

AMD RAID Installation Guide

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1. AMD BIOS RAID Installation Guide

AMD BIOS RAID Installation Guide is an instruction for you to configure RAID functions by using the Option ROM under BIOS environment. After you make a SATA / SATAII / SATA3 driver diskette, press <F2> or to enter BIOS setup to set the option to RAID mode by following the detailed instruction of the "User Manual" in our support CD or "Quick Installation Guide", then you can start to use the Option ROM to configure RAID.

1.1 Introduction to RAID

The term "RAID" stands for "Redundant Array of Independent Disks", which is a method combining two or more hard disk drives into one logical unit. For optimal performance, please install identical drives of the same model and capacity when creating a RAID set.

RAID 0 (Data Striping)

RAID 0 is called data striping that optimizes two identical hard disk drives to read and write data in parallel, interleaved stacks. It will improve data access and storage since it will double the data transfer rate of a single disk alone while the two hard disks perform the same work as a single drive but at a sustained data transfer rate.

WARNING!!

Although RAID 0 function can improve the access performance, it does not provide any fault tolerance. Hot-Plug any HDDs of the RAID 0 Disk will cause data damage or data loss.

RAID 1 (Data Mirroring)

RAID 1 is called data mirroring that copies and maintains an identical image of data from one drive to a second drive. It provides data protection and increases fault tolerance to the entire system since the disk array management software will direct all applications to the surviving drive as it contains a complete copy of the data in the other drive if one drive fails.

RAID 10 (Stripe Mirroring)

RAID 0 drives can be mirrored using RAID 1 techniques, resulting in a RAID 10 solution for improved performance plus resiliency. The controller combines the performance of data striping (RAID 0) and the fault tolerance of disk mirroring (RAID 1). Data is striped across multiple drives and duplicated on another set of drives.

1.2 RAID Configurations Precautions

1. Please use two new drives if you are creating a RAID 0 (striping) array for performance. It is recommended to use two SATA drives of the same size. If you use two drives of different sizes, the smaller capacity hard disk will be the base storage size for each drive. For example, if one hard disk has an 80GB storage capacity and the other hard disk has 60GB, the maximum storage capacity for the 80GB-drive becomes 60GB, and the total storage capacity for this RAID 0 set is 120GB.
2. You may use two new drives, or use an existing drive and a new drive to create a RAID 1 (mirroring) array for data protection (the new drive must be of the same size or larger than the existing drive). If you use two drives of different sizes, the smaller capacity hard disk will be the base storage size. For example, if one hard disk has an 80GB storage capacity and the other hard disk has 60GB, the maximum storage capacity for the RAID 1 set is 60GB.
3. Please verify the status of your hard disks before you set up your new RAID array.

WARNING!!

Please backup your data first before you create RAID functions. In the process you create RAID, the system will ask if you want to "Clear Disk Data" or not. It is recommended to select "Yes", and then your future data building will operate under a clean environment.

1.3 Installing Windows 7 / 7 64-bit / Vista / Vista 64-bit / XP With RAID

Functions

If you want to install Windows 7 / 7 64-bit / Vista / Vista 64-bit / XP on a RAID disk composed of 2 or more SATA / SATAII / SATA3 HDDs with RAID functions, please follow below procedures according to the OS you install.

1.3.1 Installing Windows XP With RAID Functions

If you want to install Windows XP on a RAID disk composed of 2 or more SATA / SATAII / SATA3 HDDs with RAID functions, please follow below steps.

STEP 1: Set up UEFI.

- A. Enter UEFI SETUP UTILITY → Advanced screen → Storage Configuration.
- B. Set the "SATA Mode" option to [RAID].

STEP 2: Make a SATA / SATAII / SATA3 driver diskette.

- A. Insert the ASRock Support CD into your optical drive to boot your system.
- B. During POST at the beginning of system boot-up, press <F11> key, and then a window for boot devices selection appears. Please select CD-ROM as the boot device.
- C. When you see the message on the screen, "Do you want to generate Serial ATA driver diskette [YN]?", press <Y>.
- D. Then you will see these messages,

Please insert a diskette into the floppy drive.

WARNING! Formatting the floppy diskette will lose ALL data in it!

Start to format and copy files [YN]?

Please insert a floppy diskette into the floppy drive, and press any key.
- E. The system will start to format the floppy diskette and copy SATA / SATAII / SATA3 drivers into the floppy diskette.

STEP 3: Use "RAID Installation Guide" to set RAID configuration.

Before you start to configure RAID function, you need to check this RAID installation guide for proper configuration. Please refer to the BIOS RAID installation guide part in this document for details.

STEP 4: Install Windows XP OS on your system.

After step 1, 2, 3, you can start to install Windows XP on your system. At the beginning of Windows setup, press F6 to install a third-party RAID driver. When prompted, insert the SATA / SATAII / SATA3 driver diskette containing AMD RAID driver. After reading the floppy disk, the driver will be presented. Select your required driver to install according to the OS you install.

1.3.2 Installing Windows 7 / 7 64-bit / Vista / Vista 64-bit With RAID Functions

If you want to install Windows 7 / 7 64-bit / Vista / Vista 64-bit on a RAID disk composed of 2 or more SATA / SATAII / SATA3 HDDs with RAID functions, please follow below steps.

STEP 1: Set up UEFI.

- A. Enter UEFI SETUP UTILITY → Advanced screen →Storage Configuration.
- B. Set the "SATA Mode" option to [RAID].

STEP 2: Use "RAID Installation Guide" to set RAID configuration.

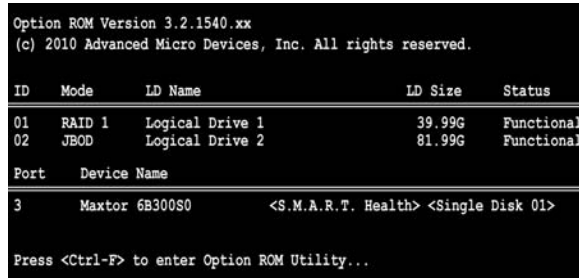
Before you start to configure RAID function, you need to check this RAID installation guide for proper configuration. Please refer to the BIOS RAID installation guide part in this document for details.

