1. INTRODUCTION

The Revoltec ALU GUARD series, which includes the interfaces USB 2.0, LAN and eSATA, makes a mobile HD drive available in combination with an installed hard disk, offering quick and problemless access to additional disk space for your computer. Due to its plug & play function, the installation is extremely comfortable, and it guarantees a quick availability whenever you are on the road. Due to the various interfaces, ALU GUARD devices are easily connected to a PC, and they can even be disconnected and re-connected while the equipment is in operation.

The version with the USB 2.0 interface is compatible with Apple Macintosh and Windows computers. If a corresponding LAN or eSATA connector is available on your computer, then the device can also be connected via the eSATA interface. (Revoltec Rhodium Midi Tower includes such an eSATA connector as a standard at the front of the housing)

TIP: From a hardware point of view, ALU GUARD USB 2.0 hard disk drives can be used to store and access information jointly from Windows and Macintosh computers. The drive must simply be installed as an MS-DOS drive, to enable cross-platform utilisation.

3. SYSTEM REQUIREMENTS

Hardware:
Notebook or desktop PCs with USB 1.1, USB 2.0 or LAN connection.

Operating system:
Windows ME, Windows 2000, Windows XP, Windows Vista, Mac OS 8.6 or higher versions

4. DESCRIPTION OF PARTS AND THEIR FUNCTION

LED: Power, data access indicator blinking (LED blue)

USB plug: USB plug for connection to a USB interface

LAN plug: LAN plug for connection to an LAN interface

USB cable: Connects the external drive to the computer via the USB interface

Power adapter cable: Connects the external drive with mains power.

5. INSTALLATION OF THE HARDWARE

Step 1: Start up the operating system of your computer. (No additional driver installation is required for the above-mentioned operating systems.)

Step 2: Connect your ALU GUARD drive via the USB 2.0 interface with your computer.

Step 3: Connect your ALU GUARD drive with an external power adapter and connect it to mains power. The ALU GUARD activates and the ready indicator will light up.

6. INSTALLATION OF DRIVERS

6.1 Windows 98/SE

For the utilisation of the hard disk drive under Windows 98/SE, you must download the USB drivers via the Microsoft software update function and subsequently install them. (http://www.microsoft.com/support)

If the new hard disk does not appear on the Desktop, then this means that the new hard disk has not yet been partitioned. In that event, please read the chapter "Partitioning of a new hard disk", so that your ALU GUARD can be prepared accordingly.

6.2 Windows ME / 2000 / XP / Vista

Step 1: The first time that you connect your ALU GUARD to your computer, the system will find the new device and install the driver (USB Mass storage device) automatically from the system files.

Step 2: After the system has installed the driver of the Mass storage device, a new disk drive will be displayed on the (Desktop) within a few seconds. This is the hard disk drive that you have just installed.

This hard disk drive will be directly supported by the mass storage device in the operating systems Win ME/2000/XP/Vista. You need not install any drivers. When the ALU GUARD contains a new hard disk, which has not yet been partitioned, then please read the chapter "Partitioning of a new hard disk" to prepare your ALU GUARD device.

6.3 Mac OS

If you connect the drive via the USB 2.0 interface, then the ALU GUARD will be supported by the mass memory support function, Mass Storage Support 1.3.5, of the Mac operating system. You need not install any drivers.

Operating system Mac 8.6
If you use the operating system MAC 8.6, then the "Mass Storage Support 1.3.5" software must be installed. "USB Mass Storage Support 1.3.5" can be downloaded via the software updates from Apple. (http://www.apple.com/support)

Operating system Mac 9.0 or newer versions
No software needs to be installed, if you are using a Mac OS 9.0 or a higher version.

When you have linked the ALU GUARD to the USB socket of your Mac computer, the volume of the mass storage device will be displayed on your Desktop within a few seconds.
7. UTILISATION OF THE ALU GUARD

After a first installation, the ALU GUARD diskdrive can be connected and disconnected from your computer, even while your computer is running. To do this, please proceed as follows.

7.1 Connecting your ALU GUARD to a computer:

Step 1: Connect your ALU GUARD drive via the USB 2.0 or the LAN interface with your computer.

Step 2: The external power adapter must be connected to your ALU GUARD diskdrive and to a mains socket. When you activate the „On“ switch, your harddisk will start up and the ready indicator will light up.

Step 3: The ALU GUARD is immediately operable and will be displayed as an icon on your [Desktop].

7.2 Disconnection of the ALU GUARD from your computer:

7.2.1 Windows 98

Step 1: Double-click on the green hardware icon „Safely remove hardware“, which is displayed on your system bar, and then click on the device you wish to disconnect. To complete the process, click on [Close].

Step 2: When the system asks whether the drive should really be disconnected from the computer, click on [OK] in the dialog screen. When the green arrow symbol has disappeared, then you may disconnect your ALU GUARD from the computer.

7.2.2 Windows ME / 2000 / XP / Vista

Step 1: Double-click on the icon [Safely remove hardware] in the system bar.

