style-type: none"> • Three x8 PCI-Express slots • Two 64-bits/66MHz/100MHz/3.3V PCI-X slot • One 32-bits 33MHz PCI slots
VGA	Onboard ATI ES1000 video controller w/ 16MB SDRAM
SAS Controller	<ul style="list-style-type: none"> • LSI 1068 3Gb/s SAS daughter card • RAID 0, 1, 1E support • ZCR (LSI MegaRAID SAS 8300XLP) support
SATA Controller	<ul style="list-style-type: none"> • Six SATA ports with Software RAID 0, 1, 10, 5 support
LAN Controller	<ul style="list-style-type: none"> • Onboard Intel 82563EB dual-channel gigabit network interface controller • Supporting Intel I/O Acceleration Technology
BMC	Optional BMC module <ul style="list-style-type: none"> • IPMI 2.0 compliant Optional ARMC/3 module <ul style="list-style-type: none"> • Remote KVM support • Dedicate NIC port • Media redirection support

Availability sub-system	
System Power Supply	<ul style="list-style-type: none"> • 1+1 redundant 610W power supply • Hot Swap
Storage Subsystem	
Drive Bays	<ul style="list-style-type: none"> • Three 5.25" front accessible drive bays for optical device, TBU, and FDD (w/ conversion kit) • Two disk cages
Hard Disks	<ul style="list-style-type: none"> • Up to 8 HDDs by two 4 HDD hot-plug/non-hot-plug cage

BOARD LAYOUT

System Block Diagram



DIMM POPULATION GUIDELINE

Memory population

#	Branch 0				Branch 1			
	DIMM A1	DIMM A2	DIMM B1	DIMM B2	DIMM C1	DIMM C2	DIMM D1	DIMM D2
1	512 MB							
2	512 MB		512 MB					
3	512 MB		512 MB		512 MB		512 MB	
4	512 MB	512 MB	512 MB	512 MB	512 MB		512 MB	
5	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB
6	1 GB							
7	1 GB		1 GB					
8	1 GB		1 GB		1 GB		1 GB	
9	1 GB	1 GB	1 GB	1 GB	1 GB		1 GB	
10	1 GB	1 GB	1 GB	1 GB	1 GB	1 GB	1 GB	1 GB
11	2 GB							
12	2 GB		2 GB					
13	2 GB		2 GB		2 GB		2 GB	
14	2 GB	2 GB	2 GB	2 GB	2 GB		2 GB	
15	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB

Memory population with mirroring

#	Branch 0				Branch 1				Total Memory	
	DIMM A1	DIMM A2	DIMM B1	DIMM B2	DIMM C1	DIMM C2	DIMM D1	DIMM D2	Physical Memory	Detected by OS
1	512 MB		512 MB		512 MB (Mirror)		512 MB (Mirror)		2 GB	1 GB
2	512 MB	512 MB	512 MB	512 MB	512 MB (Mirror)	512 MB (Mirror)	512 MB (Mirror)	512 MB (Mirror)	4 GB	2 GB
3	1 GB		1 GB		1 GB (Mirror)		1 GB (Mirror)		4 GB	2 MB
4	1 GB	1 GB	1 GB	1 GB	1 GB (Mirror)	1 GB (Mirror)	1 GB (Mirror)	1 GB (Mirror)	8 GB	4 GB
5	2 GB		2 GB		2 GB (Mirror)		2 GB (Mirror)		8 GB	4 GB
6	2 GB	2 GB	2 GB	2 GB	2 GB (Mirror)	2 GB (Mirror)	2 GB (Mirror)	2 GB (Mirror)	16 GB	8 GB

Memory population with Sparing

#	Branch 0				Branch 1				Total Memory	
	DIMM A1	DIMM A2	DIMM B1	DIMM B2	DIMM C1	DIMM C2	DIMM D1	DIMM D2	Physical Memory	Detected by OS
1	512 MB (Sparing)	512 MB							1 GB	512 MB
2	512 MB (Sparing)	512 MB	512 MB (Sparing)	512 MB					2 GB	1 GB
3	512 MB (Sparing)	512 MB	4 GB	2 GB						
4	1 GB (Sparing)	1 GB							2 GB	1 GB
5	1 GB (Sparing)	1 GB	1 GB (Sparing)	1 GB					4 GB	2 GB
6	1 GB (Sparing)	1 GB	8 GB	4 GB						
7	2 GB (Sparing)	2 GB							4 GB	2 GB
8	2 GB (Sparing)	2 GB	2 GB (Sparing)	2 GB					8 GB	4 GB
9	2 GB (Sparing)	2 GB	16 GB	8 GB						

OS INSTALLATION TIPS

Below is Altos G540 OS certification matrix:

Operating System	Service Pack	Status	Note
Windows Server 2008 Enterprise x64 Edition	N/A	Certified	1, 2, 3
Windows Server 2008 Enterprise Edition	N/A	Certified	1, 2, 3
Windows Server 2003 R2 Enterprise x64 Edition	SP2	Certified	
Windows Server 2003 R2 Enterprise Edition	SP2	Certified	
Windows 2000 Advanced Server	SP4	Tested	
Red Hat Enterprise Linux 4.0 EM64T	Update 3	Tested	
Red Hat Enterprise Linux 4.0	Update 3	Tested	
SUSE Linux Enterprise Server 10 EM64T	N/A	Certified	
SUSE Linux Enterprise Server 10	N/A	Certified	
SUSE Linux Enterprise Server 9 EM64T	SP3	Certified	
SUSE Linux Enterprise Server 9	SP3	Certified	
NetWare 6.5	SP5	Certified	

NOTE1. Altos G540 BIOS P17 (or later) is required to support Windows Server 2008.

NOTE2. This Windows Server 2008 certification also applies to Standard Edition and Web Server 2008.

NOTE3. EasyBUILD 8.0 build 200 (or later) can support Windows Server 2008.

The drivers required for the OS installation can be found on the EasyBUILD 7.1 build 200 (or later). We suggest that you use the drivers contained in the EasyBUILD 7.1 build 200 (or later), as these drivers are tested and qualified by Acer.

There are two ways you can get the drivers. You can either make diskettes from EasyBUILD 7.1 build 200 (or later), or put it in the optical drive and search the driver directly.

NOTE. In this section, we assume the OS is installed on the HDD connected to the onboard SATA RAID, LSI 1068 SAS daughter card or LSI MegaRAID SAS 8300XLP.

Windows Server 2008 Enterprise x64 Edition Installation (with LSI MegaRAID SAS 8300XLP)

Below information describes how to manually install Windows Server 2008

Enterprise x64 Edition on Altos G540 with LSI MegaRAID SAS 8300XLP installed.

BIOS Required

Altos G540 BIOS P17 (or later) is required to support Windows Server 2008.

Drivers Required

For Windows Server 2008 x64 Installation, the following device drivers are required.

Device	Version	EasyBUILD Version
LSI MegaRAID SAS 8300XLP	2.20.0.64	EasyBUILD 8.0 build 200 (or later)
Chipset	8.6.0.1002	EasyBUILD 8.0 build 200 (or later)
Onboard Gigabit Ethernet	9.12.17.0	EasyBUILD 8.0 build 200 (or later)
Onboard VGA	8.240.50.3000	EasyBUILD 8.0 build 200 (or later)
IOAT	1.2.79.9	EasyBUILD 8.0 build 200 (or later)

Software Required

For Windows Server 2008 x64 Installation, the following manage utilities are required.

Software	Version	EasyBUILD Version
MegaRAID Storage Manager	2.63-00	EasyBUILD 8.0 build 200 (or later)
Intel PROSet Utility	13.0.44.0	EasyBUILD 8.0 build 200 (or later)

Configuring LSI MegaRAID SAS 8300XLP

Please refer to the Appendix C. for the LSI MegaRAID SAS 8300XLP configuration.

Installation Tips

1. Though Windows Server 2008 x64 can recognize the LSI MegaRAID SAS 8300XLP, we still replace the driver with the one in EasyBUILD. Please copy MegaRAID SAS 8204ELP driver from the EasyBUILD 8.0 build 200 to a floppy or USB flash first before the installation.
2. Please boot the system form the Windows Server 2008 x64 DVD. Follow the instructions to do the installation.
3. When you see the "Where do you want to install Windows?" on the screen, please insert the floppy diskette or USB flash with MegaRAID SAS 8300XLP driver and click on **Load Driver**.
4. Click on **Browser** and select directory of the floppy or USB flash that contains the driver.
5. Click on **OK**. You will see the supported devices listed.

-
6. Select "LSI Logic MegaRAID SAS 8300XLP RAID Controller (A:\loemsetup.inf)" and click on **Next**.
 7. After the driver is loaded and returned to "Where do you want to install Windows?" page, click on **Drive options (advanced)** to create a partition for installation.
 8. After the partition created, click on **Next** to continue the installation and follow the instructions to finish the installation.

Chipset Driver Package Installation

1. Please insert the EasyBUILD 8.0 build 200 into the optical drive
2. Expand **Drivers -> Altos G540 -> Chipset**, select **Windows Server 2008 x64** and click on **Setup**.
3. Follow the instruction to install the driver and reboot the server after the chipset driver is installed.

Gigabit Ethernet Driver Installation

1. Though Windows Server 2008 x64 can recognize the onboard Gigabit Ethernet, we still replace the driver with the one in EasyBUILD.
2. Please insert the EasyBUILD 8.0 build 200 (or later) into the optical drive
3. Expand **Drivers -> Altos G540 -> Network Adapter -> Intel 82563EB Gigabit Ethernet Controller**, select **Windows Server 2008 x64** and click on **Setup**.
4. Select **Install Drivers and Software**.
5. Follow the instruction, accept the license agreement and use the default setting to complete the driver installation.
6. The IOAT driver and PROSet utility will be installed together automatically.

IOAT Driver Installation

The IOAT driver will be installed automatically when you installing the onboard Gigabit Ethernet driver.

VGA Driver Installation

1. Windows will treat onboard VGA as Standard VGA device. You can find the ATI ES1000 driver in EasyBUILD 8.0 build 200. Please insert the EasyBUILD 8.0 build 200 into the optical drive.
2. Expand **Drivers -> Altos G540 -> Graphics adapters -> ATI ES1000**, select **Windows Server 2008 x64** and click on **Setup**.
3. Follow the instruction to install the VGA driver and reboot the server after the driver is installed.

4. After installing the driver, you would see **ATI ES1000** listed in Display adapters.

RAID Utility Installation

1. For installing MegaRAID Storage Manager for LSI MegaRAID SAS 8300XLP, please insert the EasyBUILD 8.0 build 200 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **LSI MegaRAID SAS 8300XLP**, select **MegaRAID Storage Manager(Windows Server 2008 x64)** and click on **Setup**.
3. Follow the instruction, accept the license agreement and use the default setting to the **Setup Type**.
4. At the **Setup Type**, please select **Custom Installation** and **StandAlone**.
5. Follow the instruction again to complete the installation.

Network Utility Installation

The PROSet utility for the onboard Gigabit Ethernet controller will be installed automatically when you installing the onboard Gigabit Ethernet driver.

Windows Server 2008 Enterprise x64 Edition Installation (with SAS Daughter Board)

Below information describes how to manually install Windows Server 2008 Enterprise x64 Edition on Altos G540 with SAS daughter board.

BIOS Required

Altos G540 BIOS **P17** (or later) is required to support Windows Server 2008.

Drivers Required

For Windows Server 2008 x64 Installation, the following device drivers are required.

Device	Version	EasyBUILD Version
SAS daughter board	1.27.03.00	EasyBUILD 8.0 build 200 (or later)
Chipset	8.6.0.1002	EasyBUILD 8.0 build 200 (or later)
Onboard Gigabit Ethernet	9.12.17.0	EasyBUILD 8.0 build 200 (or later)
Onboard VGA	8.240.50.3000	EasyBUILD 8.0 build 200 (or later)
IOAT	1.2.79.9	EasyBUILD 8.0 build 200 (or later)

Software Required

For Windows Server 2008 x64 Installation, the following manage utilities are required.

Software	Version	EasyBUILD Version
MegaRAID Storage	2.63-00	EasyBUILD 8.0 build 200 (or later)

Manager		
Intel PROSet Utility	13.0.44.0	EasyBUILD 8.0 build 200 (or later)

Configuring SAS Daughter Board

Please refer to the Appendix B. for the SAS daughter board integrated mirror configuration.

Installation Tips

1. Though Windows Server 2008 x64 can recognize the SAS daughter board, we still replace the driver with the one in EasyBUILD. Please copy SAS daughter board driver from the EasyBUILD 8.0 build 200 to a floppy or USB flash first before the installation.
2. Please boot the system from the Windows Server 2008 x64 DVD. Follow the instructions to do the installation.
3. When you see the “**Where do you want to install Windows?**” on the screen, please insert the floppy diskette or USB flash with SAS daughter board driver and click on **Load Driver**.
4. Click on **Browser** and select directory of the floppy or USB flash that contains the driver.
5. Click on **OK**. You will see the supported devices listed.
6. Select “**LSI Adapter, SAS 3000 series, 8-port with 1068 -StorPort (A:\lsi_sas.inf)**” and click on **Next**.
7. After the driver is loaded and returned to “**Where do you want to install Windows?**” page, click on **Drive options (advanced)** to create a partition for installation.
8. After the partition created, click on **Next** to continue the installation and follow the instructions to finish the installation.

Chipset Driver Package Installation

Please refer to the Windows Server 2008 Enterprise x64 Edition (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

Gigabit Ethernet Driver Installation

Please refer to the Windows Server 2008 Enterprise x64 Edition (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

IOAT Driver Installation

The IOAT driver will be installed automatically when you installing the onboard Gigabit Ethernet driver.

VGA Driver Installation

Please refer to the Windows Server 2008 Enterprise x64 Edition (with LSI

MegaRAID SAS 8300XLP) VGA Driver Installation section.

RAID Utility Installation

1. For installing MegaRAID Storage Manager for SAS daughter board, please insert the EasyBUILD 8.0 build 200 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **LSI SAS 1068**, select **MegaRAID Storage Manager(Windows Server 2008 x64)** and click on **Setup**.
3. Follow the instruction, accept the license agreement and use the default setting to the **Setup Type**.
4. At the **Setup Type**, please select **Custom Installation** and **StandAlone**.
5. Follow the instruction again to complete the installation.

Network Utility Installation

The PROSet utility for the onboard Gigabit Ethernet controller will be installed automatically when you installing the onboard Gigabit Ethernet driver.

Windows Server 2008 Enterprise x64 Edition Installation (with onboard SATA RAID)

Below information describes how to manually install Windows Server 2008 Enterprise x64 Edition on Altos G540 with onboard SATA RAID.

BIOS Required

Altos G540 BIOS [P17](#) (or later) is required to support Windows Server 2008.

Drivers Required

For Windows Server 2008 x64 Installation, the following device drivers are required.

Device	Version	EasyBUILD Version
Onboard SATA RAID	8.0.0.1039	EasyBUILD 8.0 build 200 (or later)
Chipset	8.6.0.1002	EasyBUILD 8.0 build 200 (or later)
Onboard Gigabit Ethernet	9.12.17.0	EasyBUILD 8.0 build 200 (or later)
Onboard VGA	8.240.50.3000	EasyBUILD 8.0 build 200 (or later)
IOAT	1.2.79.9	EasyBUILD 8.0 build 200 (or later)

Software Required

For Windows Server 2008 x64 Installation, the following manage utilities are required.

Software	Version	EasyBUILD Version
Matrix Storage Manger	8.0.0.1039	EasyBUILD 8.0 build 200 (or later)

Intel PROSet Utility	13.0.44.0	EasyBUILD 8.0 build 200 (or later)
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Configuring Onboard SATA RAID

Please refer to the Appendix A. for onboard SATA RAID configuration.

Installation Tips

1. Though Windows Server 2008 x64 can recognize the onboard SATA RAID, we still replace the driver with the one in EasyBUILD. Please copy the onboard SATA RAID driver from the EasyBUILD 8.0 build 200 to a floppy or USB flash first before the installation.
2. Please boot the system from the Windows Server 2008 x64 DVD. Follow the instructions to do the installation.
3. When you see the “Where do you want to install Windows?” on the screen, please insert the floppy diskette or USB flash with SAS daughter board driver and click on **Load Driver**.
4. Click on **Browser** and select directory of the floppy or USB flash that contains the driver.
5. Click on **OK**. You will see the supported devices listed.
6. Select “Intel(R) ESB2 SATA RAID Controller (A:\iaStor.inf)” and click on **Next**.
7. After the driver is loaded and returned to “Where do you want to install Windows?” page, click on **Drive options (advanced)** to create a partition for installation.
8. After the partition created, click on **Next** to continue the installation and follow the instructions to finish the installation.

Chipset Driver Package Installation

Please refer to the Windows Server 2008 Enterprise x64 Edition (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

Gigabit Ethernet Driver Installation

Please refer to the Windows Server 2008 Enterprise x64 Edition (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

IOAT Driver Installation

The IOAT driver will be installed automatically when you installing the onboard Gigabit Ethernet driver.

VGA Driver Installation

Please refer to the Windows Server 2008 Enterprise x64 Edition (with LSI MegaRAID SAS 8300XLP) VGA Driver Installation section.

RAID Utility Installation

1. For installing Matrix Storage Manager for onboard SATA RAID, please insert the EasyBUILD 8.0 build 200 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **Onboard SATA RAID**, select **Matrix Storage Manager** and click on **Setup**.
3. Follow the instruction and accept the license agreement.
4. When you see the Windows Security warning message on the screen, please select **"Install this driver software anyway"**.
5. Please reboot the system after installation is completed.

Network Utility Installation

The PROSet utility for the onboard Gigabit Ethernet controller will be installed automatically when you installing the onboard Gigabit Ethernet driver.

Windows Server 2008 Enterprise x64 Edition Installation (with LSI MegaRAID SAS 8708ELP)

Below information describes how to manually install Windows Server 2008 Enterprise x64 Edition on Altos G540 with LSI MegaRAID SAS 8708ELP.

BIOS Required

Altos G540 BIOS [P17](#) (or later) is required to support Windows Server 2008.

Drivers Required

For Windows Server 2008 x64 Installation, the following device drivers are required.

Device	Version	EasyBUILD Version
LSI MegaRAID SAS 8708ELP	2.20.0.64	EasyBUILD 8.0 build 200 (or later)
Chipset	8.6.0.1002	EasyBUILD 8.0 build 200 (or later)
Onboard Gigabit Ethernet	9.12.17.0	EasyBUILD 8.0 build 200 (or later)
Onboard VGA	8.240.50.3000	EasyBUILD 8.0 build 200 (or later)
IOAT	1.2.79.9	EasyBUILD 8.0 build 200 (or later)

Software Required

For Windows Server 2008 x64 Installation, the following manage utilities are required.

Software	Version	EasyBUILD Version
MegaRAID Storage Manager	2.63-00	EasyBUILD 8.0 build 200 (or later)
Intel PROSet Utility	13.0.44.0	EasyBUILD 8.0 build 200 (or later)

Configuring MegaRAID SAS 8708ELP

Please refer to the Appendix D. for the MegaRAID SAS 8708ELP configuration.

