



# Altos G330 Installation Configuration Guide

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## Abstract

This document provides you a quick OS installation guide on Altos G330, including 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 G330 Installation Configuration guide:

- Hardware parts give you a briefly and quick hardware information about Altos G330
- The operating system installation tips.

### **Where Can I Download the Latest Altos G330 Installation Configuration Guide**

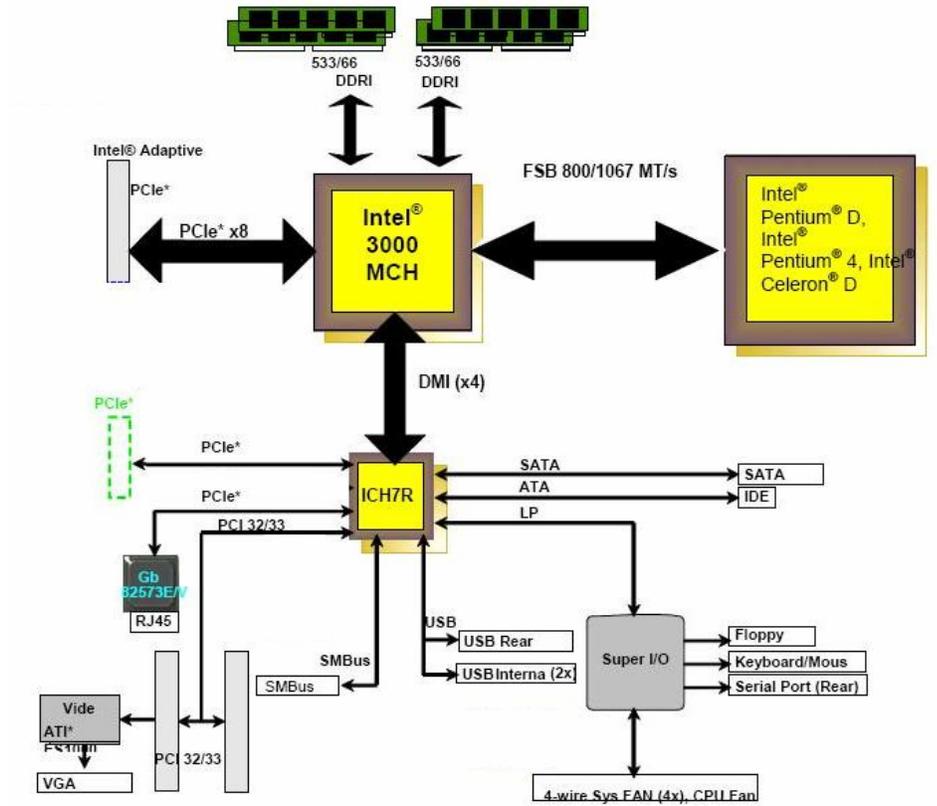
The Altos G330 Installation Configuration Guide would be updated on a monthly basis. Please download the latest release from Acer Support Website. (<http://support.acer-euro.com>)

## HARDWARE SPECIFICATION

<b>Model</b>	Altos G330
<b>Processor</b>	Single Intel Xeon 3000 sequence, Pentium 4, Pentium D and Celeron D processors at 1.86GHz or above Frequency
<b>Front Side Bus</b>	1066/800/533 MHz
<b>Cache</b>	256KB, 1MB, 2 MB, 4 MB, 2 x 2MB or 2 x 4 MB L2 cache
<b>Chipset</b>	Intel chipset <ul style="list-style-type: none"> <li>• North Bridge: Intel 3000 MCH</li> <li>• South Bridge: Intel ICH7R I/O Controller</li> </ul>
<b>Memory</b>	<ul style="list-style-type: none"> <li>• Four DIMM sockets support 512MB/1GB/2GB DDR2-667 unbuffered with ECC</li> <li>• Maximum memory of 8GB</li> <li>• Dual channel memory bus</li> <li>• Up to 8.4 GB/s maximum b/w for DDR2-667</li> </ul>
<b>Storage Interface</b>	<ul style="list-style-type: none"> <li>• Four SATA ports</li> <li>• One ATA-100 port</li> </ul>
<b>Expansion Slots</b>	<ul style="list-style-type: none"> <li>• Two 32bit/33MHz/3.3V PCI slots</li> <li>• One x8 PCI-Express slot</li> <li>• One x8 PCI-Express slot (w/ x4 throughput)</li> </ul>
<b>VGA</b>	<ul style="list-style-type: none"> <li>• Onboard ATI ES1000 video controller w/ 16MB SDRAM</li> </ul>
<b>SATA Controller</b>	<ul style="list-style-type: none"> <li>• Four SATA ports</li> <li>• Software RAID support <ul style="list-style-type: none"> <li>• Intel SATA RAID supports RAID 0, 1, 10 and 5. (Windows only)</li> <li>• LSI SATA RAID supports RAID 0, 1 and 10. (Multi-OS support)</li> </ul> </li> </ul>
<b>LAN Controller</b>	<ul style="list-style-type: none"> <li>• One onboard Intel 82573E Gigabit Ethernet Controller</li> <li>• Supports Intel Active Management Technology (iAMT)</li> </ul>
<b>BMC</b>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>
<b>Availability sub-system</b>	
<b>System Power Supply</b>	<ul style="list-style-type: none"> <li>• Single 350W power supply</li> </ul>
<b>Storage Subsystem</b>	
<b>Drive Bays</b>	<ul style="list-style-type: none"> <li>• Three 5.25" front accessible drive bays for optical device and TBU</li> </ul>
<b>Hard Disks</b>	<ul style="list-style-type: none"> <li>• Up to 4 HDDs by one 4 HDD hot-plug/easy-swap cage</li> </ul>

# BOARD LAYOUT

# System Block Diagram



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**DIMM POPULATION  
GUIDELINE**

**Memory population**

Channel A		Channel B		Memory Interleave
DIMM 1A	DIMM 2A	DIMM 1B	DIMM 2B	
512 MB				1-way
1GB				1-way
2GB				1-way
512 MB		512 MB		2-way
1 GB		1 GB		2-way
2 GB		2 GB		2-way
512 MB	512 MB	512 MB	512 MB	2-way
1 GB	1 GB	1 GB	1 GB	2-way
2 GB	2 GB	2 GB	2 GB	2-way

## OS INSTALLATION TIPS

Below is Altos G330 OS certification matrix:

Operating System	Status	Note
Windows 2000 Advanced Server SP4	Tested	
Windows Server 2003 Enterprise Edition SP1	Certified	
Windows Server 2003 Enterprise x64 Edition SP1	Certified	
Red Hat Enterprise Linux 4.0 Update 3	Certified	
Red Hat Enterprise Linux 4.0 EM64T Update 3	Certified	
SuSE Linux Enterprise Server 10	Certified	
SuSE Linux Enterprise Server 10 EM64T SP3	Certified	
SuSE Linux Enterprise Server 9 SP3	Certified	
SuSE Linux Enterprise Server 9 EM64T SP3	Certified	
NetWare 6.5 SP5	Certified	

The drivers required for the OS installation can be found on the Altos G330 Resource CD build 100. We suggest that you use the drivers contained in the Resource CD, as these drivers are tested and qualified by Acer.

There are two ways you can get the drivers. You can either make diskettes from Resource CD, or put the Resource CD in the optical drive and search the driver directly from the Resource CD.

NOTE. In this section, we assume the OS is installed on the HDD connected to the onboard SATA RAID (Intel and LSI) and add-on Adaptec 44300 SAS HBA.

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

Below information describes how to manually install Windows Server 2003 x64 Edition on Altos G330 with onboard Intel SATA RAID.

#### Drivers Required

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

Device	Version	Directory on Resource CD
Onboard ATI ES1000	8.24.3.0	\\Disk\G330\onboard\VGA\WS03x64\Setup.exe
Onboard Intel 3000 Chipset	8.1.0.1002	\\Disk\G330\onboard\chipset\Setup.exe
Onboard Intel SATA RAID	6.1.0.1002	\\Disk\G330\RAID\INTEL\ws03x64

Onboard Intel 82573E Gigabit Ethernet	9.5.12.0	\\Disk\G330\NIC\Intel\x64\pro1000.net
Onboard iAMT	5.1.2600.2180	\\Disk\G330\onboard\iAMT\ws03x64
Onboard USB 2.0	7.2.2.1007	Included in Intel 3000 Chipset driver

### Software Required

The management utility of onboard Intel SATA RAID can be found in the G330 Resource CD build 100.

Software	Version	Directory on Resource CD
Matrix Storage Manager	6.1.0.1002	\\APP\G330\SATARAID\Matrix\ws03x64\iata61_cd.exe
PROSet Utility	11.1.0.19	\\APP\G330\NIC\prosetdx\ws03x64\DxSetup.EXE

### Configuring Onboard Intel SATA RAID

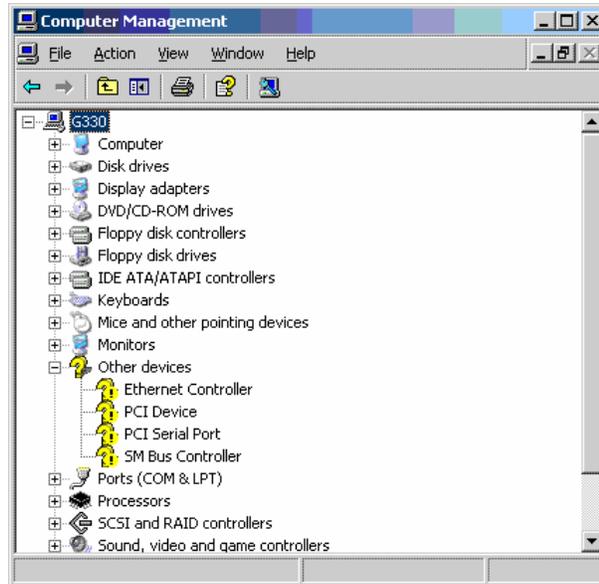
Please refer to the Appendix A. for the onboard Intel SATA RAID configuration.

### Installation Tips

1. As Windows Server 2003 x64 can't recognize the onboard Intel SATA RAID, you need to make a driver diskette from the resource CD first before the installation.
2. Press F6 at the start of installation to provide the driver diskette.
3. Select "Intel (R) 82801GR/GH SATA RAID Controller (Desktop ICH7R/DH)" 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 is completed, you would see the following other devices listed in Device Manager.



2. Please insert the G330 Resource CD into optical drive.
3. Select **Driver**, expand **Drivers** -> **Altos G330** -> **Onboard Device** -> **Chipset**, select **Windows Server 2003 x64** and run **Setup**.
4. Follow the instruction to install the chipset driver and reboot the server after the driver is installed.

#### **VGA Driver Installation**

1. Windows will treat onboard VGA as Standard VGA device. You can find the ATI ES1000 driver in G330 Resource CD. Please insert the G330 Resource CD into the optical drive.
2. Select **Driver**, Expand **Drivers** -> **Altos G330** -> **Graphics adapters** -> **ATI ES1000**, select **Windows Server 2003 x64** and click on **Setup**.
3. Follow the instruction to install the chipset driver and reboot the server after the driver is installed.
4. After installing the driver, you would see **ATI ES1000** listed in Display adapters.

#### **Gigabit Ethernet Driver Installation**

1. The **Ethernet Controller** listed under **Other devices** is onboard Intel 82573E Gigabit Ethernet Controller.
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**

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#### location in the search.

6. Click on **Browse** and specify the path for the driver. Please refer to the Directory on Resource CD 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 PM Network Connection with I/O Acceleration** listed in Network adapters.

#### iAMT Driver Installation

1. After you installing all the drivers, there are still two devices name **PCI Device** and **PCI Serial Port** listed in **Other devices** in Windows Device Manager. They are the onboard iAMT device. You can find the driver in G330 Resource CD. Please do the same on both of the devices.
2. Right-click on the **PCI Device/PCI Serial Port** 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 G330 Resource CD in Driver required section for the path for the onboard iAMT.
7. Click on **Next** and follow the instruction to finish the driver update.
8. After you installing the driver for both of **PCI Device** and **PCI Serial Prot**, you would see only one **Intel(R) Active Management Technology – SOL (COM3)** listed in Ports (COM & LPT) in Windows Device Manager.

#### Matrix Storage Manager Utility Installation

1. Please insert the G330 Resource CD into the optical drive.
2. Select **Utilities**, expand **Utilities -> Altos G330 -> Onboard Intel SATA RAID**, select **Matrix Storage Manager (Windows Server 2003 x64)** and click on **Setup**.
3. Follow the instruction to install the RAID utility installation and reboot the server after the utility is installed.

#### Intel PROSet Utility Installation

1. Please insert the G330 Resource CD into the optical drive.
2. Select **Utilities**, expand **Utilities -> Altos G330 -> Intel Gigabit Ethernet Controller**, select **PROSet Utility (Windows Server 2003 x64)** and click on **Setup**.

- Follow the instruction, accept the license agreement and use the default setting to complete the Intel PROSet utility installation.

### **Windows Server 2003 Enterprise x64 Edition (with onboard LSI SATA RAID)**

Below information describes how to manually install Windows Server 2003 Enterprise x64 Edition on Altos G330 with onboard LSI SATA RAID.

#### **Drivers Required**

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

Device	Version	Directory on Resource CD
Onboard ATI ES1000	8.24.3.0	\Disk\G330\onboard\VGA\WS03x64\Setup.exe
Onboard Intel 3000 Chipset	8.1.0.1002	\Disk\G330\onboard\chipset\Setup.exe
Onboard LSI SATA RAID	4.4.630.2006	\Disk\G330\RAID\LSI\ws03x64
Onboard Intel 82573E Gigabit Ethernet	9.5.12.0	\Disk\G330\NIC\Intel\x64\pro1000.net
Onboard iAMT	5.1.2600.2180	\Disk\G330\onboard\iAMT\ws03x64
Onboard USB 2.0	7.2.2.1007	Included in Intel 3000 Chipset driver

#### **Software Required**

The management utility for onboard LSI SATA RAID can be found in the G330 Resource CD build100 (or later).

Software	Version	Directory on Resource CD
Onboard SATA RAID Monitor Utility	1.25.11.18	\APP\G330\SATARAID\Monitor\ws03x64\MegalDESpy.exe
Intel PROSet Utility	11.1.0.19	\APP\G330\NIC\prosetdx\ws03x64\DxSetup.EXE

#### **Configuring onboard LSI SATA RAID**

Please refer to the Appendix B. for the onboard LSI SATA RAID configuration.

#### **Installation Tips**

- As Windows Server 2003 x64 can't recognize the onboard LSI SATA RAID, you need to make a driver diskette from the resource CD first before the installation.
- Press F6 at the start of installation to provide the driver diskette.
- Select "Intel (R) Embedded Server RAID Technology (Intel IA32E)" 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 onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise x64 Edition (with onboard Intel SATA RAID) Chipset Driver Installation section.

#### **VGA Driver Installation**

The VGA driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise x64 Edition (with onboard Intel SATA RAID) VGA Driver Installation section.

#### **Gigabit Ethernet Driver Installation**

The Gigabit Ethernet driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise x64 Edition (with onboard Intel SATA RAID) Gigabit Ethernet Driver Installation section.

#### **iAMT Driver Installation**

The iAMT driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise x64 Edition (with onboard Intel SATA RAID) iAMT Driver Installation section.

#### **SATA RAID Monitor Utility Installation**

1. Please insert the G330 Resource CD into the optical drive.
2. Select **Utilities**, expand **Utilities -> Altos G330 -> Onboard LSI SATA RAID**, select **Onboard SATA RAID Monitor Utility (Windows Server 2003 x64)** and click on **Setup**.
3. Follow the instructions to finish the onboard SATA RAID monitor utility installation.

#### **Intel PROSet Utility Installation**

The PROSet Utility installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise x64 Edition (with onboard Intel SATA RAID) Intel PROSet Utility Installation section.

### **Windows Server 2003 Enterprise x64 Edition (with Adaptec SAS 44300 HostRAID)**

Below information describes how to manually install Windows Server 2003 Enterprise x64 Edition on Altos G330 with Adaptec 44300 HostRAID.