STEP 3: Make a SATA / SATAII / SATA3 driver diskette.

STEP 4: Install Windows 7 / 7 64-bit / Vista / Vista 64-bit OS on your system.

1.4 Opening Option ROM

The Option ROM and the Option ROM Utility are built-in components of the AMD motherboard. When the Option ROM loads during boot-up, it displays pertinent information about the RAID logical drives that it finds.



The screenshot shows the Option ROM interface with the following text and tables:

```
Option ROM Version 3.2.1540.xx
(c) 2010 Advanced Micro Devices, Inc. All rights reserved.
```

ID	Mode	LD Name	LD Size	Status
01	RAID 1	Logical Drive 1	39.99G	Functional
02	JBOD	Logical Drive 2	81.99G	Functional

Port	Device Name
3	Maxtor 6B300S0 <S.M.A.R.T. Health> <Single Disk 01>

Press <Ctrl-F> to enter Option ROM Utility...

When the Option ROM screen appears, press Ctrl-F to enter the Utility. The Option ROM screen displays the following information:

ID – An identification number assigned to each logical drive by the Option ROM.

Mode – The RAID mode (level) configuration of the logical drive

LD Name – The name you assigned when the logical drive was created, or a default name

LD Size – The data capacity of the logical drive in GB (Gigabytes).

Status – Shows one of three logical drive conditions:

Functional – The logical drive is fully operational, and no problems are present.

Critical – The logical drive is still operational, meaning you can read and write data to it. But the logical drive has lost fault tolerance. For RAID levels 1, 5, and 10, the logical drive contains a failed physical drive. You must identify and replace the failed physical drive, then rebuild the logical drive using the RAIDXpert software.

Offline – The logical drive is no longer operational, meaning you cannot read and write data to it. You must identify and replace the failed drive(s). Then you can create a new logical drive and copy your data to it from the last tape backup or other device.

For RAID levels 1, 5, and 10, two or more physical drives in the logical drive have failed.

For a RAID 0 or JBOD at least one physical drive has failed.

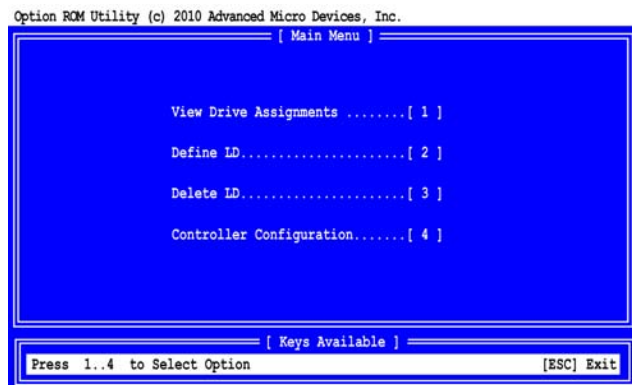
A RAID Ready logical drive disappears from the user interface when its physical drive fails.

Port – The AMD motherboard port ID number to which the Single Disk (unassigned physical drive) is attached.

Device Name – The manufacturer's name and model number of this physical drive. S.M.A.R.T. refers to the Self-Monitoring, Analysis and Reporting System that monitors the condition of disk drives. Healthy means the disk drive is OK.

1.5 Using the Main Menu

When the Option ROM displays on your computer screen, press Ctrl-F to enter the Utility and display the Main Menu.



The Main Menu (above) has five options:

Press 1 to view physical drive assignments

Press 2 to create a logical drive or view information about an existing logical drive.

Press 3 to delete a logical drive.

Press 4 to view the controller configuration.

Press Esc (Escape) to exit the utility and reboot your PC.

1.6 Viewing Drive Assignments

From the Main Menu screen, press 1 to see the View Drive Assignments screen.

Option ROM Utility (c) 2010 Advanced Micro Devices, Inc.

[View Drive Assignments]				
Port:ID	Drive Model	Capabilities	Capacity(GB)	Assignment
01:00	ST380023AS	SATA 1.5G	80.02	
	[S.M.A.R.T.]	Health		
	Extent 1		79.96	LD 1-1
02:00	ST380023AS	SATA 1.5G	80.02	
	[S.M.A.R.T.]	Health		
	Extent 1		79.96	LD 1-2
03:00	ST380023AS	SATA 1.5G	80.02	
	[S.M.A.R.T.]	Health		
	Extent 1		80.02	<Single Disk>

[Keys Available]

[↑] Up [↓] Down [PaUp/PaDn] Switch Page [Ctrl+H] Full Erase

[ESC] Exit

This screen reports physical drive assignments and provides the following information:

Port: ID – Shows the AMD motherboard port ID number to which a particular physical drive is attached. The total number of ports depends on the motherboard and whether a port multiplier is connected.

Drive Model – Identifies the manufacturer, model, and model number (if applicable) of each physical drive. S.M.A.R.T. refers to the Self-Monitoring, Analysis and Reporting System that monitors the condition of disk drives. Healthy means the disk drive is OK.

Capabilities – The type and speed of the physical drive, such as SATA 1.5 Gb/s, 3.0 Gb/s, or 6.0 Gb/s.

Capacity (GB) – Reflects the capacity in GB (gigabytes) of the physical drive.

Assignment – This field identifies the logical drive to which the physical drive belongs. In the example above, there is one logical drive composed of two physical drives. LD 1-2 means logical drive 1, physical drive 2. Unassigned drives are labeled *Single Disk*. You can use unassigned drives to create a new logical drive.