Installation Tips

1. Though Windows Server 2008 x64 can recognize the MegaRAID SAS 8708ELP, we still replace the driver with the one in EasyBUILD. Please copy MegaRAID SAS 8708ELP driver from the EasyBUILD 8.0 build 200 to a floppy or USB flash first before the installation.
2. Please boot the system from the Windows Server 2008 x64 DVD. Follow the instructions to do the installation.
3. When you see the “Where do you want to install Windows?” on the screen, please insert the floppy diskette or USB flash with SAS daughter board driver and click on **Load Driver**.
4. Click on **Browser** and select directory of the floppy or USB flash that contains the driver.
5. Click on **OK**. You will see the supported devices listed.
6. Select “LSI Logic MegaRAID SAS 8708ELP RAID Controller (A:\omesetup.inf)” and click on **Next**.
7. After the driver is loaded and returned to “Where do you want to install Windows?” page, click on **Drive options (advanced)** to create a partition for installation.
8. After the partition created, click on **Next** to continue the installation and follow the instructions to finish the installation.

Chipset Driver Package Installation

Please refer to the Windows Server 2008 Enterprise x64 Edition (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

Gigabit Ethernet Driver Installation

Please refer to the Windows Server 2008 Enterprise x64 Edition (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

IOAT Driver Installation

The IOAT driver will be installed automatically when you installing the onboard Gigabit Ethernet driver.

VGA Driver Installation

Please refer to the Windows Server 2008 Enterprise x64 Edition (with LSI MegaRAID SAS 8300XLP) VGA Driver Installation section.

RAID Utility Installation

1. For installing MegaRAID Storage Manager for LSI MegaRAID SAS 8708ELP,

please insert the EasyBUILD 8.0 build 200 into the optical drive.

2. Expand **Utilities** -> **Altos G540** -> **LSI MegaRAID SAS 8708ELP**, select **MegaRAID Storage Manager(Windows Server 2008 x64)** and click on **Setup**.
3. Follow the instruction, accept the license agreement and use the default setting to the **Setup Type**.
4. At the **Setup Type**, please select **Custom Installation and StandAlone**.
5. Follow the instruction again to complete the installation.

Network Utility Installation

The PROSet utility for the onboard Gigabit Ethernet controller will be installed automatically when you installing the onboard Gigabit Ethernet driver.

Windows Server 2008 Enterprise Edition Installation (with LSI MegaRAID SAS 8300XLP)

Below information describes how to manually install Windows Server 2008 Enterprise Edition on Altos G540 with LSI MegaRAID SAS 8300XLP installed.

BIOS Required

Altos G540 BIOS [P17](#) (or later) is required to support Windows Server 2008.

Drivers Required

For Windows Server 2008 Installation, the following device drivers are required.

Device	Version	EasyBUILD Version
LSI MegaRAID SAS 8300XLP	2.20.0.32	EasyBUILD 8.0 build 200 (or later)
Chipset	8.6.0.1002	EasyBUILD 8.0 build 200 (or later)
Onboard Gigabit Ethernet	9.12.17.0	EasyBUILD 8.0 build 200 (or later)
Onboard VGA	8.240.50.3000	EasyBUILD 8.0 build 200 (or later)
IOAT	1.2.79.9	EasyBUILD 8.0 build 200 (or later)

Software Required

For Windows Server 2008 Installation, the following manage utilities are required.

Software	Version	EasyBUILD Version
MegaRAID Storage Manager	2.63-00	EasyBUILD 8.0 build 200 (or later)
Intel PROSet Utility	13.0.44.0	EasyBUILD 8.0 build 200 (or later)

Configuring LSI MegaRAID SAS 8300XLP

Please refer to the Appendix C. for the LSI MegaRAID SAS 8300XLP

configuration.

Installation Tips

1. Though Windows Server 2008 can recognize the LSI MegaRAID SAS 8300XLP, we still replace the driver with the one in EasyBUILD. Please copy MegaRAID SAS 8204ELP driver from the EasyBUILD 8.0 build 200 to a floppy or USB flash first before the installation.
2. Please boot the system from the Windows Server 2008 DVD. Follow the instructions to do the installation.
3. When you see the “**Where do you want to install Windows?**” on the screen, please insert the floppy diskette or USB flash with MegaRAID SAS 8300XLP driver and click on **Load Driver**.
4. Click on **Browser** and select directory of the floppy or USB flash that contains the driver.
5. Click on **OK**. You will see the supported devices listed.
6. Select “**LSI Logic MegaRAID SAS 8300XLP RAID Controller (A:\loemsetup.inf)**” and click on **Next**.
7. After the driver is loaded and returned to “**Where do you want to install Windows?**” page, click on **Drive options (advanced)** to create a partition for installation.
8. After the partition created, click on **Next** to continue the installation and follow the instructions to finish the installation.

Chipset Driver Package Installation

1. Please insert the EasyBUILD 8.0 build 200 into the optical drive
2. Expand **Drivers -> Altos G540 -> Chipset**, select **Windows Server 2008** and click on **Setup**.
3. Follow the instruction to install the driver and reboot the server after the chipset driver is installed.

Gigabit Ethernet Driver Installation

1. Though Windows Server 2008 can recognize the onboard Gigabit Ethernet, we still replace the driver with the one in EasyBUILD.
2. Please insert the EasyBUILD 8.0 build 200 (or later) into the optical drive
3. Expand **Drivers -> Altos G540 -> Network Adapter -> Intel 8263EB Gigabit Ethernet Controller**, select **Windows Server 2008** and click on **Setup**.
4. Select **Install Drivers and Software**.
5. Follow the instruction, accept the license agreement and use the default setting to complete the driver installation.

-
6. The IOAT driver and PROSet utility will be installed together automatically.

IOAT Driver Installation

The IOAT driver will be installed automatically when you installing the onboard Gigabit Ethernet driver.

VGA Driver Installation

1. Windows will treat onboard VGA as Standard VGA device. You can find the ATI ES1000 driver in EasyBUILD 8.0 build 200. Please insert the EasyBUILD 8.0 build 200 into the optical drive.
2. Expand Drivers -> Altos G540 -> Graphics adapters -> ATI ES1000, select Windows Server 2008 and click on Setup.
3. Follow the instruction to install the VGA driver and reboot the server after the driver is installed.
4. After installing the driver, you would see ATI ES1000 listed in Display adapters.

RAID Utility Installation

1. For installing MegaRAID Storage Manager for LSI MegaRAID SAS 8300XLP, please insert the EasyBUILD 8.0 build 200 into the optical drive.
2. Expand Utilities -> Altos G540 -> LSI MegaRAID SAS 8300XLP, select MegaRAID Storage Manager(Windows) and click on Setup.
3. Follow the instruction, accept the license agreement and use the default setting to the Setup Type.
4. At the Setup Type, please select Custom Installation and StandAlone.
5. Follow the instruction again to complete the installation.

Network Utility Installation

The PROSet utility for the onboard Gigabit Ethernet controller will be installed automatically when you installing the onboard Gigabit Ethernet driver.

Windows Server 2008 Enterprise Edition Installation (with SAS Daughter Board)

Below information describes how to manually install Windows Server 2008 Enterprise Edition on Altos G540 with SAS daughter board.

BIOS Required

Altos G540 BIOS P17 (or later) is required to support Windows Server 2008.

Drivers Required

For Windows Server 2008 Installation, the following device drivers are required.

Device	Version	EasyBUILD Version
SAS daughter board	1.27.03.00	EasyBUILD 8.0 build 200 (or later)
Chipset	8.6.0.1002	EasyBUILD 8.0 build 200 (or later)
Onboard Gigabit Ethernet	9.12.17.0	EasyBUILD 8.0 build 200 (or later)
Onboard VGA	8.240.50.3000	EasyBUILD 8.0 build 200 (or later)
IOAT	1.2.79.9	EasyBUILD 8.0 build 200 (or later)

Software Required

For Windows Server 2008 Installation, the following manage utilities are required.

Software	Version	EasyBUILD Version
MegaRAID Storage Manager	2.63-00	EasyBUILD 8.0 build 200 (or later)
Intel PROSet Utility	13.0.44.0	EasyBUILD 8.0 build 200 (or later)

Configuring SAS Daughter Board

Please refer to the Appendix B. for the SAS daughter board integrated mirror configuration.

Installation Tips

1. Though Windows Server 2008 can recognize the SAS daughter board, we still replace the driver with the one in EasyBUILD. Please copy SAS daughter board driver from the EasyBUILD 8.0 build 200 to a floppy or USB flash first before the installation.
2. Please boot the system form the Windows Server 2008 DVD. Follow the instructions to do the installation.
3. When you see the "Where do you want to install Windows?" on the screen, please insert the floppy diskette or USB flash with SAS daughter board driver and click on **Load Driver**.
4. Click on **Browser** and select directory of the floppy or USB flash that contains the driver.
5. Click on **OK**. You will see the supported devices listed.
6. Select "LSI Adapter, SAS 3000 series, 8-port with 1068 -StorPort (A:\lsi_sas.inf)" and click on **Next**.
7. After the driver is loaded and returned to "Where do you want to install Windows?" page, click on **Drive options (advanced)** to create a partition for installation.
8. After the partition created, click on **Next** to continue the installation and follow the instructions to finish the installation.

Chipset Driver Package Installation

Please refer to the Windows Server 2008 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

Gigabit Ethernet Driver Installation

Please refer to the Windows Server 2008 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

IOAT Driver Installation

The IOAT driver will be installed automatically when you installing the onboard Gigabit Ethernet driver.

VGA Driver Installation

Please refer to the Windows Server 2008 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) VGA Driver Installation section.

SAS Daughter Board Utility Installation

1. For installing MegaRAID Storage Manager for SAS daughter board, please insert the EasyBUILD 8.0 build 200 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **LSI SAS 1068**, select **MegaRAID Storage Manager(Windows)** and click on **Setup**.
3. Follow the instruction, accept the license agreement and use the default setting to the **Setup Type**.
4. At the **Setup Type**, please select **Custom Installation** and **StandAlone**.
5. Follow the instruction again to complete the installation.

Network Utility Installation

The PROSet utility for the onboard Gigabit Ethernet controller will be installed automatically when you installing the onboard Gigabit Ethernet driver.

Windows Server 2008 Enterprise Edition Installation (with onboard SATA RAID)

Below information describes how to manually install Windows Server 2008 Enterprise Edition on Altos G540 with onboard SATA RAID.

BIOS Required

Altos G540 BIOS [P17](#) (or later) is required to support Windows Server 2008.

Drivers Required

For Windows Server 2008 Installation, the following device drivers are required.

Device	Version	EasyBUILD Version
Onboard SATA RAID	8.0.0.1039	EasyBUILD 8.0 build 200 (or later)

Chipset	8.6.0.1002	EasyBUILD 8.0 build 200 (or later)
Onboard Gigabit Ethernet	9.12.17.0	EasyBUILD 8.0 build 200 (or later)
Onboard VGA	8.240.50.3000	EasyBUILD 8.0 build 200 (or later)
IOAT	1.2.79.9	EasyBUILD 8.0 build 200 (or later)

Software Required

For Windows Server 2008 Installation, the following manage utilities are required.

Software	Version	EasyBUILD Version
Matrix Storage Manger	8.0.0.1039	EasyBUILD 8.0 build 200 (or later)
Intel PROSet Utility	13.0.44.0	EasyBUILD 8.0 build 200 (or later)

Configuring Onboard SATA RAID

Please refer to the Appendix A. for onboard SATA RAID configuration.

Installation Tips

1. Though Windows Server 2008 can recognize the onboard SATA RAID, we still replace the driver with the one in EasyBUILD. Please copy the onboard SATA RAID driver from the EasyBUILD 8.0 build 200 to a floppy or USB flash first before the installation.
2. Please boot the system form the Windows Server 2008 DVD. Follow the instructions to do the installation.
3. When you see the “Where do you want to install Windows?” on the screen, please insert the floppy diskette or USB flash with SAS daughter board driver and click on **Load Driver**.
4. Click on **Browser** and select directory of the floppy or USB flash that contains the driver.
5. Click on **OK**. You will see the supported devices listed.
6. Select “Intel(R) ESB2 SATA RAID Controller (A:\iaStor.inf)” and click on **Next**.
7. After the driver is loaded and returned to “Where do you want to install Windows?” page, click on **Drive options (advanced)** to create a partition for installation.
8. After the partition created, click on **Next** to continue the installation and follow the instructions to finish the installation.

Chipset Driver Package Installation

Please refer to the Windows Server 2008 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

Gigabit Ethernet Driver Installation

Please refer to the Windows Server 2008 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

IOAT Driver Installation

The IOAT driver will be installed automatically when you installing the onboard Gigabit Ethernet driver.

VGA Driver Installation

Please refer to the Windows Server 2008 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) VGA Driver Installation section.

Onboard SATA RAID Utility Installation

1. For installing Matrix Storage Manager for onboard SATA RAID, please insert the EasyBUILD 8.0 build 200 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **Onboard SATA RAID**, select **Matrix Storage Manager** and click on **Setup**.
3. Follow the instruction and accept the license agreement.
4. When you see the Windows Security warning message on the screen, please select **"Install this driver software anyway"**.
5. Please reboot the system after installation is completed.

Network Utility Installation

The PROSet utility for the onboard Gigabit Ethernet controller will be installed automatically when you installing the onboard Gigabit Ethernet driver.

Windows Server 2008 Enterprise Edition Installation (with LSI MegaRAID SAS 8708ELP)

Below information describes how to manually install Windows Server 2008 Enterprise Edition on Altos G540 with LSI MegaRAID SAS 8708ELP.

BIOS Required

Altos G540 BIOS [P17](#) (or later) is required to support Windows Server 2008.

Drivers Required

For Windows Server 2008 Installation, the following device drivers are required.

Device	Version	EasyBUILD Version
LSI MegaRAID SAS 8708ELP	2.20.0.32	EasyBUILD 8.0 build 200 (or later)
Chipset	8.6.0.1002	EasyBUILD 8.0 build 200 (or later)
Onboard Gigabit Ethernet	9.12.17.0	EasyBUILD 8.0 build 200 (or later)

Onboard VGA	8.240.50.3000	EasyBUILD 8.0 build 200 (or later)
IOAT	1.2.79.9	EasyBUILD 8.0 build 200 (or later)

Software Required

For Windows Server 2008 Installation, the following manage utilities are required.

Software	Version	EasyBUILD Version
MegaRAID Storage Manager	2.63-00	EasyBUILD 8.0 build 200 (or later)
Intel PROSet Utility	13.0.44.0	EasyBUILD 8.0 build 200 (or later)

Configuring MegaRAID SAS 8708ELP

Please refer to the Appendix D. for the MegaRAID SAS 8708ELP configuration.

Installation Tips

1. Though Windows Server 2008 can recognize the MegaRAID SAS 8708ELP, we still replace the driver with the one in EasyBUILD. Please copy MegaRAID SAS 8708ELP driver from the EasyBUILD 8.0 build 200 to a floppy or USB flash first before the installation.
2. Please boot the system form the Windows Server 2008 DVD. Follow the instructions to do the installation.
3. When you see the “Where do you want to install Windows?” on the screen, please insert the floppy diskette or USB flash with SAS daughter board driver and click on **Load Driver**.
4. Click on **Browser** and select directory of the floppy or USB flash that contains the driver.
5. Click on **OK**. You will see the supported devices listed.
6. Select “LSI Logic MegaRAID SAS 8708ELP RAID Controller (A:\omesetup.inf)” and click on **Next**.
7. After the driver is loaded and returned to “Where do you want to install Windows?” page, click on **Drive options (advanced)** to create a partition for installation.
8. After the partition created, click on **Next** to continue the installation and follow the instructions to finish the installation.

Chipset Driver Package Installation

Please refer to the Windows Server 2008 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

Gigabit Ethernet Driver Installation

Please refer to the Windows Server 2008 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

IOAT Driver Installation

The IOAT driver will be installed automatically when you installing the onboard Gigabit Ethernet driver.

VGA Driver Installation

Please refer to the Windows Server 2008 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) VGA Driver Installation section.

RAID Utility Installation

1. For installing MegaRAID Storage Manager for LSI MegaRAID SAS 8708ELP, please insert the EasyBUILD 8.0 build 200 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **LSI MegaRAID SAS 8708ELP**, select **MegaRAID Storage Manager(Windows)** and click on **Setup**.
3. Follow the instruction, accept the license agreement and use the default setting to the **Setup Type**.
4. At the **Setup Type**, please select **Custom Installation** and **StandAlone**.
5. Follow the instruction again to complete the installation.

Network Utility Installation

The PROSet utility for the onboard Gigabit Ethernet controller will be installed automatically when you installing the onboard Gigabit Ethernet driver.

Windows Server 2003 x64 Enterprise Edition Installation (with LSI MegaRAID SAS 8300XLP)

Below information describes how to manually install Windows Server 2003 x64 Enterprise Edition on Altos G540 with LSI MegaRAID SAS 8300XLP installed.

Drivers Required

For Windows 2003 x64 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI MegaRAID SAS 8300XLP	1.20.0.64	\\Disk\G540\RAID\LSI8300XLP\WS2K3X64
Onboard Intel 5000P Chipset	7.4.0.1005	\\Disk\G540\onboard\Chipset\
Onboard Intel 82563EB Gigabit Ethernet	9.3.39	\\Disk\G540\NIC\Intel\pro1000.net\ws03x64\
Onboard ATI ES1000	8.24.3.0	\\Disk\G540\onboard\VGA\W2K3\
Onboard USB 2.0	7.4.0.1005	Included in chipset driver package
IOAT	1.2.52.0	\\Disk\G540\onboard\IOAT\WS2K3X64

Software Required

The management utility for LSI MegaRAID SAS 8300XLP and NIC can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
Microsoft Scalable Networking Pack	N/A	http://www.microsoft.com/downloads/details.aspx?FamilyID=778ee6fe-5359-4c2f-b89d-f35f2b1b83cd&DisplayLang=en
MegaRAID Storage Manager	1.13-07	\\APP\G540\RAID\LSI8300XLP\StorageManager\Windows
Intel PROSet Utility	10.4.4.2	\\APP\G540\NIC\PROSETDX\WS2003XPx64\

Configuring LSI MegaRAID SAS 8300XLP

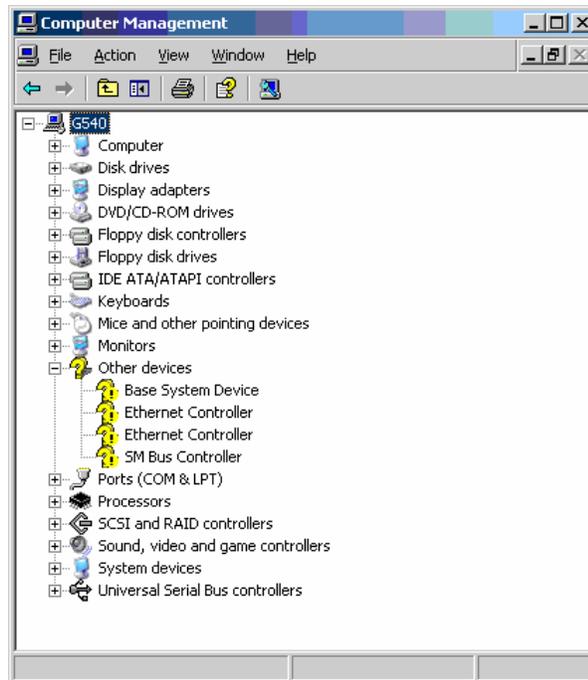
Please refer to the Appendix C. for the LSI MegaRAID SAS 8300XLP configuration.