#### **Drivers Required**

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

Device	Version	Directory on Resource CD
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Onboard ATI ES1000	8.24.3.0	\\Disk\G330\onboard\VGA\WS03x64\Setup.exe
Onboard Intel 3000 Chipset	8.1.0.1002	\\Disk\G330\onboard\chipset\Setup.exe
Adaptec SAS 44300	1.2.5902.0	\\Disk\G330\SAS\Adaptec\x64\44330.net
Onboard Intel 82573E Gigabit Ethernet	9.5.12.0	\\Disk\G330\nic\Intel\x64\pro1000.net
Onboard iAMT	5.1.2600.2180	\\Disk\G330\onboard\iAMT\ws03x64
Onboard USB 2.0	7.2.2.1007	Included in Intel 3000 Chipset driver

### Software Required

The management utility of add-on Adaptec 44300 SAS card can be found in the G330 Resource CD build 100(or later).

Software	Version	Directory on Utility and Manual CD
Adaptec Storage Manager	4.30.01(16042)	\\APP\G330\SAS\Adaptec\x64\windows\setup.exe
Intel PROSet Utility	11.1.0.19	\\APP\G330\nic\prosetdx\ws03x64\DxSetup.EXE

### Configuring Adaptec SAS 44300 HostRAID

Please refer to the Appendix C. for the Adaptec SAS 44300 HostRAID configuration.

### Installation Tips

1. As Windows Server 2003 x64 can't recognize the Adaptec 44300 SAS card, you need to make a driver diskette from the resource CD first before the installation.
2. Press F6 at the start of installation to provide the driver diskette.
3. Select "Adaptec SAS/SATA 64-bit driver for Windows x64 Edition" 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 onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise x64 Edition (with onboard Intel SATA RAID) Chipset Driver Installation section.

### VGA Driver Installation

The VGA driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise x64 Edition (with onboard Intel SATA RAID) VGA Driver Installation section.

### **Gigabit Ethernet Driver Installation**

The Gigabit Ethernet driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise x64 Edition (with onboard Intel SATA RAID) Gigabit Ethernet Driver Installation section.

### **iAMT Driver Installation**

The iAMT driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise x64 Edition (with onboard Intel SATA RAID) iAMT Driver Installation section.

### **Adaptec Storage Manager Installation**

1. Please insert G330 Resource CD into the optical drive.
2. Select **Utilities**, expand **Utilities -> Altos G330 -> Adaptec SAS 44300**, select **Adaptec Storage Manager (Windows Server 2003 x64)** and click on **Setup**.
3. Follow the instructions, accept the License Agreement and use the default setting to finish the Adaptec Storage Manager installation.

### **Intel PROSet Utility Installation**

The PROSet Utility installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise x64 Edition (with onboard Intel SATA RAID) Intel PROSet Utility Installation section.

### **Windows Server 2003 Enterprise x64 Edition (with LSI MegaRAID SAS 8204ELP)**

Below information describes how to manually install Windows Server 2003 Enterprise x64 Edition on Altos G330 with LSI MegaRAID SAS 82094ELP.

#### **Drivers Required**

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

<b>Device</b>	<b>Version</b>	<b>Directory on Resource CD</b>
Onboard ATI ES1000	8.24.3.0	\\Disk\G330\onboard\VGA\WS03x64\Setup.exe
Onboard Intel 3000 Chipset	8.1.0.1002	\\Disk\G330\onboard\chipset\Setup.exe
LSI MegaRAID SAS 8204ELP	07.15.0209.2007	\\Disk\g330\sas\8204ELP\x64\w2k3\
Onboard Intel 82573E Gigabit Ethernet	9.6.31.0	\\Disk\G330\NIC\Intel\x64\pro1000.net
Onboard iAMT	5.1.2600.2180	\\Disk\G330\onboard\iAMT\ws03x64
Onboard USB 2.0	7.2.2.1007	Included in Intel 3000 Chipset driver

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## Software Required

The management utility of LSI MegaRAID SAS 8204ELP can be found in the G330 Resource CD build 300(or later).

Software	Version	Directory on Utility and Manual CD
MegaRAID Storage Manager	2.07-00	\app\g330\sas\8204ELP\Windows\setup.exe
Intel PROSet Utility	11.2.0.69	\APP\G330\NIC\prosetdx\ws03x64\DxSetup.EXE

## Configuring LSI MegaRAID SAS 8204ELP

Please refer to the Appendix D. for the LSI MegaRAID SAS 8204ELP configuration.

### Installation Tips

1. As Windows Server 2003 x64 can't recognize the LSI MegaRAID SAS 8204ELP, you need to make a driver diskette from the resource CD first before the installation.
2. Press F6 at the start of installation to provide the driver diskette.
3. Select "LSI Logic Embedded MegaRAID (Windows XP/2003 64-bit)" 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 onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise x64 Edition (with onboard Intel SATA RAID) Chipset Driver Installation section.

### VGA Driver Installation

The VGA driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise x64 Edition (with onboard Intel SATA RAID) VGA Driver Installation section.

### Gigabit Ethernet Driver Installation

The Gigabit Ethernet driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise x64 Edition (with onboard Intel SATA RAID) Gigabit Ethernet Driver Installation section.

### iAMT Driver Installation

The iAMT driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise x64 Edition (with onboard Intel SATA RAID) iAMT Driver Installation section.

## MegaRAID Storage Manager Installation

1. Please insert G330 Resource CD into the optical drive.
2. Select **Utilities**, expand **Utilities** -> **Altos G330** -> **LSI Logic MegaRAID SAS 8204ELP**, 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 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 onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise x64 Edition (with onboard Intel SATA RAID) Intel PROSet Utility Installation section.

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

Below information describes how to manually install Windows Server 2003 Edition on Altos G330 with onboard Intel SATA RAID.

### Drivers Required

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

Device	Version	Directory on Resource CD
Onboard ATI ES1000	8.24.3.0	\\Disk\G330\onboard\VGA\WS03\Setup.exe
Onboard Intel 3000 Chipset	8.1.0.1002	\\Disk\G330\onboard\chipset\Setup.exe
Onboard Intel SATA RAID	6.1.0.1002	\\Disk\G330\RAID\INTEL\ws03
Onboard Intel 82573E Gigabit Ethernet	9.5.12.0	\\Disk\G330\NIC\Intel\pro1000.net
Onboard iAMT	5.1.2600.2180	\\Disk\G330\onboard\iAMT\ws03
Onboard USB 2.0	7.2.2.1007	Included in Intel 3000 Chipset driver

### Software Required

The management utility of onboard Intel SATA RAID can be found in the G330 Resource CD build 100.

Software	Version	Directory on Resource CD
Matrix Storage Manager	6.1.0.1002	\\APP\G330\SATARAID\Matrix\ws03\iat a61_cd.exe
PROSet Utility	11.1.0.19	\\APP\G330\NIC\prosetdx\ws03\DxSetu

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### Configuring Onboard Intel SATA RAID

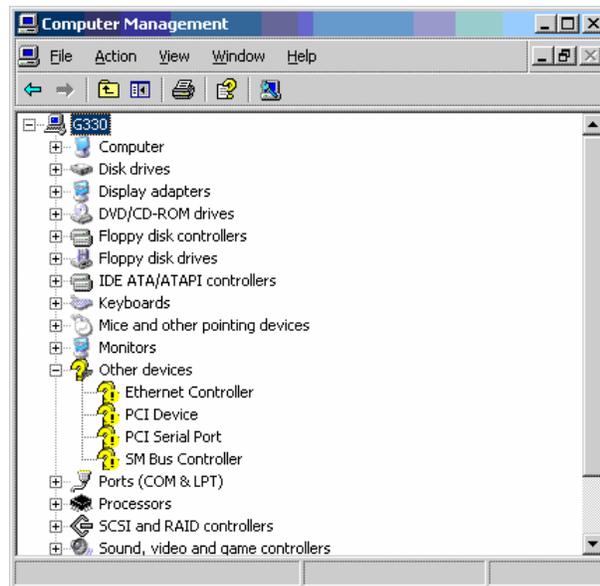
Please refer to the Appendix A. for the onboard Intel SATA RAID configuration.

#### Installation Tips

1. As Windows Server 2003 can't recognize the onboard Intel SATA RAID, you need to make a driver diskette from the resource CD first before the installation.
2. Press F6 at the start of installation to provide the driver diskette.
3. Select "Intel (R) 82801GR/GH SATA RAID Controller (Desktop ICH7R/DH)" 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 is completed, you would see the following other devices listed in Device Manager.



2. Please insert the G330 Resource CD into optical drive.
3. Select **Drivers**, expand **Drivers** -> **Altos G330** -> **Onboard Device** -> **Chipset**, select **Windows Server 2003** and run **Setup**.
4. Follow the instruction to install the chipset driver and reboot the server after the driver is installed.

#### VGA Driver Installation

1. Windows will treat onboard VGA as Standard VGA device. You can find

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the ATI ES1000 driver in G330 Resource CD. Please insert the G330 Resource CD into the optical drive.

2. Select **Drivers**, expand **Drivers -> Altos G330-> Graphics adapters -> ATI ES1000**, select **Windows Server 2003** and click on **Setup**.
3. Follow the instruction to install the chipset driver and reboot the server after the driver is installed.
4. After installing the driver, you would see **ATI ES1000** listed in Display adapters.

#### **Gigabit Ethernet Driver Installation**

1. The **Ethernet Controller** listed under **Other devices** is onboard Intel 82573E Gigabit Ethernet Controller.
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 Resource CD 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 PM Network Connection with I/O Acceleration** listed in Network adapters.

#### **iAMT Driver Installation**

1. After you installing all the drivers, there are still two devices name **PCI Device** and **PCI Serial Port** listed in **Other devices** in Windows Device Manager. They are the onboard iAMT device. You can find the driver in G330 Resource CD. Please do the same on both of the devices.
2. Right-click on the **PCI Device/PCI Serial Port** 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 G330 Resource CD in Driver required section for the path for the onboard iAMT.

7. Click on **Next** and follow the instruction to finish the driver update.
8. After you installing the driver for both of **PCI Device** and **PCI Serial Prot**, you would see only one **Intel(R) Active Management Technology – SOL (COM3)** listed in Ports (COM & LPT) in Windows Device Manager.

### **Matrix Storage Manager Utility Installation**

1. Please insert the G330 Resource CD into the optical drive.
2. Select **Utilities**, expand **Utilities -> Altos G330 -> Onboard Intel SATA RAID**, select **Matrix Storage Manager (Windows Server 2003)** and click on **Setup**.
3. Follow the instruction to install the RAID utility installation and reboot the server after the utility is installed.

### **Intel PROSet Utility Installation**

1. Please insert the G330 Resource CD into the optical drive.
2. Select **Utilities**, expand **Utilities -> Altos G330 -> Intel Gigabit Ethernet Controller**, select **PROSet Utility (Windows Server 2003)** 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 Enterprise Edition SP1 (with onboard LSI SATA RAID)**

Below information describes how to manually install Windows Server 2003 Enterprise Edition on Altos G330 with onboard LSI SATA RAID enabled.

#### **Drivers Required**

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

<b>Device</b>	<b>Version</b>	<b>Directory on Resource CD</b>
Onboard ATI ES1000	8.24.3.0	\\Disk\\G330\\onboard\\VGA\\WS03\\Setup.exe
Onboard Intel 3000 Chipset	8.1.0.1002	\\Disk\\G330\\onboard\\chipset\\Setup.exe
Onboard LSI SATA RAID	4.4.630.2006	\\Disk\\G330\\RAID\\LSI\\ws03
Onboard Intel 82573E Gigabit Ethernet	9.5.12.0	\\Disk\\G330\\NIC\\Intel\\pro1000.net
Onboard iAMT	5.1.2600.2180	\\Disk\\G330\\onboard\\iAMT\\ws03
Onboard USB 2.0	7.2.2.1007	Included in Intel 3000 Chipset driver

#### **Software Required**

The management utility of onboard LSI SATA RAID can be found in the G330 Resource CD build 100 (or later).

Software	Version	Directory on Resource CD
Onboard SATA RAID Monitor Utility	1.25.11.18	\\APP\G330\SATARAID\Monitor\ws03\Me galDESpy.exe
Intel PROSet Utility	11.1.0.19	\\APP\G330\NIC\prosetdx\ws03\DxSetup.EXE

### Configuring onboard LSI SATA RAID

Please refer to the Appendix B. for the onboard LSI SATA RAID configuration.

#### Installation Tips

1. As Windows Server 2003 can't recognize the onboard LSI SATA RAID, you need to make a driver diskette from the resource CD first before the installation.
2. Press F6 at the start of installation to provide the driver diskette.
3. Select "**Intel (R) Embedded Server RAID Technology**" 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 onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise Edition (with onboard Intel SATA RAID) Chipset Driver Installation section.

#### VGA Driver Installation

The VGA driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise Edition (with onboard Intel SATA RAID) VGA Driver Installation section.

#### Gigabit Ethernet Driver Installation

The Gigabit Ethernet driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise Edition (with onboard Intel SATA RAID) Gigabit Ethernet Driver Installation section.

#### iAMT Driver Installation

The iAMT driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise Edition (with onboard Intel SATA RAID) iAMT Driver Installation section.

#### SATA RAID Monitor Utility Installation

1. Please insert the G330 Resource CD into the optical drive.
2. Select **Utilities**, expand **Utilities -> Altos G330 -> Onboard LSI SATA RAID**, select **Onboard SATA RAID Monitor Utility (Windows Server 2003)** and click on **Setup**.

- Follow the instructions to finish the onboard SATA RAID monitor utility installation.

### Intel PROSet Utility Installation

The PROSet Utility installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise Edition (with onboard Intel SATA RAID) Intel PROSet Utility Installation section.

### Windows Server 2003 Enterprise Edition SP1 (with Adaptec SAS 44300 HostRAID)

Below information describes how to manually install Windows Server 2003 Enterprise Edition on Altos G330 with Adaptec SAS 44300 HostRAID.

#### Drivers Required

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

Device	Version	Directory on Resource CD
Onboard ATI ES1000	8.24.3.0	\Disk\G330\onboard\VGA\WS03\Setup.exe
Onboard Intel 3000 Chipset	8.1.0.1002	\Disk\G330\onboard\chipset\Setup.exe
Adaptec SAS 44300	1.2.5902.0	\Disk\G330\SAS\Adaptec\44300.net
Onboard Intel 82573E Gigabit Ethernet	9.5.12.0	\Disk\G330\nic\Intel\pro1000.net
Onboard iAMT	5.1.2600.2180	\Disk\G330\onboard\iAMT\ws03
Onboard USB 2.0	7.2.2.1007	Included in Intel 3000 Chipset driver

#### Software Required

The management utility of add-on Adaptec 44300 SAS card can be found in the G330 Resource CD build 100(or later).

Software	Version	Directory on Utility and Manual CD
Adaptec Storage Manager	4.30.01(16042)	\APP\G330\SAS\Adaptec\Windows\ws03\setup.exe
Intel PROSet Utility	11.1.0.19	\APP\G330\nic\prosetdx\ws03\DxSetup.EXE

#### Configuring Adaptec SAS 44300 HostRAID

Please refer to the Appendix C. for the Adaptec SAS 44300 HostRAID configuration.

#### Installation Tips

- As Windows Server 2003 can't recognize the Adaptec 44300 SAS card, you need to make a driver diskette from the resource CD first before the installation.

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2. Press F6 at the start of installation to provide the driver diskette.
  3. Select "**Adaptec SAS/SATA 32bit driver for Windows 2000/XP/2003**" 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 onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise Edition (with onboard Intel SATA RAID) Chipset Driver Installation section.

#### **VGA Driver Installation**

The VGA driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise Edition (with onboard Intel SATA RAID) VGA Driver Installation section.

#### **Gigabit Ethernet Driver Installation**

The Gigabit Ethernet driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise Edition (with onboard Intel SATA RAID) Gigabit Ethernet Driver Installation section.

#### **iAMT Driver Installation**

The iAMT driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise Edition (with onboard Intel SATA RAID) iAMT Driver Installation section.

#### **Adaptec Storage Manager Installation**

1. Please insert G330 Resource CD into the optical drive.
2. Select **Utilities**, expand **Utilities** -> **Altos G330** -> **Adaptec SAS 44300**, select **Adaptec Storage Manager (Windows Server 2003)** and click on **Setup**.
3. Follow the instructions, accept the License Agreement and use the default setting to finish the Adaptec Storage Manager installation.

#### **Intel PROSet Utility Installation**

The PROSet Utility installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise Edition (with onboard Intel SATA RAID) Intel PROSet Utility Installation section.