Extent – An extent is a portion of the physical drive. The Option ROM Utility allows you to split the capacity of a physical drive between two logical drives. The portion of a physical drive available to be used in a logical drive is called an *extent*. The sum of the two extents is slightly smaller than the total capacity of the physical drive.

1.7 Secure Erasing a Physical Drive

Warning

When you secure erase a physical drive, you permanently delete all data on the physical drive. There is no way to restore your data after a secure erase.

Do not secure erase a physical drive that belongs to a logical drive. This action will cause the logical drive to go Critical or Offline.

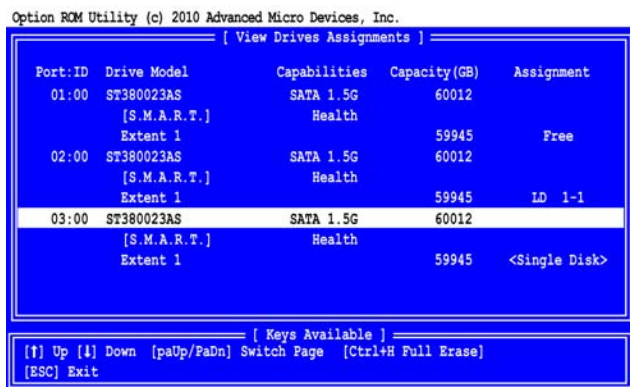
Back up any important data before you use this feature!

Important

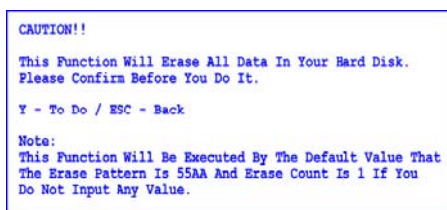
Once you begin, you cannot exit the Option ROM Utility until the Secure Erase operation is finished. Secure Erase takes about the same amount of time as a partition and format. Plan ahead and allow yourself enough time.

The Secure Erase feature overwrites all sectors on a physical drive. To secure erase a physical drive:

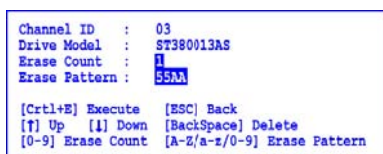
- 1 From the Main Menu screen, press 1 to see the View Drive Assignments screen.



- 2 Press the arrow keys to highlight a physical drive you want to secure erase and press Ctrl-H. The caution screen appears.



- 3 Press Y to continue. The settings screen appears.



- 4 Optional. Press the arrow keys to highlight the settings you want. Press the Backspace key to delete, then enter a new value for:

Erase Count. The default is 1.

Erase Pattern The default is 55AA (hexadecimal)

- 5 Press Ctrl-E to continue. The confirmation screen displays.

```
Please press Ctrl + P Key to erase your hard disk.  
Ctrl+P - To Do / ESC - Back
```

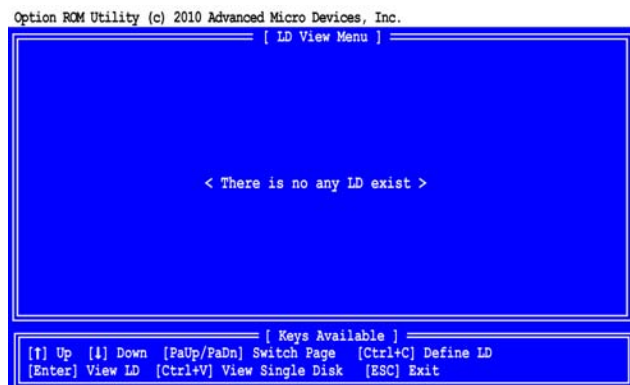
- 6 Press Ctrl-P to secure erase your physical drive. Watch the screen to monitor the progress.

```
Secure Erase Function Is DOING Now...  
Please Wait...  
  
Start Time      : 15:15:06  
End Time        : 00:00:00  
Erase Channel ID : 04  
Erase Count     : 1 of 1  
Erase Progress  : 001 %
```

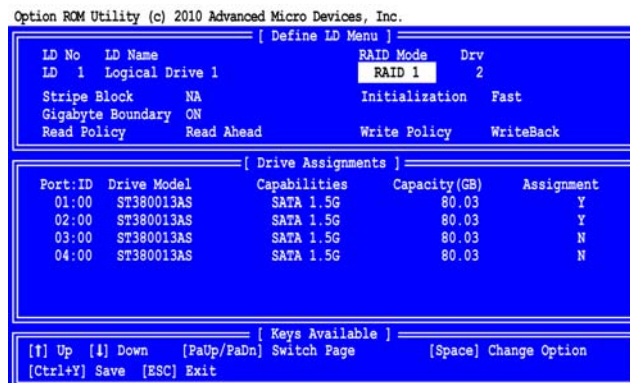
Secure Erase runs until all sectors of the selected physical drive have been overwritten. Depending on the size of your physical drive, this operation can take some time. You cannot exit the Option ROM Utility until the Secure Erase is done.

1.8 Creating a Logical Drive

- 1 From the Main Menu screen, press 2 to display the Define LD Menu.



- 2 Press the arrow keys to highlight a logical drive number you want to define and press Enter to select it.
The Define LD Menu appears for the number you selected.



- 3 Choose the RAID Level you want. In the Define LD Menu section, press the Spacebar to toggle through logical drive types:
RAID 0 (Stripe)
RAID 1 (Mirror)
RAID 5 (Stripe with Distributed Parity)
RAID 10 (Stripe/Mirror)
RAID Ready (Single Drive)
JBOD (Just a Bunch of Disks)
- 4 Press the arrow keys to move to the next option. Option choices depend on the RAID level you selected.
Initialization. Press the Spacebar to toggle through Fast, Full, and None.
Stripe Block Size. Press the Spacebar to toggle through 64 KB, 128 KB and 256 KB.
Gigabyte Boundary. Press the Spacebar to toggle between ON and OFF.
Read Policy. Press the Spacebar to toggle through NA, Read Cache, and Read Ahead.
Write Policy. Determined by the Read Policy.