Installation Tips

1. As Windows Server 2003 x64 can't recognize the LSI MegaRAID SAS 8300XLP, you need to make a driver diskette from the EasyBUILD 7.1 build 200 first before the installation.
2. Press F6 at the beginning of installation for providing the driver diskette for the LSI MegaRAID SAS 8300XLP.
3. Select "LSI Logic MegaRAID SAS RAID Controller Driver (Server 2003 for x64)" as target driver
4. After loading the RAID driver from diskette, follow the normal procedure to finish the installation.

Chipset Driver Installation

1. After the installation completes, you would see the following devices with yellow mark in Device Manager.



2. Please insert the EasyBUILD 7.1 build 200 into the optical drive
3. Expand **Drivers -> Altos G540 -> Chipset**, select **Windows Server 2003 x64** and click on **Setup**.
4. Follow the instruction to install the driver and reboot the server after the chipset driver is installed.

Gigabit Ethernet Driver Installation

1. There are two **Ethernet Controller** listed under **Other device** in Windows Device Manager. They are the onboard Intel 82563EB Gigabit Ethernet controller. You could find the driver in EasyBUILD 7.1 build 200. Please do the same on both of the devices.
2. Right-click on the **Ethernet Controller** and select **Update Driver**.
3. Select **No, not this time**. Do not connect to Windows Update to search the driver.
4. Select **Install from a list or specific location (Advanced)**.
5. Select **Search the best driver these locations** and check **Include this location in the search**.
6. Click on **Browse** and specify the path for the driver. Please refer to the Directory on EasyBUILD in Driver required section for the path for the NIC.
7. Click on **Next** and follow the instruction to finish the driver update.
8. After installing the driver, you would see **Intel(R) PRO/1000 EB Network Connection with I/O Acceleration** listed in Network adapters.

IOAT Driver Installation

1. For **Base System Device**, it should be the onboard IOAT device. You could find the driver in EasyBUILD 7.1 build 200.
2. Right-click on the **Base System Device** and select **Update Driver**.
3. Select **No, not this time**. Do not connect to Windows Update to search the driver.
4. Select **Install from a list or specific location (Advanced)**.
5. Select **Search the best driver these locations** and check **Include this location in the search**.
6. Click on **Browse** and specify the path for the driver. Please refer to the Directory on EasyBUILD in Driver required section for IOAT driver.
7. Click on **Next** and follow the instruction to finish the driver update.
8. After installing the driver, you would see **Intel(R) 5000 Series Chipsets Integrated Device – 1A38** listed in System devices.

ATI ES1000 Driver Installation

1. Windows will treat onboard VGA as Standard VGA device. You can find the ATI ES1000 driver in EasyBUILD 7.1 build 200. Please insert the EasyBUILD 7.1 build 200 into the optical drive.
2. Expand **Drivers -> Altos G540 -> Graphics adapters -> ATI ES1000**, select **Windows Server 2003 x64** and click on **Setup**.
3. Follow the instruction to install the VGA driver and reboot the server after the driver is installed.
4. After installing the driver, you would see **ATI ES1000** listed in Display adapters.

Microsoft Scalable Networking Pack Installation

You can find the Microsoft Scalable Networking Pack for Windows Server 2003 x64 in the Microsoft website:

<http://www.microsoft.com/downloads/details.aspx?FamilyID=778ee6fe-5359-4c2f-b89d-f35f2b1b83cd&DisplayLang=en>

1. Download the SNP from Microsoft website.
2. Double-click on the downloaded file to run the installation program.
3. Follow the instruction to install the SNP and reboot the server after the SNP is installed.
4. After installing the SNP, you will see **Hotfix for Windows Server 2003 (KB912222)** listed in **Add or Remove Programs** (you need to check the **Show updates** in **Add or Remove Programs** first).

MegaRAID Storage Manager Installation

1. Please insert the EasyBUILD 7.1 build 200 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **LSI MegaRAID SAS 8300XLP**, select **MegaRAID Storage Manager(Windows)** and click on **Setup**.
3. Follow the instruction, accept the license agreement and use the default setting to the **Setup Type**.
4. At the **Setup Type**, please select **StandAlone**.
5. Follow the instruction again to complete the installation.

Intel PROSet Utility Installation

1. Please insert the EasyBUILD 7.1 build 200 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **Intel Gigabit Ethernet Controller**, select **PROSet Utility (Windows Server 2003 x64)** and click on **Setup**.
3. Follow the instruction, accept the license agreement and use the default setting to complete the Intel PROSet utility installation.

Windows Server 2003 x64 Enterprise Edition Installation (with LSI 1068 SAS IM)

Below information describes how to manually install Windows Server 2003 x64 Enterprise Edition on Altos G540 with LSI 1068 SAS IM.

Drivers Required

For Windows 2003 x64 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI1068 SAS	1.21.15.0	\\Disk\G540\onboard\SAS\WS2K3X64
Onboard Intel 5000P Chipset	7.4.0.1005	\\Disk\G540\onboard\Chipset\
Onboard Intel 82563EB Gigabit Ethernet	9.3.39	\\Disk\G540\NIC\Intel\pro1000.net\ws03x64\
Onboard ATI ES1000	8.24.3.0	\\Disk\G540\onboard\VGA\W2K3\
Onboard USB 2.0	7.4.0.1005	Included in chipset driver package
IOAT	1.2.52.0	\\Disk\G540\onboard\IOAT\WS2K3X64

Software Required

The management utility for LSI 1068 SAS and NIC can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
Microsoft Scalable Networking Pack	N/A	http://www.microsoft.com/downloads/details.aspx?FamilyID=778ee6fe-5359-

		4c2f-b89d-f35f2b1b83cd&DisplayLang=en
MyStorage	3.00.05	\\APP\G540\SAS\LSI1068\MyStorage\Windows
Intel PROSet Utility	10.4.4.2	\\APP\G540\NIC\PROSETDX\WS2003XPx64\

Configuring LSI 1068 SAS

Please refer to the Appendix B. for the LSI 1068 SAS IM configuration.

Installation Tips

1. As Windows Server 2003 x64 can't recognize the LSI 1068 SAS controller, you need to make a driver diskette from the EasyBUILD 7.1 build 200 first before the installation.
2. Press F6 at the beginning of installation for providing the driver diskette for the LSI 1068 SAS controller.
3. Select "LSI Logic Fusion-MPT Driver (Server 2003 for x64)" as target driver
4. After loading the SAS driver from diskette, follow the normal procedure to finish the installation.

Chipset Driver Installation

The chipset driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

IOAT Driver Installation

The IOAT driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) IOAT Driver Installation section.

ATI ES1000 Driver Installation

The ATI ES1000 driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) ATI ES1000 Driver Installation section.

Microsoft Scalable Networking Pack Installation

The Scalable Networking Pack installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Microsoft Scalable Networking Pack Installation section.

MyStorage Installation

1. Please insert the EasyBUILD 7.1 build 200 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **LSI 1068**, select **MyStorage(Windows)** and click on **Setup**.
3. Follow the instruction, accept the license agreement and use the default setting to complete the installation.

Intel PROSet Utility Installation

The PROSet Utility installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Intel PROSet Utility Installation section.

Windows Server 2003 x64 Enterprise Edition Installation (with onboard SATA RAID)

Below information describes how to manually install Windows Server 2003 x64 Enterprise Edition on Altos G540 with onboard SATA RAID.

Drivers Required

For Windows 2003 x64 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
Onboard SATA RAID	6.0.0.1022	\\Disk\G540\onboard\SATARAID\ws2K3x64
Onboard Intel 5000P Chipset	7.4.0.1005	\\Disk\G540\onboard\Chipset\
Onboard Intel 82563EB Gigabit Ethernet	9.3.39	\\Disk\G540\NIC\Intel\pro1000.net\ws03x64\
Onboard ATI ES1000	8.24.3.0	\\Disk\G540\onboard\VGA\W2K3\
Onboard USB 2.0	7.4.0.1005	Included in chipset driver package
IOAT	1.2.52.0	\\Disk\G540\onboard\IOAT\WS2K3X64

Software Required

The management utility for onboard SATA RAID and NIC can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
Microsoft Scalable Networking Pack	N/A	http://www.microsoft.com/downloads/details.aspx?FamilyID=778ee6fe-5359-4c2f-b89d-f35f2b1b83cd&DisplayLang=en
Matrix Storage Manager	6.0.0.1002	\\APP\G540\RAID\SATARAID\Windows
Intel PROSet Utility	10.4.4.2	\\APP\G540\NIC\PROSETDX\WS2003XPx6

Configuring onboard SATA RAID

Please refer to the Appendix A. for the onboard SATA RAID configuration.

Installation Tips

1. As Windows Server 2003 x64 can't recognize the onboard SATA RAID, you need to make a driver diskette from the EasyBUILD 7.1 build 200 first before the installation.
2. Press F6 at the beginning of installation for providing the driver diskette for the onboard SATA RAID controller.
3. Select "Intel(R) 631xESB/632xESB SATA RAID Controller (Server/Workstation ESB2)" as target driver
4. After loading the onboard SATA RAID driver from diskette, follow the normal procedure to finish the installation.

Chipset Driver Installation

The chipset driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

IOAT Driver Installation

The IOAT driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) IOAT Driver Installation section.

ATI ES1000 Driver Installation

The ATI ES1000 driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) ATI ES1000 Driver Installation section.

Microsoft Scalable Networking Pack Installation

The Scalable Networking Pack installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Microsoft Scalable Networking Pack Installation section.

Matrix Storage Manager Installation

1. Please insert the EasyBUILD 7.1 build 200 into the optical drive.

2. Expand **Utilities** -> **Altos G540** -> **Onboard SATA RAID**, select **Matrix Storage Manager** and click on **Setup**.
3. Follow the instruction, accept the license agreement and use the default setting to complete the installation.
4. Please reboot the system when the installation is completed.

Intel PROSet Utility Installation

The PROSet Utility installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Intel PROSet Utility Installation section.

Windows Server 2003 x64 Enterprise Edition SP2 Installation (with LSI MegaRAID SAS 8708ELP)

Below information describes how to manually install Windows Server 2003 x64 Enterprise Edition SP2 on Altos G540 with LSI MegaRAID SAS 8708ELP installed.

Drivers Required

For Windows 2003 x64 Installation, the following device drivers are required. These drivers can be found in EasyBUILD 7.1 build 600 (or later).

Device	Version	Directory on EasyBUILD
LSI MegaRAID SAS 8708ELP	2.7.0.64	\\Disk\G540\raid\8708ELP\x64\ws03\
Onboard Intel 5000P Chipset	7.4.0.1005	\\Disk\G540\onboard\Chipset\
Onboard Intel 82563EB Gigabit Ethernet	9.6.31.0	\\Disk\G540\NIC\Intel\pro1000.net\ws03 x64\
Onboard ATI ES1000	8.24.3.0	\\Disk\G540\onboard\VGA\W2K3\
Onboard USB 2.0	7.4.0.1005	Included in chipset driver package
IOAT	1.2.66.0	\\Disk\G540\onboard\IOAT\WS2K3X64

Software Required

The management utility for LSI MegaRAID SAS 88708ELP and NIC can be found in the EasyBUILD 7.1 build 600 (or later).

Software	Version	Directory on EasyBUILD
Microsoft Scalable Networking Pack	N/A	Included in Windows Server 2003 Service Pack 2
MegaRAID Storage Manager	2.07-00	\\app\G540\raid\8708ELP\Windows\
Intel PROSet Utility	11.2.0.69	\\APP\G540\NIC\PROSETDX\WS2003XPx64\

Configuring LSI MegaRAID SAS 8708ELP

Please refer to the Appendix D. for the LSI MegaRAID SAS 8708ELP configuration.

Installation Tips

1. As Windows Server 2003 x64 can't recognize the LSI MegaRAID SAS 8708ELP, you need to make a driver diskette from the EasyBUILD 7.1 build 600 first before the installation.
2. Press F6 at the beginning of installation for providing the driver diskette for the LSI MegaRAID SAS 8708ELP.
3. Select "LSI Logic MegaRAID SAS RAID Controller Driver (Server 2003 for x64)" as target driver
4. After loading the RAID driver from diskette, follow the normal procedure to finish the installation.

Chipset Driver Installation

The chipset driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

IOAT Driver Installation

The IOAT driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) IOAT Driver Installation section.

ATI ES1000 Driver Installation

The ATI ES1000 driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) ATI ES1000 Driver Installation section.

Microsoft Scalable Networking Pack Installation

Microsoft Scalable Networking Pack is included in Windows Server 2003 Service Pack 2. You don't need to install it additionally.

MegaRAID Storage Manager Installation

1. Please insert the EasyBUILD 7.1 build 600 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **LSI Logic MegaRAID SAS 8708ELP**, select **MegaRAID Storage Manager(Windows Server 2003 x64)** and click on **Setup**.

3. Follow the instruction, accept the license agreement and use the default setting to the **Setup Type**.
4. At the **Setup Type**, please select **StandAlone**.
5. Follow the instruction again to complete the installation.

Intel PROSet Utility Installation

The PROSet Utility installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 x64 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Intel PROSet Utility Installation section.

Windows Server 2003 Enterprise Edition SP1 Installation (with LSI MegaRAID SAS 8300XLP)

Below information describes how to manually install Windows Server 2003 Enterprise Edition on Altos G540 with MegaRAID SAS 8300XLP installed.

Drivers Required

For Windows 2003 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI MegaRAID SAS 8300XLP	1.20.0.32	\\Disk\G540\RAID\LSI8300XLP\WS2K3
Onboard Intel 5000P Chipset	7.4.0.1005	\\Disk\G540\onboard\Chipset\
Onboard Intel 82563EB Gigabit Ethernet	9.3.39.0	\\Disk\G540\NIC\Intel\pro1000.net\ws032k\
Onboard ATI ES1000	8.24.3	\\Disk\G540\onboard\VGA\W2K3\
Onboard USB 2.0	7.4.0.1005	Included in chipset driver package
IOAT	1.2.52.0	\\Disk\G540\onboard\IOAT\WS2K3

Software Required

The management utility for LSI MegaRAID SAS 8300XLP can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
Microsoft Scalable Networking Pack	N/A	http://www.microsoft.com/downloads/details.aspx?FamilyID=c65f4a89-f4da-463e-a496-4b5abd660bf9&DisplayLang=en
MegaRAID Storage Manager	1.13-07	\\APP\G540\RAID\LSI8300XLP\StorageManager\Windows
Intel PROSet Utility	10.4.4.2	\\APP\G540\NIC\PROSETDX\2KXPWS03\

Configuring LSI MegaRAID SAS 8300XLP

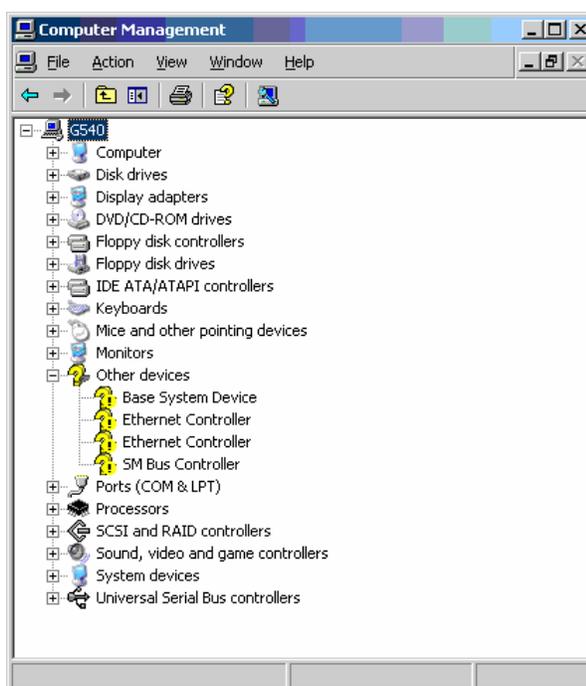
Please refer to the Appendix C. for the LSI MegaRAID SAS 8300XLP configuration.

Installation Tips

1. As Windows Server 2003 can't recognize the LSI MegaRAID SAS 8300XLP, you need to make a driver diskette from the EasyBUILD 7.1 build 200 first before the installation.
2. Press F6 at the start of installation to provide the driver disk for the LSI MegaRAID SAS 8300XLP.
3. Select "LSI Logic MegaRAID SAS RAID Controller Driver (Server 2003 32-bit)" as target driver
4. After loading the RAID driver from diskette, follow the normal procedure to finish the installation.

Chipset Driver Installation

1. After the installation completes, you would see the following devices with yellow mark in Device Manager.



2. Please insert the EasyBUILD 7.1 build 200 into the optical drive
3. Expand **Drivers** -> **Altos G540** -> **Chipset**, select **Windows Server 2003** and click on **Setup**.
4. Follow the instruction to install the driver and reboot the server after the

chipset driver is installed.

Gigabit Ethernet Driver Installation

1. There are two **Ethernet Controller** listed under **Other device** in Windows Device Manager. They are the onboard Intel 82563EB Gigabit Ethernet controller. You could find the driver in EasyBUILD 7.1 build 200. Please do the same on both of the devices.
2. Right-click on the **Ethernet Controller** and select **Update Driver**.
3. Select **No, not this time**. Do not connect to Windows Update to search the driver.
4. Select **Install from a list or specific location (Advanced)**.
5. Select **Search the best driver these locations** and check **Include this location in the search**.
6. Click on **Browse** and specify the path for the driver. Please refer to the Directory on EasyBUILD in Driver required section for NIC driver.
7. Click on **Next** and follow the instruction to finish the driver update.
8. After installing the driver, you would see **Intel(R) PRO/1000 EB Network Connection with I/O Acceleration** listed in Network adapters.

IOAT Driver Installation

1. For **Base System Device**, it should be the onboard IOAT device. You could find the driver in EasyBUILD 7.1 build 200.
2. Right-click on the **Base System Device** and select **Update Driver**.
3. Select **No, not this time**. Do not connect to Windows Update to search the driver.
4. Select **Install from a list or specific location (Advanced)**.
5. Select **Search the best driver these locations** and check **Include this location in the search**.
6. Click on **Browse** and specify the path for the driver. Please refer to the Directory on EasyBUILD in Driver required section for IOAT driver.
7. Click on **Next** and follow the instruction to finish the driver update.
8. After installing the driver, you would see **Intel(R) 5000 Series Chipsets Integrated Device – 1A38** listed in System devices.

