

RAID Subsystem

ARC-6060 Series

User's Manual

Copyright Statement

WARRANTY

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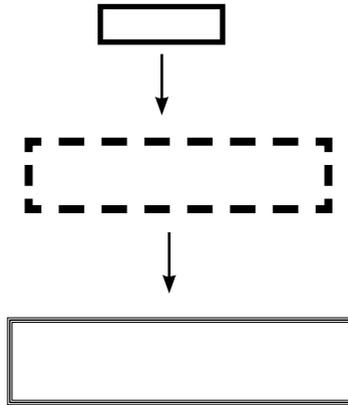
INTRODUCTION

1. Introduction



INTRODUCTION

1.1 System Architecture



1.1.1 Ultra 160/320 Host Interface

1.1.2 2Gb Host Interface

1.1.3 Serial ATA Drive Interface

INTRODUCTION

1.2 RAID subsystem Controller Board

1.2.1 Cache Memory Subsystem

INTRODUCTION

1.2.2 User Interface

1.2.3 Controller Firmware

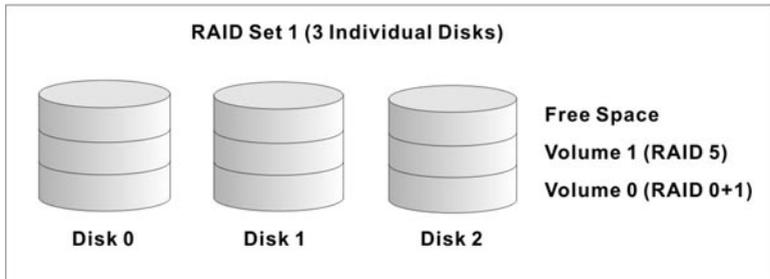
INTRODUCTION

1.3 RAID Concept

1.3.1 RAID Set

1.3.2 Volume Set

INTRODUCTION



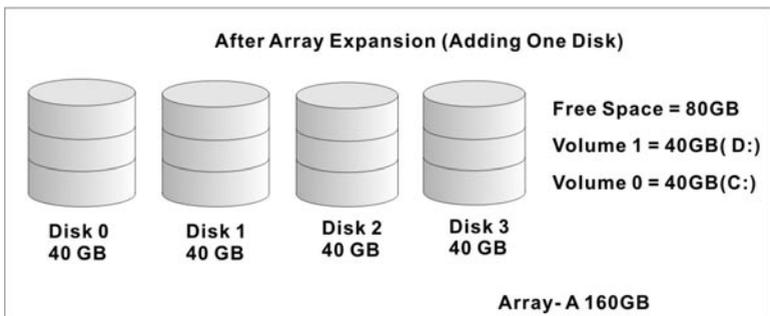
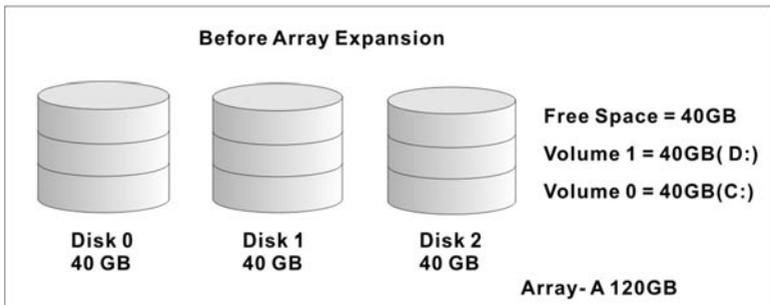
1.3.3 Easy of Use Features

1.3.3.1 Instant Availability/Background Initialization

1.3.3.2 Array Roaming

INTRODUCTION

1.3.3.3 Online Capacity Expansion



INTRODUCTION

1.3.4 Online RAID Level and Stripe Size Migration

1.4 High availability

1.4.1 Creating Hot Spares

Important:



1.4.2 Hot-Swap Disk Drive Support

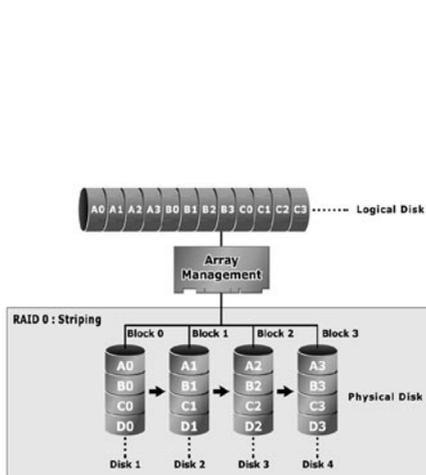
INTRODUCTION

1.4.3 Hot-Swap Disk Rebuild

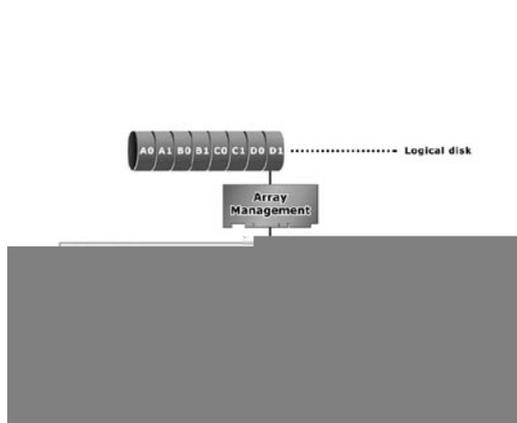
1.5 Understanding RAID

1.5.1 RAID 0

INTRODUCTION

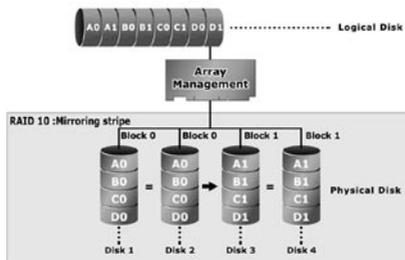


1.5.2 RAID 1

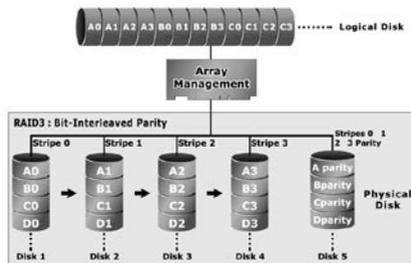


INTRODUCTION

1.5.3 RAID 10

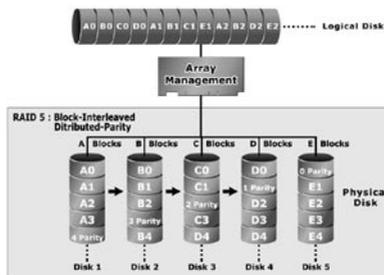


1.5.4 RAID 3

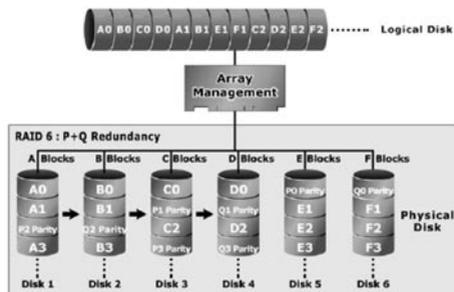


INTRODUCTION

1.5.5 RAID 5



1.5.6 RAID 6



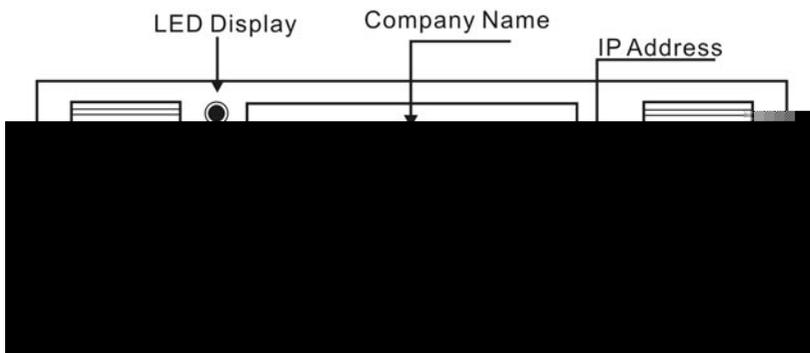
HARDWARE INSTALLATION

2. Hardware Installation

2.1 Overview

2.2 RAID Subsystem Requirements

2.3 Locations of the Parts

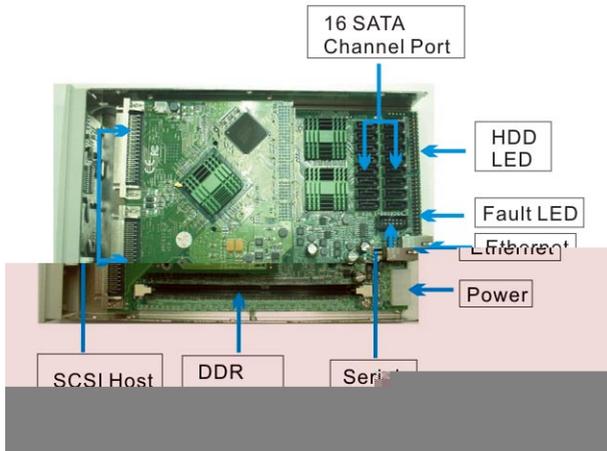


HARDWARE INSTALLATION

LED	Function

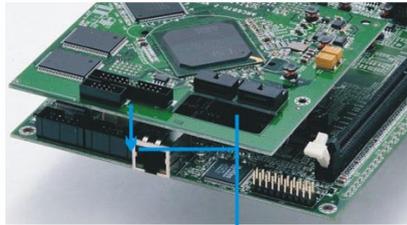
Key	Function

SCSI-to-SATA



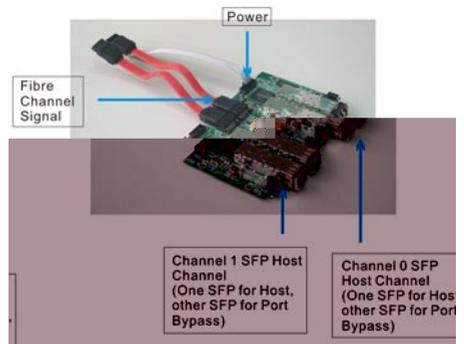
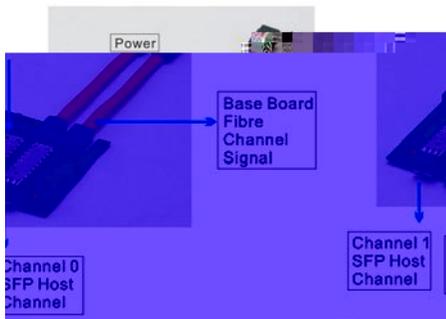
HARDWARE INSTALLATION

Fibre-to-SATA



Fibre Channel
Transfer Board
Connector

- **Fibre Daughboard**



HARDWARE INSTALLATION

1.4 Step Action

Step 1 Unpack

Checklist

Step 2 Remove the Controller Canister Top Cover

Step 3 Remove Host Channel Board

Step 4 Install Controller Memory

HARDWARE INSTALLATION

Note:

Step 5 Installing Host Channel Board

**Step 6 Connecting RAID controller to HOST SCSI Channel
(SCSI-to-SATA)**

HARDWARE INSTALLATION

Step 6-1 Connecting RAID controller to HOST Fibre Channel (Fibre-to-SATA)