5. Press the arrow keys to move to Disk Assignments. Press the spacebar to toggle between N and Y for each available drive. Y means this physical drive will be assigned to the logical drive.

Assign the appropriate number of physical drives to your logical drive.

For optimal performance, assign physical drives of the same model and capacity.

Your PC's boot drive is not listed under Drive Assignments.

6. Press Ctrl-Y to save your logical drive configuration. The name prompt appears.

```
Please press Ctrl-Y key to input the LD name
or press any key to exit.
If you do not input any LD name, the default
LD name will be used.
```

Do one of the following actions:

Press Ctrl-Y to display a name field.



Type a name in the field and press Enter.

Press any other key to use the default name, such as *Logical Drive 1*.

If you set Fast Initialization, the following message displays:

```
Fast Initialization Option has been selected.
It will erase the MBR data of the disks.
<Press Ctrl-Y Key if you are sure to erase it>
<Press any other key to ignore this option>
```

7. Do one of the following actions:

Press Ctrl-Y to perform the fast initialization.

Press any other key to cancel logical drive creation.

You have the option of using all of the physical drive capacity for one logical drive or allocating a portion to a second logical drive.

This option is *not* available for JBOD or RAID Ready logical drives.

```
Press Ctrl-Y to Modify Array Capacity or press any
other key to use maximum capacity...
```

8. Choose one of the following actions:

Allocate the full capacity of the physical drives to a single logical drive. Go to "One Logical Drive" below.

Split the capacity of the physical drives between two logical drives.

One Logical Drive

Continued from *Create Logical Drive* step 8, above.

- 1 Press any key (except for Ctrl-Y) to use the full portion of the logical drive for one logical drive.
- 2 Press Esc to exit to the Main Menu. Press Esc again to exit the Utility.
- 3 Press Y to restart the computer.

You have successfully created a new RAID logical drive.

Note

You must be partition and format your new logical drive before you can use it.

Two Logical Drives

Continued from *Create Logical Drive* step 8, above.

- 1 Press Ctrl-Y to allocate a portion of the physical drives to the first logical drive.

```
Option ROM Utility (c) 2010 Advanced Micro Devices, Inc.
[ Define LD Menu ]
LD No  LD Name          RAID Mode  Drv
LD 1   Logical Drive 1  RAID 1    2
Stripe Block    NA          Initialization  Fast
Gigabyte Boundary ON
Read Policy      Read Ahead  Write Policy  WriteBack

[ Drive Assignments ]
Port:ID  Drive Model  Capabilities  Capacity(GB)  Assignment
01:00    ST380013AS   SATA 1.5G     80.03         Y
02:00    ST380013AS   SATA 1.5G     80.03         Y
03:00    ST3          Enter array capacity (in GB) here: 40
04:00    ST3          N
N

[ Keys Available ]
[↑] Up [↓] Down [PaUp/PaDn] Switch Page [Space] Change Option
[Ctrl+Y] Save [ESC] Exit
```

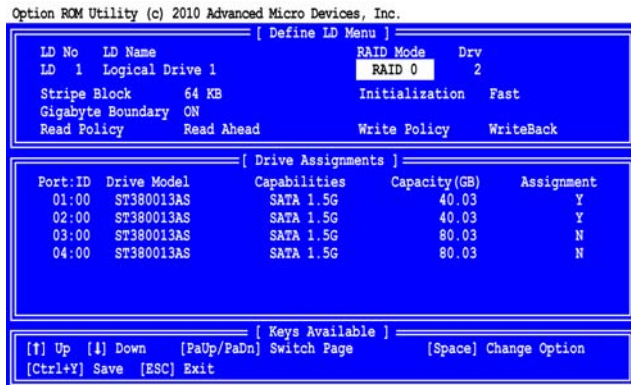
- 2 Enter the desired capacity in GB for the first logical drive and press Enter. The Define LD Menu displays again.

```
Option ROM Utility (c) 2010 Advanced Micro Devices, Inc.
[ LD View Menu ]

LD No  RAID Mode  Drv  Capacity(GB)  Status
LD 1   RAID 1    2    39.99         Functional

[ Keys Available ]
[↑] Up [↓] Down [PaUp/PaDn] Switch Page [Ctrl+C] Define LD
[Enter] View LD [Ctrl+V] View Single Disk [ESC] Exit
```

- 3 Press the up and down arrow keys to select an available logical drive number and press Enter.



4. Choose the RAID level and options for the second logical drive. Note that the physical drives on Ports 1 and 2 reflect smaller capacities because a portion of their original capacity belongs to the first logical drive. The physical drives on Ports 3 and 4 have not yet been assigned to a logical drive, so they show the original capacity.
5. Press Ctrl-Y to save your logical drive configuration.
6. Press Esc to exit to the Main Menu. Press Esc again to exit the Utility.
7. Press Y to restart the computer.

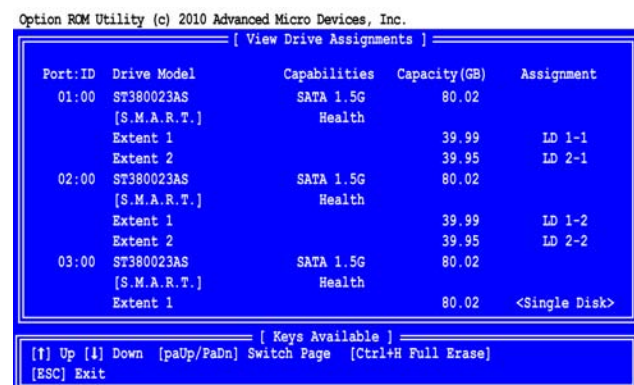
You have successfully created a new RAID logical drive.

Note

You must be partition and format your new logical drive before you can use it.