ATI ES1000 Installation

1. Windows will treat onboard VGA as Standard VGA device. You can find the ATI ES1000 driver in EasyBUILD 7.1 build 200. Please insert the EasyBUILD 7.1 build 200 into the optical drive.
2. Expand **Drivers -> Altos G540 -> Graphics adapters -> ATI ES1000**, select

Windows Server 2003 and click on **Setup**.

3. Follow the instruction to install the VGA driver and reboot the server after the driver is installed.
4. After installing the driver, you would see **ATI ES1000** listed in Display adapters.

Microsoft Scalable Networking Pack Installation

You can find the Microsoft Scalable Networking Pack for Windows Server 2003 in the Microsoft website:

<http://www.microsoft.com/downloads/details.aspx?FamilyID=c65f4a89-f4da-463e-a496-4b5abd660bf9&DisplayLang=en>

1. Download the SNP from Microsoft website.
2. Double-click on the downloaded file to run the installation program.
3. Follow the instruction to install the SNP and reboot the server after the SNP is installed.
4. After installing the SNP, you will see **Hotfix for Windows Server 2003 (KB912222)** listed in **Add or Remove Programs** (you need to check the **Show updates** in **Add or Remove Programs** first).

MegaRAID Storage Manager Installation

1. Please insert the EasyBUILD 7.1 build 200 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **LSI MegaRAID SAS 8300XLP**, select **MegaRAID Storage Manager(Windows)** and click on **Setup**.
3. Follow the instruction, accept the license agreement and use the default setting to the **Setup Type**.
4. At Setup Type, please select **StandAlone**.
5. Follow the instruction again to complete the installation.

Intel PROSet Utility Installation

1. Please insert the EasyBUILD 7.1 build 200 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **Intel Gigabit Ethernet Controller**, select **PROSet Utility (Windows Server 2003)** and click on **Setup**.
3. Follow the instruction and use the default setting to complete the Intel PROSet utility installation.

Windows Server 2003 Enterprise Edition SP1 Installation (with LSI 1068 SAS IM)

Below information describes how to manually install Windows Server 2003 Enterprise Edition SP1 on Altos G540 with LSI 1068 SAS IM.

Drivers Required

For Windows 2003 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI1068 SAS	1.21.15.0	\Disk\G540\onboard\SAS\WS2K3
Onboard Intel 5000P Chipset	7.4.0.1005	\Disk\G540\onboard\Chipset\
Onboard Intel 82563EB Gigabit Ethernet	9.3.39	\Disk\G540\NIC\Intel\pro1000.net\ws032k\
Onboard ATI ES1000	8.24.3.0	\Disk\G540\onboard\VGA\W2K3\
Onboard USB 2.0	7.4.0.1005	Included in chipset driver package
IOAT	1.2.52.0	\Disk\G540\onboard\IOAT\WS2K3

Software Required

The management utility for LSI 1068 SAS and NIC can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
Microsoft Scalable Networking Pack	N/A	http://www.microsoft.com/downloads/details.aspx?FamilyID=c65f4a89-f4da-463e-a496-4b5abd660bf9&DisplayLang=en
MyStorage	3.00.05	\APP\G540\SAS\LSI1068\MyStorage\Windows
Intel PROSet Utility	10.4.4.2	\APP\G540\NIC\PROSETDX\2KXPWS03\

Configuring LSI 1068 SAS

Please refer to the Appendix B. for the LSI 1068 SAS IM configuration.

Installation Tips

1. As Windows Server 2003 can't recognize the LSI 1068 SAS controller, you need to make a driver diskette from the EasyBUILD 7.1 build 200 first before the installation.
2. Press F6 at the beginning of installation for providing the driver diskette for the LSI 1068 SAS controller.
3. Select "LSI Logic Fusion-MPT SAS Driver (Server 2003 32-bit)" as target driver
4. After loading the SAS driver from diskette, follow the normal procedure to finish the installation.

Chipset Driver Installation

The chipset driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 Enterprise Edition SP1 (with

LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 Enterprise Edition SP1 (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

IOAT Driver Installation

The IOAT driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 Enterprise Edition SP1 (with LSI MegaRAID SAS 8300XLP) IOAT Driver Installation section.

ATI ES1000 Driver Installation

The ATI ES1000 driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 Enterprise Edition SP1 (with LSI MegaRAID SAS 8300XLP) ATI ES1000 Driver Installation section.

Microsoft Scalable Networking Pack Installation

The Scalable Networking Pack installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 Enterprise Edition SP1 (with LSI MegaRAID SAS 8300XLP) Microsoft Scalable Networking Pack Installation section.

MyStorage Installation

1. Please insert the EasyBUILD 7.1 build 200 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **LSI 1068**, select **MyStorage(Windows)** and click on **Setup**.
3. Follow the instruction, accept the license agreement and use the default setting to complete the installation.

Intel PROSet Utility Installation

The PROSet Utility installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 Enterprise Edition SP1 (with LSI MegaRAID SAS 8300XLP) Intel PROSet Utility Installation section.

Windows Server 2003 Enterprise Edition SP1 Installation (with onboard SATA RAID)

Below information describes how to manually install Windows Server 2003 Enterprise Edition SP1 on Altos G540 with onboard SATA RAID.

Drivers Required

For Windows 2003 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
Onboard SATA	6.0.0.1022	\\Disk\\G540\\RAID\\onboard\\SATARAID\\

RAID		w2k_ws2K3
Onboard Intel 5000P Chipset	7.4.0.1005	\Disk\G540\onboard\Chipset\
Onboard Intel 82563EB Gigabit Ethernet	9.3.39	\Disk\G540\NIC\Intel\pro1000.net\ws032k\
Onboard ATI ES1000	8.24.3.0	\Disk\G540\onboard\VGA\W2K3\
Onboard USB 2.0	7.4.0.1005	Included in chipset driver package
IOAT	1.2.52.0	\Disk\G540\onboard\IOAT\WS2K3

Software Required

The management utility for onboard SATA RAID and NIC can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
Microsoft Scalable Networking Pack	N/A	http://www.microsoft.com/downloads/details.aspx?FamilyID=c65f4a89-f4da-463e-a496-4b5abd660bf9&DisplayLang=en
Matrix Storage Manger	6.0.0.1002	\APP\G540\RAID\SATARAID\Windows
Intel PROSet Utility	10.4.4.2	\APP\G540\NIC\PROSETDX\2KXPWS03\

Configuring onboard SATA RAID

Please refer to the Appendix A. for the onboard SATA RAID configuration.

Installation Tips

1. As Windows Server 2003 can't recognize the onboard SATA RAID, you need to make a driver diskette from the EasyBUILD 7.1 build 200 first before the installation.
2. Press F6 at the beginning of installation for providing the driver diskette for the onboard SATA RAID.
3. Select "Intel(R) 631xESB/632xESB SATA RAID Controller (Server/Workstation ESB2)" as target driver
4. After loading the SAS driver from diskette, follow the normal procedure to finish the installation.

Chipset Driver Installation

The chipset driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 Enterprise Edition SP1 (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed.

Please refer to the Windows Server 2003 Enterprise Edition SP1 (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

IOAT Driver Installation

The IOAT driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 Enterprise Edition SP1 (with LSI MegaRAID SAS 8300XLP) IOAT Driver Installation section.

ATI ES1000 Driver Installation

The ATI ES1000 driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 Enterprise Edition SP1 (with LSI MegaRAID SAS 8300XLP) ATI ES1000 Driver Installation section.

Microsoft Scalable Networking Pack Installation

The Scalable Networking Pack installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 Enterprise Edition SP1 (with LSI MegaRAID SAS 8300XLP) Microsoft Scalable Networking Pack Installation section.

Matrix Storage Manager Installation

1. Please insert the EasyBUILD 7.1 build 200 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **Onboard SATA RAID**, select **Matrix Storage Manager** and click on **Setup**.
3. Follow the instruction, accept the license agreement and use the default setting to complete the installation.
4. Please reboot the system when the installation is completed.

Intel PROSet Utility Installation

The PROSet Utility installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 Enterprise Edition SP1 (with LSI MegaRAID SAS 8300XLP) Intel PROSet Utility Installation section.

Windows Server 2003 Enterprise Edition SP2 Installation (with LSI MegaRAID SAS 8708ELP)

Below information describes how to manually install Windows Server 2003 Enterprise Edition SP2 on Altos G540 with LSI MegaRAID SAS 8708ELP installed.

Drivers Required

For Windows 2003 Installation, the following device drivers are required. These drivers can be found in EasyBUILD 7.1 build 600 (or later).

Device	Version	Directory on EasyBUILD
LSI MegaRAID SAS 8708ELP	2.7.0.64	\\Disk\g540\raid\8708ELP\ws03\
Onboard Intel	7.4.0.1005	\\Disk\G540\onboard\Chipset\

5000P Chipset		
Onboard Intel 82563EB Gigabit Ethernet	9.6.31.0	\\Disk\G540\NIC\Intel\pro1000.net\ws032k\
Onboard ATI ES1000	8.24.3.0	\\Disk\G540\onboard\VGA\W2K3\
Onboard USB 2.0	7.4.0.1005	Included in chipset driver package
IOAT	1.2.66.0	\\Disk\G540\onboard\IOAT\WS2K3

Software Required

The management utility for LSI MegaRAID SAS 88708ELP and NIC can be found in the EasyBUILD 7.1 build 600 (or later).

Software	Version	Directory on EasyBUILD
Microsoft Scalable Networking Pack	N/A	Included in Windows Server 2003 Service Pack 2
MegaRAID Storage Manager	2.07-00	\\app\g540\raid\8708ELP\Windows\
Intel PROSet Utility	11.2.0.69	\\APP\G540\NIC\PROSETDX\2KXPWS03\

Configuring LSI MegaRAID SAS 8708ELP

Please refer to the Appendix D. for the LSI MegaRAID SAS 8708ELP configuration.

Installation Tips

1. As Windows Server 2003 can't recognize the LSI MegaRAID SAS 8708ELP, you need to make a driver diskette from the EasyBUILD 7.1 build 600 first before the installation.
2. Press F6 at the beginning of installation for providing the driver diskette for the LSI MegaRAID SAS 8708ELP.
3. Select "LSI Logic MegaRAID SAS RAID Controller Driver (Server 2003 32-bit)" as target driver
4. After loading the RAID driver from diskette, follow the normal procedure to finish the installation.

Chipset Driver Installation

The chipset driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

IOAT Driver Installation

The IOAT driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) IOAT Driver Installation section.

ATI ES1000 Driver Installation

The ATI ES1000 driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) ATI ES1000 Driver Installation section.

Microsoft Scalable Networking Pack Installation

Microsoft Scalable Networking Pack is included in Windows Server 2003 Service Pack 2. You don't need to install it additionally.

MegaRAID Storage Manager Installation

1. Please insert the EasyBUILD 7.1 build 600 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **LSI Logic MegaRAID SAS 8708ELP**, select **MegaRAID Storage Manager(Windows Server 2003)** and click on **Setup**.
3. Follow the instruction, accept the license agreement and use the default setting to the **Setup Type**.
4. At the **Setup Type**, please select **StandAlone**.
5. Follow the instruction again to complete the installation.

Intel PROSet Utility Installation

The PROSet Utility installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows Server 2003 Enterprise Edition (with LSI MegaRAID SAS 8300XLP) Intel PROSet Utility Installation section.

Windows 2000 Advanced Server SP4 Installation (with LSI MegaRAID SAS 8300XLP)

Below information describes how to manually install Microsoft Windows 2000 Advanced Server SP4 on Altos G540 with LSI MegaRAID SAS 8300XLP installed.

Drivers Required

For Windows 2000 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI MegaRAID SAS 8300XLP	1.20.0.32	\\Disk\G540\RAID\LSI8300XLP\W2K\
Onboard Intel 5000P Chipset	7.4.0.1005	\\Disk\G540\onboard\Chipset\
Onboard Intel 82563EB Gigabit Ethernet	9.3.39	\\Disk\G540\NIC\Intel\pro1000.net\ws032k\

Onboard ATI ES1000	8.24.3	\\Disk\G540\onboard\VGA\W2K\
Onboard USB 2.0	5.0.2195.6717	OS built-in
IOAT	1.2.52.0	\\Disk\G540\onboard\IOAT\WS2K3

Software Required

The management utility of LSI MegaRAID SAS 8300XLP can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manager	1.13-07	\\APP\G540\RAID\LSI8300XLP\StorageManager\Windows
Intel PROSet Utility	10.4.4.2	\\APP\G540\NIC\PROSETDX\2KXPWS03\

Configuring LSI MegaRAID SAS 8300XLP

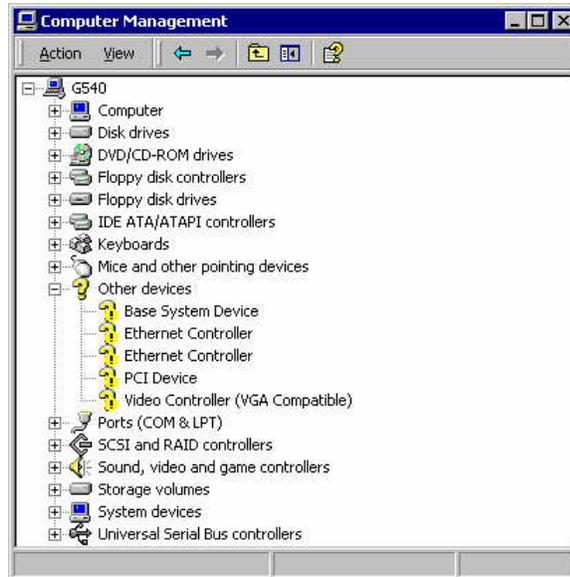
Please refer to the Appendix C. for the LSI MegaRAID SAS 8300XLP configuration.

Installation Tips

1. As Windows 2000 can't recognize the integrated SAS RAID, you need to make a driver diskette from the EasyBUILD 7.1 build 200 first before the installation.
2. Press F6 at the start of installation to provide the driver disk for the MegaRAID SAS 8300XLP.
3. Select "LSI MegaRAID SAS RAID Controller Driver (Windows 2000)" as target driver
4. After loading the driver from diskette, follow the normal procedure to finish the installation.

Chipset Driver Installation

5. After the installation completes, you would see the following other devices listed in Device Manager.



6. Please insert the EasyBUILD 7.1 build 200 (or later) into the optical drive
7. Expand **Drivers -> Altos G540 -> Chipset** and double-click on **Windows 2000**.
8. Follow the instruction to install the driver and reboot the server after the chipset driver is installed.

Gigabit Ethernet Driver Installation

9. There are two **Ethernet Controller** listed under **Other device** in Windows Device Manager. It should be the onboard Intel 82563EB Gigabit Ethernet controller. You could find the driver in EasyBUILD 7.1 build 200. Please do the same on both of the devices.
10. Right-click on the **Ethernet Controller** and select **Properties**.
11. Select **Driver** tab and click on **Update Driver**.
12. Follow the instructions. Select **Search for a suitable driver for my device (Recommended)** and click on Next.
13. Check on the **Specify a location** and click on **Next** to specify the path for the driver. Please refer to the Directory on EasyBUILD in Driver required section for NIC driver.
14. Follow the instructions to finish the installation.
15. After installing the driver, you would see **Intel(R) PRO/1000 EB Network Connection with I/O Acceleration** listed in Network adapters.

IOAT Driver Installation

1. For **Base System Device**, it should be the onboard IOAT device. You could find the driver in EasyBUILD 7.1 build 200 (or later).

-
2. Right-click on the **Base System Device** and select **Properties**.
 3. Select **Driver** tab and click on **Update Driver**.
 4. Follow the instructions. Select **Search for a suitable driver for my device (Recommended)** and click on **Next**.
 5. Check on the **Specify a location** and click on **Next** to specify the path for the driver. Please refer to the Directory on EasyBUILD in Driver required section for IOAT driver.
 6. Follow the instruction to finish the driver update.
 7. After installing the driver, you would see **Intel(R) 5000 Series Chipsets Integrated Device – 1A38** listed in System devices.

ATI ES1000 Installation

1. There is a **VGA controller (VGA Compatible)** listed under **Other devices** in Windows Device Manager. It is the ATI ES1000 for G540.
2. Insert the EasyBUILD 7.1 build 200 (or later) into the optical drive.
3. Expand **Drivers** -> **Altos G540** -> **Graphics adapters** -> **ATI ES1000** and double-click on **Windows 2000**.
4. Follow the instruction to install the VGA driver and reboot the server after the driver is installed.
5. After installing the driver, you would see **ATI ES1000** listed in Display adapters.

MegaRAID Storage Manager Installation

1. Please insert the EasyBUILD 7.1 build 200 (or later) into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **LSI MegaRAID SAS 8300XLP**, select **MegaRAID Storage Manger(Windows)** and click on **Setup**.
3. Follow the instruction, accept the license agreement and use the default setting to the **Setup Type**.
4. At Setup Type, please select **StandAlone**.
5. Follow the instruction again to complete the installation.

Intel PROSet Utility Installation

1. Please insert the EasyBUILD 7.1 build 200 (or later) into the optical drive.
2. Expand **Utilities** -> **Altos g540** -> **Intel Gigabit Ethernet Controller**, select **PROSet Utility (Windows 2000)** and click on **Setup**.
3. Follow the instruction and use the default setting to complete the Intel PROSet utility installation.

Windows 2000 Advanced Server SP4 Installation (with LSI 1068 SAS IM)

Below information describes how to manually install Windows 2000 Advanced Server SP4 on Altos G540 with LSI 1068 SAS IM.

Drivers Required

For Windows 2000 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI1068 SAS	1.21.15.0	\\Disk\G540\onboard\SAS\W2K\
Onboard Intel 5000P Chipset	7.4.0.1005	\\Disk\G540\onboard\Chipset\
Onboard Intel 82563EB Gigabit Ethernet	9.3.39	\\Disk\G540\NIC\Intel\pro1000.net\ws032k\
Onboard ATI ES1000	8.24.3.0	\\Disk\G540\onboard\VGA\W2K\
Onboard USB 2.0	5.0.2195.6717	OS built-in
IOAT	1.2.52.0	\\Disk\G540\onboard\IOAT\WS2K3

Software Required

The management utility for LSI 1068 SAS and NIC can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
MyStorage	3.00.05	\\APP\G540\SAS\LSI1068\MyStorage\Windows
Intel PROSet Utility	10.4.4.2	\\APP\G540\NIC\PROSETDX\2KXPWS03\

Configuring LSI 1068 SAS

Please refer to the Appendix B. for the LSI 1068 SAS IM configuration.

Installation Tips

1. As Windows 2000 can't recognize the LSI 1068 SAS controller, you need to make a driver diskette from the EasyBUILD 7.1 build 200 first before the installation.
2. Press F6 at the beginning of installation for providing the driver diskette for the LSI 1068 SAS controller.
3. Select "LSI Logic Fusion-MPT Driver for SAS1068 (Windows 2000)" as target driver
4. After loading the SAS driver from diskette, follow the normal procedure to finish the installation.