Step 7 Install the Controller Canister Top Cover

Step 8 Power Down the System

Step 9 Mounting RAID controller in Server/Enclosure

Step 10 Connecting RAID controller Power

Step 11 Connecting RAID controller's RS232C

HARDWARE INSTALLATION

Step 12 Connecting RAID controller's Ethernet Port

Step 13 Connecting SATA Cable

Step 14 Loading Drive to the Drive Tray

Step 15 Turn on the host computer Power

Step 16 Configure RAID Subsystems

CONFIGURATION METHOD

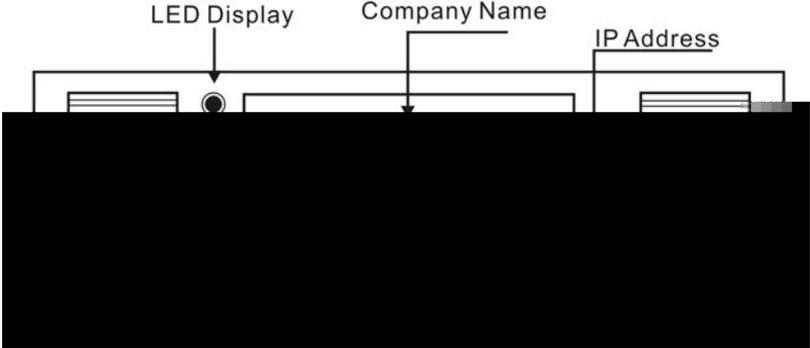
3. Configuration Methods

3.1 Overview

3.2 Using local front panel touch-control keypad



CONFIGURATION METHOD



Key	Function

CONFIGURATION METHOD

Panel LED	Normal Status	Problem Indication

3.3 VT100 terminal (Using the controller's serial port)

3.3.1 RAID Subsystem RS-232C Port Pin Assignment

Terminal requirment	

CONFIGURATION METHOD

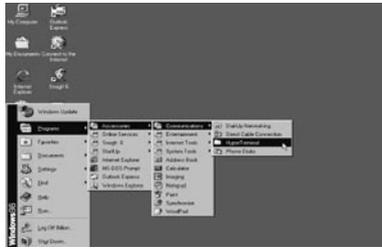
Keyboard Navigation

Key	Function

3.3.2 Start-up VT100 Screen

Step 1.

CONFIGURATION METHOD



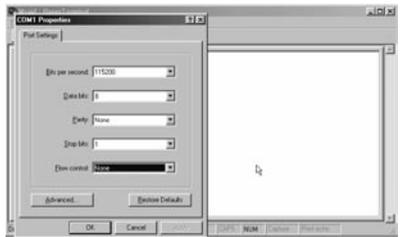
Step 2. HYPERTRM.EXE
OK



Step 3.

115200 8
None OK

None 1

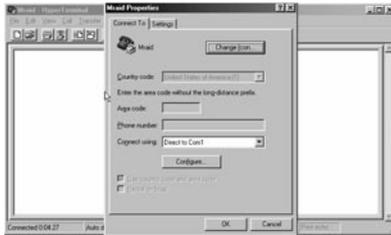


Step 4.



CONFIGURATION METHOD

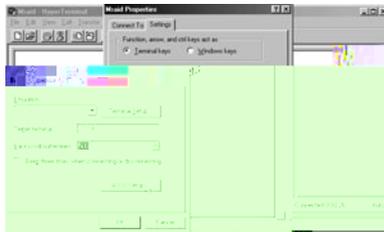
Step 5.



Step 6.

Crtl+H

OK



X

X

3.4 Bootable CD VT100 utility (Using the controller's serial port)

CONFIGURATION METHOD

3.4.1 Bootable CD VT100 terminal emulation setting value requirement

Terminal requirment	

3.4.2 Start-up ROM-DOS VT100 Screen

F5-Communications F6-Video F7-keyboard F8-VT emulation F9-File F10-Exit

CONFIGURATION METHOD

F9-File

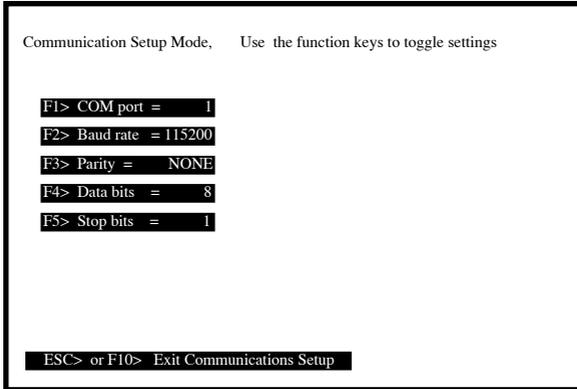
Step 1.

1

115200

8

None



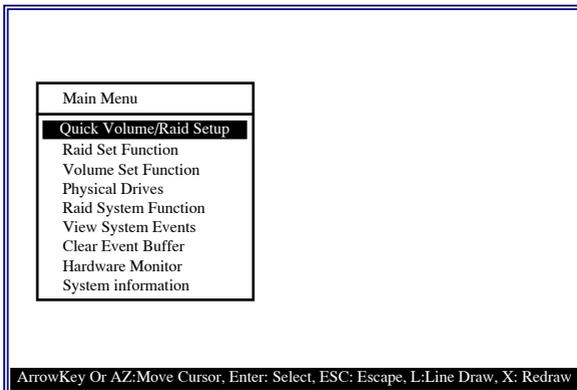
Step 2.

ESC

Step 3.

Ctrl

D



X

CONFIGURATION METHOD

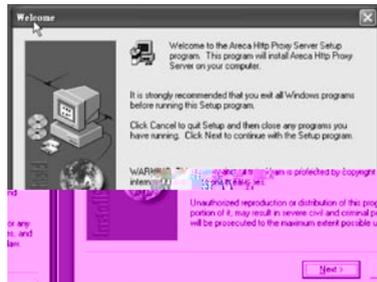
3.5 Web browser-based RAID manager

3.5.1 Web browser-based RAID manager via HTTP Proxy (Using the controller's serial port)

CONFIGURATION METHOD

3.5.1.1 Start-up Web Browser-based RAID Management for Local Administration

3.5.1.1.1 For Windows



CONFIGURATION METHOD



CONFIGURATION METHOD



A screenshot of a Windows-style dialog box titled "Enter Network Password". The dialog contains a key icon and the text "Please type your user name and password." Below this, it shows "Site: 192.168.1.121" and "Realm: Raid Console Content-Length: 0". There are two input fields: "User Name" with the text "admin" and "Password" with masked characters "****". A checkbox labeled "Save this password in your password list" is unchecked. At the bottom right are "OK" and "Cancel" buttons.

admin

0000



A screenshot of a dialog box titled "Activity". It has a "General Setting" section with the following controls: "TCP Port" with a value of "80" and a "Default: 80" label; "RAID Connected to:" with a dropdown menu showing "00:01"; and "BootRate" with a dropdown menu showing "115200". There is a checked checkbox labeled "Detach Web Browser when server started!". On the right side, there are "Start" and "Exit" buttons. Below the settings is a large empty rectangular area.

CONFIGURATION METHOD

3.5.1.1.2 For Linux

3.5.1.2 Start-up Web Browser-based RAID Management for Remote Administration

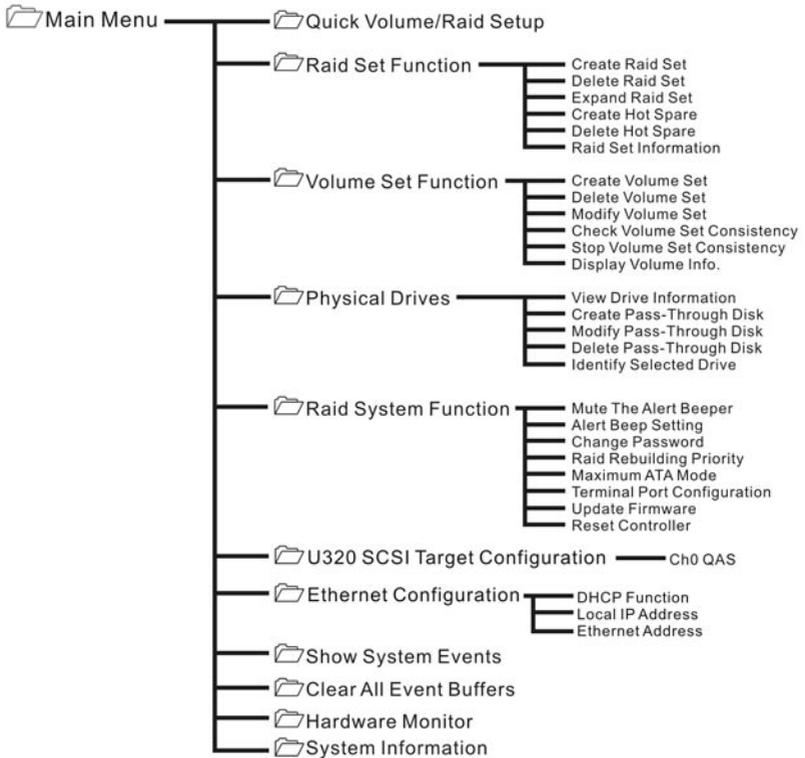
CONFIGURATION METHOD

3.5.2 Firmware-embedded TCP/IP & web browser-based RAID manager (using the controller's 10/100 Ethernet LAN port)

3.6 Configuration Menu Tree



CONFIGURATION METHOD



Note:

LCD CONFIGURATION MENU

4. LCD Configuration Menu

Key	Function

4.1 Starting LCD Configuration Utility

UP/DOWN Enter ESC

LCD CONFIGURATION MENU

4.2 LCD Configuration Utility Main Menu Options

Option	Description

4.3 Configuring Raid Sets and Volume Sets

Step	Action

LCD CONFIGURATION MENU

4.4 Designating Drives as Hot Spares

Enter

UP/DOWN
Enter

Enter

UP/DOWN

Enter

4.5 Using Quick Volume and Raid Set Setup

Parameter	Setting



LCD CONFIGURATION MENU

	ter	En-
		Enter

4.6 Using Raid Set and Volume Set Functions

		Raid Set Function Create Hot Spare
	Enter	

LCD CONFIGURATION MENU

	UP DOWN Enter
	ESC
	ENT
	ENT
	ENT

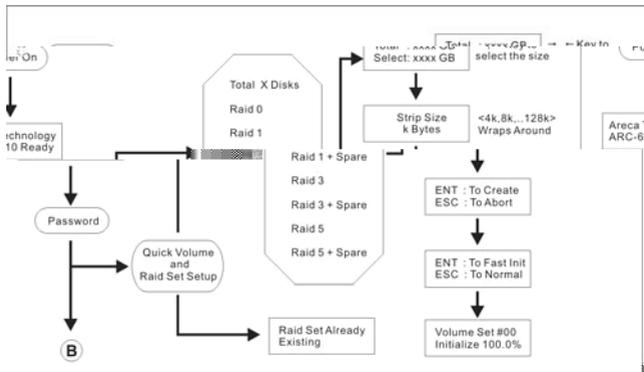
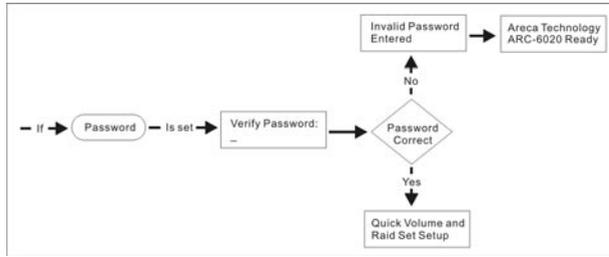
LCD CONFIGURATION MENU