#### **Windows Server 2003 Enterprise Edition SP1 (with LSI MegaRAID SAS 8204ELP)**

Below information describes how to manually install Windows Server 2003 Enterprise Edition on Altos G330 with LSI MegaRAID SAS 8204ELP.

## Drivers Required

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

Device	Version	Directory on Resource CD
Onboard ATI ES1000	8.24.3.0	\\Disk\G330\onboard\VGA\WS03\Setup.exe
Onboard Intel 3000 Chipset	8.1.0.1002	\\Disk\G330\onboard\chipset\Setup.exe
LSI MegaRAID SAS 8204ELP	07.15.0209.2007	\\Disk\g330\sas\8204ELP\w2k3\
Onboard Intel 82573E Gigabit Ethernet	9.6.31.0	\\Disk\G330\NIC\Intel\pro1000.net
Onboard iAMT	5.1.2600.2180	\\Disk\G330\onboard\iAMT\ws03
Onboard USB 2.0	7.2.2.1007	Included in Intel 3000 Chipset driver

## Software Required

The management utility of add-on LSI MegaRAID SAS 8204ELP can be found in the G330 Resource CD build 300(or later).

Software	Version	Directory on Utility and Manual CD
MegaRAID Storage Manager	2.07-00	\\app\g330\sas\8204ELP\Windows\setup.exe
Intel PROSet Utility	11.2.0.69	\\APP\G330\NIC\prosetdx\ws03\DxSetup.EXE

## Configuring LSI MegaRAID SAS 8204ELP

Please refer to the Appendix D. for the LSI MegaRAID SAS 8204ELP configuration.

## Installation Tips

1. As Windows Server 2003 can't recognize the LSI MegaRAID SAS 8204ELP, you need to make a driver diskette from the resource CD first before the installation.
2. Press F6 at the start of installation to provide the driver diskette.
3. Select "LSI Logic Embedded MegaRAID (Windows XP/2003)" 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 onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise Edition (with onboard Intel SATA RAID) Chipset Driver Installation section.

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### **VGA Driver Installation**

The VGA driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise Edition (with onboard Intel SATA RAID) VGA Driver Installation section.

### **Gigabit Ethernet Driver Installation**

The Gigabit Ethernet driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise Edition (with onboard Intel SATA RAID) Gigabit Ethernet Driver Installation section.

### **iAMT Driver Installation**

The iAMT driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise Edition (with onboard Intel SATA RAID) iAMT Driver Installation section.

### **MegaRAID Storage Manager Installation**

1. Please insert G330 Resource CD into the optical drive.
2. Select **Utilities**, expand **Utilities -> Altos G330 -> LSI Logic MegaRAID SAS 8204ELP**, 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 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 onboard Intel SATA RAID enabled. Please refer to the Windows Server 2003 Enterprise Edition (with onboard Intel SATA RAID) Intel PROSet Utility Installation section.

### **Windows 2000 Advanced Server SP4 (with onboard Intel SATA RAID)**

Below information describes how to manually install Windows 2000 on Altos G330 with onboard Intel SATA RAID.

#### **Drivers Required**

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

<b>Device</b>	<b>Version</b>	<b>Directory on Resource CD</b>
Onboard ATI ES1000	8.24.3.0	\\Disk\\G330\\onboard\\VGA\\WS2K\\Setup.exe
Onboard Intel 3000 Chipset	8.1.0.1002	\\Disk\\G330\\onboard\\chipset\\Setup.exe

Onboard Intel SATA RAID	6.1.0.1002	\\Disk\G330\RAID\INTEL\ws2k
Onboard Intel 82573E Gigabit Ethernet	9.5.12.0	\\Disk\G330\NIC\Intel\pro1000.w2k
Onboard iAMT	1.1.25.0/5.1.2600.2180	\\Disk\G330\onboard\iAMT\ws2k
Onboard USB 2.0	7.2.2.1007	Included in Intel 3000 Chipset driver

### Software Required

The management utility of onboard Intel SATA RAID can be found in the G330 Resource CD build 100.

Software	Version	Directory on Resource CD
Matrix Storage Manager	6.1.0.1002	\\APP\G330\SATARAID\Matrix\ws2k\iat a61_cd.exe
PROSet Utility	11.1.0.19	\\APP\G330\NIC\prosetdx\ws2k\DxSetup.EXE

### Configuring Onboard Intel SATA RAID

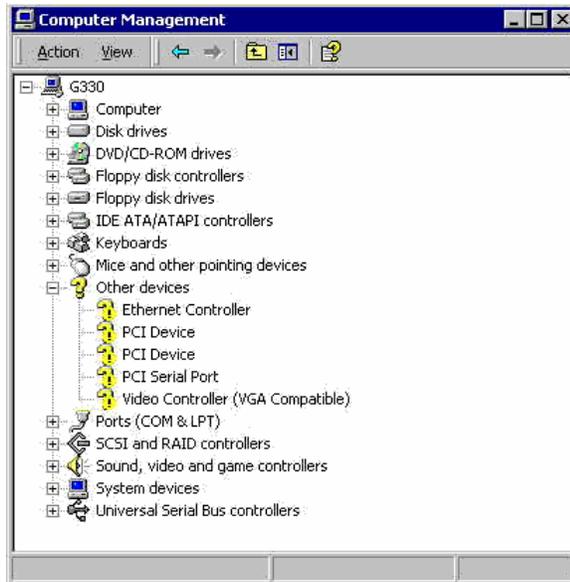
Please refer to the Appendix A. for the onboard Intel SATA RAID configuration.

#### Installation Tips

1. As Windows 2000 can't recognize the onboard Intel SATA RAID, you need to make a driver diskette from the resource CD first before the installation.
2. Press F6 at the start of installation to provide the driver diskette.
3. Select "Intel (R) 82801GR/GH SATA RAID Controller (Desktop ICH7R/DH)" 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 is completed, you would see the following other devices listed in Device Manager.



2. Please insert the G330 Resource CD into optical drive.
3. Select **Drivers**, expand **Drivers -> Altos G330 -> Onboard Device -> Chipset**, select **Windows 2000** and run **Setup**.
4. Follow the instruction to install the chipset driver and reboot the server after the driver is installed.

#### **VGA Driver Installation**

1. There is a **VGA controller (VGA Compatible)** listed under **Other devices** in Windows Device Manager. It is the ATI ES1000 for G330.
2. Insert the G330 Resource CD build 100 (or later) into the optical drive.
3. Select **Drivers**, expand **Drivers -> Altos G330 -> 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.

#### **Gigabit Ethernet Driver Installation**

1. There is one **Ethernet Controller** listed under **Other device** in Windows Device Manager. It should be the onboard Intel 82573E Gigabit Ethernet controller. You could find the driver in G330 Resource CD build 100 (or later).
2. Right-click on the **Ethernet Controller** 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**

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**(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 Resource CD in Driver required section for NIC driver.
6. Follow the instructions to finish the installation.
7. After installing the driver, you would see **Intel(R) PRO/1000 PM Network Connection** listed in Network adapters.

#### **iAMT Driver Installation**

1. After you installing all the drivers, there are still two devices name **PCI Device** and **PCI Serial Port** listed in **Other devices** in Windows Device Manager. They are the onboard iAMT device. You can find the driver in G330 Resource CD. Please do the same on both of the devices.
2. Right-click on the **PCI Device/PCI Serial Port** 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 Resource CD in Driver required section for IOAT driver.
6. Follow the instruction to finish the driver update.
7. After you installing the driver for both of **PCI Device** and **PCI Serial Prot**, you would see **Intel(R) Active Management Technology – KCS** listed in System devices and **Intel(R) Active Management Technology – SOL (COM3)** listed in Ports (COM & LPT) in Windows Device Manager.

#### **Matrix Storage Manager Utility Installation**

1. Please insert the G330 Resource CD into the optical drive.
2. Select **Utilities**, expand **Utilities -> Altos G330 -> Onboard Intel SATA RAID**, select **Matrix Storage Manager (Windows 2000)** and click on **Setup**.
3. Follow the instruction to install the RAID utility installation and reboot the server after the utility is installed.

#### **Intel PROSet Utility Installation**

1. Before you installing the PROSet Utility, you need to enable the Windows Instrumentation service first.
2. Please launch the service management console form **Start -> Administrative Tools -> Service**.
3. Right-click on Windows Management Instrumentation service and select Properties.

4. Change the Startup type to Automatic and click on OK.
5. After the Windows Management Instrumentation service is started, you can start to install the PROSet Utility.
6. Please insert the G330 Resource CD into the optical drive.
7. Select **Utilities**, expand **Utilities -> Altos G330 -> Intel Gigabit Ethernet Controller**, select **PROSet Utility (Windows 2000)** and click on **Setup**.
8. Follow the instruction, accept the license agreement and use the default setting to complete the Intel PROSet utility installation.

### **Windows 2000 Advanced Server SP4 (with onboard LSI SATA RAID)**

Below information describes how to manually install Windows 2000 on Altos G330 with onboard LSI SATA RAID.

#### **Drivers Required**

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

<b>Device</b>	<b>Version</b>	<b>Directory on Resource CD</b>
Onboard ATI ES1000	8.24.3.0	\Disk\G330\onboard\VGA\WS2K\Setup.exe
Onboard Intel 3000 Chipset	8.1.0.1002	\Disk\G330\onboard\chipset\Setup.exe
Onboard LSI SATA RAID	4.4.630.2006	\Disk\G330\RAID\LSI\ws2k
Onboard Intel 82573E Gigabit Ethernet	9.5.12.0	\Disk\G330\NIC\Intel\pro1000.w2k\
Onboard iAMT	1.1.25.0/5.1.2600.2180	\Disk\G330\onboard\iAMT\ws2k
Onboard USB 2.0	7.2.2.1007	Included in Intel 3000 Chipset driver

#### **Software Required**

The management utility of onboard LSI SATA RAID can be found in the G330 Resource CD build 100.

<b>Software</b>	<b>Version</b>	<b>Directory on Resource CD</b>
Onboard SATA RAID Monitor Utility	1.25.11.18	\APP\G330\SATARAID\Monitor\ws2k\MegaIDESpy.exe
PROSet Utility	11.1.0.19	\APP\G330\NIC\prosetdx\ws2k\DxSetup.EXE

#### **Configuring Onboard Intel SATA RAID**

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

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### **Installation Tips**

1. As Windows 2000 can't recognize the onboard Intel SATA RAID, you need to make a driver diskette from the resource CD first before the installation.
2. Press F6 at the start of installation to provide the driver diskette.
3. Select "**Intel (R) 82801GR/GH SATA RAID Controller (Desktop ICH7R/DH)**" 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 onboard Intel SATA RAID enabled. Please refer to the Windows 2000 Advanced Server (with onboard Intel SATA RAID) Chipset Driver Installation section.

### **VGA Driver Installation**

The VGA driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows 2000 Advanced Server (with onboard Intel SATA RAID) VGA Driver Installation section.

### **Gigabit Ethernet Driver Installation**

The Gigabit Ethernet driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows 2000 Advanced Server (with onboard Intel SATA RAID) Gigabit Ethernet Driver Installation section.

### **iAMT Driver Installation**

The iAMT driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows 2000 Advanced Server (with onboard Intel SATA RAID) iAMT Driver Installation section.

### **SATA RAID Monitor Utility Installation**

1. Please insert the G330 Resource CD into the optical drive.
2. Select **Utilities**, expand **Utilities -> Altos G330 -> Onboard LSI SATA RAID**, select **Onboard SATA RAID Monitor Utility (Windows 2000)** and click on **Setup**.
3. Follow the instructions to finish the onboard SATA RAID monitor utility installation.

### **Intel PROSet Utility Installation**

The PROSet Utility installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows 2000 Advanced Server (with onboard Intel SATA RAID) Intel PROSet Utility Installation section.

## Windows 2000 Advanced Server SP4 (with Adaptec SAS 44300 HostRAID)

Below information describes how to manually install Windows 2000 on Altos G330 with Adaptec SAS 44300 HostRAID.

### Drivers Required

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

Device	Version	Directory on Resource CD
Onboard ATI ES1000	8.24.3.0	\\Disk\G330\onboard\VGA\WS2K\Setup.exe
Onboard Intel 3000 Chipset	8.1.0.1002	\\Disk\G330\onboard\chipset\Setup.exe
Adaptec SAS 44300	1.2.5902.0	\\Disk\G330\SAS\Adaptec\44330.w2k
Onboard Intel 82573E Gigabit Ethernet	9.5.12.0	\\Disk\G330\NIC\Intel\pro1000.w2k\
Onboard iAMT	1.1.25.0/5.1.2600.2180	\\Disk\G330\onboard\iAMT\ws2k
Onboard USB 2.0	7.2.2.1007	Included in Intel 3000 Chipset driver

### Software Required

The management utility of Adaptec SAS 44300 HostRAID can be found in the G330 Resource CD build 100.

Software	Version	Directory on Resource CD
Adaptec Storage Manager	4.30.01(16042)	\\APP\G330\SAS\Adaptec\Windows\ws2k\setup.exe
PROSet Utility	11.1.0.19	\\APP\G330\NIC\prosetdx\ws2k\DxSetup.EXE

### Configuring Adaptec SAS 44300 HostRAID

Please refer to the Appendix C. for the Adaptec SAS 44300 HostRAID configuration.

### Installation Tips

1. As Windows 2000 can't recognize the Adaptec SAS 44300 HostRAID, you need to make a driver diskette from the resource CD first before the installation.
2. Press F6 at the start of installation to provide the driver diskette.
3. Select "Adaptec SAS/SATA 32bit driver for Windows 2000/XP/2003" as target driver
4. After loading the RAID driver from diskette, follow the normal procedure to finish the installation.

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### **Chipset Driver Installation**

The chipset driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows 2000 Advanced Server (with onboard Intel SATA RAID) Chipset Driver Installation section.

### **VGA Driver Installation**

The VGA driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows 2000 Advanced Server (with onboard Intel SATA RAID) VGA Driver Installation section.

### **Gigabit Ethernet Driver Installation**

The Gigabit Ethernet driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows 2000 Advanced Server (with onboard Intel SATA RAID) Gigabit Ethernet Driver Installation section.

### **iAMT Driver Installation**

The iAMT driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows 2000 Advanced Server (with onboard Intel SATA RAID) iAMT Driver Installation section.

### **Adaptec Storage Manager Utility Installation**

1. Please insert G330 Resource CD into the optical drive.
2. Select **Utilities**, expand **Utilities -> Altos G330 -> Adaptec SAS 44300**, select **Adaptec Storage Manager (Windows 2000)** and click on **Setup**.
3. Follow the instructions, accept the License Agreement and use the default setting to finish the Adaptec Storage Manager installation.

### **Intel PROSet Utility Installation**

The PROSet Utility installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows 2000 Advanced Server (with onboard Intel SATA RAID) Intel PROSet Utility Installation section.

## **Windows 2000 Advanced Server SP4 (with LSI MegaRAID SAS 8204ELP)**

Below information describes how to manually install Windows 2000 on Altos G330 with LSI MegaRAID SAS 8204ELP.

### **Drivers Required**

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

<b>Device</b>	<b>Version</b>	<b>Directory on Resource CD</b>
Onboard ATI ES1000	8.24.3.0	\\Disk\G330\onboard\VGA\WS2K\Setup.exe
Onboard Intel 3000 Chipset	8.1.0.1002	\\Disk\G330\onboard\chipset\Setup.exe

LSI MegaRAID SAS 8204ELP	07.15.0209.2007	\\Disk\g330\sas\8204ELP\w2k\
Onboard Intel 82573E Gigabit Ethernet	9.6.31.0	\\Disk\G330\NIC\Intel\pro1000.w2k\
Onboard iAMT	1.1.25.0/5.1.2600.2180	\\Disk\G330\onboard\iAMT\ws2k
Onboard USB 2.0	7.2.2.1007	Included in Intel 3000 Chipset driver

### Software Required

The management utility of LSI MegaRAID SAS 8204ELP can be found in the G330 Resource CD build 300 (or later).

Software	Version	Directory on Resource CD
MegaRAID Storage Manager	2.07-00	\\app\g330\sas\8204ELP\Windows\setup.exe
PROSet Utility	11.2.0.69	\\APP\G330\NIC\prosetdx\ws2k\DxSetup.EXE

### Configuring LSI MegaRAID SAS 8204ELP

Please refer to the Appendix D. for the LSI MegaRAID SAS 8204ELP configuration.