Chipset Driver Installation

The chipset driver installation is the same as LSI MegaRAID SAS 8300XLP

installed. Please refer to the Windows 2000 Advanced Server SP4 Installation (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows 2000 Advanced Server SP4 Installation (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

IOAT Driver Installation

The IOAT driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows 2000 Advanced Server SP4 Installation (with LSI MegaRAID SAS 8300XLP) IOAT Driver Installation section.

ATI ES1000 Driver Installation

The ATI ES1000 driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows 2000 Advanced Server SP4 Installation (with LSI MegaRAID SAS 8300XLP) ATI ES1000 Driver Installation section.

MyStorage Installation

Before you install the MyStorage 3.00.05 on Windows 2000, you need to install the Windows 2000 support tools first. You can find the tools in the Windows 2000 installation CD.

1. Please run SETUP.EXE from \SUPPORTTOOLS in Windows 2000 installation CD to install the Windows 2000 support tools. Follow the instruction and use the default to finish the installation.
2. Please insert the EasyBUILD 7.1 build 200 into the optical drive.
3. Expand **Utilities** -> **Altos G540** -> **LSI 1068**, select **MyStorage (Windows)** and click on **Setup**.
4. During the installation, select **Yes, I have Windows 2000 Resource Kit installed** and click on **Next**.
5. Specify the directory that the Windows 2000 support tools is installed. The default path of Windows 2000 support tools is **C:\Program Files\Support Tools**.
6. Follow the instruction, accept the license agreement and use the default setting to do the installation.
7. When you see the **Device Driver Installation Wizard**, please click on **Cancel** to skip it.
8. Follow the instruction to complete the installation.

Intel PROSet Utility Installation

The PROSet Utility installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows 2000 Advanced Server SP4 Installation

(with LSI MegaRAID SAS 8300XLP) Intel PROSet Utility Installation section.

Windows 2000 Advanced Server SP4 Installation (with onboard SATA RAID)

Below information describes how to manually install Windows 2000 Advanced Server SP4 on Altos G540 with onboard SATA RAID.

Drivers Required

For Windows 2000 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
Onboard SATA RAID	6.0.0.1002	\\Disk\G540\onboard\SATARAID\ws2k_ws2K3\
Onboard Intel 5000P Chipset	7.4.0.1005	\\Disk\G540\onboard\Chipset\
Onboard Intel 82563EB Gigabit Ethernet	9.3.39	\\Disk\G540\NIC\Intel\pro1000.net\ws032k\
Onboard ATI ES1000	8.24.3.0	\\Disk\G540\onboard\VGA\W2K3\
Onboard USB 2.0	5.0.2195.6717	OS built-in
IOAT	1.2.52.0	\\Disk\G540\onboard\IOAT\WS2K3

Software Required

The management utility for onboard SATA RAID and NIC can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
Matrix Storage Manager	6.0.0.1002	\\APP\G540\RAID\SATARAID\Windows
Intel PROSet Utility	10.4.4.2	\\APP\G540\NIC\PROSETDX\2KXPWS03\

Configuring onboard SATA RAID

Please refer to the Appendix A. for the onboard SATA RAID configuration.

Installation Tips

1. As Windows 2000 can't recognize the onboard SATA RAID, you need to make a driver diskette from the EasyBUILD 7.1 build 200 first before the installation.
2. Press F6 at the beginning of installation for providing the driver diskette for the onboard SATARAID.
3. Select "Intel(R) 631xESB/632xESB SATA RAID Controller (Server/Workstation ESB2)" as target driver
4. After loading the SAS driver from diskette, follow the normal procedure to finish the installation.

Chipset Driver Installation

The chipset driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows 2000 Advanced Server SP4 Installation (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows 2000 Advanced Server SP4 Installation (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

IOAT Driver Installation

The IOAT driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows 2000 Advanced Server SP4 Installation (with LSI MegaRAID SAS 8300XLP) IOAT Driver Installation section.

ATI ES1000 Driver Installation

The ATI ES1000 driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows 2000 Advanced Server SP4 Installation (with LSI MegaRAID SAS 8300XLP) ATI ES1000 Driver Installation section.

Matrix Storage Manager Installation

1. Please insert the EasyBUILD 7.1 build 200 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **Onboard SATA RAID**, select **Matrix Storage Manager** and click on **Setup**.
3. Follow the instruction, accept the license agreement and use the default setting to complete the installation.
4. Please reboot the system when the installation is completed.

Intel PROSet Utility Installation

The PROSet Utility installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows 2000 Advanced Server SP4 Installation (with LSI MegaRAID SAS 8300XLP) Intel PROSet Utility Installation section.

Windows 2000 Advanced Server SP4 Installation (with MegaRAID SAS 8708ELP)

Below information describes how to manually install Windows 2000 Advanced Server SP4 on Altos G540 with MegaRAID SAS 8708ELP.

Drivers Required

For Windows 2000 Installation, the following device drivers are required. These drivers can be found in EasyBUILD 7.1 build 600 (or later).

Device	Version	Directory on EasyBUILD
MegaRAID SAS	2.7.0.32	\\Disk\g540\raid\8708ELP\ws2k\

8708ELP		
Onboard Intel 5000P Chipset	7.4.0.1005	\Disk\G540\onboard\Chipset\
Onboard Intel 82563EB Gigabit Ethernet	9.6.31.0	\Disk\G540\NIC\Intel\pro1000.net\ws032k\
Onboard ATI ES1000	8.24.3.0	\Disk\G540\onboard\VGA\W2K\
Onboard USB 2.0	5.0.2195.6717	OS built-in
IOAT	1.2.66.0	\Disk\G540\onboard\IOAT\WS2K3

Software Required

The management utility for onboard SATA RAID and NIC can be found in the EasyBUILD 7.1 build 600 (or later).

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manager	2.07-00	\APP\G540\RAID\SATARAID\Windows
Intel PROSet Utility	11.2.0.69	\APP\G540\NIC\PROSETDX\2KXPWS03\

Configuring LSI MegaRAID SAS 8708ELP

Please refer to the Appendix D. for the LSI MegaRAID SAS 8708ELP configuration.

Installation Tips

1. As Windows 2000 can't recognize the MegaRAID SAS 8708ELP, you need to make a driver diskette from the EasyBUILD 7.1 build 200 first before the installation.
2. Press F6 at the beginning of installation for providing the driver diskette for the LSI MegaRAID SAS 8708ELP.
3. Select "LSI Logic MegaRAID SAS RAID Controller Driver (Windows 2000)" as target driver
4. After loading the driver from diskette, follow the normal procedure to finish the installation.

Chipset Driver Installation

The chipset driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows 2000 Advanced Server SP4 Installation (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows 2000 Advanced Server SP4 Installation (with LSI MegaRAID SAS 8300XLP) Chipset Driver Installation section.

IOAT Driver Installation

The IOAT driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows 2000 Advanced Server SP4 Installation (with LSI MegaRAID SAS 8300XLP) IOAT Driver Installation section.

ATI ES1000 Driver Installation

The ATI ES1000 driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows 2000 Advanced Server SP4 Installation (with LSI MegaRAID SAS 8300XLP) ATI ES1000 Driver Installation section.

MegaRAID Storage Manager Installation

1. Please insert the EasyBUILD 7.1 build 600 into the optical drive.
2. Expand **Utilities** -> **Altos G540** -> **LSI Logic MegaRAID SAS 8708ELP**, select **MegaRAID Storage Manager(Windows 2000)** and click on **Setup**.
3. Follow the instruction, accept the license agreement and use the default setting to the **Setup Type**.
4. At the **Setup Type**, please select **StandAlone**.
5. Follow the instruction again to complete the installation.

Intel PROSet Utility Installation

The PROSet Utility installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Windows 2000 Advanced Server SP4 Installation (with LSI MegaRAID SAS 8300XLP) Intel PROSet Utility Installation section.

Red Hat Enterprise Linux 4.0 EM64T Update 3 Installation (with LSI MegaRAID SAS 8300XLP)

Below information describes how to manually install Red Hat Enterprise Linux 4.0 EM64T Update 3 on Altos G540 with MegaRAID SAS 8300XLP.

Drivers Required

For Red Hat Enterprise Linux 4.0 EM64T Update 3 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
MegaRAID SAS 8300XLP	00.00.03.01	\\Disk\G540\RAID\LSI8300XLP\RHEL4\
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.0.38-NAPI	\\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI ES1000	N/A	OS built-in

Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility for MegaRAID SAS 8300XLP can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manager	1.13-07	\APP\G540\RAID\LSI8300XLP\StorageMa nager\Linux\

Configuring MegaRAID SAS 8300XLP

Please refer to the Appendix C. for the MegaRAID SAS 8300XLP configuration.

Installation Tips

1. Since Red Hat Enterprise Linux 4.0 EM64T Update3 cannot recognize the MegaRAID SAS 8300XLP, you need to make a driver diskette from the EasyBUILD 7.1 build 200 (or later) first before the installation.
2. Type **linux dd** when the prompt **boot:** appears at the start.
3. Please select the **fd0** as the **Driver Disk Source**.
4. Follow the instruction to load the MegaRAID driver from the driver diskette.
5. At the **Package Installation Defaults**, select **Customize software packages to be installed**.
6. At the **Package Group Selection** step, select **Development Tools** under **Development**.
7. Follow the normal procedure to finish the installation.

Gigabit Ethernet Driver Installation

1. You can find the Intel 82563EB driver in EasyBUILD 7.1 build 200. Please refer to Directory of EasyBUILD in Driver Required section for 82563EB and copy the driver from the EasyBUILD 7.1 build 200 to HDD first.

```
# mount /media/cdrecorder
```

```
# cp -R /media/cdrecorder/Disk/G540/NIC/Intel/pro1000.lx/. /tmp
```

2. Change the directory to the driver source and install the driver

```
# cd /tmp/src/
```

```
# make install
```

```
# insmod e1000.ko
```

3. Run the kudzu utility, it will auto detect the Intel 82563EB network controller and help you to configure it.

```
# kudzu
```

- Restart the network service to bring up both of the network interfaces.

```
# service network restart
```

MegaRAID Storage Manager Installation

- You can find the MegaRAID Storage Manager in EasyBUILD 7.1 build 200. Please refer to Directory of EasyBUILD in Software Required section for the MegaRAID Storage Manager and copy the utility from the EasyBUILD 7.1 build 200 to HDD first.

```
# mount /media/cdrecorder
```

```
# cp -R /media/cdrecorder/APP/G540/RAID/LSI8300XLP/StorageManager  
/Linux/. /tmp
```

- Install MegaRAID Storage Manager utility

```
# cd /tmp/
```

```
# unzip Linux_LSI_MSM_1.13-07.zip
```

```
# tar zxvf MSM_linux_installer-1.13-07.tar.gz
```

```
# cd disk
```

```
# ./install.sh
```

- Type y to accept the license agreement and select 3 for **StandAlone** installation.
- To start Intel RAID Web Console on, select **applications -> System Tools -> MegaRAID Storage Manager Startup UI**

Red Hat Enterprise Linux 4.0 EM64T Update 3 Installation (with LSI 1068 SAS)

Below information describes how to manually install Red Hat Enterprise Linux 4.0 EM64T Update 3 on Altos G540 with LSI 1068 SAS IM.

Drivers Required

For Red Hat Enterprise Linux 4.0 EM64T Update 3 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI 1068 SAS	3.02.77	\Disk\G540\onboard\SAS\RHEL4U3X64
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.0.38-NAPI	\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI	N/A	OS built-in

ES1000		
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility for LSI 1068 SAS can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
MyStorage	3.00.05	\APP\G540\SAS\LSI1068\MyStorage\Linux\

Configuring LSI 1068 SAS

Please refer to the Appendix B. for the LSI 1068 SAS IM configuration.

Installation Tips

Although Red Hat Enterprise Linux 4.0 EM64T Update 3 can detect the LSI 1068 SAS automatically, we still need to update the driver during the installation. If you don't update the driver, the LSI MyStorage management software will not recognize the LSI 1068 SAS.

1. Please make the driver diskette from the EasyBUILD 7.1 build 200 (or later) first before the installation.
2. Type **linux dd updates** when the prompt **boot:** appears at the start.
3. Please select the **fd0** as the **Driver Disk Source**.
4. Follow the instruction to load the LSI 1068 SAS driver from the driver diskette.
5. At **Update Disk Source**, please select **fd0** and follow the instruction to update it.
6. At the **Package Installation Defaults**, select **Customize software packages to be installed**.
7. At the **Package Group Selection** step, select **Development Tools** under **Development**.
8. Follow the normal procedure to finish the installation.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Red Hat Enterprise Linux 4.0 EM64T Update3 Installation (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

MyStorage Installation

1. You can find the MyStorage in EasyBUILD 7.1 build 200. Please refer to Directory of EasyBUILD in Software Required section for the MyStorage and copy the utility from the EasyBUILD 7.1 build 200 to HDD first.

```
# mount /media/cdrecorder

# cp -R /media/cdrecorder/APP/G540/SAS/LSI1068/MyStorage/Linux/. /tmp
```

2. Install MegaRAID Storage Manager utility

```
# cd /tmp/

# ./MyStorageInstaller_Linux_SAS_030005.bin
```

3. Follow the instruction, accept the license agreement and use the default setting to complete the installation.
4. To launch the MyStorage, please select **Applications -> Other -> MyStorage Manager**.

Red Hat Enterprise Linux 4.0 EM64T Update 3 Installation (with LSI MegaRAID SAS 8708ELP)

Below information describes how to manually install Red Hat Enterprise Linux 4.0 EM64T Update 3 on Altos G540 with MegaRAID SAS 8708ELP.

Drivers Required

For Red Hat Enterprise Linux 4.0 EM64T Update 3 Installation, the following device drivers are required. These drivers can be found in EasyBUILD 7.1 build 600 (or later).

Device	Version	Directory on EasyBUILD
MegaRAID SAS 8708ELP	00.00.03.06	\\Disk\g540\raid\8708ELP\x64\rhel4u3\
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.3.15-NAPI	\\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility for MegaRAID SAS 8708ELP can be found in the EasyBUILD 7.1 build 600 (or later).

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manager	2.07-00	\\app\g540\raid\8708ELP\Linux\

Configuring MegaRAID SAS 8708ELP

Please refer to the Appendix D. for the MegaRAID SAS 8708ELP configuration.

Installation Tips

1. Since Red Hat Enterprise Linux 4.0 EM64T Update3 cannot recognize the MegaRAID SAS 8708ELP, you need to make a driver diskette from the EasyBUILD 7.1 build 600 (or later) first before the installation.
2. Type **linux dd** when the prompt **boot:** appears at the start.
3. Please select the **fd0** as the **Driver Disk Source**.
4. Follow the instruction to load the MegaRAID driver from the driver diskette.
5. At the **Package Installation Defaults**, select **Customize software packages to be installed**.
6. At the **Package Group Selection** step, select **Development Tools** under **Development**.
7. Follow the normal procedure to finish the installation.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Red Hat Enterprise Linux 4.0 EM64T Update3 Installation (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

MegaRAID Storage Manager Installation

1. You can find the MegaRAID Storage Manager in EasyBUILD 7.1 build 600. Please refer to Directory of EasyBUILD in Software Required section for the MegaRAID Storage Manager and copy the utility from the EasyBUILD 7.1 build 600 to HDD first.

```
# mount /media/cdrecorder  
  
# cp -R /media/cdrecorder/app/g540/raid/8708ELP/Linux/. /tmp
```

2. Install MegaRAID Storage Manager utility

```
# cd /tmp/  
# ./install.sh
```
3. Type **y** to accept the license agreement and select **3** for **StandAlone** installation.
4. To start Intel RAID Web Console, select **applications -> System Tools -> MegaRAID Storage Manager Startup UI**

Red Hat Enterprise Linux 4.0 Update 3 Installation (with LSI MegaRAID SAS 8300XLP)

Below information describes how to manually install Red Hat Enterprise Linux 4.0 Update 3 on Altos G540 with MegaRAID SAS 8300XLP.

Drivers Required

For Red Hat Enterprise Linux 4.0 Update 3 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
MegaRAID SAS 8300XLP	00.00.03.01	\\Disk\G540\RAID\LSI8300XLP\RHEL4\
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.0.38-NAPI	\\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility for MegaRAID SAS 8300XLP can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manager	1.13-07	\\APP\G540\RAID\LSI8300XLP\StorageManager\Linux\

Configuring MegaRAID SAS 8300XLP

Please refer to the Appendix C. for the MegaRAID SAS 8300XLP configuration.

Installation Tips

1. Since Red Hat Enterprise Linux 4.0 Update3 cannot recognize the MegaRAID SAS 8300XLP, you need to make a driver diskette from the EasyBUILD 7.1 build 200 (or later) first before the installation.
2. Type **linux dd** when the prompt **boot:** appears at the start.
3. Please select the **fd0** as the **Driver Disk Source**.
4. Follow the instruction to load the MegaRAID SAS 8300XLP driver from the driver diskette.
5. At the **Package Installation Defaults**, select **Customize software packages to be installed**.
6. At the **Package Group Selection** step, select **Development Tools** under **Development**.
7. Follow the normal procedure to finish the installation.

Gigabit Ethernet Driver Installation

1. You can find the Intel 82563EB driver in EasyBUILD 7.1 build 200. Please

refer to Directory of EasyBUILD in Driver Required section for the 82563EB driver and copy the driver from the EasyBUILD 7.1 build 200 to HDD first.

```
# mount /media/cdrecorder
```

```
# cp -R /media/cdrecorder/Disk/G540/NIC/Intel/pro1000.lx/. /tmp
```

2. Change the directory to the driver source and install the driver

```
# cd /tmp/src/
```

```
# make install
```

```
# insmod e1000.ko
```

3. Run the kudzu utility, it will auto detect the Intel 82563EB network controller and help you to configure it.

```
# kudzu
```

4. Restart the network service to bring up both of the network interfaces.

```
# service network restart
```

MegaRAID Storage Manager Installation

1. You can find the MegaRAID Storage Manager in EasyBUILD 7.1 build 200. Please refer to Directory of EasyBUILD in Software Required section for the MegaRAID Storage Manager and copy the utility from the EasyBUILD 7.1 build 200 to HDD first.

```
# mount /media/cdrecorder
```

```
# cp -R /media/cdrecorder/APP/G540/RAID/LSI8300XLP/StorageManager  
/Linux/. /tmp
```

2. Install MegaRAID Storage Manager utility

```
# cd /tmp/
```

```
# unzip Linux_LSI_MSM_1.13-07.zip
```

```
# tar zxvf MSM_linux_installer-1.13-07.tar.gz
```

```
# cd disk
```

```
# ./install.sh
```

3. Type y to accept the license agreement and select 3 for **StandAlone** installation.

4. To start Intel RAID Web Console, select **applications -> System Tools -> MegaRAID Storage Manager Startup UI**

Red Hat Enterprise Linux 4.0 Update 3 Installation (with LSI 1068 SAS)

Below information describes how to manually install Red Hat Enterprise Linux

4.0 Update 3 on Altos G540 with LSI 1068 SAS IM.

Drivers Required

For Red Hat Enterprise Linux 4.0 Update 3 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI 1068 SAS	3.02.77	\\Disk\G540\onboard\SAS\RHEL4U3\
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.0.38-NAPI	\\DiskG540\NIC\Intel\pro1000.lx
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility for LSI 1068 SAS can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
MyStorage	3.00.05	\\APP\G540\SAS\LSI1068\MyStorage\Linux\

Configuring LSI 1068 SAS

Please refer to the Appendix B. for the LSI 1068 SAS IM configuration.