	DOWN	ENT	UP/
			ENT
	ENT		ESC

4.7 Navigation Map of the LCD

4.7.1 Quick Volume/Raid Setup

LCD CONFIGURATION MENU

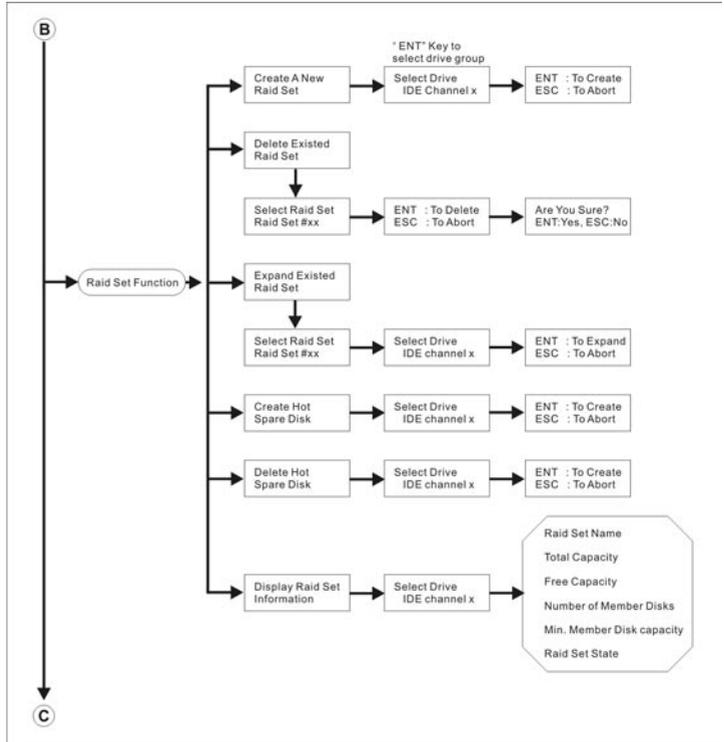


4.7.2 Raid Set Function

UP/DOWN
Enter

Enter

LCD CONFIGURATION MENU



4.7.2.1 Create A New Raid Set

4.7.2.2 Delete Existed Raid Set

UP/DOWN
UP/DOWN

Enter

Enter

Yes

4.7.2.3 Expand Existed Raid Set

LCD CONFIGURATION MENU

UP/DOWN
UP/DOWN

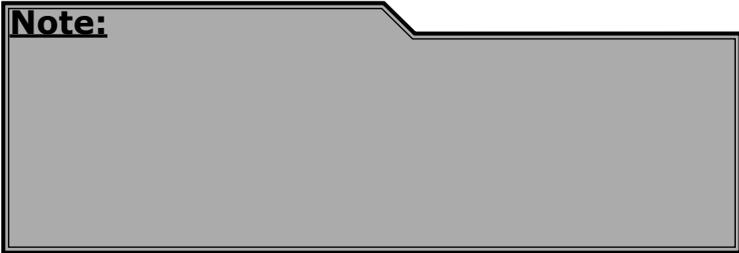
Enter

UP/DOWN

Enter

Enter

Note:



4.7.2.4 Activate Incomplete RaidSet

4.7.2.5 Create Hot Spare Disk

LCD CONFIGURATION MENU

4.7.2.6

4.7.3 Volume Set Function

UP/DOWN
Enter

Enter

4.7.3.1 Create Raid Volume Set

LCD CONFIGURATION MENU

4.7.3.1.2 Raid Level

4.7.3.1.3 Strip Size

4.7.3.1.4 Volume Name

4.7.3.1.5 SCSI Channel

4.7.3.1.6 SCSI ID/Fibre LUN Base

LCD CONFIGURATION MENU

4.7.3.1.7 SCSI LUN/LUN

4.7.3.1.8 Cache Mode

4.7.3.1.9 Tag Queuing

4.7.3.1.10 Max Sync Rate

4.7.3.2 Delete Volume Set

UP/DOWN

UP/DOWN

Enter

UP/DOWN

Enter

Enter

Yes

LCD CONFIGURATION MENU

4.7.3.4 Check Volume Set Consistency

UP/DOWN

UP/DOWN

Enter

UP/DOWN

Enter

Enter

4.7.3.5 Stop Volume Set Consistency Check

UP/DOWN

Enter

4.7.3.6 Display Volume Set Information

DOWN

UP/DOWN

Enter

UP/DOWN

UP/

Enter

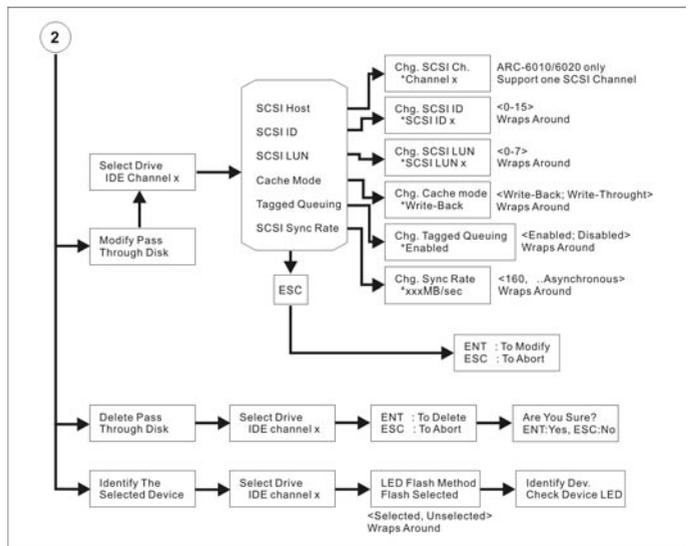
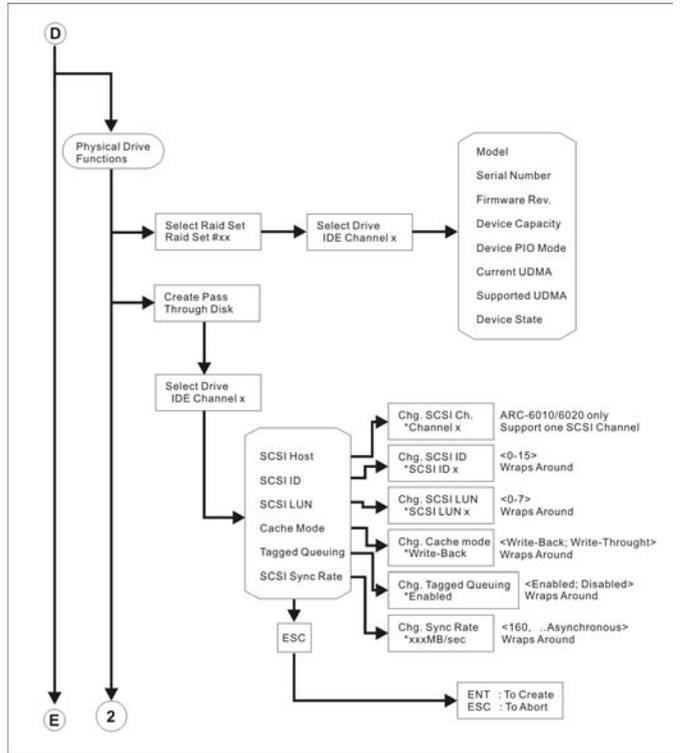
4.7.4 Physical Drive

Enter

UP/DOWN

Enter

LCD CONFIGURATION MENU



LCD CONFIGURATION MENU

4.7.4.1 Display Drive Information

UP/DOWN

Enter

UP/DOWN

4.7.4.2 Create Pass-Through Disk

UP/DOWN

ENT

UP/DOWN

UP/DOWN

ENT

UP/ DOWN

ENT

4.7.4.3



LCD CONFIGURATION MENU

UP/ DOWN
ENT
ESC
ENT

4.7.4.4 Delete Pass-Through Disk

UP/DOWN
Enter
UP/DOWN
Enter
Enter

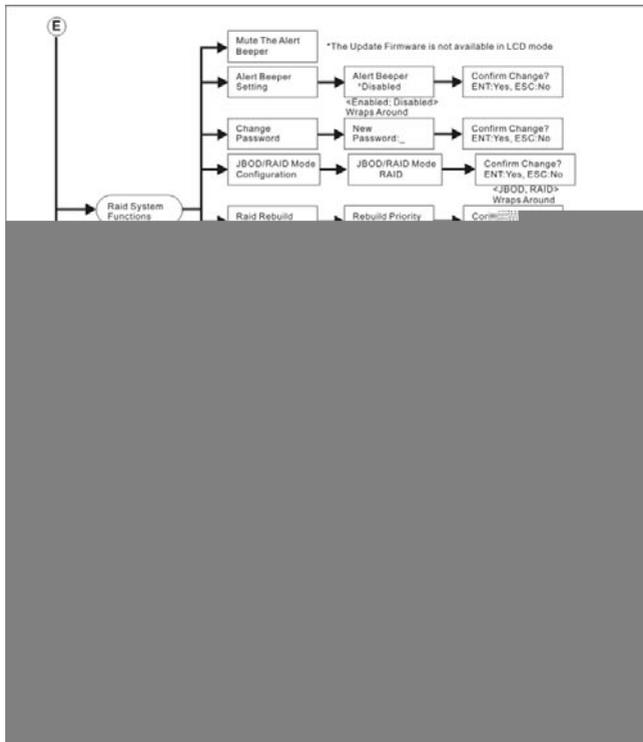
4.7.4.5 Identify Selected Drive

UP/DOWN
Enter
UP/DOWN
Enter

4.7.5 Raid System Function

Enter
UP/DOWN
Enter
Enter

LCD CONFIGURATION MENU



4.7.5.1 Mute The Alert Beeper

No

4.7.5.2 Alert Beeper Setting

LCD CONFIGURATION MENU

4.7.5.3 Change Password

DOWN UP/
Enter Enter

DOWN UP/
Enter Enter

4.7.5.4 JBOD/RAID Configuration

4.7.5.5 RAID Rebuild Priority

UP/DOWN
Enter

UP/DOWN
Enter

4.7.5.6 Maximum SATA Mode Supported

LCD CONFIGURATION MENU

UP/ DOWN
Enter

UP/DOWN

4.7.5.7 Disk Capacity Truncation Mode

Truncation Multiples Of 10G Multiples Of 1G No

Multiples Of 10G:

Multiples Of 10G

Multiples Of 1G:

Multiples Of 1G

No Truncation:

4.7.5.8 Terminal Port Configuration

UP/DOWN

LCD CONFIGURATION MENU

UP/DOWN

UP/DOWN

Enter

4.7.5.9 Restart Controller

UP/ DOWN

Enter

Enter

4.7.6 Show System Events

Enter

UP/DOWN

Enter

UP/DOWN

4.7.7 Clear all Event Buffers

Enter

UP/DOWN

Enter

Enter

ESC

4.7.8 Hardware Information

Enter

UP/DOWN

Enter

UP/DOWN

VT-100 UTILITY CONFIGURATION

5. VT-100 Utility Configuration

Keyboard Navigation

Key	Function

5.1 Configuring Raid Sets and Volume Sets

VT-100 UTILITY CONFIGURATION

	Quick Volume /Raid Setup
	<i>RAID level</i> Enter
	UP DOWN Enter



VT-100 UTILITY CONFIGURATION

	UP DOWN Enter
	Enter
	Enter

5.4 Using Raid Set/Volume Set Function Method

VT-100 UTILITY CONFIGURATION

	Raid Set Function Create Hot Spare
	Enter
	UP DOWN Enter
	Enter
	Volume Set Function Create Volume Set Enter

VT-100 UTILITY CONFIGURATION

	Enter

Note:

5.5 Main Menu

Areca Technology Corporation RAID Controller

Main Menu
Quick Volume/Raid Setup
Raid Set Function
Volume Set Function
Physical Drives
Raid System Function
View System Events
Clear Event Buffer
Hardware Monitor
System information