### Installation Tips

1. As Windows 2000 can't recognize the Adaptec SAS 44300 HostRAID, you need to make a driver diskette from the resource CD first before the installation.
2. Press F6 at the start of installation to provide the driver diskette.
3. Select "LSI Logic Embedded MegaRAID (Windows 2000 SP4)" 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 onboard Intel SATA RAID enabled. Please refer to the Windows 2000 Advanced Server (with onboard Intel SATA RAID) Chipset Driver Installation section.

### VGA Driver Installation

The VGA driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows 2000 Advanced Server (with onboard Intel SATA RAID) VGA Driver Installation section.

### Gigabit Ethernet Driver Installation

The Gigabit Ethernet driver installation is the same as onboard Intel SATA RAID

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enabled. Please refer to the Windows 2000 Advanced Server (with onboard Intel SATA RAID) Gigabit Ethernet Driver Installation section.

### **iAMT Driver Installation**

The iAMT driver installation is the same as onboard Intel SATA RAID enabled. Please refer to the Windows 2000 Advanced Server (with onboard Intel SATA RAID) iAMT Driver Installation section.

### **MegaRIAD Storage Manager Utility Installation**

1. Please insert G330 Resource CD into the optical drive.
2. Select **Utilities**, expand **Utilities -> Altos G330 -> LSI Logic MegaRAID SAS 8204ELP**, 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 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 onboard Intel SATA RAID enabled. Please refer to the Windows 2000 Advanced Server (with onboard Intel SATA RAID) Intel PROSet Utility Installation section.

### **Red Hat Enterprise Linux 4.0 Update 3 (with onboard LSI SATA RAID)**

Below information describes how to manually install Red Hat Enterprise Linux 4.0 update 3 on Altos G330 with onboard LSI SATA RAID.

#### **Drivers Required**

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

<b>Device</b>	<b>Version</b>	<b>Directory on Resource CD</b>
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
Onboard LSI SATA RAID	5.09a	\\Disk\G330\raid\LSI\rhe4u3
Onboard Intel 82573E Gigabit Ethernet	7.2.7-NAPI	\\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

## Software Required

The management utility of onboard SATA RAID can be found in the G330 Resource CD build 100 (or later).

Software	Version	Directory on Resource CD
Onboard SATA RAID Monitor Utility	1.11.0	VAPP\G330\SATARAID\Monitor\linux\

## Configuring Onboard LSI SATA RAID

Please refer to the Appendix B. for the onboard LSI SATA RAID configuration.

### Installation Tips

1. Since Red Hat Enterprise Linux 4.0 Update 3 cannot recognize the onboard LSI SATA RAID, you need to make a driver diskette from the Resource CD first before the installation.
2. Type **linux dd** when the prompt **boot:** appears at the start.
3. Follow the instruction to load onboard LSI SATA RAID driver from the driver diskette from floppy (fd0).
4. At **Package Defaults** page, select **Customize the set of packages to be installed**. And select **Development Tools** under **Development** in the **Package Group Selection**.
5. Follow the normal procedure to finish the installation.

### Gigabit Ethernet Driver Installation

The Red Hat Enterprise Linux 4.0 Update 3 can detect the onboard Intel 82573E. But we recommend replacing the driver with the one in G330 Resource CD.

1. Stop the network interface

```
# service network stop
```
2. Remove the module e1000

```
# rmmod e1000
```
3. Make the driver diskette for G330 Resource CD.
4. Copy driver from floppy to hard disk

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

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

- Restart the network interface.

```
# service network start
```

### Onboard SATA RAID Utility Setup

- Copy the utility Spy.i386.rpm from the G330 Resource CD to HDD.
- Install the Spy.i386.rpm

```
# rpm -ivh Spy.i386.rpm
```

## Red Hat Enterprise Linux 4.0 Update 3 (with Adaptec SAS 44300 HostRAID)

Below information describes how to manually install Red Hat Enterprise Linux 4.0 update 3 on Altos G330 with Adaptec SAS 44300 HostRAID.

### Drivers Required

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

Device	Version	Directory on Resource CD
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
Adaptec SAS 44300	1.2.5918.0	\Disk\G330\SAS\Adaptec\44330.rl
Onboard Intel 82573E Gigabit Ethernet	7.2.7-NAPI	\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

### Software Required

The management utility of Adaptec SAS 44300 HostRAID can be found in the G330 Resource CD build 100 (or later).

Software	Version	Directory on Resource CD
Adaptec Storage Manager	4.30.01(16042 )	\APP\G330\SAS\Adaptec\Linux\

### Configuring Adaptec SAS 44300 HostRAID

Please refer to the Appendix C. for the Adaptec SAS 44300 HostRAID configuration.

### Installation Tips

- Since Red Hat Enterprise Linux 4.0 Update 3 cannot recognize the Adaptec SAS 44300, you need to make a driver diskette from the Resource CD first before the installation.
- Type **linux dd** when the prompt **boot:** appears at the start.

3. Follow the instruction to load Adaptec SAS 44300 driver from the driver diskette from floppy (fd0).
4. At **Package Defaults** page, select **Customize the set of packages to be installed**. And select **Development Tools** under **Development** in the **Package Group Selection**.
5. Follow the normal procedure to finish the installation.

### Gigabit Ethernet Driver Installation

The Gigabit Ethernet Driver installation is the same as onboard LSI SATA RAID enabled. Please refer to the Red Hat Enterprise Linux 4 Update 3 (with onboard LSI SATA RAID) Gigabit Ethernet Driver Installation section.

### Adaptec Storage Manager Installation

1. Insert the G330 Resource CD and copy the utility StorMan-4.30.i386.rpm from the folder /APP/G330SAS/Adaptec/Linux on the CD to HDD.
2. Install StorMan-4.30.i386.rpm.
 

```
# rpm -ivh StorMan-4.30.i386.rpm
```
3. Launch the Adaptec Storage Manager
 

```
# /usr/StorMan/StorMan.sh
```

### Red Hat Enterprise Linux 4.0 Update 3 (with LSI MegaRAID SAS 8204ELP)

Below information describes how to manually install Red Hat Enterprise Linux 4.0 update 3 on Altos G330 with LSI MegaRAID SAS 8204ELP.

#### Drivers Required

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

Device	Version	Directory on Resource CD
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
LSI MegaRAID SAS 8204ELP	07.15.0209.2007	\app\g330\sas\8204ELP\Linux\
Onboard Intel 82573E Gigabit Ethernet	7.3.15-NAPI	\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

#### Software Required

The management utility of LSI MegaRAID SAS 8204ELP can be found in the

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G330 Resource CD build 300 (or later).

Software	Version	Directory on Resource CD
MegaRAID Storage Manager	2.07-00	\app\g330\sas\8204ELP\Linux\

### Configuring LSI MegaRAID SAS 8204ELP

Please refer to the Appendix D. for the LSI MegaRAID SAS 8204ELP configuration.

#### Installation Tips

1. Since Red Hat Enterprise Linux 4.0 Update 3 cannot recognize the LSI MegaRAID SAS 8204ELP, you need to make a driver diskette from the Resource CD first before the installation.
2. Type **linux dd** when the prompt **boot:** appears at the start.
3. Follow the instruction to load MegaRAID SAS 8204ELP driver from the driver diskette from floppy (fd0).
4. At **Package Defaults** page, select **Customize the set of packages to be installed**. And select **Development Tools** under **Development** in the **Package Group Selection**.
5. Follow the normal procedure to finish the installation.

#### Gigabit Ethernet Driver Installation

The Gigabit Ethernet Driver installation is the same as onboard LSI SATA RAID enabled. Please refer to the Red Hat Enterprise Linux 4 Update 3 (with onboard LSI SATA RAID) Gigabit Ethernet Driver Installation section.

#### MegaRAID Storage Manager Installation

1. You can find the MegaRAID Storage Manager in G330 Resource CD build 300. Please refer to Directory on Resource CD in Software Required section for the utility and copy it from the G330 Resource CD build 300 to HDD first.

```
# mount /media/cdrom
```

```
# cp -R /media/cdrom/APP/G330/sas/8204ELP/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 MegaRAID Storage Manager, click on **Applications** and select **System Tools -> MegaRAID Storage Manager StartupUI**.

## Red Hat Enterprise Linux 4.0 EM64T Update 3 (with onboard LSI SATA RAID)

Below information describes how to manually install Red Hat Enterprise Linux 4.0 Update 3 EM64T on Altos G330 with onboard LSI SATA RAID.

### Drivers Required

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

Device	Version	Directory on Resource CD
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
Onboard LSI SATA RAID	5.09a	\Disk\G330\raid\LSI\rhe4u3
Onboard Intel 82573E Gigabit Ethernet	7.2.7-NAPI	\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

### Software Required

The management utility of onboard LSI SATA RAID can be found in the G330 Resource CD build 100 (or later)

Software	Version	Directory on Resource CD
Onboard SATA RAID Monitor Utility	1.11.0	\APP\G330\SATARAID\Monitor\linux\

### Configuring onboard LSI SATA RAID

Please refer to the Appendix B. for the onboard LSI SATA RAID configuration.

### Installation Tips

1. Since Red Hat Enterprise Linux 4.0 Update 3 EM64T cannot recognize the onboard LSI SATA RAID, you need to make a driver diskette from the Resource CD first before the installation.
2. Type **linux dd** when the prompt **boot:** appears at the start.
3. Follow the instruction to load onboard LSI SATA RAID driver from the driver diskette from floppy (fd0).
4. At **Package Installation Defaults** page, select **Customize the set of packages to be installed**. And select **Development Tools** under **Development** in the **Package Group Selection**.
5. Follow the normal procedure to finish the installation.

---

## Gigabit Ethernet Driver Installation

The Red Hat Enterprise Linux 4.0 Update 3 EM64T can detect the onboard Intel 82573E. But we recommend replacing the driver with the one in G330 Resource CD.

1. Stop the network interface

```
# service network stop
```
2. Remove the module e1000

```
# rmmod e1000
```
3. Make the driver diskette for G330 Resource CD.
4. Copy driver from floppy to hard disk

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

```
# cd /tmp/src/  
# make install  
# insmod e1000.ko
```
6. Restart the network interface.

```
# service network start
```

## Onboard SATA RAID Utility Setup

1. Copy the utility Spy.i386.rpm from the G330 Resource CD to HDD.
2. Install the Spy.i386.rpm

```
# rpm -ivh Spy.i386.rpm
```

## Red Hat Enterprise Linux 4.0 EM64T Update 3 (with Adaptec SAS 44300 HostRAID)

Below information describes how to manually install Red Hat Enterprise Linux 4.0 Update 3 EM64T on Altos G330 with Adaptec SAS 44300 HostRAID.

### Drivers Required

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

Device	Version	Directory on Resource CD
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver

Adaptec SAS 44300	1.2.5918.0	\\Disk\G330\SAS\Adaptec\x64\44330.rl
Onboard Intel 82573E Gigabit Ethernet	7.2.7-NAPI	\\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

### Software Required

The management utility of Adaptec SAS 44300 HostRAID can be found in the G330 Resource CD build 100 (or later).

Software	Version	Directory on Resource CD
Adaptec Storage Manager	4.30.01(16042 )	\\APP\G330\SAS\Adaptec\x64\linux\

### Configuring Adaptec SAS 44300 HostRAID

Please refer to the Appendix C. for the Adaptec SAS 44300 HostRAID configuration.

### Installation Tips

1. Since Red Hat Enterprise Linux 4.0 Update 3 EM64T cannot recognize the Adaptec SAS 44300, you need to make a driver diskette from the Resource CD first before the installation.
2. Type **linux dd** when the prompt **boot:** appears at the start.
3. Follow the instruction to load Adaptec SAS 44300 driver from the driver diskette from floppy (fd0).
4. At **Package Defaults** page, select **Customize the set of packages to be installed**. And select **Development Tools** under **Development** in the **Package Group Selection**.
5. Follow the normal procedure to finish the installation.

### Gigabit Ethernet Driver Installation

The Gigabit Ethernet Driver installation is the same as onboard LSI SATA RAID enabled. Please refer to the Red Hat Enterprise Linux 4 EM64T Update 3 (with onboard LSI SATA RAID) Gigabit Ethernet Driver Installation section.

### Adaptec Storage Manager Installation

1. Insert the G330 Resource CD and copy the utility StorMan-4.30.x86\_64.rpm from the folder /APP/G330SAS/Adaptec/Linux on the CD to HDD.
2. Install StorMan-4.30.x86\_64.rpm.  

```
# rpm -ivh StorMan-4.30.x86_64.rpm
```
3. Launch the Adaptec Storage Manager  

```
# /usr/StorMan/StorMan.sh
```

---

## Red Hat Enterprise Linux 4.0 EM64T Update 3 (with LSI MegaRAID SAS 8204ELP)

Below information describes how to manually install Red Hat Enterprise Linux 4.0 Update 3 EM64T on Altos G330 with LSI MegaRAID SAS 8204ELP.

### Drivers Required

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

Device	Version	Directory on Resource CD
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
LSI MegaRAID SAS 8204ELP	07.15.0209.2007	Disk\g330\sas\8204ELPx64\rhel4u3\
Onboard Intel 82573E Gigabit Ethernet	7.3.15-NAPI	\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

### Software Required

The management utility of LSI MegaRAID SAS 8204ELP can be found in the G330 Resource CD build 300 (or later).

Software	Version	Directory on Resource CD
MegaRAID Storage Manager	2.07-00	\APP\G330\sas\8204ELP\Linux\

### Configuring LSI MegaRAID SAS 8204ELP

Please refer to the Appendix D. for the LSI MegaRAID SAS 8204ELP configuration.

### Installation Tips

NOTE. The Red Hat Enterprise Linux 4 EM64T Update 3 CANNOT detect the floppy with LSI MegaRAID SAS 8204ELP installed. You need an USB floppy during the installation to load the driver for MegaRAID SAS 8204ELP.

1. Red Hat Enterprise Linux 4.0 EM64T Update 3 cannot recognize the LSI MegaRAID SAS 8204ELP, you need to make a driver diskette from the Resource CD first before the installation.
2. Please connect the USB floppy to the G330 before you start to install the Red Hat Enterprise Linux 4 EM64T Update 3.
3. Type **linux dd** when the prompt **boot:** appears at the start.
4. Follow the instruction to load LSI MegaRAID SAS 8204EPL driver from the driver diskette from USB floppy (**sda**).

- 
5. At **Package Defaults** page, select **Customize the set of packages to be installed**. And select **Development Tools** under **Development** in the **Package Group Selection**.
  6. Follow the normal procedure to finish the installation.

### **Gigabit Ethernet Driver Installation**

1. Remove the original module e1000

```
# rmmod e1000
```
2. You can find the Gigabit Ethernet Driver in G330 Resource CD build 300. Please refer to Directory on Resource CD in Drivers Required section for the driver and copy it from the G330 Resource CD build 300 to HDD first.

```
# mount /media/cdrom
# cp -R /media/cdrom/Disk/G330/nic/Intel/pro1000.lx/. /tmp/
```
3. Change the directory to the driver source and install the driver.

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

### **MegaRAID Storage Manager Installation**

1. You can find the MegaRAID Storage Manager in G330 Resource CD build 300. Please refer to Directory on Resource CD in Software Required section for the utility and copy it from the G330 Resource CD build 300 to HDD first.

```
# mount /media/cdrom
# cp -R /media/cdrom/APP/G330/sas/8204ELP/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 MegaRAID Storage Manager, click on **Applications** and select **System Tools -> MegaRAID Storage Manager StartupUI**.

### **SUSE Linux Enterprise Server 10 (with onboard LSI SATA RAID)**

Below information describes how to manually install SUSE Linux Enterprise Server 10 on Altos G330 with onboard LSI SATA RAID.

## Drivers Required

For SUSE Linux Enterprise Server 10 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
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
Onboard LSI SATA RAID	5.09c	\Disk\G330\raid\LSI\sles10
Onboard Intel 82573E Gigabit Ethernet	7.3.15-NAPI	\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

## Software Required

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

Software	Version	Directory on EasyBUILD
Onboard SATA RAID Monitor Utility	1.11.0	\APP\G330\SATARAID\Monitor\linux\

## Configuring onboard LSI SATA RAID

Please refer to the Appendix B. for the onboard LSI SATA RAID configuration.