Installation Tips

Although Red Hat Enterprise Linux 4.0 Update 3 can detect the LSI 1068 SAS automatically, we still need to update the driver during the installation. If you don't update the driver, the LSI MyStorage management software will not recognize the LSI 1068 SAS.

1. Please make the driver diskette from the EasyBUILD 7.1 build 200 (or later) first before the installation.
2. Type **linux dd updates** when the prompt **boot:** appears at the start.
3. Please select the **fd0** as the **Driver Disk Source**.
4. Follow the instruction to load the LSI 1068 SAS driver from the driver diskette.
5. At **Update Disk Source**, please select **fd0** and follow the instruction to update it.
6. At the **Package Installation Defaults**, select **Customize software packages to be installed**.

7. At the **Package Group Selection** step, select **Development Tools** under **Development**.
8. Follow the normal procedure to finish the installation.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Red Hat Enterprise Linux 4.0 Update3 Installation (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

MyStorage Installation

1. You can find the MyStorage in EasyBUILD 7.1 build 200. Please refer to **Directory of EasyBUILD** in **Software Required** section for the MyStorage and copy the utility from the EasyBUILD 7.1 build 200 to HDD first.

```
# mount /media/cdrecorder
# cp -R /media/cdrecorder/APP/G540/SAS/LSI1068/MyStorage/Linux/. /tmp
```

2. Install MegaRAID Storage Manager utility

```
# cd /tmp/
# ./MyStorageInstaller_Linux_SAS_030005.bin
```

3. Follow the instruction, accept the license agreement and use the default setting to complete the installation.
4. To launch the MyStorage, please select **Applications -> Other -> MyStorage Manager**.

Red Hat Enterprise Linux 4.0 Update 3 Installation (with LSI MegaRAID SAS 8708ELP)

Below information describes how to manually install Red Hat Enterprise Linux 4.0 Update 3 on Altos G540 with MegaRAID SAS 8708ELP.

Drivers Required

For Red Hat Enterprise Linux 4.0 Update 3 Installation, the following device drivers are required. These drivers can be found in EasyBUILD 7.1 build 600 (or later).

Device	Version	Directory on EasyBUILD
MegaRAID SAS 8708ELP	00.00.03.06	\\Disk\g540\raid\8708ELP\rhel4u3\
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.3.15-NAPI	\\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI	N/A	OS built-in

ES1000		
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility for MegaRAID SAS 8708ELP can be found in the EasyBUILD 7.1 build 600 (or later).

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manager	2.07-00	\app\g540\raid\8708ELP\Linux\

Configuring MegaRAID SAS 8708ELP

Please refer to the Appendix D. for the MegaRAID SAS 8708ELP configuration.

Installation Tips

1. Since Red Hat Enterprise Linux 4.0 Update3 cannot recognize the MegaRAID SAS 8708ELP, you need to make a driver diskette from the EasyBUILD 7.1 build 600 (or later) first before the installation.
2. Type **linux dd** when the prompt **boot:** appears at the start.
3. Please select the **fd0** as the **Driver Disk Source**.
4. Follow the instruction to load the MegaRAID SAS 8300XLP driver from the driver diskette.
5. At the **Package Installation Defaults**, select **Customize software packages to be installed**.
6. At the **Package Group Selection** step, select **Development Tools** under **Development**.
7. Follow the normal procedure to finish the installation.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the Red Hat Enterprise Linux 4.0 Update3 Installation (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

MegaRAID Storage Manager Installation

1. You can find the MegaRAID Storage Manager in EasyBUILD 7.1 build 600. Please refer to Directory of EasyBUILD in Software Required section for the MegaRAID Storage Manager and copy the utility from the EasyBUILD 7.1 build 600 to HDD first.

```
# mount /media/cdrecorder
```

```
# cp -R /media/cdrecorder/app/g540/raid/8708ELP/Linux/. /tmp
```

2. Install MegaRAID Storage Manager utility

```
# cd /tmp/
# ./install.sh
```

3. Type y to accept the license agreement and select 3 for **StandAlone** installation.
4. To start Intel RAID Web Console, select **applications -> System Tools -> MegaRAID Storage Manager Startup UI**

SUSE Linux Enterprise Server 10 EM64T Installation (with LSI MegaRAID SAS 8300XLP)

Below information describes how to manually install SUSE Linux Enterprise Server 10 EM64T on Altos G540 with LSI MegaRAID SAS 8300XLP

Drivers Required

For SUSE Linux Enterprise Server 10 EM64T Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI MegaRAID SAS 8300XLP	00.00.03.07	N/A
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.3.15-NAPI	\\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility of LSI MegaRAID SAS 8300XLP is required.

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manager	2.21-00	N/A

Configuring LSI MegaRAID SAS 8300XLP

Please refer to the Appendix C. for the LSI MegaRAID SAS 8300XLP configuration.

Installation Tips

1. Please prepare the driver diskette for MegaRAID SAS 8300XLP before the installation.
2. Boot the system from SUSE Linux Enterprise Server 10 EM64T bootable CD.

-
3. When you see the boot menu on the screen, press F5 and select **Yes**.
 4. Please insert the driver disk into the floppy drive then press Enter to continue the installation.
 5. The system will automatically load the driver from floppy. After loading the driver, select **OK** and **Back** to return the installation procedure.
 6. Follow the instructions to the **Installation Settings**.
 7. At the **Installation settings**, select the **Software**.
 8. Check **C/C++ Compiler and Tools** under **Development** to add C/C++ compiler tools.
 9. Click on **Details**, change **Filter** from **Patterns** to **Package Groups**.
 10. Select **Source** under **Development** in the left window and check **kernel-source** in the right window to add kernel-source.
 11. After you add the **kernel-source** and **C/C++ Compiler and Tools**, please click on **Accept** and follow the instruction to complete the installation.

Gigabit Ethernet Driver Installation

The SUSE Linux Enterprise Linux 10 could detect the onboard Intel 82573E automatically. We still recommend replacing the driver with the one in EasyBUILD 7.1.

1. Remove the module e1000

```
# rmmod e1000
```
2. Make the driver diskette for EasyBUILD 7.1.
3. Copy driver from floppy to hard disk

```
# mount /media/floppy
# cp -R /media/floppy/. /tmp/
```
4. Change the directory to the driver source and install the driver

```
# cd /tmp/src/
# make install
# insmod e1000.ko
```

MegaRAID Storage Manager Installation

1. Please copy the MegaRAID Storage Manger to HDD first.
2. Change the directory to which including the MegaRAID Storage Manager and install it

```
# cd /tmp/
# unzip MSM_linux_2.21.zip
```

```
# tar zxvf MSM_linux_installer-2.21-00.tar.gz
# cd disk
# ./install.sh
```

3. Type **y** to accept the license agreement and select 3 for **StandAlone** installation.
4. To start MegaRAID Storage Manager, click on **Computer**, select **More Applications** and **MegaRAID Storage Manager Startup UI**.

SUSE Linux Enterprise Server 10 EM64T Installation (with LSI 1068 SAS IM)

Below information describes how to manually install SUSE Linux Enterprise Server 10 EM64T on Altos G540 with LSI 1068 SAS IM.

Drivers Required

For SUSE Linux Enterprise Server 10 EM64T Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI 1068 SAS	3.03.17.04	N/A
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.3.15-NAPI	\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility of LSI 1068 SAS is required.

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manger	2.21-00	N/A

Configuring LSI 1068 SAS

Please refer to the Appendix B. for the LSI 1068 SAS IM configuration.

Installation Tips

1. Please prepare the driver diskette for LSI 1068 SAS before the installation.
2. Boot the system form SUSE Linux Enterprise Server 10 EM64T bootable CD.
3. When you see the boot menu on the screen, press F5 and select **Yes**.

4. Please insert the driver disk into the floppy drive then press Enter to continue the installation.
5. The system will automatically load the driver from floppy. After loading the driver, select **OK** and **Back** to return the installation procedure.
6. Follow the instructions to the **Installation Settings**.
7. At the **Installation settings**, select the **Software**.
8. Check **C/C++ Compiler and Tools** under **Development** to add C/C++ compiler tools.
9. Click on **Details**, change **Filter** from **Patterns** to **Package Groups**.
10. Select **Source** under **Development** in the left window and check **kernel-source** in the right window to add kernel-source.
11. After you add the **kernel-source** and **C/C++ Compiler and Tools**, please click on **Accept** and follow the instruction to complete the installation.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the SuSE Linux Enterprise Linux 10 EM64T Installation (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

MegaRAID Storage Manager Installation

The MegaRAID Storage Manager installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the SuSE Linux Enterprise Linux 10 EM64T Installation (with LSI MegaRAID SAS 8300XLP) MegaRAID Storage Manager Installation section.

SUSE Linux Enterprise Server 10 EM64T Installation (with LSI MegaRAID SAS 8708ELP)

Below information describes how to manually install SUSE Linux Enterprise Server 10 EM64T on Altos G540 with LSI MegaRAID SAS 8708ELP.

Drivers Required

For SUSE Linux Enterprise Server 10 EM64T Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI MegaRAID SAS 8708ELP	00.00.03.09	N/A
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.3.15-NAPI	\\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI	N/A	OS built-in

ES1000		
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility of LSI MegaRAID SAS 8708ELP is required.

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manager	2.21-00	N/A

Configuring LSI MegaRAID SAS 8708ELP

Please refer to the Appendix D. for the LSI MegaRAID SAS 8708ELP configuration.

Installation Tips

1. Please prepare the driver diskette for MegaRAID SAS 8708ELP before the installation.
2. Boot the system from SUSE Linux Enterprise Server 10 EM64T bootable CD.
3. When you see the boot menu on the screen, press F5 and select **Yes**.
4. Please insert the driver disk into the floppy drive then press Enter to continue the installation.
5. The system will automatically load the driver from floppy. After loading the driver, select **OK** and **Back** to return the installation procedure.
6. Follow the instructions to the **Installation Settings**.
7. At the **Installation settings**, select the **Software**.
8. Check **C/C++ Compiler and Tools** under **Development** to add C/C++ compiler tools.
9. Click on **Details**, change **Filter** from **Patterns** to **Package Groups**.
10. Select **Source** under **Development** in the left window and check **kernel-source** in the right window to add kernel-source.
11. After you add the **kernel-source** and **C/C++ Compiler and Tools**, please click on **Accept** and follow the instruction to complete the installation.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the SuSE Linux Enterprise Linux 10 ME64T Installation (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

MegaRAID Storage Manager Installation

The MegaRAID Storage Manager installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the SuSE Linux Enterprise Linux 10 EM64T

Installation (with LSI MegaRAID SAS 8300XLP) MegaRAID Storage Manager Installation section.

SUSE Linux Enterprise Server 10 Installation (with LSI MegaRAID SAS 8300XLP)

Below information describes how to manually install SUSE Linux Enterprise Server 10 on Altos G540 with LSI MegaRAID SAS 8300XLP installed.

Drivers Required

For SUSE Linux Enterprise Server 10 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI MegaRAID SAS 8300XLP	00.00.03.07	N/A
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.3.15-NAPI	\\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility for MegaRAID SAS 8300XLP is required.

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manager	2.21-00	N/A

Configuring LSI MegaRAID SAS 8300XLP

Please refer to the Appendix C. for the LSI MegaRAID SAS 8300XLP configuration.

Installation Tips

1. Please prepare the driver diskette for MegaRAID SAS 8300XLP before the installation.
2. Boot the system from SUSE Linux Enterprise Server 10 bootable CD.
3. When you see the boot menu on the screen, press F5 and select **Yes**.
4. Please insert the driver disk into the floppy drive then press Enter to continue the installation.
5. The system will automatically load the driver from floppy. After loading

-
- the driver, select **OK** and **Back** to return the installation procedure.
 6. Follow the instructions to the **Installation Settings**
 7. At the **Installation settings**, select the **Software**.
 8. Check **C/C++ Compiler and Tools** under **Development** to add C/C++ compiler tools.
 9. Click on **Details**, change **Filter** from **Patterns** to **Package Groups**.
 10. Select **Source** under **Development** in the left window and check **kernel-source** in the right window to add kernel-source.
 11. After you add the **kernel-source** and **C/C++ Compiler and Tools**, please click on **Accept** and follow the instruction to complete the installation.

Gigabit Ethernet Driver Installation

The SUSE Linux Enterprise Linux 10 could detect the onboard Intel 82573E automatically. We still recommend replacing the driver with the one in EasyBUILD 7.1.

1. Remove the module e1000

```
# rmmmod e1000
```
2. Make the driver diskette for EasyBUILD 7.1.
3. Copy driver from floppy to hard disk

```
# mount /media/floppy
# cp -R /media/floppy/. /tmp/
```
4. Change the directory to the driver source and install the driver

```
# cd /tmp/src/
# make install
# insmod e1000.ko
```

MegaRAID Storage Manager Installation

1. Please copy the MegaRAID Storage Manager to HDD first.
2. Install MegaRAID Storage Manager

```
# cd /tmp/
# unzip MSM_linux_2.21-00.zip
# tar zxvf MSM_linux_installer-2.21-00.tar.gz
# cd disk
# ./install.sh
```
3. Type **y** to accept the license agreement and select 3 for **StandAlone**

installation.

4. To start MegaRAID Storage Manager, click on **Computer**, select **More Applications** and **MegaRAID Storage Manager Startup UI**.

SUSE Linux Enterprise Server 10 Installation (with LSI 1068 SAS IM)

Below information describes how to manually install SUSE Linux Enterprise Server 10 on Altos G540 with LSI 1068 SAS IM.

Drivers Required

For SUSE Linux Enterprise Server 10 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI 1068 SAS	3.03.17.04	N/A
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.3.15-NAPI	\\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility of LSI 1068 SAS is required.

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manager	2.21-00	N/A

Configuring LSI 1068 SAS

Please refer to the Appendix B. for the LSI 1068 SAS IM configuration.

Installation Tips

1. Please prepare the driver diskette for LSI 1068 SAS before the installation.
2. Boot the system form SUSE Linux Enterprise Server 10 bootable CD.
3. When you see the boot menu on the screen, press F5 and select **Yes**.
4. Please insert the driver disk into the floppy drive then press Enter to continue the installation.
5. The system will automatically load the driver from floppy. After loading the driver, select **OK** and **Back** to return the installation procedure.

6. Follow the instructions to the **Installation Settings**.
7. At the **Installation settings**, select the **Software**.
8. Check **C/C++ Compiler and Tools** under **Development** to add C/C++ compiler tools.
9. Click on **Details**, change **Filter** from **Patterns** to **Package Groups**.
10. Select **Source** under **Development** in the left window and check **kernel-source** in the right window to add kernel-source.
11. After you add the **kernel-source** and **C/C++ Compiler and Tools**, please click on **Accept** and follow the instruction to complete the installation.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the SuSE Linux Enterprise Linux 10 Installation (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

MegaRAID Storage Manager Installation

The MegaRAID Storage Manager installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the SuSE Linux Enterprise Linux 10 Installation (with LSI MegaRAID SAS 8300XLP) MegaRAID Storage Manager Installation section.

SUSE Linux Enterprise Server 10 Installation (with LSI MegaRAID SAS 8708ELP)

Below information describes how to manually install SUSE Linux Enterprise Server 10 on Altos G540 with LSI MegaRAID SAS 8708ELP.

Drivers Required

For SUSE Linux Enterprise Server 10 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI MegaRAID SAS 8708ELP	00.00.03.09	N/A
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.3.15-NAPI	\\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility of LSI MegaRAID SAS 8708ELP is required.

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manager	2.21-00	N/A

Configuring LSI MegaRAID SAS 8708ELP

Please refer to the Appendix D. for the LSI MegaRAID SAS 8708ELP configuration.

Installation Tips

1. Please prepare the driver diskette for MegaRAID SAS 8708ELP before the installation.
2. Boot the system from SUSE Linux Enterprise Server 10 bootable CD.
3. When you see the boot menu on the screen, press F5 and select **Yes**.
4. Please insert the driver disk into the floppy drive then press Enter to continue the installation.
5. The system will automatically load the driver from floppy. After loading the driver, select **OK** and **Back** to return the installation procedure.
6. Follow the instructions to the **Installation Settings**.
7. At the **Installation settings**, select the **Software**.
8. Check **C/C++ Compiler and Tools** under **Development** to add C/C++ compiler tools.
9. Click on **Details**, change **Filter** from **Patterns** to **Package Groups**.
10. Select **Source** under **Development** in the left window and check **kernel-source** in the right window to add kernel-source.
11. After you add the **kernel-source** and **C/C++ Compiler and Tools**, please click on **Accept** and follow the instruction to complete the installation.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the SuSE Linux Enterprise Linux 10 Installation (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

MegaRAID Storage Manager Installation

The MegaRAID Storage Manager installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the SuSE Linux Enterprise Linux 10 Installation (with LSI MegaRAID SAS 8300XLP) MegaRAID Storage Manager Installation section.

SUSE Linux Enterprise Server 9 EM64T Service Pack 3 Installation (with LSI MegaRAID SAS 8300XLP)

Below information describes how to manually install SUSE Linux Enterprise Server 9 EM64T Service Pack 3 on Altos G540 with LSI MegaRAID SAS 8300XLP

Drivers Required

For SUSE Linux Enterprise Server 9 EM64T Service Pack 3 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI MegaRAID SAS 8300XLP	00.00.03.01	\\Disk\G540\RAID\LSI8300XLP\SLES9\
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.0.38-NAPI	\\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility of LSI MegaRAID SAS 8300XLP can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manager	1.13-07	\\APP\G540\RAID\8300XLP\StorageManager\Linux\

Configuring LSI MegaRAID SAS 8300XLP

Please refer to the Appendix C. for the LSI MegaRAID SAS 8300XLP configuration.

Installation Tips

1. Since SUSE Linux Enterprise Server 9 EM64T Service Pack 3 cannot recognize the LSI MegaRAID SAS 8300XLP, you need to make a driver diskette from the EasyBUILD 7.1 build 200 first before the installation.
2. Boot the system from SUSE Linux Enterprise Server 9 EM64T Service Pack 3 bootable CD.
3. When you see the boot menu on the screen, press F6, select **Installation** then press Enter to continue.
4. Follow the instruction to load the LSI MegaRAID SAS 8300XLP driver from the driver diskette.