Verify Password
█

Arrow Key: Move Cursor, Enter: Select, ESC: Escape, L:Line Draw, X: Redraw

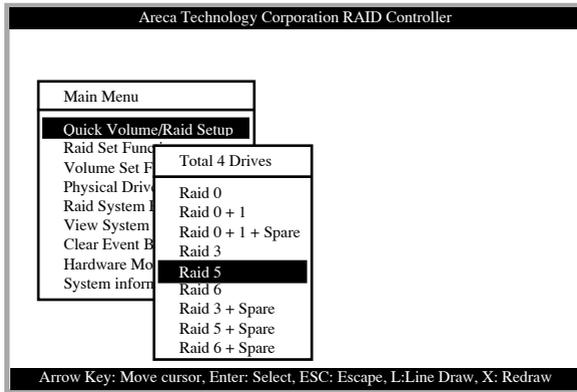
Note:

0000

**Change
Password
Raid System Func-
tion**

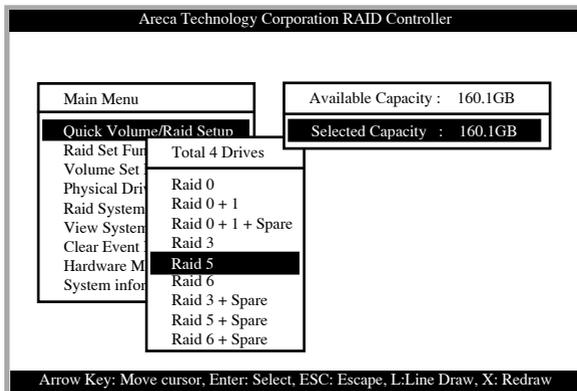
VT-100 UTILITY CONFIGURATION

Volume/RAID Setup



Enter

Create Volume Set



Stripe size

VT-100 UTILITY CONFIGURATION

Areca Technology Corporation RAID Controller

Main Menu	Available Capacity : 160.1GB
Quick Volume/Raid Setup	Selected Capacity : 160.1GB
Raid Set Fur	Total 4 Drives
Volume Set	Raid 0
Physical Dri	Raid 0 + 1
Raid System	Raid 0 + 1 + Spare
View System	Raid 3
Clear Event	Raid 5
Hardware M	Raid 6
System info	Raid 3 + Spare
	Raid 5 + Spare
	Raid 6 + Spare

Select Strip Size
4K
8K
16K
32K
64K
128K

Arrow Key: Move cursor, Enter: Select, ESC: Escape, L:Line Draw, X: Redraw

Yes

Areca Technology Corporation RAID Controller

Main Menu	Available Capacity : 160.1GB
Quick Volume/Raid Setup	Selected Capacity : 160.1GB
Raid Set Fur	Total 4 Drives
Volume Set	Raid 0
Physical Dri	Raid 0 + 1
Raid System	Raid 0 + 1 + Spare
View System	Raid 3
Clear Event	Raid 5
Hardware M	Raid 6
System info	Raid 3 + Spare
	Raid 5 + Spare
	Raid 6 + Spare

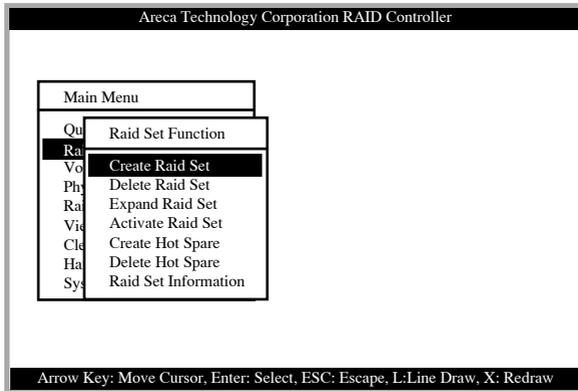
Create Vol/Raid Set
Yes
No

Select Strip Size
4K
8K
16K
32K
64K
128K

Arrow Key: Move cursor, Enter: Select, ESC: Escape, L:Line Draw, X: Redraw

VT-100 UTILITY CONFIGURATION

5.5.2 Raid Set Function



5.5.2.1 Create Raid Set

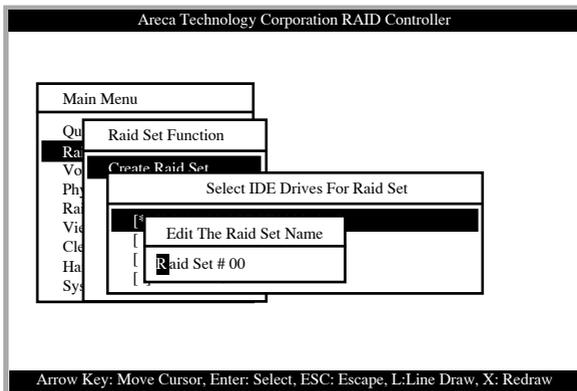
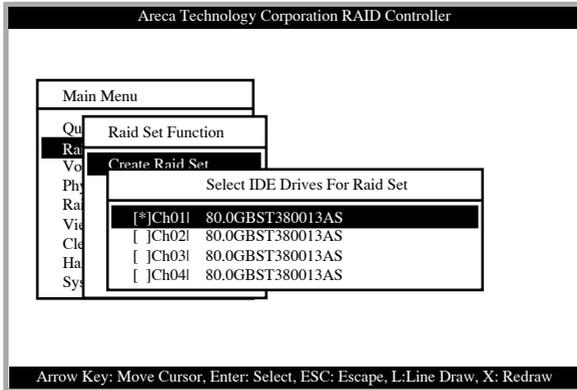
DOWN

UP

Esc
Yes



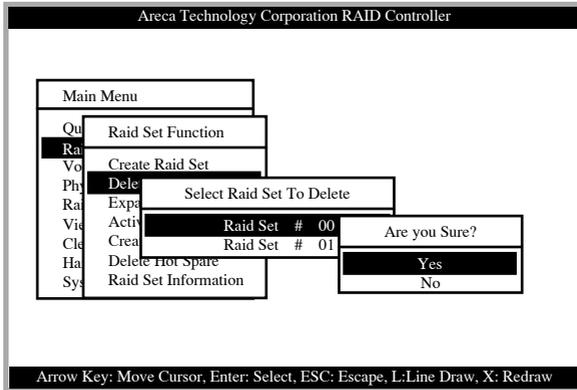
VT-100 UTILITY CONFIGURATION



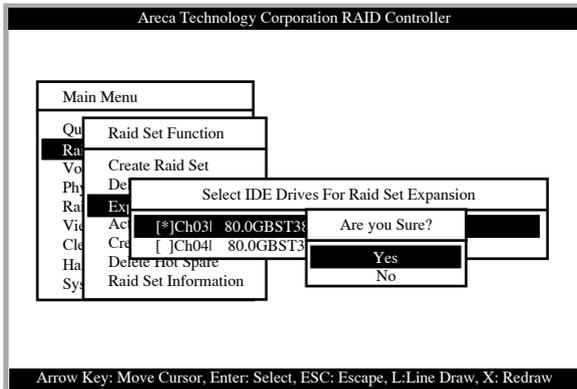
5.5.2.2 Delete Raid Set

Yes

VT-100 UTILITY CONFIGURATION



5.5.2.3 Expand Raid Set



Yes

VT-100 UTILITY CONFIGURATION

• Migrating

Areca Technology Corporation RAID Controller

Main Menu	
Qu	Raid Set Function
Ra	
Vo	Create The Raid Set Information
Ph	Delete
Ra	Expan
Vi	Activa
Cl	Create
Ha	Delete
Sys	Raid S

Raid Set Name	: Raid Set # 00
Member Disks	: 4
Raid State	: Migrating
Total Capacity	: 160.1GB
Free Capacity	: 144.1GB
Min Member Disk Size	: 40.0GB
Member Disk Channels	: 1234

Arrow Key: Move Cursor, Enter: Select, ESC: Escape, L:Line Draw, X: Redraw

5.5.2.4 Activate Incomplete Raid Set

Areca Technology Corporation RAID Controller

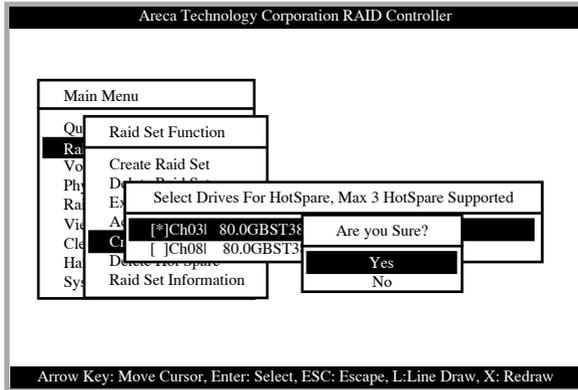
Main Menu	
Qu	Raid Set Function
Ra	
Vo	Create The Raid Set Information
Ph	Delete
Ra	Expan
Vi	Activa
Cl	Create
Ha	Delete
Sys	Raid S

Raid Set Name	: Raid Set # 00
Member Disks	: 4
Raid State	: Incomplete
Total Capacity	: 160.1GB
Free Capacity	: 160.1GB
Min Member Disk Size	: 40.0GB
Member Disk Channels	: 123-