Viewing Drive Assignments, Split Physical Drives

After you create two logical drives from the same set of physical drives, press 1 on the Main Menu screen to see the View Drive Assignments screen.



In this example, observe how each of the physical drives in Ports 1 and 2 are split between two logical drives. Extent 1 belongs to logical drive 1 (LD 1). Extent 2 belongs to logical drive 2 (LD 2).

Under Assignment, the physical drives are divided into LD 1 and LD 2. For example, LD 1-1 means logical drive 1, physical drive 1; and LD 1-2 means logical drive 1, physical drive 2.

Note that the combined size of the extents is slightly smaller than the total capacity of the physical drive.

Unassigned physical drives are labeled Single Disk. You can use an unassigned physical drive to create a new logical drive.

1.9 Deleting a Logical Drive

Warning

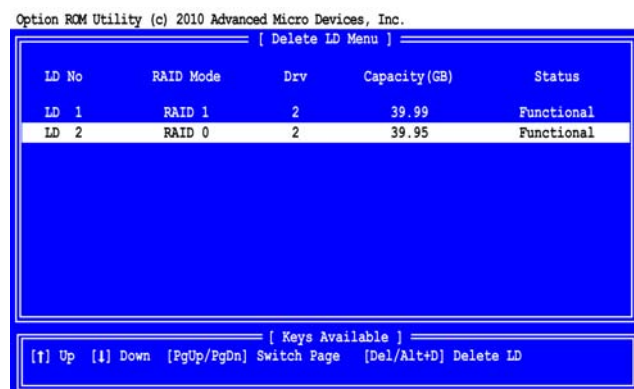
When you delete a logical drive, you delete all data on the logical drive. Be sure to back up any important data before you delete a logical drive!

Note

If you create a logical drive and install the OS on it, you cannot delete that logical drive.

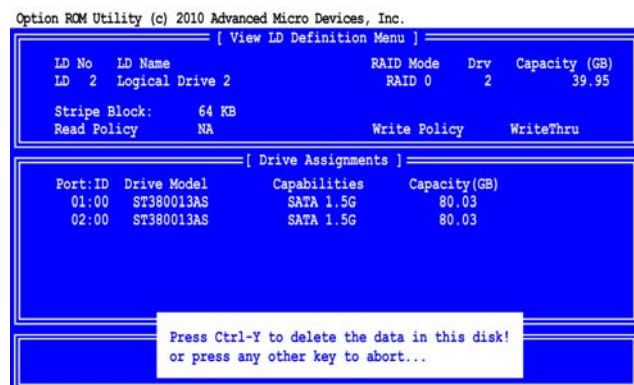
To delete a logical drive:

- 1 From the Main Menu screen, press 3 to display the Delete LD Menu.



- 2 Highlight the logical drive you wish to delete and press the Del key or Alt-D.

The Delete LD Menu for the selected logical drive appears.

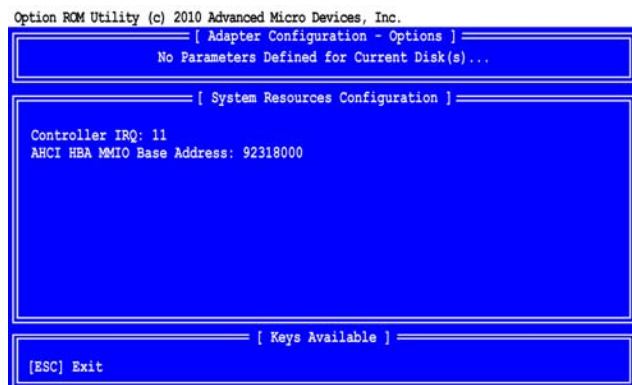


- 3 Press Ctrl-Y to confirm and complete logical drive deletion.

The screen returns to the Delete LD Menu. Press Esc to return to the Main Menu.

1.10 Viewing Controller Configuration

From the Main Menu screen, press 4 to display the Controller Configuration Options screen.



The Controller Configuration Options screen provides diagnostic information that might be helpful for troubleshooting purposes:

The system IRQ used by the RAID controller

Base Address

1.11 Responding to Logical Problems

While physical drives are highly reliable, on occasion a physical drive can fail.

Fault-tolerant (RAID 1, 5, and 10) logical drives go *Critical* when a physical drive fails.

Non-fault-tolerant (RAID 0 and JBOD) logical drives go *Offline* when a physical drive fails.

A RAID Ready logical drive disappears from the user interface when its physical drive fails.

```
Option ROM Version 3.2.1540.xx
(c) 2010 Advanced Micro Devices, Inc. All rights reserved.

ID   Mode   LD Name           LD Size   Status
---
01   RAID 1   Logical Drive 1   39.99G    Critical
02   JBOD     Logical Drive 2   81.99G    Functional

Problem is detected with Array : 1
Critical Status:
A disk member of an array has failed or is not responding.
Please refer to your User Manual for further details.

Press <Ctrl-F> to enter RAID Option ROM Utility...
```

When you boot your system, the Option ROM screen informs you if there is a critical or offline logical drive.

Allow your PC to finish booting and use RAIDXpert to identify the failed drive and to rebuild your logical drive.

See the *RAIDXpert User Manual* for more information.

2. AMD Windows RAID Installation Guide

AMD Windows RAID Installation Guide is an instruction for you to configure RAID functions by using RAIDXpert RAID management software under Windows environment. The RAIDXpert software offers local and remote management and monitoring of all AMD SATA logical drives that exist anywhere on a network. Its browser-based GUI provides email notification of all major events/alarms, memory cache management, drive event logging, logical drive maintenance, rebuild, and access to all components in the RAID configuration (server, controller, logical drives, physical drives, and enclosure). RAIDXpert is designed to work with AMD SATA RAID controllers. Other brands of RAID controllers are not supported. Please read this guide carefully and follow the instructions below to configure and manage RAID functions.