-
5. After loading the driver, select **Back** to return the installation procedure.
 6. Follow the instruction to change the CD to SUSE Linux Enterprise Server 9 EM64T CD #1.
 7. Continue to follow the instructions to the **Installation Settings**
 8. At the **Installation settings**, select the **Software** and click on **Detailed selection**.
 9. Check **C/C++ Compiler and Tools** in the left window to add C/C++ compiler tools.
 10. Select **Various Linux Tools** in the left window and check **kernel-source** in the right window to add kernel-source.
 11. After you add the **kernel-source** and **C/C++ Compiler and Tools**, please click on **Accept** and follow the instruction to complete the installation.

Gigabit Ethernet Driver Installation

1. You can find the Intel 82563EB driver in EasyBUILD 7.1 build 200. Please refer to Directory of EasyBUILD in Driver Required section for the 82563EB driver and copy the driver from the EasyBUILD 7.1 build 200 to HDD first.

```
# mount /media/dvdram
```

```
# cp -R /media/dvdram/Disk/G540/NIC/Intel/pro1000.lx/. /tmp
```

2. Change the directory to the driver source and install the driver

```
# cd /tmp/src/
```

```
# make install
```

```
# insmod e1000.ko
```

3. Run the YaST2 utility.

```
# YaST2
```

4. Select **Network Devices -> Network Card**, it will auto detect the Intel 82563EB network controller and help you to configure it.

MegaRAID Storage Manager Installation

1. You can find the MegaRAID Storage Manager in EasyBUILD 7.1 build 200. Please refer to Directory in EasyBUILD in Software Required section for the utility and copy it from the EasyBUILD 7.1 build 200 to HDD first.

```
# mount /media/dvdram
```

```
# cp -R /media/dvdram/APP/G540/RAID/LSI8300XLP/StorageManager  
/Linux/. /tmp
```

2. Install MegaRAID Storage Manager

```
# cd /tmp/
```

```
# unzip Linux_LSI_MSM_1.13-07.zip
# tar zxvf MSM_linux_installer-1.13-07.tar.gz
# cd disk
# ./install.sh
```

3. Type **y** to accept the license agreement and select 3 for **StandAlone** installation.
4. To start Intel RAID Web Console, click on start button, select **System -> More Programs -> MegaRAID Storage Manager Startup UI**

SUSE Linux Enterprise Server 9 EM64T Service Pack 3 Installation (with LSI 1068 SAS IM)

Below information describes how to manually install SUSE Linux Enterprise Server 9 EM64T Service Pack 3 on Altos G540 with LSI 1068 SAS IM.

Drivers Required

For SUSE Linux Enterprise Server 9 EM64T Service Pack 3 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI 1068 SAS	3.02.77	\Disk\G540\onboard\SAS\SLES9SP3\
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.0.38-NAPI	\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility of LSI 1068 SAS can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
MyStorage	3.00.05	\APP\G540\SAS\LSI1068\MyStorage\Linu x\

Configuring LSI 1068 SAS

Please refer to the Appendix B. for the LSI 1068 SAS IM configuration.

Installation Tips

Although SuSE Linux Enterprise Server 9 EM64T Service Pack 3 can detect the LSI 1068 SAS automatically, we still need to update the driver during the

installation. If you don't update the driver, the LSI MyStorage management software will not recognize the LSI 1068 SAS.

1. Please make the driver diskette from the EasyBUILD 7.1 build 200 (or later) first before the installation.
2. Boot the system from SUSE Linux Enterprise Server 9 EM64T Service Pack 3 bootable CD.
3. When you see the boot menu on the screen, press **F6**, select **Installation** then press Enter to continue.
4. Follow the instruction to load the LSI 1068 SAS driver from the driver diskette.
5. After loading the driver, select **Back** to return the installation procedure.
6. Follow the instruction to change the CD to SUSE Linux Enterprise Server 9 EM64T CD #1.
7. Continue to follow the instructions to the **Installation Settings**
8. At the **Installation settings**, select the **Software** and click on **Detailed selection**.
9. Check **C/C++ Compiler and Tools** in the left window to add C/C++ compiler tools.
10. Select **Various Linux Tools** in the left window and check **kernel-source** in the right window to add kernel-source.
11. After you add the **kernel-source** and **C/C++ Compiler and Tools**, please click on **Accept** and follow the instruction to complete the installation.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the SuSE Linux Enterprise Linux 9 EM64T Service Pack 3 Installation (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

MyStorage Installation

1. You can find the MyStorage in EasyBUILD 7.1 build 200. Please refer to Directory of EasyBUILD in Software Required section for the MyStorage and copy the utility from the EasyBUILD 7.1 build 200 to HDD first.

```
# mount /media/cdrecorder
```

```
# cp -R /media/cdrecorder/APP/G540/SAS/LSI1068/MyStorage/Linux/. /tmp
```

2. Install MegaRAID Storage Manager utility

```
# cd /tmp/
```

```
# ./MyStorageInstaller_Linux_SAS_030005.bin
```

3. Follow the instruction, accept the license agreement and use the default setting to complete the installation.
4. To launch the MyStorage, click on Start button, select **LSI Logic -> MyStorage Manager**.

SUSE Linux Enterprise Server 9 EM64T Service Pack 3 Installation (with LSI MegaRAID SAS 8708ELP)

Below information describes how to manually install SUSE Linux Enterprise Server 9 EM64T Service Pack 3 on Altos G540 with LSI MegaRAID SAS 8708ELP

Drivers Required

For SUSE Linux Enterprise Server 9 EM64T Service Pack 3 Installation, the following device drivers are required. These drivers can be found in EasyBUILD 7.1 build 600 (or later).

Device	Version	Directory on EasyBUILD
LSI MegaRAID SAS 8708ELP	00.00.03.06	\\Disk\g540\raid\8708ELP\x64\sles9sp3\
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.3.15-NAPI	\\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility of LSI MegaRAID SAS 8708ELP can be found in the EasyBUILD 7.1 build 600 (or later).

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manager	2.07-00	\\app\g540\raid\8708ELP\Linux\

Configuring LSI MegaRAID SAS 8708ELP

Please refer to the Appendix D. for the LSI MegaRAID SAS 8708ELP configuration.

Installation Tips

1. Since SUSE Linux Enterprise Server 9 EM64T Service Pack 3 cannot recognize the LSI MegaRAID SAS 8708ELP, you need to make a driver diskette from the EasyBUILD 7.1 build 600 first before the installation.
2. Boot the system form SUSE Linux Enterprise Server 9 EM64T Service Pack3

bootable CD.

3. When you see the boot menu on the screen, press F6, select **Installation** then press Enter to continue.
4. Follow the instruction to load the LSI MegaRAID SAS 8708ELP driver from the driver diskette.
5. After loading the driver, select **Back** to return the installation procedure.
6. Follow the instruction to change the CD to SUSE Linux Enterprise Server 9 EM64T CD #1.
7. Continue to follow the instructions to the **Installation Settings**
8. At the **Installation settings**, select the **Software** and click on **Detailed selection**.
9. Check **C/C++ Compiler and Tools** in the left window to add C/C++ compiler tools.
10. Select **Various Linux Tools** in the left window and check **kernel-source** in the right window to add kernel-source.
11. After you add the **kernel-source** and **C/C++ Compiler and Tools**, please click on **Accept** and follow the instruction to complete the installation.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the SuSE Linux Enterprise Linux 9 EM64T Service Pack 3 Installation (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

MegaRAID Storage Manager Installation

1. You can find the MegaRAID Storage Manager in EasyBUILD 7.1 build 600. Please refer to Directory in EasyBUILD in Software Required section for the utility and copy it from the EasyBUILD 7.1 build 600 to HDD first.

```
# mount /media/dvdram
```

```
# cp -R /media/dvdram/app/g540/raid/8708ELP/Linux/. /tmp
```

2. Install MegaRAID Storage Manager

```
# cd /tmp/
```

```
# ./install.sh
```

3. Type **y** to accept the license agreement and select 3 for **StandAlone** installation.
4. To start Intel RAID Web Console, click on start button, select **System -> Configuration -> MegaRAID Storage Manager Startup UI**

SUSE Linux Enterprise Server 9 Service Pack 3 Installation (with LSI MegaRAID SAS 8300XLP)

Below information describes how to manually install SUSE Linux Enterprise Server 9 Service Pack 3 on Altos G540 with LSI MegaRAID SAS 8300XLP installed.

Drivers Required

For SUSE Linux Enterprise Server 9 Service Pack 3 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI MegaRAID SAS 8300XLP	00.00.03.01	\\Disk\G540\RAID\LSI8300XLP\SLES9SP3\
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.0.38-NAPI	\\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility for MegaRAID SAS 8300XLP can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manager	1.13-07	\\APP\G540\RAID\LSI8300XLP\StorageManager\Linux\

Configuring LSI MegaRAID SAS 8300XLP

Please refer to the Appendix C. for the LSI MegaRAID SAS 8300XLP configuration.

Installation Tips

1. Since SUSE Linux Enterprise Server 9 Service Pack 3 cannot recognize the LSI MegaRAID SAS 8300XLP, you need to make a driver diskette from the EasyBUILD 7.1 build 200 first before the installation.
2. Boot the system from SUSE Linux Enterprise Server 9 Service Pack3 bootable CD.
3. When you see the boot menu on the screen, press F6, select **Installation** then press Enter to continue.
4. Follow the instruction to load the LSI MegaRAID SAS 8300XLP driver from the driver diskette.

-
5. After loading the driver, select **Back** to return the installation procedure.
 6. Follow the instruction to change the CD to SUSE Linux Enterprise Server 9 CD #1.
 7. Continue to follow the instructions to the **Installation Settings**
 8. At the **Installation Settings**, select the Software and click on **Detailed selection**.
 9. Check **C/C++ Compiler and Tools** in the left window to add **C/C++ compiler tools**.
 10. Select **Various Linux Tools** in the left window and check **kernel-source** in the right window to add kernel-source.
 11. After you add the **kernel-source** and **C/C++ Compiler and Tools**, please click on **Accept** and follow the instruction to complete the installation.

Gigabit Ethernet Driver Installation

1. You can find the Intel 82563EB driver in EasyBUILD 7.1 build 200. Please refer to Directory on EasyBUILD in Driver Required section for and copy the driver from the EasyBUILD 7.1 build 200 to HDD first.

```
# mount /media/dvdram
```

```
# cp -R /media/dvdram/Disk/G540/NIC/Intel/pro1000.lx/. /tmp
```

2. Change the directory to the driver source and install the driver

```
# cd /tmp/src/
```

```
# make install
```

```
# insmod e1000.ko
```

3. Run the YaST2 utility.

```
# YaST2
```

4. Select **Network Devices -> Network Card**, it will auto detect the Intel 82563EB network controller and help you to configure it.

MegaRAID Storage Manager Installation

1. You can find the MegaRAID Storage Manager in EasyBUILD 7.1 build 200. Please refer to Directory on EasyBUILD in Software Required section for the utility and copy it from the EasyBUILD 7.1 build 200 to HDD first.

```
# mount /media/dvdram
```

```
# cp -R /media/dvdram/APP/G540/RAID/LSI8300XLP/StorageManager  
/Linux/. /tmp
```

2. Install MegaRAID Storage Manager

```
# cd /tmp/
```

```
# unzip Linux_LSI_MSM_1.13-07.zip
# tar zxvf MSM_linux_installer-1.13-07.tar.gz
# cd disk
# ./install.sh
```

3. Type **y** to accept the license agreement and select **3** for StandAlone installation.
4. To start Intel RAID Web Console, click on start button, select **System -> More Programs -> MegaRAID Storage Manager Startup UI**

SUSE Linux Enterprise Server 9 Service Pack 3 Installation (with LSI 1068 SAS IM)

Below information describes how to manually install SUSE Linux Enterprise Server 9 Service Pack 3 on Altos G540 with LSI 1068 SAS IM.

Drivers Required

For SUSE Linux Enterprise Server 9 Service Pack 3 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI 1068 SAS	3.02.77	\Disk\G540\onboard\SAS\SLES9SP3\
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.0.38-NAPI	\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility of LSI 1068 SAS can be found in the EasyBUILD 7.1 build 200 (or later).

Software	Version	Directory on EasyBUILD
MyStorage	3.00.05	\APP\G540\SAS\LSI1068\MyStorage\Linu x\

Configuring LSI 1068 SAS

Please refer to the Appendix B. for the LSI 1068 SAS IM configuration.

Installation Tips

Although SuSE Linux Enterprise Server 9 Service Pack 3 can detect the LSI 1068 SAS automatically, we still need to update the driver during the installation. If

you don't update the driver, the LSI MyStorage management software will not recognize the LSI 1068 SAS.

1. Please make the driver diskette from the EasyBUILD 7.1 build 200 (or later) first before the installation.
2. Boot the system from SUSE Linux Enterprise Server 9 Service Pack3 bootable CD.
3. When you see the boot menu on the screen, press **F6**, select **Installation** then press Enter to continue.
4. Follow the instruction to load the LSI 1068 SAS driver from the driver diskette.
5. After loading the driver, select **Back** to return the installation procedure.
6. Follow the instruction to change the CD to SUSE Linux Enterprise Server 9 CD #1.
7. Continue to follow the instructions to the **Installation Settings**
8. At the **Installation settings**, select the **Software** and click on **Detailed selection**.
9. Check **C/C++ Compiler and Tools** in the left window to add C/C++ compiler tools.
10. Select **Various Linux Tools** in the left window and check **kernel-source** in the right window to add kernel-source.
11. After you add the **kernel-source** and **C/C++ Compiler and Tools**, please click on **Accept** and follow the instruction to complete the installation.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the SuSE Linux Enterprise Linux 9 Service Pack 3 Installation (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

MyStorage Installation

1. You can find the MyStorage in EasyBUILD 7.1 build 200. Please refer to Directory of EasyBUILD in Software Required section for the MyStorage and copy the utility from the EasyBUILD 7.1 build 200 to HDD first.

```
# mount /media/cdrecorder
```

```
# cp -R /media/cdrecorder/APP/G540/SAS/LSI1068/MyStorage/Linux/. /tmp
```

2. Install MegaRAID Storage Manager utility

```
# cd /tmp/
```

```
# ./MyStorageInstaller_Linux_SAS_030005.bin
```

3. Follow the instruction, accept the license agreement and use the default

setting to complete the installation.

4. To launch the MyStorage, click on Start button, select **LSI Logic -> MyStorage Manager**.

SUSE Linux Enterprise Server 9 Service Pack 3 Installation (with LSI MegaRAID SAS 8708EXLP)

Below information describes how to manually install SUSE Linux Enterprise Server 9 Service Pack 3 on Altos G540 with LSI MegaRAID SAS 8708ELP installed.

Drivers Required

For SUSE Linux Enterprise Server 9 Service Pack 3 Installation, the following device drivers are required. These drivers can be found in EasyBUILD 7.1 build 600 (or later).

Device	Version	Directory on EasyBUILD
LSI MegaRAID SAS 8708ELP	00.00.03.06	\\Disk\g540\raid\8708ELP\sles9sp3\
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	7.3.15-NAPI	\\Disk\G540\NIC\Intel\pro1000.lx
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in
IOAT	N/A	N/A

Software Required

The management utility for MegaRAID SAS 8708ELP can be found in the EasyBUILD 7.1 build 600 (or later).

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manager	2.07-00	\\app\g540\raid\8708ELP\Linux\

Configuring LSI MegaRAID SAS 8708ELP

Please refer to the Appendix D. for the LSI MegaRAID SAS 8708ELP configuration.

Installation Tips

1. Since SUSE Linux Enterprise Server 9 Service Pack 3 cannot recognize the LSI MegaRAID SAS 8708ELP, you need to make a driver diskette from the EasyBUILD 7.1 build 600 first before the installation.
2. Boot the system from SUSE Linux Enterprise Server 9 Service Pack3 bootable CD.

-
3. When you see the boot menu on the screen, press F6, select **Installation** then press Enter to continue.
 4. Follow the instruction to load the LSI MegaRAID SAS 8708ELP driver from the driver diskette.
 5. After loading the driver, select **Back** to return the installation procedure.
 6. Follow the instruction to change the CD to SUSE Linux Enterprise Server 9 CD #1.
 7. Continue to follow the instructions to the **Installation Settings**
 8. At the **Installation Settings**, select the Software and click on **Detailed selection**.
 9. Check **C/C++ Compiler and Tools** in the left window to add **C/C++ compiler tools**.
 10. Select **Various Linux Tools** in the left window and check **kernel-source** in the right window to add kernel-source.
 11. After you add the **kernel-source** and **C/C++ Compiler and Tools**, please click on **Accept** and follow the instruction to complete the installation.

Gigabit Ethernet Driver Installation

The NIC driver installation is the same as LSI MegaRAID SAS 8300XLP installed. Please refer to the SuSE Linux Enterprise Linux 9 Service Pack 3 Installation (with LSI MegaRAID SAS 8300XLP) Gigabit Ethernet Driver Installation section.

MegaRAID Storage Manager Installation

1. You can find the MegaRAID Storage Manager in EasyBUILD 7.1 build 600. Please refer to Directory on EasyBUILD in Software Required section for the utility and copy it from the EasyBUILD 7.1 build 600 to HDD first.

```
# mount /media/dvdram
```

```
# cp -R /media/dvdram/app/g540/raid/8708ELP/Linux/. /tmp
```

2. Install MegaRAID Storage Manager

```
# cd /tmp/
```

```
# ./install.sh
```

3. Type **y** to accept the license agreement and select **3** for StandAlone installation.
4. To start Intel RAID Web Console, click on start button, select **System -> Configuration -> MegaRAID Storage Manager Startup UI**

NetWare 6.5 SP5 Installation (with LSI SAS 1068 IM)

Below information describes how to manually install NetWare 6.5 (Support

Pack 5 overlay CD) on Altos G540 with LSI 1068 SAS IM.

Drivers Required

For NetWare 6.5 SP5 installation with LSI 1068 SAS IM, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI 1068 SAS	4.01.05	\\Disk\G540\onboard\SAS\NW6.5\
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	9.22	\\Disk\G540\NIC\Intel\pro1000.nw
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in

Patch Required

For NetWare 6.5 SP5 installation, the following patch is recommended.

Patch	Where to download
ACPI PSM module update	http://support.novell.com/servlet/downloadfile?file=/un/nsd/psm7.exe/

Configuring LSI 1068 SAS

Please refer to the Appendix B. for the LSI 1068 SAS IM configuration.

Installation Tips

1. Make a driver diskette for LSI 1068 SAS and onboard Intel 82563EB Gigabit Ethernet from EasyBUILD 7.1 build 200.
2. Boot the system from the NetWare 6.5 SP5 OS CD.
3. At **Welcome to the NetWare 6.5 server installation** page, select **Manual** to install.
4. At **Prepare boot partition** page, create one 500 MB DOS partition.
5. When you see the following message, please select **Modify**. Then, move the cursor to **Storage adapters** and press **Enter**.

```
The following device drivers were detected for this
server. Add, change, or delete device drivers as
needed.
```

```
Device types                Driver names
-----
HotPlug Support Module      (optional)
Storage adapters:          IDEATA, LSIMPTNW
```

6. Please select LSIMPTNW.HAM and press **Delete** to delete the module.
7. Then, press **INSERT** key to insert the LSI 1068 SAS driver. After the drivers are successfully loaded, please select **Return to driver summary**.
8. Continue the installation.
9. When you see the following message, please select Modify. Then, move the cursor to Network boards and press **Enter**.