Arrow Key: Move Cursor, Enter: Select, ESC: Escape, L:Line Draw, X: Redraw

VT-100 UTILITY CONFIGURATION

5.5.2.5 Create Hot Spare



Enter

Yes

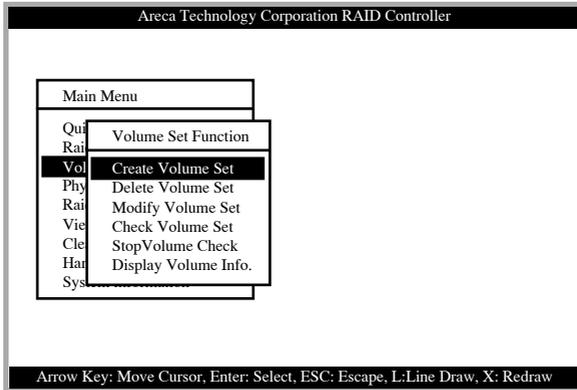
5.5.2.6 Delete Hot Spare

Enter

Yes

VT-100 UTILITY CONFIGURATION

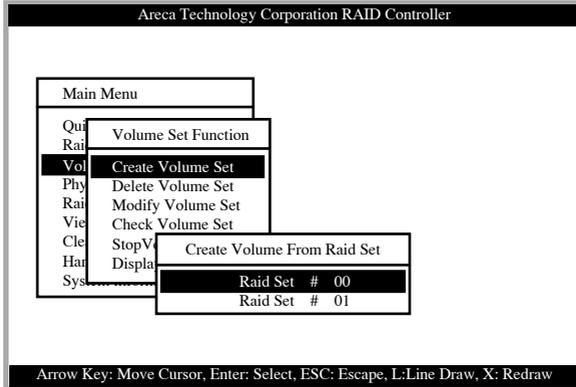
VT-100 UTILITY CONFIGURATION



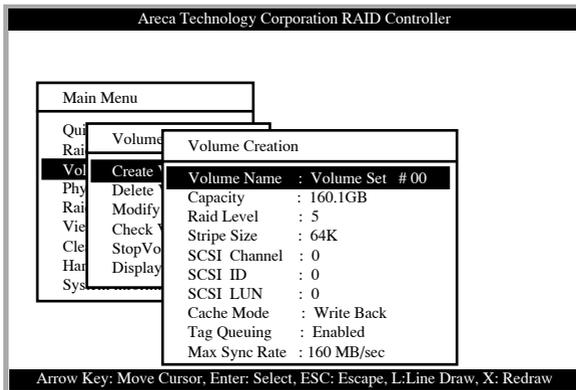
5.5.3.1 Create Volume Set

VT-100 UTILITY CONFIGURATION

Enter



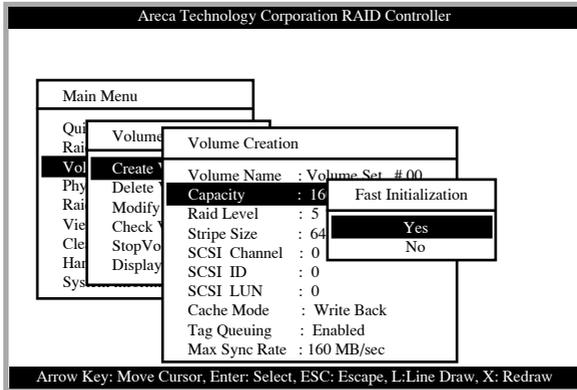
Volume Creation



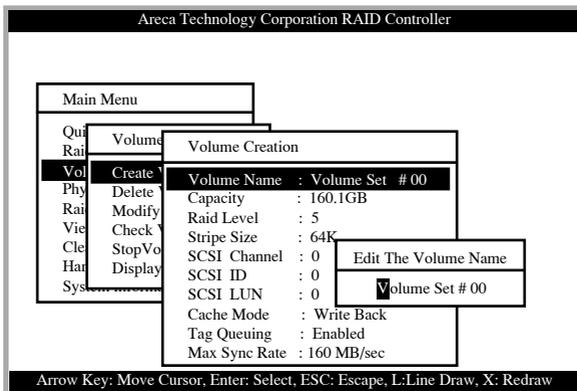
Yes

No

VT-100 UTILITY CONFIGURATION

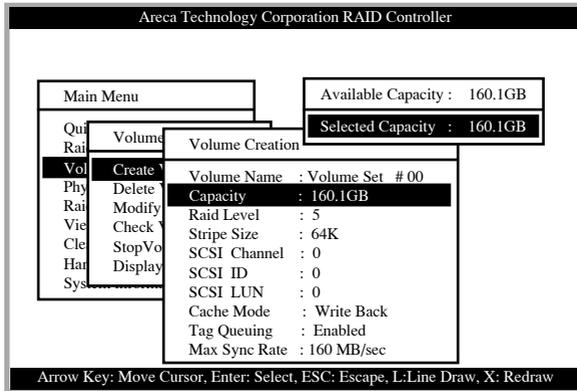


5.5.3.1.1.1 Volume Name



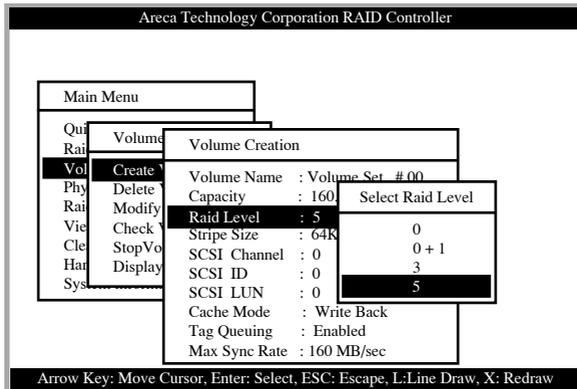
VT-100 UTILITY CONFIGURATION

5.5.3.1.1.2 Capacity



UP **DOWN**

5.5.3.1.1.3 Raid Level

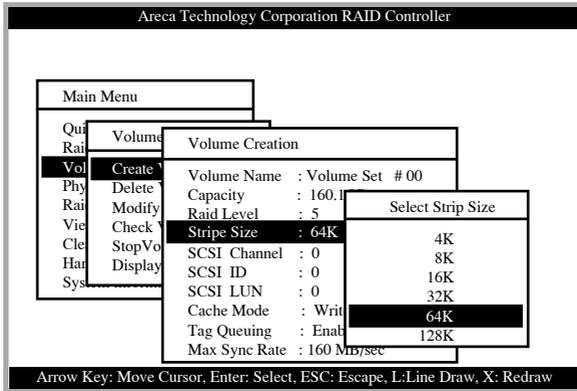


Enter

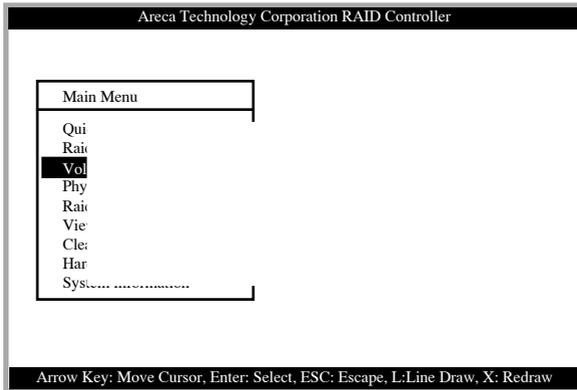
Enter

VT-100 UTILITY CONFIGURATION

5.5.3.1.1.4 Strip Size



5.5.3.1.1.5 SCSI Channel



VT-100 UTILITY CONFIGURATION

5.5.3.1.1.6 SCSI ID

Areca Technology Corporation RAID Controller

The screenshot shows a multi-level menu system. The 'Main Menu' is on the left, with 'Volume Creation' selected. The 'Volume Creation' menu is in the center, with 'Create' selected. The 'Create' menu is on the right, with 'SCSI ID : 0' selected. The 'SCSI ID' menu is on the far right, with '0' selected. The 'SCSI ID' menu lists options 0 through 15. The 'Create' menu shows the following configuration: Volume Name : Volume, Capacity : 160.1G, Raid Level : 5, Stripe Size : 64K, SCSI Channel : 0, SCSI ID : 0, SCSI LUN : 0, Cache Mode : Write, Tag Queuing : Enable, Max Sync Rate : 160 MB/sec.

Main Menu	
Quit	Volume
Raid	Volume Creation
Vol	Create
Phys	Delete
Raid	Modify
View	Check
Clear	StopVol
Help	Display
System	

Volume Creation	
Volume Name	: Volume
Capacity	: 160.1G
Raid Level	: 5
Stripe Size	: 64K
SCSI Channel	: 0
SCSI ID	: 0
SCSI LUN	: 0
Cache Mode	: Write
Tag Queuing	: Enable
Max Sync Rate	: 160 MB/sec

Select SCSI ID	
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

Arrow Key: Move Cursor, Enter: Select, ESC: Escape, L:Line Draw, X: Redraw

5.5.3.1.1.7 SCSI LUN

Areca Technology Corporation RAID Controller

The screenshot shows a multi-level menu system. The 'Main Menu' is on the left, with 'Volume Creation' selected. The 'Volume Creation' menu is in the center, with 'Create' selected. The 'Create' menu is on the right, with 'SCSI LUN : 0' selected. The 'SCSI LUN' menu is on the far right, with '0' selected. The 'SCSI LUN' menu lists options 0 through 7. The 'Create' menu shows the following configuration: Volume Name : Volume, Capacity : 160.1G, Raid Level : 5, Stripe Size : 64K, SCSI Channel : 0, SCSI ID : 0, SCSI LUN : 0, Cache Mode : Write, Tag Queuing : Enabled, Max Sync Rate : 160 MB/sec.

Main Menu	
Quit	Volume
Raid	Volume Creation
Vol	Create
Phys	Delete
Raid	Modify
View	Check
Clear	StopVol
Help	Display
System	

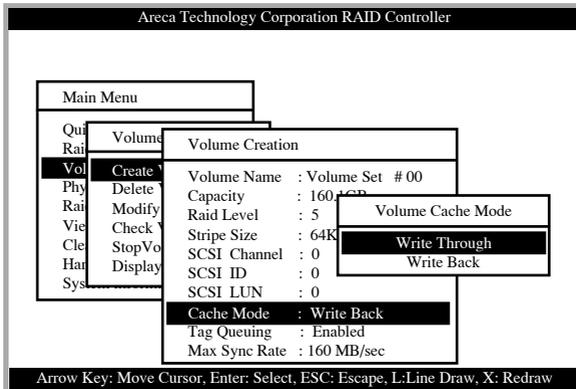
Volume Creation	
Volume Name	: Volume
Capacity	: 160.1G
Raid Level	: 5
Stripe Size	: 64K
SCSI Channel	: 0
SCSI ID	: 0
SCSI LUN	: 0
Cache Mode	: Write
Tag Queuing	: Enabled
Max Sync Rate	: 160 MB/sec

Select SCSI LUN	
0	
1	
2	
3	
4	
5	
6	
7	

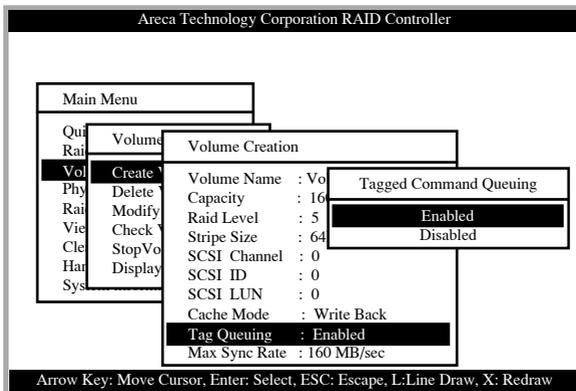
Arrow Key: Move Cursor, Enter: Select, ESC: Escape, L:Line Draw, X: Redraw