### Installation Tips

1. Since SUSE Linux Enterprise Server 10 cannot recognize the onboard LSI SATA RAID, you need to make a driver diskette from the EasyBUILD7.1 build 600 (or later) first 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. Press Enter to continue the installation.
5. Insert the driver disk to the floppy, select **fd0: Floppy** and **OK** to load the onboard LSI SATA RAID driver from the driver diskette.
6. After loading the driver, select **OK** and **Back** to return the installation.
7. Follow the instructions to the **Installation Settings**
8. At the **Installation settings**, select the **Software**.
9. Check **C/C++ Compiler and Tools** under **Development** to add C/C++ compiler tools.
10. Click on **Details**, change **Filter** from **Patterns** to **Package Groups**.

11. Select **Source** under **Development** in the left window and check **kernel-source** in the right window to add kernel-source.
12. 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 build 600 (or later).

1. Remove the module e1000
 

```
# rmmod e1000
```
2. Make the driver diskette for EasyBUILD 7.1 build 600 (or later).
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
```

### Onboard SATA RAID Utility Setup

1. Copy the utility Spy.i386.rpm from the EasyBUILD build 600 (or later) to HDD. Please refer to the Software Required section to find the utility in the EasyBUILD.
2. Install the Spy.i386.rpm
 

```
# rpm -ivh Spy.i386.rpm
```

### SUSE Linux Enterprise Server 10 Installation (with Adaptec SAS 44300 HostRAID)

Below information describes how to manually install SUSE Linux Enterprise Server 10 on Altos G330 with add-on Adaptec SAS 44300 HostRAID.

#### Drivers Required

For SUSE Linux Enterprise Server 10 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
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000	N/A	No Driver

Chipset		
Adaptec SAS 44300	1.4.11662.0	\\Disk\g330\sas\Adaptec\44300.SL10
Onboard Intel 82573E Gigabit Ethernet	7.3.15-NAPI	\\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

### Software Required

The management utility of Adaptec SAS 44300 HostRAID can be found in the EasyBUILD 7.1 build 600(or later).

Software	Version	Directory on EasyBUILD
Adaptec Storage Manager	4.30.01(16042 )	\\APP\G330\SAS\Adaptec\Linux\

### Configuring Adaptec SAS 44300 HostRAID

Please refer to the Appendix C. for the Adaptec SAS 44300 HostRAID configuration.

### Installation Tips

NOTE. There is built-in driver for Adaptec 44300. But the driver is incorrect. You need to use additional parameter to disable the driver during the system boot form the Since SUSE Linux Enterprise Server 10 CD.

1. Please make the driver diskette for Adaptec SAS 44300 from the EasyBUILD7.1 build 600 (or later) first 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. Type **broken\_modules=aic94xx** at **Boot Options**.
5. Please DO NOT insert the driver diskette into the floppy now. Please press Enter to continue the installation.
6. When you see the **Please choose the Driver Update medium**, please insert the driver diskette into the floppy, select the floppy drive as the driver source and press **OK** to load the driver.
7. After loading the driver, select **OK** and **Back** to return the installation.
8. Follow the instructions to the **Installation Settings**
9. At the **Installation settings**, select the **Software**.
10. Check **C/C++ Compiler and Tools** under **Development** to add C/C++ compiler tools.
11. Click on **Details**, change **Filter** from **Patterns** to **Package Groups**.
12. Select **Source** under **Development** in the left window and check **kernel-source** in the right window to add kernel-source.

- 
13. After you add the **kernel-source** and **C/C++ Compiler and Tools**, please click on **Accept** and follow the instruction to complete the installation.

NOTE. If you are using an USB floppy during the installation, you will see the following message after CD#1 installation completed and system rebooted.

```
resume device /dev/sdb1 not found (ignoring)
waiting for device /dev/sdb2 to appear.....
.....not found -- exiting to /bin/sh

$
```

This is because during installation, the USB floppy device was recognized as sda, and the mass storage was recognized as sdb. After reboot, mass storage is now recognized as sda, but SuSE Linux still tries to load system files from sdb. Please follow the step 14 and 15 below to solve this.

14. At \$ prompt, type the following command to mount file system on mass storage:

```
$mount /dev/sda2 /tmp
```

Edit the grub menu list file to change all entries with sdb to sda:

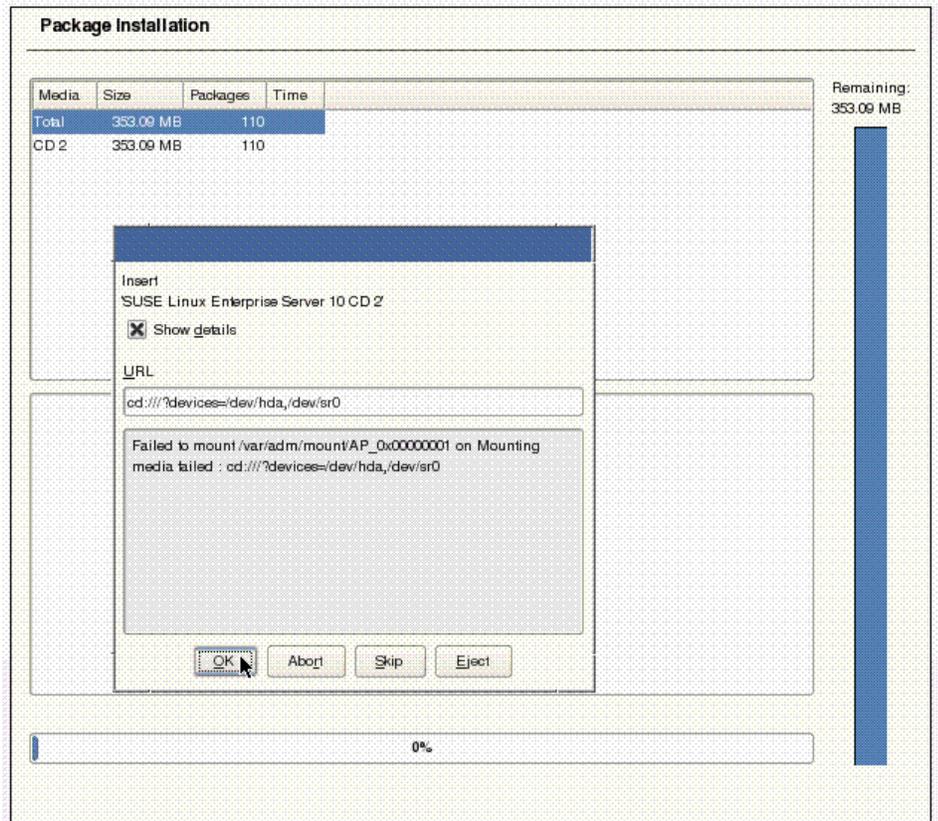
```
$/tmp/bin/vi /tmp/boot/grub/menu.lst
```

Next, edit the fstab file to change all entries with sdb to sda and remove lines with floppy:

```
/tmp/bin/vi /tmp/etc/fstab
```

15. Please remove the driver diskette, press Ctrl-Alt-Del to reboot the system, and follow the instruction to complete the installation with remained installation CDs.

NOTE: If the driver diskette is kept in the USB floppy drive, you would see below message even though you've inserted the installation CD #2. In this case, please press "Ctrl+Alt+F2" to switch to another terminal. Issue the "reboot" command to reboot the system. Then, remove the driver diskette and continue the installation.



### Gigabit Ethernet Driver Installation

The Gigabit Ethernet Driver installation is the same as onboard LSI SATA RAID enabled. Please refer to the SUSE Linux Enterprise Server 10 (with onboard LSI SATA RAID) Gigabit Ethernet Driver Installation section.

### Adaptec Storage Manager Installation

1. Insert the EasyBUILD 7.1 build 600 (or later) and copy the utility StorMan-4.30.i386.rpm from the folder \APPG330\SAS\Adaptec\Linux\ to HDD.

2. Install StorMan-4.30.i386.rpm.

```
# rpm -ivh StorMan-4.30.i386.rpm
```

3. Launch the Adaptec Storage Manager

```
# /usr/StorMan/StorMan.sh
```

### SUSE Linux Enterprise Server 10 Installation (with LSI MegaRAID SAS 8204ELP)

Below information describes how to manually install SUSE Linux Enterprise Server 10 on Altos G330 with add-on LSI MegaRAID SAS 8204ELP.

## Drivers Required

For SUSE Linux Enterprise Server 10 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
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
LSI MegaRAID SAS 8204ELP	07.15.0209.2007	\\Disk\g330\sas\8204ELP\sles10
Onboard Intel 82573E Gigabit Ethernet	7.3.15-NAPI	\\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

## Software Required

The management utility of LSI MegaRAID SAS 8204ELP can be found in the G330 Resource CD build 600(or later).

Software	Version	Directory on EasyBUILD
MegaRAID Storage Manager	2.07-00	\\app\g330\sas\8204ELP\Linux\

## Configuring LSI MegaRAID SAS 8204ELP

Please refer to the Appendix D. for the LSI MegaRAID SAS 8204ELP configuration.

## Installation Tips

NOTE. The SuSE Linux Enterprise Server 10 CANNOT detect the floppy correctly with LSI MegaRAID SAS 8204ELP installed. You need an USB floppy during the installation to load the driver for MegaRAID SAS 8204ELP.

1. Since SUSE Linux Enterprise Server 10 cannot recognize the LSI MegaRAID 8204ELP, you need to make a driver diskette from the EasyBUILD 7.1 build 600 (or later) first before the installation.
2. Please connect the USB floppy to the G330 before you start to install the SUSE Linux Enterprise Server 10.
3. Boot the system form SUSE Linux Enterprise Server 10 bootable CD.
4. When you see the boot menu on the screen, press F5 and select **Yes**.
5. Press Enter to continue the installation.
6. Follow the instruction to load the LSI MegaRAID SAS 8204ELP driver from the driver diskette from the USB floppy.
7. After loading the driver, select **Back** to return the installation procedure.

8. Follow the instructions to the **Installation Settings**.
9. At the **Installation settings**, select the **Software**.
10. Check **C/C++ Compiler and Tools** under **Development** to add C/C++ compiler tools.
11. Click on **Details**, change **Filter** from **Patterns** to **Package Groups**.
12. Select **Source** under **Development** in the left window and check **kernel-source** in the right window to add kernel-source.
13. After you add the **kernel-source** and **C/C++ Compiler and Tools**, please click on **Accept** and follow the instruction to complete the installation.
14. You will see the following message after CD#1 installation completed and system rebooted. This is because during installation, the USB floppy device was recognized as sda, and the mass storage was recognized as sdb. After reboot, mass storage is now recognized as sda, but SuSE Linux still tries to load system files from sdb. Please follow the step 14 and 15 below to solve this.

```
resume device /dev/sdb1 not found (ignoring)
waiting for device /dev/sdb2 to appear.....
.....not found -- exiting to /bin/sh

$
```

15. At \$ prompt, type the following command to mount file system on mass storage:

```
$mount /dev/sda2 /tmp
```

Edit the grub menu list file to change all entries with sdb to sda:

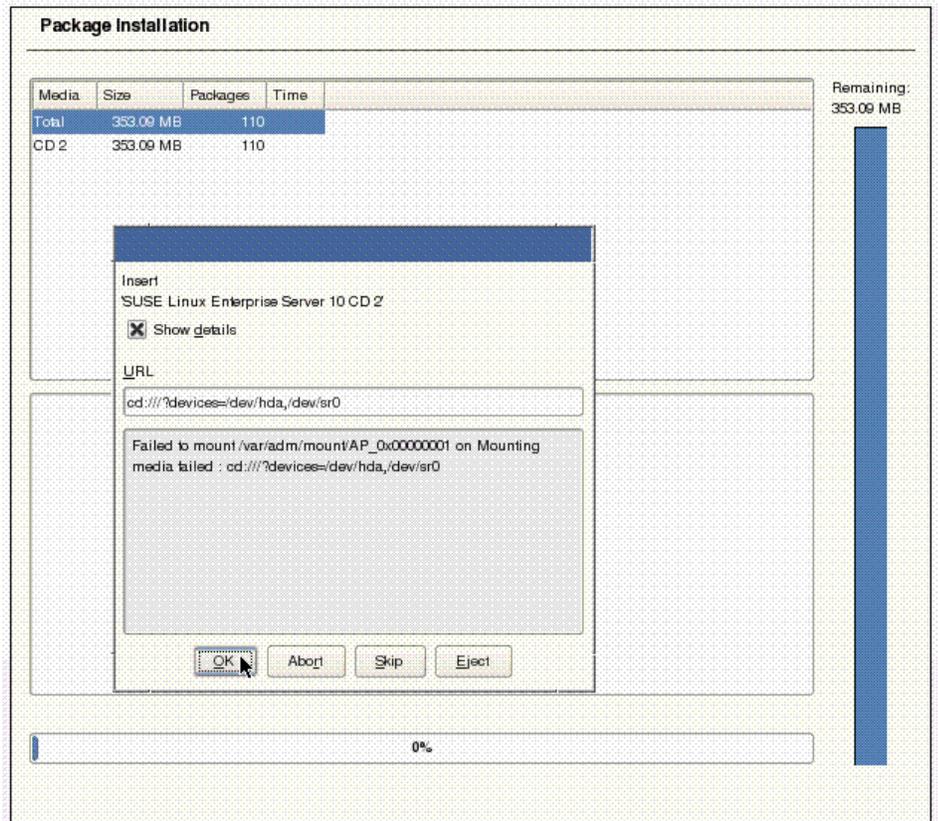
```
$/tmp/bin/vi /tmp/boot/grub/menu.lst
```

Next, edit the fstab file to change all entries with sdb to sda and remove lines with floppy:

```
/tmp/bin/vi /tmp/etc/fstab
```

16. Please remove the driver diskette, press Ctrl-Alt-Del to reboot the system, and follow the instruction to complete the installation with remained installation CDs.

NOTE: If the driver diskette is kept in the USB floppy drive, you would see below message even though you've inserted the installation CD #2. In this case, please press "Ctrl+Alt+F2" to switch to another terminal. Issue the "reboot" command to reboot the system. Then, remove the driver diskette and continue the installation.



### Gigabit Ethernet Driver Installation

The Gigabit Ethernet Driver installation is the same as onboard LSI SATA RAID enabled. Please refer to the SUSE Linux Enterprise Server 10 (with onboard LSI SATA RAID) 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 to HDD first.

```
# cp -R /media/EBV71B600/app/g330/sas/8204ELP/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 MegaRAID Storage Manager, click on **Computer**, select **More Applications** and **MegaRAID Storage Manager Startup UI**.

---

## SUSE Linux Enterprise Server 10 EM64T (with onboard LSI SATA RAID)

Below information describes how to manually install SUSE Linux Enterprise Server 10 EM64T on Altos G330 with onboard LSI SATA RAID.

### Drivers Required

For SUSE Linux Enterprise Server 10 EM64T 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
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
Onboard LSI SATA RAID	5.09c	\\Disk\g330\raid\LSI\sles10x64
Onboard Intel 82573E Gigabit Ethernet	7.3.15-NAPI	\\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

### Software Required

The management utility of onboard LSI SATA RAID can be found in EasyBUILD 7.1 build 00 (or later).

Software	Version	Directory on EasyBUILD
Onboard SATA RAID Monitor Utility	1.11.0	\\APP\G330\SATARAID\Monitor\linux\

### Configuring onboard LSI SATA RAID

Please refer to the Appendix B. for the onboard LSI SATA RAID configuration.

### Installation Tips

1. Since SUSE Linux Enterprise Server 10 EM64T cannot recognize the onboard LSI SATA RAID, you need to make a driver diskette from the EasyBUILD7.1 build 600 (or later) first 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. Press Enter to continue the installation.
5. Insert the driver disk to the floppy, select **fd0: Floppy** and **OK** to load the onboard LSI SATA RAID driver from the driver diskette.
6. After loading the driver, select **OK** and **Back** to return the installation.

- 
7. Follow the instructions to the **Installation Settings**
  8. At the **Installation settings**, select the **Software**.
  9. Check **C/C++ Compiler and Tools** under **Development** to add C/C++ compiler tools.
  10. Click on **Details**, change **Filter** from **Patterns** to **Package Groups**.
  11. Select **Source** under **Development** in the left window and check **kernel-source** in the right window to add kernel-source.
  12. 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 build 600 (or later).