Step 2: Checkmark the option [USB Mass storage device] in the dialog box, then click on [Close], select the harddisk drive that you wish to disconnect, and then once more click on [Close] in the screen that follows.

Step 3: Wait a few seconds, after which the system will display the following message: „You can now disconnect your device safely from the computer.“ You can then disconnect your ALU GUARD from the computer.

7.2.3 MAC operating system

If you would like to disconnect your ALU GUARD from the computer, then you must first close all open windows and running applications, which are stored on your harddisk drive, after which you just drag the icon of the corresponding harddisk drive to the „Wastebasket“.

WARNING!!!
Please do not disconnect your ALU GUARD from the computer or a network node, as long as data is being copied from or to the device. And never disconnect your ALU GUARD, as long as files or applications are open and in use, which are stored on the ALU GUARD. NON-OBSERVANCE OF THESE INSTRUCTIONS WILL LEAD TO DATA LOSS!

8. PARTITIONING OF A NEW HARRDDISK

8.1 Partitioning under Windows 98/ME

Please refer to the help files of your operating system.

8.2 Partitioning under Windows 2000/XP

Step 1: For partitioning your ALU GUARD diskdrive under Windows 2000/XP, first plug in the harddisk, then click on [Start], select [Control panel] at the right, then select [Administrative tools] and a double click on [Computer management].

Step 2: In the left part of the window, please click on [Device manager] and [Disk drives] in the right-hand panel; where a list of all connected harddisk drives will be displayed. Select the harddisk that you have added from this list. The partitioning status of this drive will be displayed to the right of the harddisk number. Here you can create a new partition, or you can delete an existing partition, by clicking on the right-hand side of this pane.

Step 3: Click on the pane to the right of the harddisk drive. Then click on [Create partition]. The „Partitions wizard“ will be displayed under Assistant.

Step 4: Follow the instructions provided by the Assistant, for partitioning and formatting your harddisk drive.

You can begin to store data on the drive, as soon as you have created a partition on your ALU GUARD.
1. Installation

Requirements

The following are required when using the ALU GUARD LAN:
- TCP/IP Protocol must be installed in your PC.
- Connect the Alu Guard LAN to a switch/hub port to connect to your network.

HW installation

To begin the installation of ALU GUARD LAN:
- Connect the network cable to LAN port of ALU GUARD LAN and to Hub/Switch.
- Connect the power to ALU GUARD LAN. Switch the Power Button to ON.
- Booting up will take about 1 minute
- When the Ready/Status Led is lighting permanently BLUE means the boot up is completed.

2. Web

Type in the LAN IP (default-IP address: 192.168.0.100) in the browser to enter the LAN-Web surface.

2.1 Home

The basic information of the ALU GUARD LAN will be shown like the following.

<table>
<thead>
<tr>
<th>System Info</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Firmware version:</strong> V06R02</td>
</tr>
<tr>
<td><strong>Device name:</strong> NSDFFF09</td>
</tr>
<tr>
<td><strong>Description:</strong> Network Storage Device</td>
</tr>
<tr>
<td><strong>MAC address:</strong> 00:16:67:ff:ff:09</td>
</tr>
<tr>
<td><strong>IP address:</strong> 211.22.74.123</td>
</tr>
<tr>
<td><strong>Protocol:</strong> Static</td>
</tr>
<tr>
<td><strong>HTTP server port:</strong> 80</td>
</tr>
</tbody>
</table>

2.2 Administration

The username and password will be required when entering this part. The default username is "admin" and the password is "root".

![Connect to 192.168.16.1](image)

2.2.1 LAN Settings

This section contains all LAN settings to configure the ALU GUARD LAN to the network. Depending on how the network is set up, changes to this page may or may not be necessary. You can choose between DHCP and Static IP from the "Protocol".

<table>
<thead>
<tr>
<th>Lan Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Work Group:</strong> workgroup</td>
</tr>
<tr>
<td><strong>Protocol:</strong> Static IP</td>
</tr>
<tr>
<td><strong>IP Address:</strong> 192.168.0.100</td>
</tr>
<tr>
<td><strong>Subnet Mask:</strong> 255.255.255.0</td>
</tr>
<tr>
<td><strong>Default Gateway:</strong> 0.0.0.0</td>
</tr>
<tr>
<td><strong>Primary DNS:</strong> 0.0.0.0</td>
</tr>
<tr>
<td><strong>Secondary DNS:</strong> 0.0.0.0</td>
</tr>
</tbody>
</table>

2.2.1.1 DHCP

Selecting this option enables the ALU GUARD LAN to request an IP and auto-configure itself to the network if there is a DHCP Server present. NOTE: If DHCP Client is enabled, but there is no DHCP server, the Alu Guard LAN will fall back to the default IP address of 192.168.0.100.

2.2.1.2 Static IP

Click this option if there is no DHCP Server present on the network and manually enter the network settings in the fields provided below this option.
> IP Address - Enter the static IP address
> Subnet Mask - Enter the Subnet Mask address
> Default Gateway - Enter the Gateway IP address
> DNS1 and DNS2 (both optional) - If available, enter those IP addresses here

If you need assistance in manually entering the above information, contact your network administrator for additional help in configuring the network settings.