2.1 Components of RAIDXpert Installation Software

RAIDXpert installation software will install two major components to your system:

1. RAIDXpert RAID management software: The RAIDXpert software installs on the PC with the AMD SATA RAID Controller (the "Host PC").
2. Java Runtime Environment (in a private folder): The RAIDXpert installation program installs a private JRE in folder _jvm under the same directory where RAIDXpert is installed. RAIDXpert uses this private JRE to avoid incompatibility issues with any other JREs that may be present on your system.

2.2 Browser Support

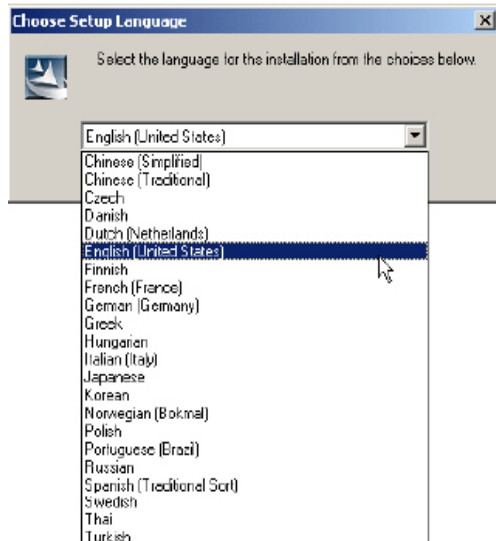
On the Host PC with the AMD Controller, where you install RAIDXpert, you must have one of the following browsers: Internet Explorer 6.0, Mozilla Suite 1.7, Mozilla Firefox 1.0, or Netscape Navigator 7.1.

If you do not have one of the above browsers, install the browser first and make it the default browser. Then install RAIDXpert. You must use one of the browsers listed above on your networked PC in order to access RAIDXpert over the network.

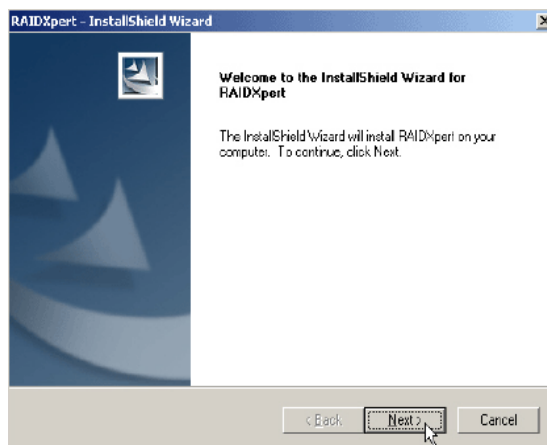
2.3 Installing RAIDXpert

Follow these steps to install RAIDXpert on your Windows-based PC or Server.

1. Boot the PC or server, launch Windows, and log in as the Administrator. If the computer is already running, exit all programs. If you are not logged in as the Administrator, log out, then log in again as the Administrator.
2. Insert the software CD into your CD-ROM drive.
3. Double-click the Install CD's icon to open it.
4. Double-click the Installer icon to launch it (right). The first RAIDXpert installation dialog box appears.
5. Follow the prompts in the installation dialog boxes.
6. When the first installation screen appears, choose an installer language from the dropdown menu.



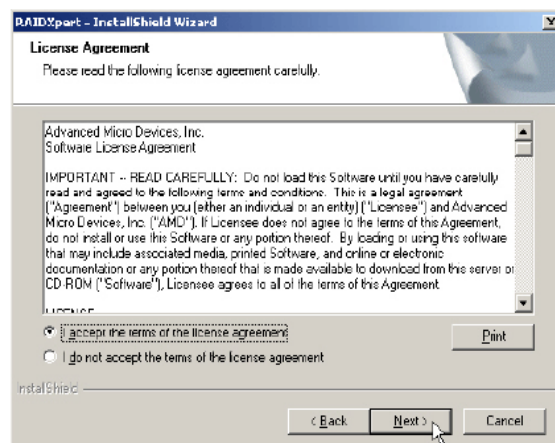
7. When the Welcome screen appears, click the **Next** button.



8. When the License Agreement screen appears, click the "I accept the terms of the license agreement" option to proceed with installation. Then click the **Next** button to continue.

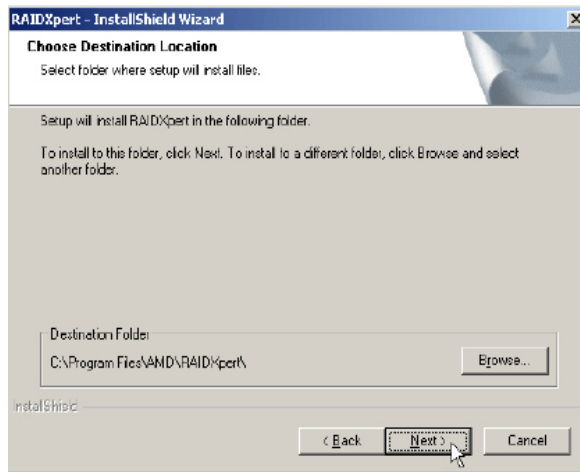
Note:

If you leave the "I do not accept the terms of the license" option selected, the installation will quit when you click **Next**.



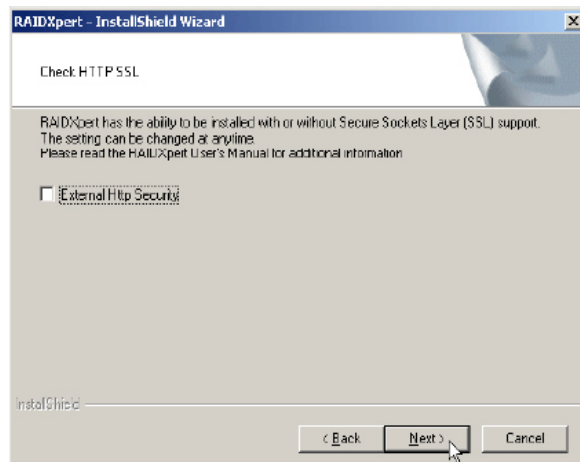
9. When the Choose Install Folder screen appears, make your selection of a folder for the RAIDXpert applications you are installing. For example, the Windows default folder is: **C:\Program Files\AMD\RAIDXpert**

If you want a different folder, type its location or click the **Choose...** button and select a new location. Click the **Next** button when you are finished.