1. Remove the module e1000

```
# rmmod e1000
```
2. Make the driver diskette for EasyBUILD 7.1 build 600 (or later).
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
```

### **Onboard SATA RAID Utility Setup**

1. Copy the utility `Spy.i386.rpm` from the EasyBUILD build 600 (or later) to HDD. Please refer to the Software Required section to find the utility in the EasyBUILD.
2. Install the `Spy.i386.rpm`

```
# rpm -ivh Spy.i386.rpm
```

### **SUSE Linux Enterprise Server 10 EM64T Installation (with Adaptec SAS 44300 HostRAID)**

Below information describes how to manually install SUSE Linux Enterprise Server 10 EM64T on Altos G330 with add-on Adaptec SAS 44300 HostRAID.

## Drivers Required

For SUSE Linux Enterprise Server 10 EM64T Installation, the following device drivers are required. These drivers can be found in EasyBUILD 7.1 build 600 (or later)

Device	Version	Directory on Resource CD
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
Adaptec SAS 44300	1.4.11662.0	\\Disk\g330\sas\Adaptec\64\44300.SL10
Onboard Intel 82573E Gigabit Ethernet	7.3.15-NAPI	\\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

## Software Required

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

Software	Version	Directory on Resource CD
Adaptec Storage Manager	4.30.01(16042 )	\\APP\G330\SAS\Adaptec\64\linux\

## Configuring Adaptec SAS 44300 HostRAID

Please refer to the Appendix C. for the Adaptec SAS 44300 HostRAID configuration.

## Installation Tips

NOTE. There is built-in driver for Adaptec 44300. But the driver is incorrect. You need to use additional parameter to disable the driver during the system boot form the Since SUSE Linux Enterprise Server 10 EM64T CD.

1. Please make the driver diskette for Adaptec SAS 44300 from the EasyBUILD7.1 build 600 (or later) first 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. Type **broken\_modules=aic94xx** at **Boot Options**.
5. Please DO NOT insert the driver diskette into the floppy now. Please press Enter to continue the installation.
6. When you see the **Please choose the Driver Update medium**, please insert the driver diskette into the floppy, select the floppy drive as the driver source and press **OK** to load the driver.
7. After loading the driver, select **OK** and **Back** to return the installation.

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

NOTE. If you are using an USB floppy during the installation, you will see the following message after CD#1 installation completed and system rebooted.

```
resume device /dev/sdb1 not found (ignoring)
waiting for device /dev/sdb2 to appear.....
.....not found -- exiting to /bin/sh
$
```

This is because during installation, the USB floppy device was recognized as `sda`, and the mass storage was recognized as `sdb`. After reboot, mass storage is now recognized as `sda`, but SuSE Linux still tries to load system files from `sdb`. Please follow the step 14 and 15 below to solve this.

14. At `$` prompt, type the following command to mount file system on mass storage:

```
$mount /dev/sda2 /tmp
```

Edit the grub menu list file to change all entries with `sdb` to `sda`:

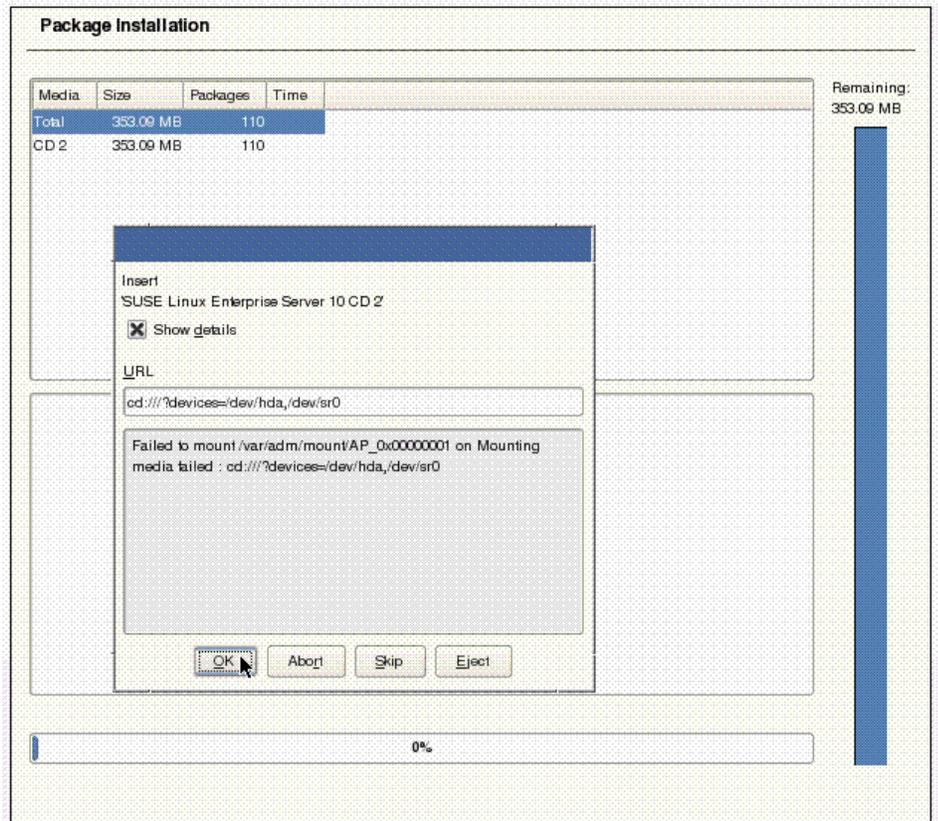
```
$/tmp/bin/vi /tmp/boot/grub/menu.lst
```

Next, edit the `fstab` file to change all entries with `sdb` to `sda` and remove lines with floppy:

```
/tmp/bin/vi /tmp/etc/fstab
```

15. Please remove the driver diskette, press `Ctrl-Alt-Del` to reboot the system, and follow the instruction to complete the installation with remained installation CDs.

NOTE: If the driver diskette is kept in the USB floppy drive, you would see below message even though you've inserted the installation CD #2. In this case, please press "`Ctrl+Alt+F2`" to switch to another terminal. Issue the "`reboot`" command to reboot the system. Then, remove the driver diskette and continue the installation.



### Gigabit Ethernet Driver Installation

The Gigabit Ethernet Driver installation is the same as onboard LSI SATA RAID enabled. Please refer to the SUSE Linux Enterprise Server 10 EM64T (with onboard LSI SATA RAID) Gigabit Ethernet Driver Installation section.

### Adaptec Storage Manager Installation

1. Insert the EasyBUILD 7.1 build 600 (or later) and copy the utility StorMan-4.30.i386.rpm from the folder \APPG330\SAS\Adaptec\x64\Linux\ to HDD.
2. Install StorMan-4.30.i386.rpm.

```
# rpm -ivh StorMan-4.30.x86_64.rpm
```

3. Launch the Adaptec Storage Manager

```
# /usr/StorMan/StorMan.sh
```

### SUSE Linux Enterprise Server 10 EM64T Installation (with LSI MegaRAID SAS 8204ELP)

Below information describes how to manually install SUSE Linux Enterprise Server 10 EM64T on Altos G330 with add-on LSI MegaRAID SAS 8204ELP.

## Drivers Required

For SUSE Linux Enterprise Server 10 EM64T 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
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
LSI MegaRAID SAS 8204ELP	07.15.0209.2007	\\Disk\g330\sas\8204ELP\x64\sles10
Onboard Intel 82573E Gigabit Ethernet	7.3.15-NAPI	\\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

## Software Required

The management utility of LSI MegaRAID SAS 8204ELP can be found in the EasyBUILD 7.1 build 600 (or later).

Software	Version	Directory on Resource CD
MegaRAID Storage Manager	2.07-00	\\app\g330\sas\8204ELP\Linux\

## Configuring LSI MegaRAID SAS 8204ELP

Please refer to the Appendix D. for the LSI MegaRAID SAS 8204ELP configuration.

## Installation Tips

NOTE. The SuSE Linux Enterprise Server 10 EM64T CANNOT detect the floppy correctly with LSI MegaRAID SAS 8204ELP installed. You need an USB floppy during the installation to load the driver for MegaRAID SAS 8204ELP.

1. Since SUSE Linux Enterprise Server 10 EM64T cannot recognize the LSI MegaRAID 8204ELP, you need to make a driver diskette from the EasyBUILD 7.1 build 600 (or later) first before the installation.
2. Please connect the USB floppy to the G330 before you start to install the SUSE Linux Enterprise Server 10 EM64T.
3. Boot the system from SUSE Linux Enterprise Server 10 EM64T bootable CD.
4. When you see the boot menu on the screen, press F5 and select **Yes**.
5. Press Enter to continue the installation.
6. Follow the instruction to load the LSI MegaRAID SAS 8204ELP driver from the driver diskette from the USB floppy.

7. After loading the driver, select **Back** to return the installation procedure.
8. Follow the instructions to the **Installation Settings**.
9. At the **Installation settings**, select the **Software**.
10. Check **C/C++ Compiler and Tools** under **Development** to add C/C++ compiler tools.
11. Click on **Details**, change **Filter** from **Patterns** to **Package Groups**.
12. Select **Source** under **Development** in the left window and check **kernel-source** in the right window to add kernel-source.
13. After you add the **kernel-source** and **C/C++ Compiler and Tools**, please click on **Accept** and follow the instruction to complete the installation.
14. You will see the following message after CD#1 installation completed and system rebooted. This is because during installation, the USB floppy device was recognized as sda, and the mass storage was recognized as sdb. After reboot, mass storage is now recognized as sda, but SuSE Linux still tries to load system files from sdb. Please follow the step 14 and 15 below to solve this.

```
resume device /dev/sdb1 not found (ignoring)
waiting for device /dev/sdb2 to appear.....
.....not found -- exiting to /bin/sh

$
```

15. At \$ prompt, type the following command to mount file system on mass storage:

```
$mount /dev/sda2 /tmp
```

Edit the grub menu list file to change all entries with sdb to sda:

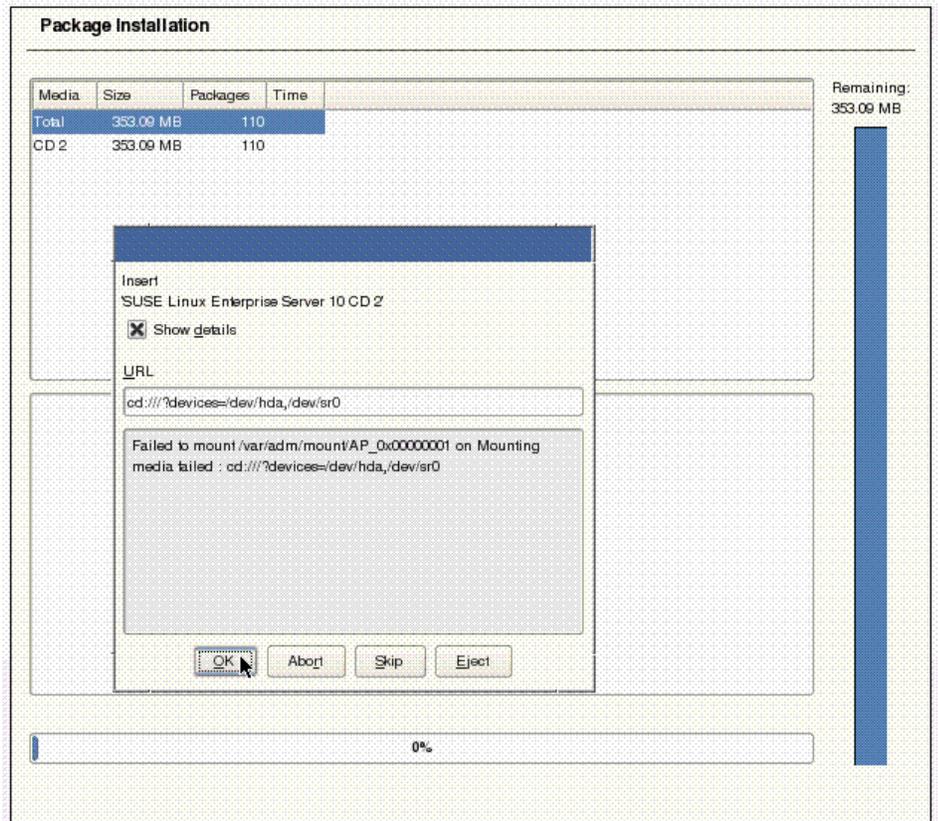
```
$/tmp/bin/vi /tmp/boot/grub/menu.lst
```

Next, edit the fstab file to change all entries with sdb to sda and remove lines with floppy:

```
/tmp/bin/vi /tmp/etc/fstab
```

16. Please remove the driver diskette, press Ctrl-Alt-Del to reboot the system, and follow the instruction to complete the installation with remained installation CDs.

NOTE: If the driver diskette is kept in the USB floppy drive, you would see below message even though you've inserted the installation CD #2. In this case, please press "Ctrl+Alt+F2" to switch to another terminal. Issue the "reboot" command to reboot the system. Then, remove the driver diskette and continue the installation.



### Gigabit Ethernet Driver Installation

The Gigabit Ethernet Driver installation is the same as onboard LSI SATA RAID enabled. Please refer to the SUSE Linux Enterprise Server 10 EM64T (with onboard LSI SATA RAID) 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 to HDD first.

```
# cp -R /media/EBV71B600/app/g330/sas/8204ELP/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 MegaRAID Storage Manager, click on **Computer**, select **More Applications** and **MegaRAID Storage Manager Startup UI**.

---

## SUSE Linux Enterprise Server 9 Service Pack 3 (with onboard LSI SATA RAID)

Below information describes how to manually install SUSE Linux Enterprise Server 9 Service Pack 3 on Altos G330 with onboard LSI SATA RAID.

### Drivers Required

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

Device	Version	Directory on Resource CD
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
Onboard LSI SATA RAID	5.09a	\\Disk\G330\raid\LSI\sles9sp3
Onboard Intel 82573E Gigabit Ethernet	7.2.7-NAPI	\\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

### Software Required

The management utility of onboard LSI SATA RAID can be found in the G330 Resource CD build 100(or later).

Software	Version	Directory on Resource CD
Onboard SATA RAID Monitor Utility	1.11.0	\\APP\G330\SATARAID\Monitor\linux\

### Configuring onboard LSI SATA RAID

Please refer to the Appendix B. for the onboard LSI SATA RAID configuration.

### Installation Tips

1. Since SUSE Linux Enterprise Server 9 Service Pack 3 cannot recognize the onboard LSI SATA RAID, you need to make a driver diskette from the G330 Resource CD build 100 first before the installation.
2. Boot the system form 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 onboard LSI SATA RAID 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 SUSE Linux Enterprise Linux 9 SP3 could detect the onboard Intel 82573E automatically. We still recommend replacing the driver with the one in G330 Resource CD.

1. Remove the module e1000

```
# rmmod e1000
```
2. Make the driver diskette for G330 Resource CD.
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
```

### **Onboard SATA RAID Utility Setup**

1. Copy the utility Spy.i386.rpm from the G330 Resource CD to HDD.
2. Install the Spy.i386.rpm

```
# rpm -ivh Spy.i386.rpm
```

### **SUSE Linux Enterprise Server 9 Service Pack 3 Installation (with Adaptec SAS 44300 HostRAID)**

Below information describes how to manually install SUSE Linux Enterprise Server 9 Service Pack 3 on Altos G330 with add-on Adaptec SAS 44300 HostRAID.

## Drivers Required

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

Device	Version	Directory on Resource CD
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
Adaptec SAS 44300	1.2.5918.0	\\Disk\G330\SAS\Adaptec\44330.sl
Onboard Intel 82573E Gigabit Ethernet	7.2.7-NAPI	\\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

## Software Required

The management utility of Adaptec SAS 44300 HostRAID can be found in the G330 Resource CD build 100(or later).

Software	Version	Directory on Resource CD
Adaptec Storage Manager	4.30.01(16042 )	\\APP\G330\SAS\Adaptec\Linux\

## Configuring Adaptec SAS 44300 HostRAID

Please refer to the Appendix C. for the Adaptec SAS 44300 HostRAID configuration.

## Installation Tips

1. Since SUSE Linux Enterprise Server 9 Service Pack 3 cannot recognize the Adaptec SAS 44300 HostRAID, you need to make a driver diskette from the G330 Resource CD build 100 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 onboard LSI SATA RAID 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 Gigabit Ethernet Driver installation is the same as onboard LSI SATA RAID enabled. Please refer to the SUSE Linux Enterprise Server 9 Service Pack 3 (with onboard LSI SATA RAID) Gigabit Ethernet Driver Installation section.

### **Adaptec Storage Manager Installation**

1. Insert the G330 Resource CD and copy the utility StorMan-4.30.i386.rpm from the folder /APP/G330SAS/Adaptec/Linux on the CD to HDD.
2. Install StorMan-4.30.i386.rpm.  