VT-100 UTILITY CONFIGURATION

5.5.3.1.1.8 Cache Mode

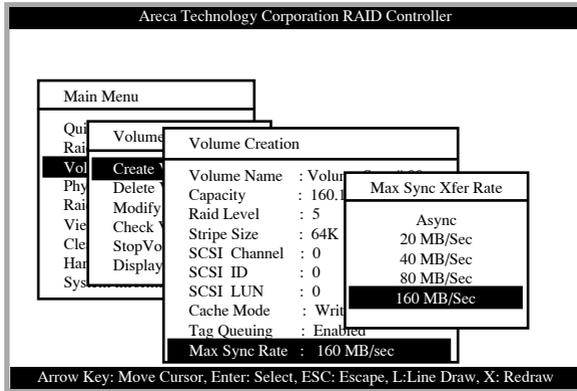


5.5.3.1.1.9 Tag Queuing



VT-100 UTILITY CONFIGURATION

5.5.3.1.1.10 Max Sync Rate

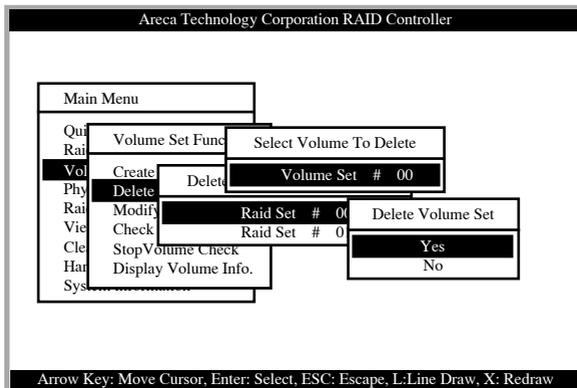


5.5.3.2 Delete Volume Set

Enter

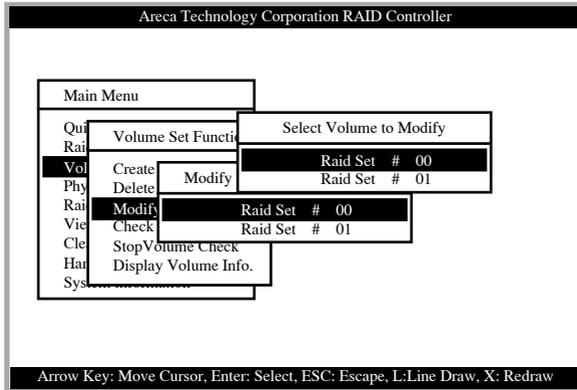
Enter

Enter



VT-100 UTILITY CONFIGURATION

5.5.3.3 Modify Volume Set



Enter

Enter

Enter

5.3.3.1 Volume Expansion

VT-100 UTILITY CONFIGURATION

Areca Technology Corporation RAID Controller

Main Menu

Select Volume to Modify

Volume Modification

Volume Name : Volume Set # 00

Capacity : 160.1GB

Raid Level : 5

Stripe Size : 64K

SCSI Channel : 0

SCSI ID : 0

SCSI LUN : 0

Cache Mode : Write Back

Tag Queuing : Enabled

Max Sync Rate : 160 MB/sec

Arrow Key: Move Cursor, Enter: Select, ESC: Escape, L:Line Draw, X: Redraw

5.5.3.3 Volume Set Migration

Areca Technology Corporation RAID Controller

Main Menu

The Volume Set Information

Volume Name : Volume Set # 00

Raid Set Name : Raid Set # 00

Volume Capacity : 160.1GB

Volume State : Migrating

SCSI Ch/Id/Lun : 0/0/0

Stripe Size : 64K

Raid Level : 5

Member Disks : 3

Cache Attribute : Write Back

Tag Queuing : Enabled

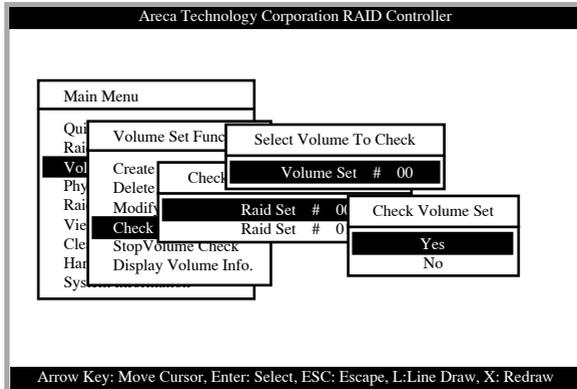
Max SCSI Speed : 160 MB/sec

Current Speed : Async

Arrow Key: Move Cursor, Enter: Select, ESC: Escape, L:Line Draw, X: Redraw

VT-100 UTILITY CONFIGURATION

5.5.3.4 Check Volume Set



Enter

Enter

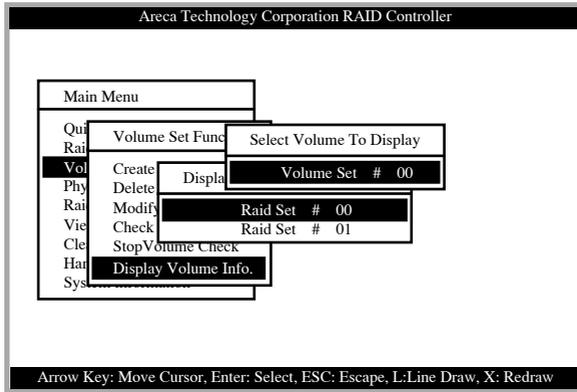
Enter

Yes

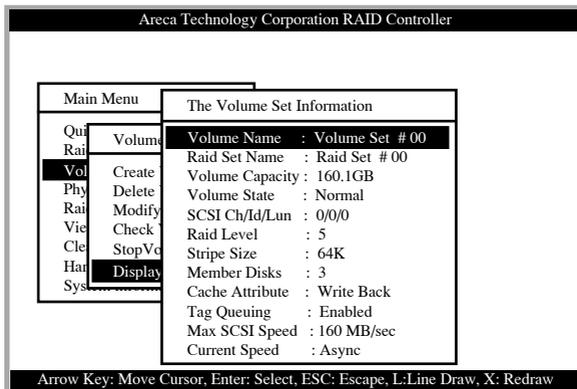
5.5.3.5 Stop Volume Set Check

VT-100 UTILITY CONFIGURATION

5.5.3.6 Display Volume Set Info.

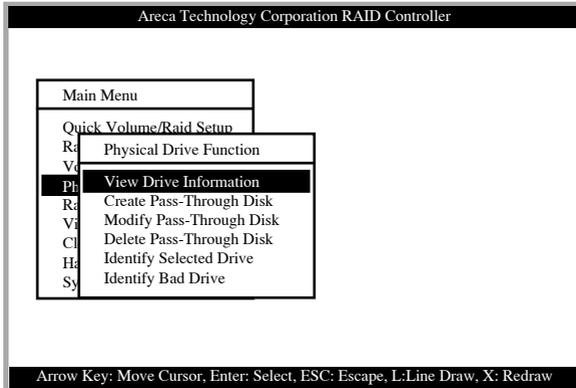


Enter

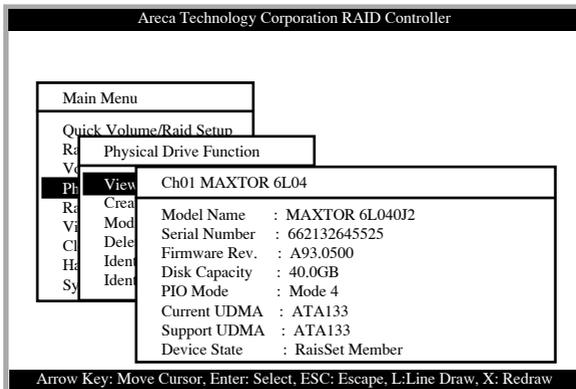


VT-100 UTILITY CONFIGURATION

5.5.4 Physical Drives



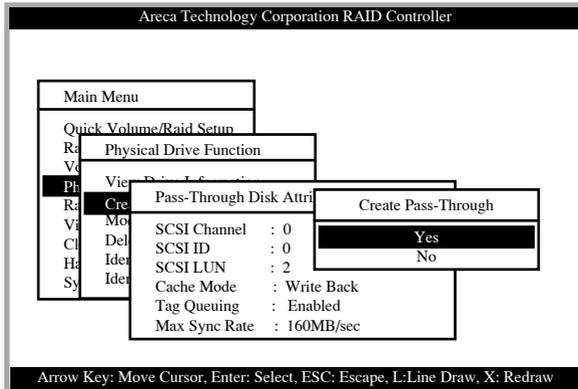
5.5.4.1 View Drive Information



Enter

VT-100 UTILITY CONFIGURATION

5.5.4.2 Create Pass-Through Disk



5.5.4.3 Modify Pass-Through Disk

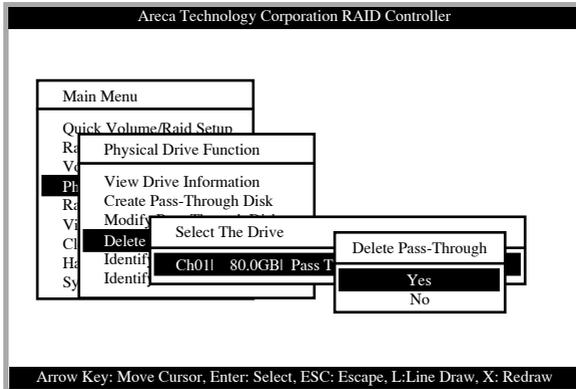
Enter

Enter

Enter

VT-100 UTILITY CONFIGURATION

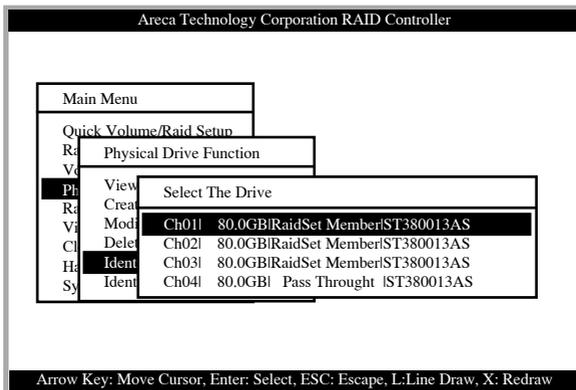
5.5.4.4 Delete Pass-Through Disk



Enter

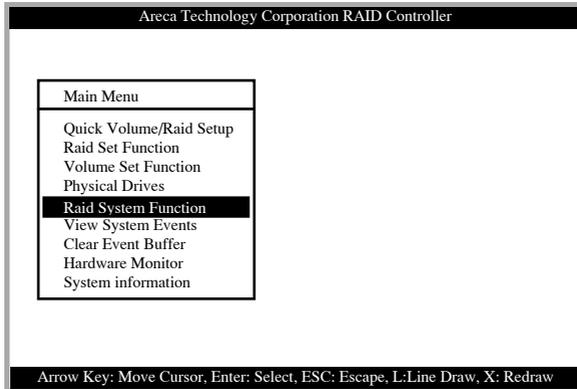
Yes

5.5.4.5 Identify Selected Drive



VT-100 UTILITY CONFIGURATION

5.5.5 Raid System Function

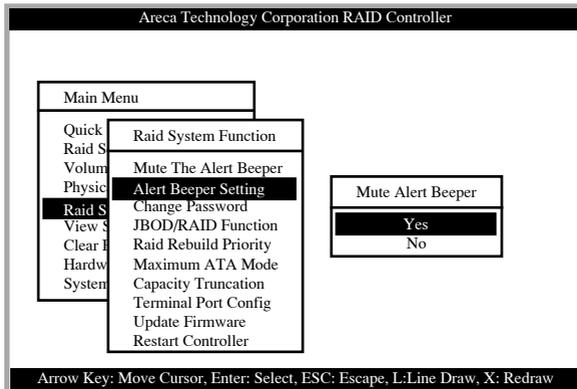


Raid System Function

Enter

Enter

5.5.5.1 Mute The Alert Beeper

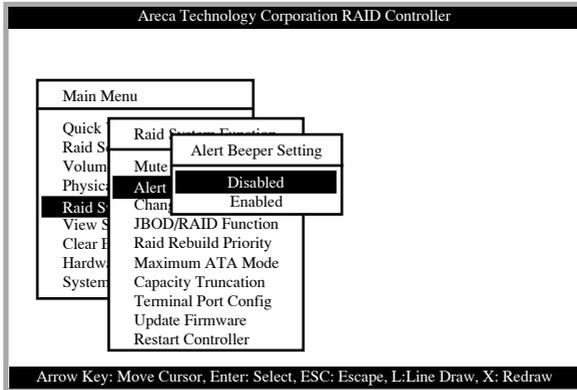


No

Enter

5.5.5.2 Alert Beeper Setting

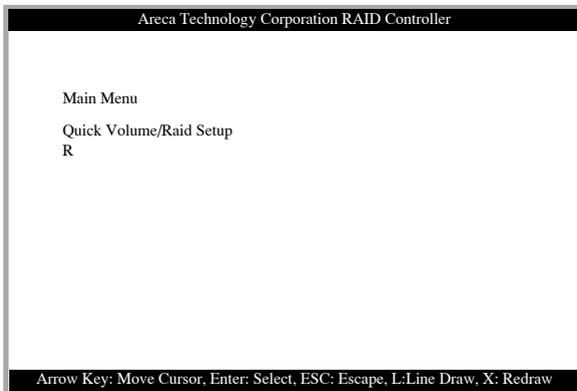
VT-100 UTILITY CONFIGURATION



No

Enter

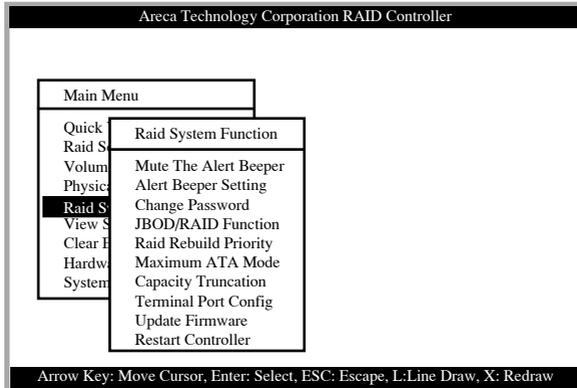
5.5.5.3 Change Password



VT-100 UTILITY CONFIGURATION

Enter

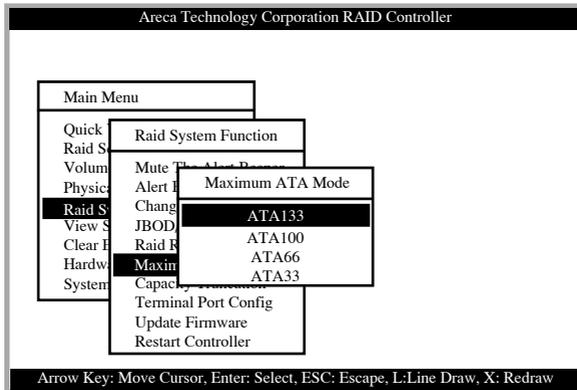
5.5.5.4 JBOD/RAID Configuration



VT-100 UTILITY CONFIGURATION

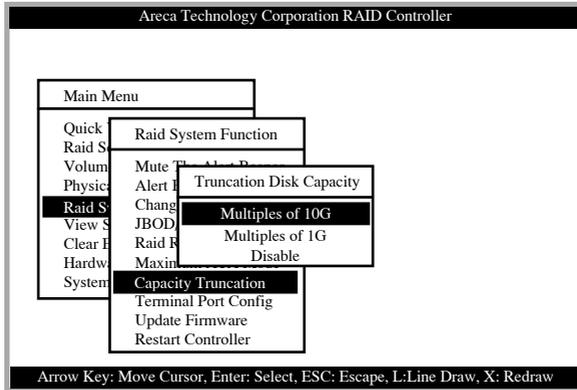
Raid Rebuild Priority

5.5.5.6 Maximum SATA Mode Supports



5.5.5.7 Disk Capacity Truncation Mode

VT-100 UTILITY CONFIGURATION



Multiples Of 10G Multiples Of 1G No
Truncation

Multiples Of 10G:

Multiples Of 10G

Multiples Of 1G:

Multiples Of 1G

No Truncation:

5.5.5.8 Terminal Port Configuration

VT-100 UTILITY CONFIGURATION

Areca Technology Corporation RAID Controller

The screenshot shows a multi-level menu structure. The 'Main Menu' is on the left, with 'Raid S' highlighted. The 'Raid System Function' menu is open, with 'Terminal Port Configuration' highlighted. The 'Terminal Port Configuration' menu is open, showing a list of options with '115200' highlighted.

Terminal Port Configuration	RS232 Speed Selection
1200	
2400	
4800	
9600	
19200	
38400	
57600	
115200	

Arrow Key: Move Cursor, Enter: Select, ESC: Escape, L: Line Draw, X: Redraw

Areca Technology Corporation RAID Controller

The screenshot shows a multi-level menu structure. The 'Main Menu' is on the left, with 'Raid S' highlighted. The 'Raid System Function' menu is open, with 'Terminal Port Configuration' highlighted. The 'Terminal Port Configuration' menu is open, showing a list of options with '1 bit' highlighted.

Terminal Port Configuration	Select Stop Bits
1 bit	
2 bits	

Arrow Key: Move Cursor, Enter: Select, ESC: Escape, L: Line Draw, X: Redraw

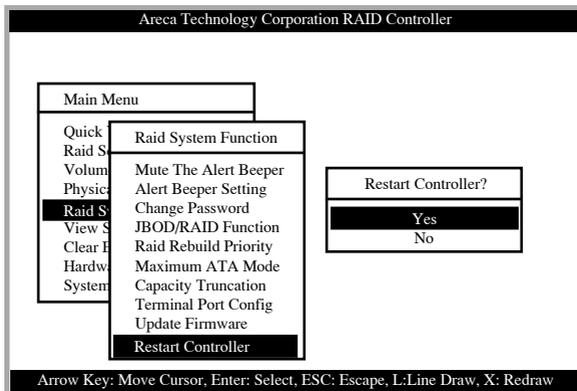
5.5.5.9 Update Firmware

VT-100 UTILITY CONFIGURATION

Note:

5.5.5.10 Restart Controller

Note:



VT-100 UTILITY CONFIGURATION

5.5.5.11 View Events

Enter

Areca Technology Corporation RAID Controller				
Main Menu				
Quick Volume/Raid Setup				
Raid Set Function				
Time	Device	Event Type	ElapseTime	Errors
2004-1-1 12:00:00	H/W Monitor	Raid Powered On		
2004-1-1 12:00:00	H/W Monitor	Raid Powered On		
2004-1-1 12:00:00	H/W Monitor	Raid Powered On		

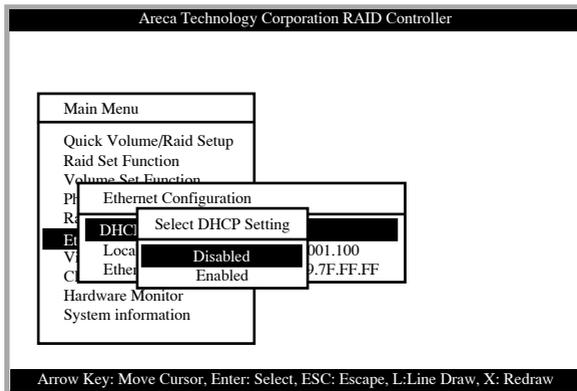
Arrow Key: Move Cursor, Enter: Select, ESC: Escape, L:Line Draw, X: Redraw

5.5.6 U320 SCSI Target Config

5.5.7 Ethernet Configuration

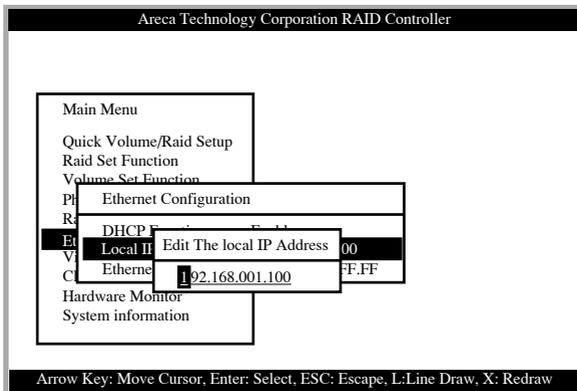
VT-100 UTILITY CONFIGURATION

5.5.7.1 DHCP Function



5.5.7.2 Local IP address

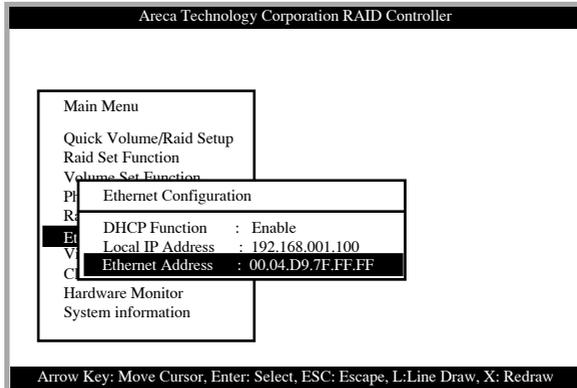
VT-100 UTILITY CONFIGURATION



5.5.7.3 Ethernet Address



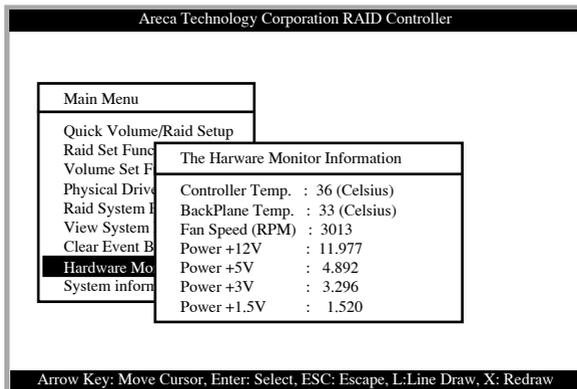
VT-100 UTILITY CONFIGURATION



5.5.8 View System Events

5.5.9 Clear Events Buffer

5.5.10 Hardware Monitor Information



VT-100 UTILITY CONFIGURATION

Item	Warning Condition
	> 60°
	> 55°
	< 1900 RPM
	< 10.5V or > 13.5V
	< 4.7V or > 5.3V
	< 3.0V or > 3.6V
	< 1.35V or > 1.65V

5.5.11 System Information

Enter



WEB BROWSER-BASED CONFIGURATION

6. Web Browser-based Configuration

6.1 Firmware-embedded TCP/IP & web browser-based RAID manager (using the controller's 10/100 Ethernet LAN port)

WEB BROWSER-BASED CONFIGURATION

6.2 Configuring Raid Sets and Volume Sets

Step	Action

6.3 Designating Drives as Hot Spares

6.4 Using Quick Volume /Raid Setup Configuration



WEB BROWSER-BASED CONFIGURATION

	Quick Volume /Raid Setup
	<i>RAID level</i> Enter
	Enter UP DOWN Enter

WEB BROWSER-BASED CONFIGURATION

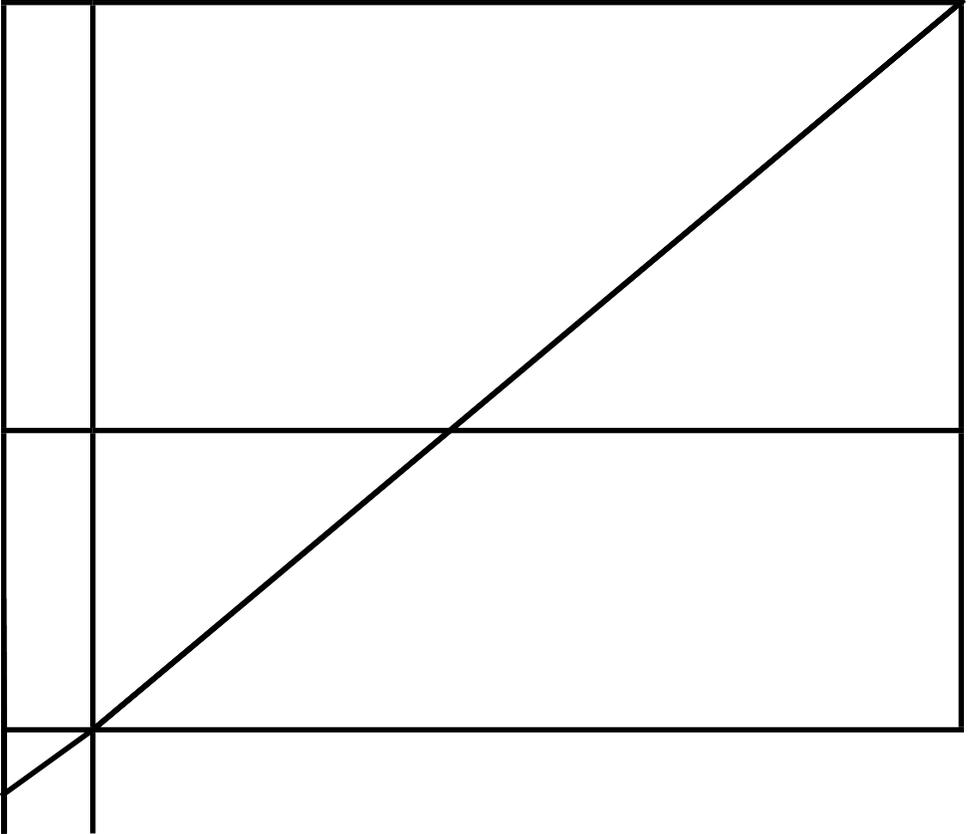
	UP DOWN Enter
	Enter
	Enter

6.5 Using Raid Set/Volume Set Function Method

WEB BROWSER-BASED CONFIGURATION

	Raid Set Function Create Hot Spare
	Enter
	UP DOWN Enter
	Enter
	Volume Set Function Create Volume Set Enter