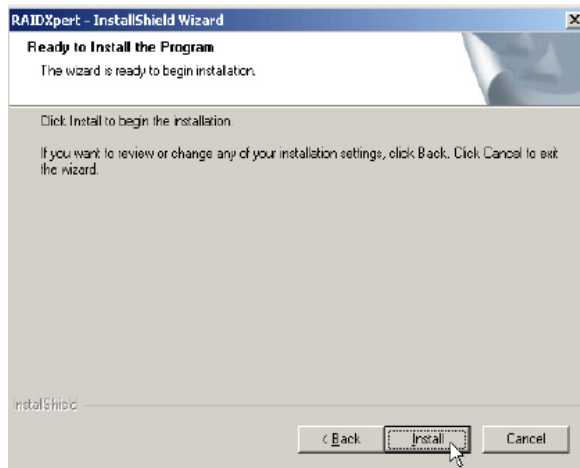


10. When the Check HTTP SSL screen appears, you can choose External Security. An explanation follows.

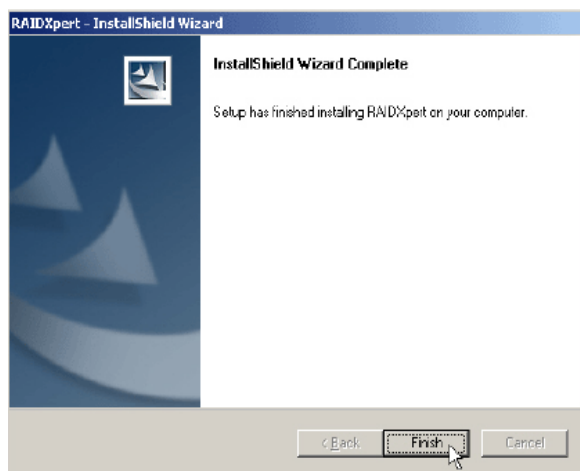
External SSL Security – Applies security to all connections involving the Internet or outside your company firewall. Security options are invisible to authorized users. AMD provides a default certificate for the server as well as for internal data communication. However, in some cases it is better to install and verify your own certificate for the webserver. And, if possible, verify your certificate by certificate authority like Verisign or Thwate. See your MIS Administrator for guidance. Click the **Next** button when you have made your choice.



11. When the Ready to Install screen appears, click the **Install** button to continue.



12. When the Install Complete screen appears, click the **Finish** button.



2.4 Logging into RAIDXpert

Choose RAIDXpert in the Windows Programs menu. Or, log on manually with your browser:

1. Launch the Browser.
2. In the Browser address field, type the entry explained below.

If you did *not* choose the External Security option during RAIDXpert installation, use the *Regular* connection.

If you chose the External Security option during RAIDXpert installation, use the *Secure* connection.

2.5 Regular Connection

RAIDXpert uses an HTTP connectionhttp://

- Enter the Host PC's IP address127.0.0.1 or localhost
- Enter the Port number:25902
- Add to launch RAIDXpert./amd

Together, your entry looks like this:

http://127.0.0.1:25902/ati or **http://localhost:25902/ati**

2.6 Secure Connection

RAIDXpert uses a secure HTTP connectionhttps://

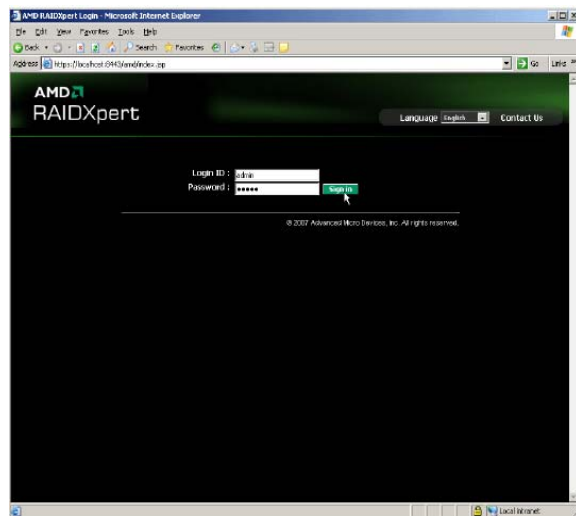
- Enter the Host PC's IP address127.0.0.1 or localhost
- Enter the Port number:8443
- Add to launch RAIDXpert. /amd

Together, your entry looks like this:

https://127.0.0.1:8443/amd or **https://localhost:8443/amd**

Note that the IP address shown above applies to a log-in at the Host PC. When you log in over a network, enter the Host PC's actual IP address or hostname.

Press the **Enter** key. Then, when the login screen appears, type **admin** in the Login ID field. Type **admin** again in the Password field. The RAIDXpert login and password are case sensitive.



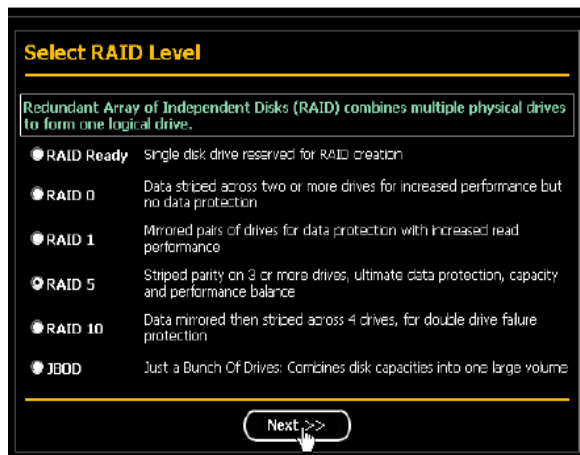
Click the **Sign in** button. After sign-in, the RAIDXpert opening screen appears.