2.2.1.3 PC IP Setting (without DHCP)

Before linking to ALU GUARD LAN through WEB or FTP, the Alu guard LAN and all the computers in the network have to follow the Internet Protocol setting showed as below:

The first three numbers of the IP address in ALU GUARD LAN and the computers have to be exactly the same (192.168.0 — shown as the red square above). The last number of the IP address in ALU GUARD LAN and each computer has to be different. The numbers of the Subnet mask in ALU GUARD LAN and the computers have to be exactly the same. The above setting can allow computers access the WEB and FTP in ALU GUARD LAN. For more detail information of TCP/IP setting, please contact your web administrator.

2.2.2 System

The basic settings of ALU GUARD LAN can be set here. Including "Device Name", "Description", "Date", "Time Zone", "Http Port" and the NTP, FTP server can be enabled or disabled below.

After the NTP option is enabled, you'll need to enter a valid NTP server to make it works correctly. It will get the time from the server. (The selection for the date and time will be closed after NTP is enabled)

FTP Setting: We are allowed to use the FTP to access to the device too after it is enabled.

PS: The FTP Username and password of Admin are, Username: Admin, Password: admin
2.2.3 Harddisk Status

Harddisk's status will be show in here.

<table>
<thead>
<tr>
<th>Index</th>
<th>Share Name</th>
<th>Device ID</th>
<th>FS Type</th>
<th>Total Size(MB)</th>
<th>Free Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NAS-HD</td>
<td>Hitachi</td>
<td>Fat/Fat32</td>
<td>951425</td>
<td>100%</td>
</tr>
</tbody>
</table>

Refresh

2.2.4 Users

An ALU GUARD LAN hard disk MUST be installed for this function to work properly.

Delete User: You can delete the not needed user account from here.

There are two options to choose in here:

Leave user's share folder for Administrator (read/write)
- This option will move the user's folder into Administrator's folder, and only read/writeable for administrator (administrator's folder will be created automatically at the time of ALU GUARD LAN hard disk is created).

Remove user's share folder completely
- This will remove all users' files and folder completely without any backup.

Add a new user: Type in the username, and password you want.

There are 3 properties that can be chosen:

Not accessible to other users: Only the user himself can access to the folder.

Read-only to other users: The other user of ALU GUARD LAN get in to this user's folder to read only.

Read/Write to other users: The other user of ALU GUARD LAN can read and write files in this user's folder.

Click on "Save" after you want to add the user. Or "Cancel" to clear the information (user name, password), or "Return" to get back to the previous screen.

Change Password: You can change the user's password from here (only works if there is a user existing).
2.2.5 Share
You can change the user's properties, after a user has been added to the list.

There will be a default admin which can be used to login the admin folder and FTP.
Default Username: admin, Password: admin

Click on the user's you want to change (After selection you can see his properties) and click on "Modify Properties". Choose the properties you want to share and click "Save", or you can return to previous screen by clicking on the "Return" button (properties won't be changed).

2.2.6 Tools

2.2.6.1 Scheduling
A schedule for the ALU GUARD LAN to restart can be set in here.

2.2.6.2 Restart
Restart the ALU GUARD LAN immediately. (you have to confirm it)

2.2.6.3 Hard disk utility
Two functions can be found in this option.
1. Format: Format a new hard disk into an ALU GUARD LAN hard disk from here (User management ONLY works on an ALU GUARD LAN hard disk). The minimum requirement of hard disk size is 10GB.
2. Scandisk: Can be used to repair the damaged files on the hard disk. (ALU GUARD LAN hard disk required first).

2.2.6.4 Firmware Upgrade
Whenever a new firmware is released, you can upgrade the ALU GUARD LAN firmware from here. This will take about 1-2 min for the upgrade to complete.

2.2.6.5 Save Configuration
This allows you to backup the setting you have set for future use. (Including the settings in LAN, System and Scheduling)
Download: The configuration file will be downloaded (Internet Explorer 6.0 or higher users will need to click on the protection bar on top and choose "download files")

Restore: This function allows you to restore the previous setting by loading the configuration file you have saved before.

2.2.6.6 Factory Default

Only use this function whenever you want the device to be set back to the Factory Default. ALU GUARD LAN will be rebooted for the new setting to be effective.

2.2.6.7 Login Settings

The username and password to login the ALU GUARD LAN can be change from here.

2.2.6.8 System Log

You can view the log content from here.

3. Reset

The steps of H/W Reset are as follows:
- Reset button is located at the Left side of the PCB
1. Power Off
2. Unscrew and Remove top cover
3. Unscrew and Remove HDD
4. Power On and wait for about 30 seconds to get LAN Disk boot up is ready
5. Press the Reset Button:
   - 1 second, IP will be returned to factory default as 192.168.0.100
   - 10 seconds, IP and all settings will be returned to factory defaults.
   
   Please check the changes has been set by Network browser (e.g. IE 6.0)
6. Power Off
7. Reconnect HDD and screw it tightly
8. Screw the top cover

10. MANUFACTURER

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