The following device drivers were detected for this server. Add, change, or delete device drivers as needed.

```

Device types                Driver names
-----
Network boards:
NetWare Loadable Modules: (optional)

```

10. Please press **INSERT** key to insert the onboard Intel 82563EB Gigabit Ethernet driver. After the drivers are successfully loaded, please select **Return to driver summary**.
11. Then, you would see the following message. Please select **Continue**.

The following device drivers were detected for this server. Add, change, or delete device drivers as needed.

```

Device types                Driver names
-----
Network boards:            E1000E, E1000E
Network Loadable Modules: (optional)

```

12. Please follow the normal procedures to complete the NetWare 6.5 installation.

ACPI PSM Module Update

NOTE. When you install the NW6.5 with the SP6 or later overlay CD, you DO NOT need to update this ACPI PSM Module update. The SP6 or later can install the ACPI driver correctly.

During installation the ACPI driver is not installed correctly. Please update the ACPI PSM Module after the OS installation completed. You can find the update on the Novell Website.

1. Please download the ACPI PSM Module update from the Novell website and extract it to a floppy disk.
2. Please load NWCONFIG from the server console.
3. Select Product Option and Install a product not listed.

4. Insert the disk with the update and press Enter. You will see the following message.

Indicated which file groups you want to installed:

```
-----
[x] NetWare 6.5 post-sp5/Novell OES post-sp2 ACPI NLMs
```

5. Press F10 and follow the instructions to complete the installation of the update files.
6. Open the C:\NWSERVER\STARTUP.NCF file and replace the line "LOAD MPS14.PSM" with "LOAD ACPIDRV.PSM".
7. After you installing the update and updating the STARTUP.NCF file, please reboot the server.

NetWare 6.5 SP5 Installation (with LSI MegaRAID SAS 8300XLP)

Below information describes how to manually install NetWare 6.5 (Support Pack 5 overlay CD) on Altos G540 with LSI MegaRAID SAS 8300XLP.

Drivers Required

For NetWare 6.5 SP5 installation with LSI MegaRAID SAS 8300XLP, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI MegaRAID SAS 8300XLP	1.03	The driver will be included in EasyBUILD 7.1 build 500 or later. Or you find the drive on GCSD website.
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	9.22	\Disk\G540\NIC\Intel\pro1000.nw
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in

Patch Required

For NetWare 6.5 SP5 installation, the following patch is recommended.

Patch	Where to download
ACPI PSM module update	http://support.novell.com/servlet/downloadfile?file=/un/nsd/psm7.exe/

Configuring LSI MegaRAID SAS 8300XLP

Please refer to the Appendix C. for the LSI MegaRAID SAS 8300XLP configuration.

Installation Tips

1. Make a driver diskette for LSI MegaRAID SAS 8300XLP and onboard Intel 82563EB Gigabit Ethernet from EasyBUILD 7.1 build 200.
2. Boot the system from the NetWare 6.5 SP5 OS CD.
3. At **Welcome to the NetWare 6.5 server installation** page, select **Manual** to install.
4. At **Prepare boot partition** page, create one 500 MB DOS partition.
5. When you see the following message, please select **Modify**. Then, move the cursor to **Storage adapters** and press **Enter**.

The following device drivers were detected for this server. Add, change, or delete device drivers as needed.

```
Device types                Driver names
-----
HotPlug Support Module     (optional)
Storage adapters:      IDEATA, IDEATA
```

6. Please select **IDEATA.HAM | Standard ATA/IDE RAID Adapter** and press **Delete** to delete the module.
7. Then, press **INSERT** key to insert the LSI MegaRAID SAS 8300XLP driver. After the drivers are successfully loaded, you will see the driver listed as following. Please select **Return to driver summary**.

```
Driver name    Device name                Status
-----
IDEATA.HAM    | Standard ATA/IDE/ATAPI Adapter
MEGA_SAS.HAM | LSI MegaRAID SAS Adapter
```

8. Continue the installation.
9. When you see the following message, please select **Modify**. Then, move the cursor to **Network boards** and press **Enter**.

The following device drivers were detected for this server. Add, change, or delete device drivers as needed.

```
Device types                Driver names
-----
Network boards:
NetWare Loadable Modules:  (optional)
```

10. Please press **INSERT** key to insert the onboard Intel 82563EB Gigabit Ethernet driver. After the drivers are successfully loaded, please select

Return to driver summary.

11. Then, you would see the following message. Please select **Continue**.

The following device drivers were detected for this server. Add, change, or delete device drivers as needed.

```
Device types                Driver names
-----
Network boards:            E1000E, E1000E
Network Loadable Modules: (optional)
```

12. Please follow the normal procedures to complete the NetWare 6.5 installation.

ACPI PSM Module Update

NOTE. When you install the NW6.5 with the SP6 or later overlay CD, you DO NOT need to update this ACPI PSM Module update. The SP6 or later can install the ACPI driver correctly.

The ACPI PSM Module Update is the same as LSI SAS 1068 IM. Please refer to the NetWare 6.5 SP5 Installation (with LSI SAS 1068 IM) ACPI PSM Module Update section.

SCO OpenServer 5.0.7 Installation (with LSI SAS 1068)

Below information describes how to manually install SCO OpenServer 5.0.7 on Altos G540 with LSI SAS 1068.

Drivers Required

For SCO OpenServer 5.0.7 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
LSI 1068 SAS	1.04.09	The driver can be found on GCSD website
Onboard Intel 5000P Chipset	N/A	OS built-in
Onboard Intel 82563EB Gigabit Ethernet	2.3.10	The driver can be found on GCSD website
Onboard ATI ES1000	N/A	OS built-in
Onboard USB 2.0	N/A	OS built-in

Patch Required

For OpenServer 5.0.7 installation, the following patches are recommended.

Patch	Where to download
-------	-------------------

Installation Tips

1. Please download the LSI SAS 1068 driver form GCSO website and make the driver diskette by using raw write utility like dd.

```
dd if=sco10409 of=a:
```

2. Insert the Installation CD and boot up the system. At the boot prompt type:

```
Boot
```

```
: defbootstr link=lsil Sdsk=lsil(0,0,1,0)
```

In this example, going from the left of (0, 0, 1, 0), the first "0" is the HBA number, the 2nd "0" is the bus number, the "1" is the ID of the Disk (you can check the ID form the SAS information during POST. You would see the information as below during the POST), and the last "0" is the LUN.

```
Acer | LSI Logic Corp. MPT SAS BIOS
MPTBIOS-6.08.05.00 (2006.08.02)
Copyright 2000-2006 LSI Logic Corp.
```

SLOT	ID	LUN	VENDOR	PRODUCT	REVISION	SIZE\NV
0	1	0	MAXTOR	ATLAS10L5_300SAS	BK00	279 GB
0			LSILogic	SAS1068-IR	1.15.02.00	NV 25:02

3. When the screen shows "Please insert the fd(65)lsil volume and press <Return>, or 'q' to quit:", insert the LSI SAS 1068 driver diskette.
4. At **Configuring optional software** screen, do the following selections.

```
Network card:      Deferred
Network address:  No networking card configured
Video and graphics:  ATI RAGE PRO/LT-PRO/XL/Mobility (P/M/M1)
Mouse:           Microsoft Intellimouse, PS/2 (wheel)
Email system:     MMDF
```

5. The first system reboot after the installation, please use following parameter at boot prompt.

```
Boot
```

```
: defbootstr Sdsk=lsil(0,0,1,0)
```

6. When you boot into the OS, please modify two boot files for adding boot string "Sdsk=lsil(0,0,1,0)" (that is what your system needed at boot: prompt in install phase)
7. Modify /stand/etc/default/boot file

```
# cd /
```

```
# btmnt -w
# cd /stand/etc/default
# vi boot
```

8. Add boot string at the end of DEFBOOTSTR line and save it. It looks like below:

```
DEFBOOTSTR=hd(40)unix swap=hd(41) dump=hd(41) root=hd(42)
sdk=lsil(0,0,1,0)
```

9. Modify /etc/default/boot file

```
# cd /etc/default
# vi boot
```

10. Add boot string at the end of DEFBOOTSTR line and save it. It looks like below:

```
DEFBOOTSTR=hd(40)unix swap=hd(41) dump=hd(41) root=hd(42)
sdk=lsil(0,0,1,0)
```

Maintenance Pack 3 Installation

1. Launch the Software Manager.

```
# custom
```

2. Select **Software -> Install New -> From scosysv** (your system name)
3. Insert the **SCO OpenServer Release 5.0.7 Supplement 3** CD into CD-ROM, select **CD-ROM Drive 0** and press **Continue**.
4. Select **SCO OpenServer Release 5.0.7 Maintenance Pack 3 (ver 1.0.0Hc)** to install.
5. When the installation completed, please reboot the system.

```
# shutdown -g0
```

Update Pack 3 Installation

NOTE1. You have to install Maintenance Pack 3 first then install Update pack 3.

NOTE2. You have to add SCO Update Service Enabler license before you apply Update Pack 3.

1. Launch SCOadmin

```
# scoadmin
```

2. Select **License Manager -> License -> Add a Product or Service License** to add the SCO Update Service Enabler license.

3. Launch the Software Manager.

```
# custom
```

-
4. Select **Software** -> **Install New** -> **From scosysv** (your system name)
 5. Insert the **SCO OpenServer Release 5.0.7 Supplement 3** CD into CD-ROM, select **CD-ROM Drive 0** and press **Continue**.
 6. Select **SCO OpenServer Release 5.0.7 Update Pack 3 (ver 1.0.0la)** to install.
 7. After applied the Update Pack 2, please reboot the system.

Symmetrical Multiprocessing Support Installation

Launch the Software Manager.

```
# custom
```

1. Select **Software** -> **Install New** -> **From scosysv** (your system name).
2. Insert the OS installation CD into CD-ROM, select **CD-ROM Drive 0** and press **Continue**.
3. Select **SCO Symmetrical Multiprocessing (ver 1.1.1Hw)** and press **Install**.
4. During the installation, you have to apply the SMP license code.
5. When the installation completed, please reboot the system.

```
# shutdown -g0
```

Intel Gigabit Ethernet Driver Installation

1. You can download the onboard Intel gigabit Ethernet driver from GCSD website. Copy the driver from floppy disk to hard disk and rename it as VOL.000.000

```
# mount -f DOS /dev/fd0 /mnt
```

```
# cp /mnt/* /tmp/.
```

```
# cd /tmp
```

```
# mv <Intel-NIC-driver> VOL.000.000
```

2. Use custom to install the driver

```
# custom
```

3. Select **Software** -> **Install New** -> **From scosysv** (your system name) -> **Media Images** and specify the path to **/tmp**.
4. Use netconfig to configure the network adapter.

```
# netconfig
```

NOTE. A kernel rebuild and reboot is required before the new configuration take effect.

APPENDIX A: ONBOARD SATA RAID CREATION

Configuring Onboard SATA RAID

This section briefly shows how to create RAID1 with onboard SATA RAID function.

Enabling onboard SATA RAID

To configure onboard SATA RAID, you have to enable the onboard SATA RAID in BIOS first.

1. Press **F2** during the POST to enter the BIOS
2. After you entering the BIOS, select **Advanced** -> **I/O Device Configuration**
3. Change the setting of **SATA Controller Mode Option** from **Compatible** to **Enhanced**.
4. Change the setting of **SATA RAID Enable** form **Disable** to **Enabled**.
5. Press **F10** and select **Yes** to save the setting and exit the BIOS.

Entering Onboard SATA RAID Configuration Utility

To enter the onboard SATA RAID configuration utility, press **CTRL-I** when you see **Intel(R) Matrix Storage manager option ROM** during POST.

Note. You have to install more than two SATA HDDs to the onboard SATA controller in the system or you cannot the Intel(R) Matrix Storage manager option ROM.

Creating a RAID1 Volume

1. After you entering the configuration utility, select **1. Create RAID Volume** in the **MAIN MENU** and press **Enter**.
2. Specify the name for the RAID volume and press **Enter**.
3. Use the arrow key **↑ ↓** to select the RAID level as **RAID1(Mirror)** and press **Enter**.
4. If you have more than two HDD installed, you need to select two HDD for the RAID1 volume. If you only have two HDD installed, it will skip the step automatically.
5. Use the **space bar** to select the HDD. After you select the HDD, press **Enter** to next step.
6. Press **Enter** to accept the capacity of the RAID1 volume.
7. Press **Enter** to Create the RAID1 Volume.
8. Press **Y** to confirm to create the RAID volume. You will see the RAID1 volume listed in **DISK/VOLUME INFORMATION**.
9. Now you can select **4. Exit** in the **MAIN MENU** and start to installation OS

APPENDIX B: LSI 1068 SAS IM CREATION

Configuring LSI 1068 SAS

This section briefly shows how to create mirror with LSI 1068 SAS daughter card.

Starting LSI 1068 SAS Configuration Utility

To start LSI Logic Config Utility, press **CTRL-C** when you see the SAS BIOS during POST.

Loading Factory Default Setting

1. In the LSI Logic Config Utility, press **Alt-N** to enter the **Global Properties**.
2. Select **Restore Defaults** and press **Enter**.
3. Press **ESC**, then select **Save changes then exit this menu**.
4. Select **SAS1068** and press **Enter**.
5. Select **Advanced Adapter Properties** and press **Enter**.
6. Select **Restore Defaults** and press **Enter**.
7. Press **ESC** twice then select **Save changes then exit this menu**.

Creating a RAID1 Volume with a Hot Spare Disk

1. In the LSI Logic Config Utility, please select **SAS1068** and press **Enter**.
2. Select **RAID Properties** and press **Enter**.
3. Select **Create IM Volume** and press **Enter**
4. Move the cursor to the **RAID Disk** column.
5. Press **Space bar** and **D** to change the setting from **No** to **Yes**. The **Drive Status** will be marked as **Primary**.
6. Move the cursor to another disk.
7. Press **Space bar** to change the setting from **No** to **Yes**. The **Drive Status** will be marked as **Secondary**.
8. Move the cursor to **Hot Spr** column and select another disk.
9. Press **Spare bar** to change the setting from **No** to **Yes**. The **Drive Status** will be marked as **Hot Spare**.
10. Press **C** and select **Save changes then exit this menu**.

Initialing the RAID Volume

Since we pressed **D** to create a new IM array during creating the RAID1 volume, no synchronization will be performed. You don't need to initial the RAID volume. Now, you can exit the LSI Logic Config utility and start to install Operation System. Press **ESC** twice and select **Exit the Configuration Utility and Reboot**.

APPENDIX C: LSI MEGARAID SAS 8300XLP RAID CREATION

Configuring LSI MegaRAID SAS 8300XLP

This section briefly shows how to create RAID with LSI MegaRAID SAS 8300XLP.

Starting LSI MegaRAID SAS RAID Configuration Utility

To start LSI MegaRAID SAS RAID Configuration Utility, press **CTRL-H** when you see the RAID BIOS during POST. After POST finished, the Adapter Selection page will show on the screen. Please click on **Start** to launch the configuration menu.

Loading Factory Default Setting

1. In the Configuration menu, select **Adapter Properties**. The current adapter settings appear. Please click on **Next** to change the setting.
2. Change the setting of **Set Factory Defaults** from **No** to **Yes** then click on submit.
3. Press **Ctrl+Alt+Del** to reboot the server.

Creating and Initialing a RAID Volume

1. Launch the configuration menu.
2. Select **Configuration Wizard**
3. Select **Add Configuration** (default) and click on **Next**.
4. Select **Custom Configuration** (default) and click on **Next**.
5. Select the drives that you want to add into the array with **Ctrl** key. After you select the drives, click on **Accept DG** then **Next**.
6. Select the **RAID Level** you want to use, create the logical volume by specify the size at **Select Size** and click on **Accept** to create the logical volume.
7. After you create the logical volumes on all of the RAID volume, click on **Accept** and **Yes** to save the configuration.
8. Click on **Yes** to initialize the new logical drives. You will see all the logical drives listed.
9. Click on **Home** to go back to the configuration menu.
10. Now you can reboot the system and install the Operating System. Select **Exit**, click on **Yes** and press **Ctrl+Alt+Del** to reboot the system.

Assigning a Hot Spare Disk

1. Launch the configuration menu.
2. Select a free disk marked as **UNCONF GOOD** and listed under **Physical Drives**.
3. Select **Make Global Dedicated HSP** or **Make Dedicated HSP** and click on

Go.

4. Click on **Home** to go back to the configuration menu. You will see the disk marked as **Hotsapare** in pink and listed under Physical Drives.

APPENDIX D: LSI MEGARAID SAS 8708ELP RAID CREATION

Configuring LSI MegaRAID SAS 8708ELP

This section briefly shows how to create RAID with LSI MegaRAID SAS 8708ELP.

Starting LSI MegaRAID SAS RAID Configuration Utility

To start LSI MegaRAID SAS RAID Configuration Utility for MegaRAID SAS 8708ELP, press **CTRL-H** when you see the RAID BIOS during POST. After POST finished, the Adapter Selection page will show on the screen. Please click on **Start** to launch the configuration menu.

Loading Factory Default Setting

1. In the Configuration menu, select **Adapter Properties**. The current adapter settings appear. Please click on **Next** to change the setting.
2. Change the setting of **Set Factory Defaults** from **No** to **Yes** then click on submit.
3. Press **Ctrl+Alt+Del** to reboot the server.

Creating and Initialing a RAID Volume

1. Launch the configuration menu.
2. Select **Configuration Wizard**
3. Select **Add Configuration** (default) and click on **Next**.
4. Select **Custom Configuration** (default) and click on **Next**.
5. Hold the **Ctrl** key and select the drives that you want to add into the array. After you selecting the drives, click on **AddtoArray**.
6. Click on **Accept DG** then **Next**.
7. Select the array you just created, click on **Add to SPAN** and **Next**.
8. Select the **RAID Level** you want to use, create the logical volume by specify the size at **Select Size** and click on **Accept** to create the logical volume.
9. Click on **Next** after you creating the logical volume.
10. Click on **Accept** and **Yes** to save the configuration.
11. Click on **Yes** to initialize the new logical drives. You will see all the logical drives listed.
12. Click on **Home** to go back to the configuration menu.
13. Now you can reboot the system and install the Operating System. Select **Exit**, click on **Yes** and press **Ctrl+Alt+Del** to reboot the system.

Assigning a Hot Spare Disk

1. Launch the configuration menu.
2. Select a free disk marked as **UNCONF GOOD** and listed under **Physical**

Drives.

3. Select **Make Global Dedicated HSP** or **Make Dedicated HSP** and click on **Go**.
4. Click on **Home** to go back to the configuration menu. You will see the disk marked as **Hotsapare** in pink and listed under Physical Drives.