```
# rpm -ivh StorMan-4.30.i386.rpm
```
3. Launch the Adaptec Storage Manager  

```
# /usr/StorMan/StorMan.sh
```

### **SUSE Linux Enterprise Server 9 Service Pack 3 Installation (with LSI MegaRAID SAS 8204ELP)**

Below information describes how to manually install SUSE Linux Enterprise Server 9 Service Pack 3 on Altos G330 with add-on LSI MegaRAID SAS 8204ELP.

#### **Drivers Required**

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

<b>Device</b>	<b>Version</b>	<b>Directory on Resource CD</b>
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
LSI MegaRAID SAS 8204ELP	07.15.0209.2007	\\Disk\g330\sas\8204ELP\sles9sp3\
Onboard Intel 82573E Gigabit Ethernet	7.3.15-NAPI	\\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

#### **Software Required**

The management utility of LSI MegaRAID SAS 8204ELP can be found in the

---

G330 Resource CD build 300(or later).

Software	Version	Directory on Resource CD
MegaRAID Storage Manager	2.07-00	\\app\g330\sas\8204ELP\Linux\

### Configuring LSI MegaRAID SAS 8204ELP

Please refer to the Appendix D. for the LSI MegaRAID SAS 8204ELP configuration.

### Installation Tips

NOTE. The SuSE Linux Enterprise Server 9 Service Pack 3 CANNOT detect the floppy correctly with LSI MegaRAID SAS 8204ELP installed. You need an USB floppy during the installation to load the driver for MegaRAID SAS 8204ELP.

1. Since SUSE Linux Enterprise Server 9 Service Pack 3 cannot recognize the LSI MegaRAID 8204ELP, you need to make a driver diskette from the G330 Resource CD build 300 first before the installation.
2. Please connect the USB floppy to the G330 before you start to install the SUSE Linux Enterprise Server 9 Service Pack 3.
3. Boot the system form SUSE Linux Enterprise Server 9 Service Pack3 bootable CD.
4. When you see the boot menu on the screen, press F6, select **Installation** then press Enter to continue.
5. Follow the instruction to load the LSI MegaRAID SAS 8204ELP driver from the driver diskette from the USB floppy.
6. After loading the driver, select **Back** to return the installation procedure.
7. Follow the instruction to change the CD to SUSE Linux Enterprise Server 9 CD #1.
8. Continue to follow the instructions to the **Installation Settings**
9. At the **Installation settings**, select the **Software** and click on **Detailed selection**.
10. Check **C/C++ Compiler and Tools** in the left window to add C/C++ compiler tools.
11. Select **Various Linux Tools** in the left window and check **kernel-source** in the right window to add kernel-source.
12. 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 Gigabit Ethernet Driver installation is the same as onboard LSI SATA RAID enabled. Please refer to the SUSE Linux Enterprise Server 9 Service Pack 3 (with

onboard LSI SATA RAID) Gigabit Ethernet Driver Installation section.

### **MegaRAID Storage Manager Installation**

1. You can find the MegaRAID Storage Manager in G330 Resource CD build 300. Please refer to Directory on Resource CD in Software Required section for the utility and copy it from the G330 Resource CD build 300 to HDD first.

```
# mount /media/cdrom  
  
# cp -R /media/cdrom/APP/G330/sas/8204ELP/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 MegaRAID Storage Manager, click on **Applications** and select **System Tools -> MegaRAID Storage Manager StartupUI**.

### **SUSE Linux Enterprise Server 9 EM64T Service Pack 3 (with onboard LSI SATA RAID)**

Below information describes how to manually install SUSE Linux Enterprise Server 9 EM64T Service Pack 3 on Altos G330 with onboard LSI SATA RAID.

#### **Drivers Required**

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

Device	Version	Directory on Resource CD
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
Onboard LSI SATA RAID	5.09a	\\Disk\G330\raid\LSI\sles9sp3
Onboard Intel 82573E Gigabit Ethernet	7.2.7-NAPI	\\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

#### **Software Required**

The management utility of onboard LSI SATA RAID can be found in the G330 Resource CD build 100 (or later).

Software	Version	Directory on Resource CD
----------	---------	--------------------------

---

Onboard SATA RAID Monitor Utility	1.11.0	\\APP\G330\SATARAID\Monitor\linux\
---	--------	------------------------------------

### Configuring onboard LSI SATA RAID

Please refer to the Appendix B. for the onboard LSI SATA RAID configuration.

#### Installation Tips

1. Since SUSE Linux Enterprise Server 9 EM64T Service Pack 3 cannot recognize the onboard LSI SATA RAID, you need to make a driver diskette from the G330 Resource CD build 100 first before the installation.
2. Boot the system from 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 onboard LSI SATA RAID 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 SUSE Linux Enterprise Linux 9 SP3 EM64T could detect the onboard Intel 82573E automatically. We still recommend replacing the driver with the one in G330 Resource CD.

1. Remove the module e1000

```
# rmmod e1000
```
5. Make the driver diskette for G330 Resource CD.
6. Copy driver from floppy to hard disk

```
# mount /media/floppy
```

```
# cp -R /media/floppy/. /tmp/
```

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

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

```
# make install
```

```
# insmod e1000.ko
```

### Onboard SATA RAID Utility Setup

1. Copy the utility Spy.i386.rpm from the G330 Resource CD to HDD.
2. Install the Spy.i386.rpm

```
# rpm -ivh Spy.i386.rpm
```

## SUSE Linux Enterprise Server 9 EM64T Service Pack 3 Installation (with Adaptec SAS 44300 HostRAID)

Below information describes how to manually install SUSE Linux Enterprise Server 9 EM64T Service Pack 3 on Altos G330 with add-on Adaptec SAS 44300 HostRAID.

### Drivers Required

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

Device	Version	Directory on Resource CD
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
Adaptec SAS 44300	1.2.5918.0	\\Disk\G330\SAS\Adaptec\x64\44330.sl
Onboard Intel 82573E Gigabit Ethernet	7.2.7-NAPI	\\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

### Software Required

The management utility of onboard LSI SATA RAID can be found in the G330 Resource CD build 100 (or later).

Software	Version	Directory on Resource CD
Adaptec Storage Manager	4.30.01(16042)	\\APP\G330\SAS\Adaptec\x64\linux\

### Configuring Adaptec SAS 44300 HostRAID

Please refer to the Appendix C. for the Adaptec SAS 44300 HostRAID configuration.

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## Installation Tips

1. Since SUSE Linux Enterprise Server 9 EM64T Service Pack 3 cannot recognize the Adaptec SAS 44300 HostRAID, you need to make a driver diskette from the G330 Resource CD build 100 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 onboard LSI SATA RAID 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 Gigabit Ethernet Driver installation is the same as onboard LSI SATA RAID enabled. Please refer to the SUSE Linux Enterprise Server 9 EM64T Service Pack 3 (with onboard LSI SATA RAID) Gigabit Ethernet Driver Installation section.

## Adaptec Storage Manager Installation

1. Insert the G330 Resource CD and copy the utility StorMan-4.30.x46\_64.rpm from the folder /APP/G330SAS/Adaptec/Linux on the CD to HDD.
2. Install StorMan-4.30.x86\_64.rpm.  

```
# rpm -ivh StorMan-4.30.x86_64.rpm
```
3. Launch the Adaptec Storage Manager  

```
# /usr/StorMan/StorMan.sh
```

## SUSE Linux Enterprise Server 9 EM64T Service Pack 3 Installation (with LSI MegaRAID SAS 8204ELP)

Below information describes how to manually install SUSE Linux Enterprise Server 9 EM64T Service Pack 3 on Altos G330 with add-on LSI MegaRAID SAS 8204ELP.

### Drivers Required

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

Device	Version	Directory on Resource CD
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
LSI MegaRAID SAS 8204ELP	07.15.0209.2007	\\Disk\g330\sas\8204ELP\x64\sles9sp3\
Onboard Intel 82573E Gigabit Ethernet	7.3.15-NAPI	\\Disk\G330\NIC\Intel\pro1000.lx
Onboard USB 2.0	N/A	OS built-in

### Software Required

The management utility of LSI MegaRAID SAS 8204ELP can be found in the G330 Resource CD build 300 (or later).

Software	Version	Directory on Resource CD
MegaRAID Storage Manager	2.07-00	\\app\g330\sas\8204ELP\Linux\

### Configuring LSI MegaRAID SAS 8204ELP

Please refer to the Appendix D. for the LSI MegaRAID SAS 8204ELP configuration.

### Installation Tips

NOTE. The SuSE Linux Enterprise Server 9 EM64T Service Pack 3 CANNOT detect the floppy with LSI MegaRAID SAS 8204ELP installed. You need an USB floppy during the installation to load the driver for MegaRAID SAS 8204ELP.

1. Since SUSE Linux Enterprise Server 9 EM64T Service Pack 3 cannot recognize the LSI MegaRAID SAS 8204ELP, you need to make a driver diskette from the G330 Resource CD build 300 first before the installation.
2. Please connect the USB floppy to the G330 before you start to install the SUSE Linux Enterprise Server 9 EM64T Service Pack 3.
3. Boot the system from SUSE Linux Enterprise Server 9 EM64T Service Pack 3 bootable CD.

- 
4. When you see the boot menu on the screen, press F6, select **Installation** then press Enter to continue.
  5. Follow the instruction to load the LSI MegaRAID SAS 8204ELP driver from the driver diskette from USB floppy.
  6. After loading the driver, select **Back** to return the installation procedure.
  7. Follow the instruction to change the CD to SUSE Linux Enterprise Server 9 EM64T CD #1.
  8. Continue to follow the instructions to the **Installation Settings**
  9. At the **Installation settings**, select the **Software** and click on **Detailed selection**.
  10. Check **C/C++ Compiler and Tools** in the left window to add C/C++ compiler tools.
  11. Select **Various Linux Tools** in the left window and check **kernel-source** in the right window to add kernel-source.
  12. 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 Gigabit Ethernet Driver installation is the same as onboard LSI SATA RAID enabled. Please refer to the SUSE Linux Enterprise Server 9 EM64T Service Pack 3 (with onboard LSI SATA RAID) Gigabit Ethernet Driver Installation section.

#### **MegaRAID Storage Manager Installation**

1. You can find the MegaRAID Storage Manager in G330 Resource CD build 300. Please refer to Directory on Resource CD in Software Required section for the utility and copy it from the G330 Resource CD build 300 to HDD first.

```
# mount /media/cdrom
```

```
# cp -R /media/cdrom/APP/G330/sas/8204ELP/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 MegaRAID Storage Manager, click on Start button and select **System -> Configuration -> MegaRAID Storage Manager StartupUI**.

## NetWare 6.5 Support Pack 5 Installation (with Adaptec SAS 44300 HostRAID)

Below information describes how to manually install NetWare 6.5 (Support Pack 5 overlay CD) on Altos G330 with Adaptec SAS 44300 HostRAID.

### Drivers Required

For NetWare 6.5 SP5 Installation, the following device drivers are required.

Device	Version	Directory on Resource CD
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
Adaptec SAS 44300	1.20	\\Disk\G330\SAS\Adaptec\44330.nw
Onboard Intel 82573E Gigabit Ethernet	10.21.01	\\Disk\G330\NIC\Intel\pro1000.nw
Onboard USB 2.0	N/A	OS built-in

### Software Required

The management utility of Adaptec SAS 44300 can be found in the G330 Resource CD build 100 (or later).

Software	Version	Directory on Resource CD
Adaptec Storage Manager	4.30.01(16042)	\\APP\G330\sas\Adaptec\NetWare\

### Patch Required

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

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

### Configuring Adaptec SAS 44300 HostRAID

Please refer to the Appendix C. for the Adaptec SAS 44300 HostRAID configuration.

### Installation Tips

1. Make the driver disks for Adaptec SAS 44300 and 82573E Gigabit Ethernet from Resource CD.
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.

- During the installation, you would see the default **Platform Support Modules** would be set to **MPS14** as following. You need to update it to ACPI with ACPI PSM module update patch after OS installation completed.

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

```
Device types           Driver names
-----
Platform Support Module:  MPS14
```

- When you see the following message, please select **Modify**. Move the cursor to **Storage adapters** and press **Enter** to apply the driver for Adaptec SAS 44300.

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 IDEATA
```

- After you pressing the Enter, you would see the storage adapter detected by NetWare 6.5 SP5.

Add, edit, or delete storage drivers. Each controller/adapter requires a driver.

```
Driver name   Device Name           Stat
-----
IDEATA.HAM    Standard ATA/IDE/ATAPI Adapter
IDEATA.HAM    Standard ATA/IDE/ATAPI Adapter
IDEATA.HAM    Standard ATA/IDE RAID Adapter
```

- Please press **INSERT** key twice, insert the driver disk for Adaptec SAS 44300 into floppy and press Enter. It will show the driver on the disk as following. Please press Enter again to select the driver to install.

Select a driver to install:

```
-----
ADP94XX.HAM  Adaptec HostrAID SAS/SATA Driver
```

- When you see the following message to ask you to verify/enter the driver properties, just select **Return to driver list**.

Verify/Enter the driver properties so that they match the hardware in this server

ADP94XX Properties

-----  
Slot Number:

10. After the driver is successfully loaded, you would see the devices listed as below. Then, please select **Return to driver summary**.

Add, edit, or delete storage drivers. Each controller/adapter requires a driver.

Driver name	Device Name	Stat
-----	-----	----
<b>ADP94XX.HAM</b>	<b>Adaptec ASC-44300 SAS/SATA Host Adaptec</b>	
IDEATA.HAM	Standard ATA/IDE/ATAPI Adapter	
IDEATA.HAM	Standard ATA/IDE/ATAPI Adapter	
IDEATA.HAM	Standard ATA/IDE RAID Adapter	

11. You would see the following message. Please select **Continue** to continue the installation.

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:	<b>ADP94XX, IDEATA, IDEATA, IDEATA</b>

12. NetWare 6.5 SP5 can detect the onboard Intel 82573E but we still replace the driver with the one in G330 Resource CD. When you see the following screen, 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
-----	-----
<b>Network boards:</b>	<b>E1000E</b>
NetWare Loadable Modules:	(optional)

13. Please press **DELETE** key to remove the E1000E drivers.

Add, edit, or delet network board drivers. Each network board requires a driver

Driver name	Device Name	Stat
E1000E.LAN	Intel Intel(R) PRO/1000 PCI-E Network Connection D	

- Please press **INSERT** key twice, insert the driver disk for onboard Intel 82573E NIC into floppy and press Enter.
- After the driver is successfully loaded, you would see Intel 82573E listed as below. Then, please select **Return to driver summary**.

Add, edit, or delete storage drivers. Each controller/adaptor requires a driver.

Driver name	Device Name	Status
E1000E.LAN	Intel Intel(R) PRO/1000 PM Network Connection	

- You would see the following message. Please select Continue to continue the installation.

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

Device types	Driver names
Network boards:	<b>E1000E</b>
NetWare Loadable Modules:	(optional)

- Please follow the normal procedures to complete the NetWare 6.5 SP5 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.

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

#### **Adaptec Storage Manager Installation**

1. Please install the G330 Resource CD into the optical drive.
2. Open the file browser and expend RESCDG330B100 -> APP -> G330 -> sas -> Netware.
3. Double-click on the install.nlm1 to launch the installer.
4. Follow the instruction and accept the License Agreement to complete the installation.
5. To launch the Adaptec Storage Manager, please load raidman from the server console.

#### **NetWare 6.5 Support Pack 6 Installation (with onboard LSI SATA RAID)**

Below information describes how to manually install NetWare 6.5 (Support Pack 6 overlay CD) on Altos G330 with onboard LSI SATA RAID.