2.7 Creating a New Logical Drive

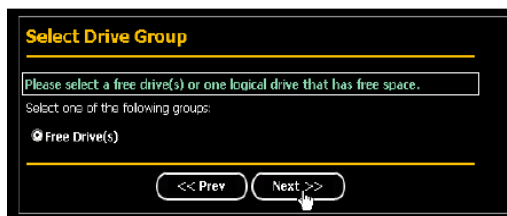
A logical drive is a collection of physical drives in a RAID. To create a new logical drive:

1. Click **Logical Drive View** in Tree View.
2. Click the **Create** tab in Management View. The Select RAID Level screen appears.
3. Select the option beside the RAID level you want for your logical drive. RAIDXpert displays the RAID levels you can use with the available physical drives.



4. In the Select Drive Type screen, click the following option:
 - **Free Drives** – Select all Free (unassigned) physical drives

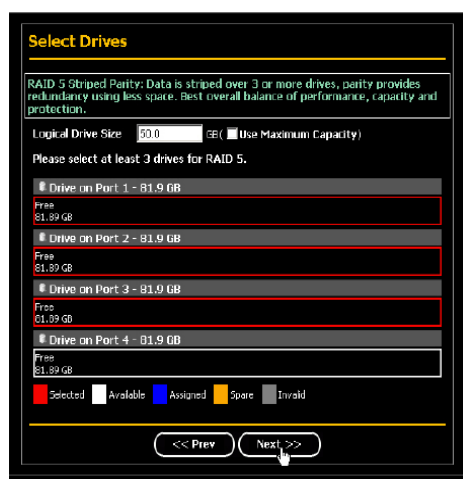
The Select Drives screen appears.



5. Click the **Next** button.
6. If you want to split the capacity of your physical drives between two logical drives, enter the capacity for the first logical drive in the Logical Drive Size field. Or, to use the maximum capacity of the physical drives, check the Use Maximum Capacity box. For RAID Ready and JBOD, the system will check the Use Maximum Capacity Box automatically.



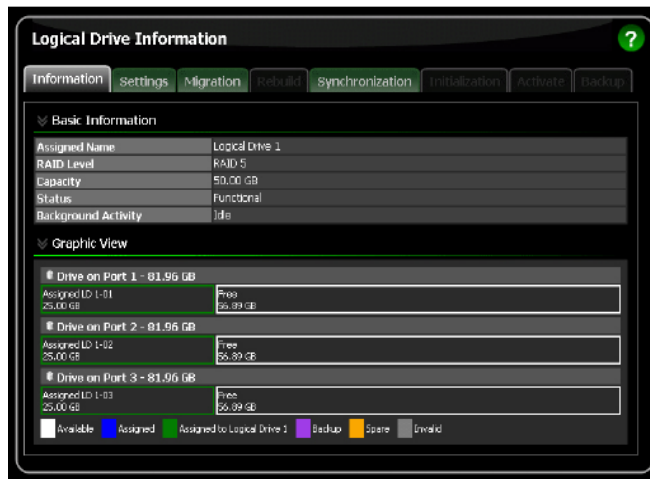
7. Click the physical drives to select them. Available drives have a black frame. Selected drives have a red frame. For RAID Ready, select only one physical drive.



8. Click the **Next** button. The Assign a Name screen appears.
9. Enter a name for the logical drive in the field provided.

10. Click the **Next** button. The Final Settings screen appears.
11. RAID 0, 5, and 10. Choose a Stripe Block Size from the dropdown menu. The choices are 64 and 128 KB. The Write Cache policy is None. You cannot change this setting.
12. RAID 0, 1, and 5. Select a Gigabyte Boundary policy from the dropdown menu.
 - **GigaByte Boundary** – Rounds the size of the logical drive down to the nearest whole gigabyte. This is the default. For more information.
 - **None** – No Boundary function.
13. Select an Initialization policy from the dropdown menu.
 - **Fast Initialization** – Erases the reserve and master boot sectors of the physical drives being added to the logical drive.
 - **Full Initialization** – Erases all sectors of the physical drives being added to the logical drive. RAID 0, 1 and 5 only.
 - **None** – No initialization. This choice is not recommended.

14. Click the **Finish** button. If there are physical drives available, the Select RAID Level screen appears again, where you can create an additional logical drive. Click the **Logical Drive** in Tree View to see all of the information about your new logical drive.



Before you can use your new logical drive, you must partition and format the logical drive using your PC's operating system.

2.8 Connecting to RAIDXpert from the Internet

The above instructions cover connections between the Host PC and other PCs using RAIDXpert over your company network. It is also possible to connect to a Host PC from the Internet.

Your MIS Administrator can tell you how to access your network from outside the firewall. Once you are logged onto the network, you can access the Host PC using its IP address.

Please note that only the Host PC can read and write data to the logical drives. However, other PCs can monitor the Host PC from virtually any location.

2.9 Running RAIDXpert without Network Connection

While RAIDXpert was designed to run over a network, you can run RAIDXpert without a network connection but only from the Host PC. Follow this procedure:

1. Choose RAIDXpert in the Windows Programs menu. Or choose RAIDXpert in the Linux Applications menu. Your browser opens and displays a "no connection to the Internet is currently available" message.
2. Click the Work Offline button.
3. In the RAIDXpert login screen, enter your user name and password (if used), then click the Sign in button. A "webpage unavailable while offline" message will display.
4. Click the Connect button. A "no connection to the Internet is currently available" message will display.
5. Click the Try Again button.

After a few moments, RAIDXpert will display normally in your browser.