#### **Drivers Required**

For NetWare 6.5 SP6 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver
Onboard LSI SATA RAID	6.31	The driver will be included in EasyBUILD 7.1 build 600 or later. You can find the driver on GCSD website, too. <a href="http://csd.acer.com.tw">http://csd.acer.com.tw</a>
Onboard Intel 82573E Gigabit Ethernet	10.21.01	\Disk\G330\NIC\Intel\pro1000.nw
Onboard USB 2.0	N/A	OS built-in

## Software Required

The management utility of onboard LSI SATA RAID will be included in the EasyBUILD 7.1 build 600 (or later).

Software	Version	Directory on EasyBUILD
Onboard LSI SATA RAID monitor utility	7.29	The utility will be included in the EasyBUILD 7.1 build 600 or later. You can find the utility on GCSO website, too. <a href="http://csd.acer.com.tw">http://csd.acer.com.tw</a>

## Configuring onboard LSI SATA RAID

Please refer to the Appendix B. for the onboard LSI SATA RAID configuration.

### Installation Tips

1. Download and make the driver disks for onboard LSI SATA RAID and 82573E Gigabit Ethernet.
2. Boot the system from the NetWare 6.5 Support Pack 6 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**. 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 ADPAHCI
```

6. After you pressing the Enter, you would see the storage adapter detected by NetWare 6.5 Support Pack 6. Please move cursor to ADPAHCI.HAM and press Delete to remove the driver.

```
Add, edit, or delete storage drivers. Each
controller/adapter requires a driver.
```

```
Driver name    Device Name                Stat
-----
IDEATA.HAM     Standard ATA/IDE/ATAPI Adapter
ADPAHCI.HAM    Adaptec ICH 7R RAID Controller
```

7. To apply the driver for onboard LSI SATA RAID, please press **INSERT** key

---

twice, insert the driver disk for onboard LSI SATA RAID into floppy and press Enter.

8. After the driver is successfully loaded, you would see the devices listed as below. Then, please select **Return to driver summary**.

Add, edit, or delete storage drivers. Each controller/adaptor requires a driver.

Driver name	Device Name	Stat
IDEATA.HAM	Standard ATA/IDE/ATAPI Adapter	
MEGARIDE.HAM	Intel Embedded Server RAID Technology	

9. You would see the following message. Please select **Continue** to continue the installation.

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:	<b>IDEATA, MEGARIDE</b>

10. NetWare 6.5 Support Pack 6 can detect the onboard Intel 82573E but we still replace the driver with the one in G330 Resource CD. When you see the following screen, 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
<b>Network boards:</b>	<b>E1000E</b>
NetWare Loadable Modules:	(optional)

11. Please press **DELETE** key to remove the E1000E drivers.

Add, edit, or delet network board drivers. Each network board requires a driver

Driver name	Device Name	Stat
E1000E.LAN	Intel Intel(R) PRO/1000 PCI-E Network Connection D	

12. Please press **INSERT** key twice, insert the driver disk for onboard Intel

82573E NIC into floppy and press Enter.

13. After the driver is successfully loaded, you would see Intel 82573E listed as below. Then, please select **Return to driver summary**.

Add, edit, or delete storage drivers. Each controller/adapter requires a driver.

```
Driver name      Device Name      Status
-----
E1000E.LAN      Intel Intel(R) PRO/1000 PM Network Connection
```

14. You would see the following message. Please select Continue to continue the installation.

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

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

15. Please follow the normal procedures to complete the NetWare 6.5 Support Pack 6 installation.

#### **Onboard LSI SATA RAID Monitor Utility Installation**

1. Please copy the onboard LSI SATA RAID utility to a disk.
2. Insert the disk into the floppy and type a:\install from the system console to install the utility.

```
G330: a:\install
```

3. After you install the utility, please reboot the system.

#### **NetWare 6.5 Support Pack 5 Installation (with onboard LSI SATA RAID)**

Below information describes how to manually install NetWare 6.5 (Support Pack 5 overlay CD) on Altos G330 with onboard LSI SATA RAID.

#### **Drivers Required**

For NetWare 6.5 SP5 Installation, the following device drivers are required.

Device	Version	Directory on EasyBUILD
Onboard ATI ES1000	N/A	OS built-in
Onboard Intel 3000 Chipset	N/A	No Driver

Onboard LSI SATA RAID	6.31	The driver will be included in EasyBUILD 7.1 build 600 or later. You can find the driver on GCSD website, too. <a href="http://csd.acer.com.tw">http://csd.acer.com.tw</a>
Onboard Intel 82573E Gigabit Ethernet	10.21.01	\\Disk\\G330\\NIC\\Intel\\pro1000.nw
Onboard USB 2.0	N/A	OS built-in

### Software Required

The management utility of onboard LSI SATA RAID will be included in the EasyBUILD 7.1 build 600 (or later).

Software	Version	Directory on EasyBUILD
Onboard LSI SATA RAID monitor utility	7.29	The utility will be included in the EasyBUILD 7.1 build 600 or later. You can find the utility on GCSD website, too. <a href="http://csd.acer.com.tw">http://csd.acer.com.tw</a>

### Patch Required

NOTE. The ACPI PSM update patch is required for NetWare 6.5 installation with Support Pack 5 overlay CD. You MUST apply the update before you start the OS installation.

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

### Configuring onboard LSI SATA RAID

Please refer to the Appendix B. for the onboard LSI SATA RAID configuration.

### Installation Tips

NOTE. The ACPI PSM update patch is required for NetWare 6.5 installation with Support Pack 5 overlay CD. You MUST apply the update before you start the OS installation.

1. Please create a bootable DOS partition on the RAID volume.
2. Create the \nwupdate\drivers directory in the DOS partition.
3. Copy the files in \startup directory in the ACPI PSM module update package to \nwupdate\drivers directory.
4. Download and make the driver disks for onboard LSI SATA RAID and 82573E Gigabit Ethernet.
5. Boot the system from the NetWare 6.5 Support Pack 5 OS CD.
6. At **Welcome to the NetWare 6.5 server installation** page, select **Manual** to

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install.

7. At **Prepare boot partition** page, just select **continue** to use the DOS partition we created.
8. When you see the following message, please select **Modify**. 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 ADPAHCI
```

9. After you pressing the Enter, you would see the storage adapter detected by NetWare 6.5 Support Pack 6. Please move cursor to ADPAHCI.HAM and press Delete to remove the driver.

Add, edit, or delete storage drivers. Each controller/adapter requires a driver.

```
Driver name    Device Name                Stat
-----
IDEATA.HAM     Standard ATA/IDE/ATAPI Adapter
ADPAHCI.HAM    Adaptec ICH 7R RAID Controller
```

10. To apply the driver for onboard LSI SATA RAID, please press **INSERT** key twice, insert the driver disk for onboard LSI SATA RAID into floppy and press Enter.
11. After the driver is successfully loaded, you would see the devices listed as below. Then, please select **Return to driver summary**.

Add, edit, or delete storage drivers. Each controller/adapter requires a driver.

```
Driver name    Device Name                Stat
-----
IDEATA.HAM     Standard ATA/IDE/ATAPI Adapter
MEGARIDE.HAM   Intel Embedded Server RAID Technology
```

12. You would see the following message. Please select **Continue** to continue the installation.

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,MEGARIDE

```

- NetWare 6.5 Support Pack 6 can detect the onboard Intel 82573E but we still replace the driver with the one in G330 Resource CD. When you see the following screen, 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:            E1000E
NetWare Loadable Modules: (optional)

```

- Please press **DELETE** key to remove the E1000E drivers.

Add, edit, or delete network board drivers. Each network board requires a driver

```

Driver name  Device Name                               Stat
-----
E1000E.LAN  Intel Intel(R) PRO/1000 PCI-E Network Connection D

```

- Please press **INSERT** key twice, insert the driver disk for onboard Intel 82573E NIC into floppy and press Enter.
- After the driver is successfully loaded, you would see Intel 82573E listed as below. Then, please select **Return to driver summary**.

Add, edit, or delete storage drivers. Each controller/adaptor requires a driver.

```

Driver name  Device Name                               Status
-----
E1000E.LAN  Intel Intel(R) PRO/1000 PM Network Connection

```

- You would see the following message. Please select Continue to continue the installation.

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

```

Device types                Driver names
-----

```

---

Network boards: **E100E**

NetWare Loadable Modules: (optional)

18. Please follow the normal procedures to complete the NetWare 6.5 Support Pack 6 installation.

#### **Onboard LSI SATA RAID Monitor Utility Installation**

The onboard LSI SATA RAID Monitor Utility installation is the same as NetWare 6.5 Support Pack 6. Please refer to the NetWare 6.5 Support Pack 6 (with onboard LSI SATA RAID) Onboard LSI SATA RAID Monitor utility Installation section.

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## APPENDIX A: ONBOARD INTEL SATA RAID CREATION

### Configuring the onboard Intel SATA RAID

This section briefly shows how to create RAID 1 (mirror) volume with onboard Intel SATA RAID function.

#### Enable onboard Intel SATA RAID function

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

1. Press **F2** during the POST to enter the BIOS.
1. After you entering the BIOS, select **Advanced** -> **IDE Controller**
2. Change the setting of **Configure SATA as RAID** form **Disabled** to **Enabled**.
3. There will be an additional option **SATA RAID OPROM** appeared.
4. Change the setting of SATA RAID OPROM to **Intel matrix Storage**.
4. Press **F10** and select **Yes** to save the setting and exit the BIOS

#### Enter the onboard Intel 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.

#### Create RAID 1 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: ONBOARD LSI SATA RAID CREATION

### Configuring the onboard LSI SATA RAID

This section briefly shows how to create RAID 1 (mirror) volume with onboard LSI SATA RAID function.

#### Enable onboard SATA RAID function

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

1. Press **F2** during the POST to enter the BIOS.
5. After you entering the BIOS, select **Advanced** -> **IDE Controller**
6. Change the setting of **Configure SATA as RAID** form **Disabled** to **Enabled**.
7. There will be an additional option **SATA RAID OPROM** appeared.
8. Change the setting of SATA RAID OPROM to **LSI**.
2. Press **F10** and select **Yes** to save the setting and exit the BIOS

#### Enter the onboard SATA RAID Configuration Utility

When you see the Intel Embedded Server RAID Technology information shows on the screen during the POST, press **Ctrl-E** to enter the Embedded RAID Configuration Utility.

#### Loading onboard SATA RAID default setting

1. Select Objects from Management menu.
2. Select Adapter from Objects. The selectable adapter will be listed.
3. Press Enter on the adapter and the adapter setting will be shown on the screen. You can change the setting from this menu.
4. Select Factory Default and YES to load the default settings.
5. Exit the configuration utility and press <Ctrl> + <Alt> + <Del> to reboot the server.

#### Create RAID 1 volume

1. Select Configuration from Management Menu.
2. Select New Configuration from the Configuration menu and select YES to continue. An array selection window displays the devices connected to the current controller.
3. Press the arrow keys to choose specific physical drives and press spacebar to associate the selected drive with the current array. The indicator for selected drive change from READY to ONLINE
4. Add 2 drives to current array and press <Enter> to finish creating current array.
5. Press Enter again to select array to configure.

- 
6. Press spacebar to select the array and press <F10> to configure the logical drive
  7. The default RAID level for 2 disk drives is RAID1. Just select Accept to use the default setting and press <Enter> to return to the ARRAY SELECTION MENU.
  8. Press <Enter> to end the array configuration.
  9. Select YES to Save Configuration and press any key to return to the Configure menu.

#### **Initial RAID Volume**

1. Press <Esc> to return to the Management Menu.
2. Select Initialize from Management menu. All logical drives should be listed under Logical Drives.
3. Press <Spacebar> to select drives for initialization. The selected drive will be shown in yellow.
4. After selecting the drives, press <F10> and select YES to start the initialization process.
5. When initialization is complete, press any key to continue.
6. Press <Esc> to return to the Management Menu.

#### **Assigning a Hot Spare Disk**

1. Select Objects from Management menu.
2. Select Physical Drive from Objects. All of the HDDs will be listed.
3. Select a drive marked as READY and press Enter.
4. Select Make Hot Spare and press Enter.
5. Select Yes then you will see the HDD is changed from READY to HOTSP.
6. Press <ESC> to return to the Management Menu.

#### **Save and Exit Embedded RAID Configuration Utility**

1. When RAID configuration, initialization and assigning hot spare is complete, press <Esc> in the Management Menu and select YES to exit the Embedded RAID Configuration Utility.
2. Press <Ctrl> + <Alt> + <Del> to reboot the server.
3. Now you can start to install OS.

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## APPENDIX C: ADAPTEC SAS 44300 HOSTRAID CREATION

### Configuring Adaptec SAS 44300 HostRAID

This section briefly shows how to create RAID 1 with Adaptec SAS 44300 HostRAID.

#### Starting SAS Configuration Utility

To start Adaptec SAS/SATA Configuration Utility, press **CTRL-A** when you see the Adaptec Serial Attached SCSI (SAS) BIOS during POST.

#### Create RAID1 volume

1. Select **Array Configuration Utility** in the **Options**.
2. Select **Create Array** in the **Main Menu** of **Array Configuration utility**.
3. Press the arrow keys to choose specific physical drives and press spacebar to associate the selected drive with the current array. The select drives will be added to the right field.
4. After you select the drives, press **Enter** to configure the **Array Properties**.
5. Select **RAID 1(Mirror)** and press **Enter**.
6. Specify the name for the RAID volume and press **Enter**.
7. Select **Quick Init** to create the RAID.
8. Press **Enter** on **Done** to completed the RAID creation.

#### Assigning a Hot Spare Disk

1. Select **Add/Delete Hotspare** in the **Main Menu** of **Array Configuration utility**.
2. Press the arrow keys to choose specific physical drives and press spacebar. The selected drive will be added to the right field.
3. Press **Enter** then **Y** to create the spare.
4. Press **Y** again to confirm creating the spare.
5. Now you can press **ESC** to exit the Adaptec SAS/SATA Configuration utility and start to install OS.

---

## APPENDIX D: LSI MEGARAID SAS 8204ELP RAID CREATION

### Configuring LSI MegaRAID SAS 8204ELP

This section briefly shows how to create RAID with LSI MegaRAID SAS 8204ELP.

#### Starting LSI MegaRAID SAS RAID Configuration Utility

To start LSI MegaRAID SAS RAID Configuration Utility for MegaRAID SAS 8204ELP, press **CTRL-M** 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. Select **Objects** from Management menu.
2. Select **Adapter** from Objects. The selectable adapter will be listed.
3. Press Enter on the adapter and the adapter setting will be shown on the screen. You can change the setting from this menu.
4. Select **Factory Default** and **Yes** to load the default settings.
5. Exit the configuration utility and press <Ctrl> + <Alt> + <Del> to reboot the server.

#### Creating a RAID volume

1. Select **Configuration** from **Management Menu**.
2. Select **New Configuration** from the **Configuration menu**. An array selection window displays the devices connected to the current controller.
3. Press the arrow keys to choose specific physical drives and press spacebar to associate the selected drive with the current array. The indicator for selected drive change from **READY** to **ONLINE**.
4. After you adding the drives to current array, press **Enter** to finish creating current array.
5. Press **Enter** again to select array to configure.
6. Press **spacebar** to select the array and press **F10** to configure the logical drive
7. Select **Accept** and press **Enter** to use the default setting for the RAID volume.
8. Press **Enter** to end the array configuration.
9. Select **YES** to Save Configuration and press any key to return to the **Configuration menu**.
10. Press **ESC** to return to the **Management Menu**

#### Initial RAID Volume

6. Select **Initialize** from **Management menu**. All logical drives should be

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listed under **Logical Drives**.

7. Press **Spacebar** to select drives for initialization. The selected drive will be shown in yellow.
8. After selecting the drives, press **F10** and select **YES** to start the initialization process.
9. When initialization is complete, press **ESC** to continue.
10. Press **ESC** to return to the **Management Menu**.

#### **Assigning a Hot Spare Disk**

1. Select **Objects** from **Management menu**.
2. Select **Physical Drive** from **Objects**. All of the HDDs will be listed.
3. Select a drive marked as **READY** and press **Enter**.
4. Select **Make Hot Spare** and press **Enter**.
5. Select **Yes** then you will see the HDD is changed from **READY** to **HOTSP**.
6. Press **ESC** to return to the **Management Menu**.

#### **Save and Exit Embedded RAID Configuration Utility**

1. When RAID configuration, initialization and assigning hot spare is completed, press **ESC** in the **Management Menu** and select **YES** to exit the RAID Configuration Utility.
2. Press **Ctrl + Alt + Del** to reboot the server.
3. Now you can start to install OS.