WEB BROWSER-BASED CONFIGURATION



WEB BROWSER-BASED CONFIGURATION



6.8.2 Delete Raid Set



6.8.3 Expand Raid Set

WEB BROWSER-BASED CONFIGURATION

<ul style="list-style-type: none">Quick FunctionCheck ConfigBasic Functions Create RAID Set Format RAID Set Remove RAID Set Assign RAID Set Create Hot Spare Format Hot Spare Remove RAID SetVolume Set FunctionsPhysical DrivesSystem ControlsInformation	 <p>Areca Technology Corporation</p> <hr/> <p>Try To Remove Missing RAIDSET Enter RESCUE To Try To Recover Missing RAIDSet Enter REFORMAT To Reformat RAIDSet Again If RAIDSet Is Recovered</p> <p><input type="text" value="Enter The Keyword"/></p> <p><input type="checkbox"/> Confirm The Operation</p> <p><input type="button" value="Submit"/> <input type="button" value="Cancel"/></p>
--	---

6.9 Volume Set Functions

6.9.1 Create Volume Set

WEB BROWSER-BASED CONFIGURATION

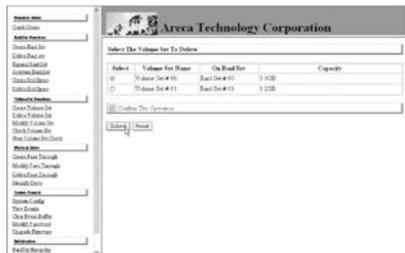
- Max SCSI Speed:

- SCSI Channel/SCSI ID/SCSI Lun:
SCSI Channel:

SCSI IDE:

SCSI LUN:

6.9.2 Delete Volume Set



WEB BROWSER-BASED CONFIGURATION

6.9.3.4 Volume Set Migration

The screenshot displays the 'RAID Sets' configuration page. The left sidebar contains a navigation menu with categories like 'Basic Config', 'Advanced Config', 'RAID Config', 'Storage Config', 'System Config', 'Maintenance', 'Help', and 'About'. The main content area is titled 'RAID Sets Migration' and features a table with columns: 'RAID Set', 'RAID Channels', 'Volume Size/Max/Limit', 'Volume Status', and 'Capacity'.

RAID Set	RAID Channels	Volume Size/Max/Limit	Volume Status	Capacity
RAID Set #0	CH01	Volume Set #0 (60GB)	Migration: 75%	3.0GB
	CH02			
RAID Set #1	CH04	Volume Set #1 (60GB)	Normal	3.0GB
	CH05			

Below the RAID Sets table is a 'RAID Channels' table with columns: 'Channel', 'Group', 'Capacity', and 'Model'.

Channel	Group	Capacity	Model
CH01	RAID Set #0	41.2GB	IC700RAV19010-0
CH02	RAID Set #0	41.2GB	IC700RAV19010-0
CH03	RAID Set #0	40.9GB	MAJ200-GL402
CH04	RAID Set #1	41.2GB	IC700RAV19010-0
CH05	RAID Set #1	41.2GB	IC700RAV19010-0

6.9.4 Check Volume Set

The screenshot displays the 'RAID Sets Check' configuration page. The left sidebar contains a navigation menu with categories like 'Basic Config', 'Advanced Config', 'RAID Config', 'Storage Config', 'System Config', 'Maintenance', 'Help', and 'About'. The main content area is titled 'RAID Sets Check' and features a table with columns: 'RAID Set', 'RAID Channels', 'Volume Size/Max/Limit', 'Volume Status', and 'Capacity'.

RAID Set	RAID Channels	Volume Size/Max/Limit	Volume Status	Capacity
RAID Set #0	CH01	Volume Set #0 (60GB)	Check: 90%	3.0GB
	CH02			
RAID Set #1	CH04	Volume Set #1 (60GB)	Normal	3.0GB
	CH05			

Below the RAID Sets table is a 'RAID Channels' table with columns: 'Channel', 'Group', 'Capacity', and 'Model'.

Channel	Group	Capacity	Model
CH01	RAID Set #0	41.2GB	IC700RAV19010-0
CH02	RAID Set #0	41.2GB	IC700RAV19010-0
CH03	RAID Set #0	40.9GB	MAJ200-GL402
CH04	RAID Set #1	41.2GB	IC700RAV19010-0
CH05	RAID Set #1	41.2GB	IC700RAV19010-0

6.9.5 Stop VolumeSet Check

WEB BROWSER-BASED CONFIGURATION

6.10 Physical Drive

6.10.1 Create Pass-Through Disk



6.10.2 Modify Pass-Through Disk

WEB BROWSER-BASED CONFIGURATION

6.11 System Controls

6.11.1 System Configuration

- System Beeper Setting:
- RAID Rebuild Priority:
- Terminal Port Configuration:



- Maximum SATA Mode Supported:

WEB BROWSER-BASED CONFIGURATION



• JBOD/RAID Configuration:



• Disk Capacity Truncation Mode:

Truncation **Multiples Of 10G** **Multiples Of 1G** **No**

Multiples Of 10G:

Multiples Of 10G

Multiples Of 1G:

Multiples Of 1G

No Truncation:

6.11.2 U320 SCSI Target Config

6.11.3 EtherNet Config

WEB BROWSER-BASED CONFIGURATION

- Quick Functions
- Mailbox Functions
- Calendar Functions
- Office of Device
- System Controls
 - System Control
 - Address Book
 - Calendar
 - Alert By Mail Config
 - One Direction Search
 - One Search Index
 - Mobile Support
 - Mobile Support
 - Mobile Control
- Information

Area Technology Corporation

Alert By Mail Configuration

SMTP Server	192.168.1.1	25	25
SMTP Server Port	192.168.1.1	25	25
SMTP Server Mail	192.168.1.1	25	25
SMTP Server Mail	192.168.1.1	25	25
SMTP Server Mail	192.168.1.1	25	25

6.11.4 Alert By Mail Config

- Quick Functions
- Mailbox Functions
- Physical Device
- System Controls
 - System Control
 - Address Book
 - Calendar
 - Alert By Mail Config
 - One Direction Search
 - One Search Index
 - Mobile Support
 - Mobile Support
 - Mobile Control
- Information

SMTP Server Address:

Mail Address Configuration

Sender Name	<input type="text"/>	Mail Address	<input type="text"/>
Account	<input type="text"/>	Password	<input type="text"/>
Mailbox Name1	<input type="text"/>	Mail Address	<input type="text"/>
Mailbox Name2	<input type="text"/>	Mail Address	<input type="text"/>
Mailbox Name3	<input type="text"/>	Mail Address	<input type="text"/>
Mailbox Name4	<input type="text"/>	Mail Address	<input type="text"/>

Event Notification Configuration

<input type="checkbox"/> Enable Event Notifications	<input type="checkbox"/> Send Notifications With The Date
<input type="checkbox"/> Urgent Error Notifications	<input type="checkbox"/> Send Only Urgent Errors
<input type="checkbox"/> Service Error Notifications	<input type="checkbox"/> Send Urgent And Service Errors
<input type="checkbox"/> Warning Error Notifications	<input type="checkbox"/> Send Urgent, Service And Warning Errors
<input type="checkbox"/> All errors in Notifications	<input type="checkbox"/> Send All Errors

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WEB BROWSER-BASED CONFIGURATION



6.11.7 Update Firmware:

6.11.8 Restart Controller

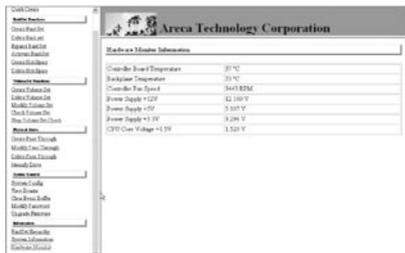
6.12 Information Menu

6.12.1 RaidSet Hierarchy

WEB BROWSER-BASED CONFIGURATION

6.12.2 System Information

6.12.3 Hardware Monitor



Item	Warning Condition
	> 60°
	> 55°
	< 1900 RPM
	< 10.5V or > 13.5V
	< 4.7V or > 5.3V
	< 3.0V or > 3.6V
	< 1.35V or > 1.65V

APPENDIX

APPENDIX A

Specifications

System Architecture

RAID Features

Host Interface **Ultra320 SCSI-to-SATA**

2Gb Fibre-to-SATA

Drive Interface

Monitors / Indicators

RAID Management

Operation System

Mechanical

- **Form Factor**

 - **Dimension (W x H x D)**
-

APPENDIX

- I/O Interface

Environmental

Electrical

Appendix B

Upgrading Flash Firmware Programming Utility

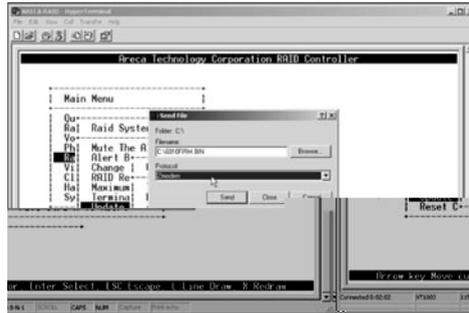
Establishing the Connection for the RS-232

APPENDIX

Upgrade Firmware Through ANSI/VT-100 Terminal Emulation



APPENDIX



APPENDIX



Upgrade Firmware Through HTTP Proxy Web Browser Manager

APPENDIX



APPENDIX

Appendix C

Connector and Pin Definitions

ARC-6060 Controller Diagram

Connector	Description

Pin	Pin Name	Description

APPENDIX

10 Pin IDC Female Connector	9 Pin External D-SUB Male Connector



APPENDIX

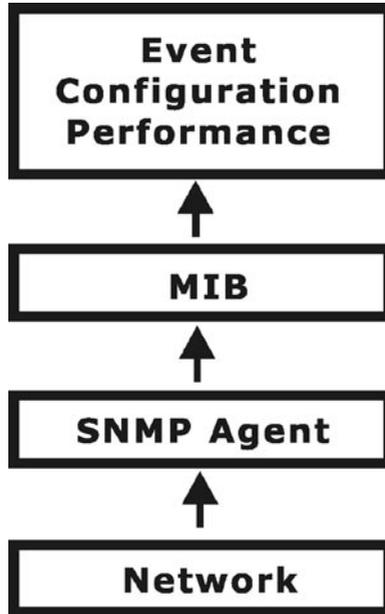
Appendix D

SNMP Operation & Definition

Overview

SNMP Definition





SNMP Installation

Starting the SNMP function setting

<ul style="list-style-type: none">Ⓜ Quick FunctionⓂ RAIDSet FunctionsⓂ VolumeSet FunctionsⓂ Physical DrivesⓂ System ControlsSystem ConfigSNMP ConfigurationView Events/Logs/ReportGenerate Test EventClear Event BufferModify PasswordUpgrade FirmwareⓂ Information	 <p>Areca Technology Corporation</p> <hr/> <p>SNMP Community Configuration</p> <p>Community: <input type="text"/></p> <p><input checked="" type="checkbox"/> Confirm The Operation</p> <p><input type="button" value="Submit"/> <input type="button" value="Reset"/></p>
---	---

APPENDIX

- **Community Name**

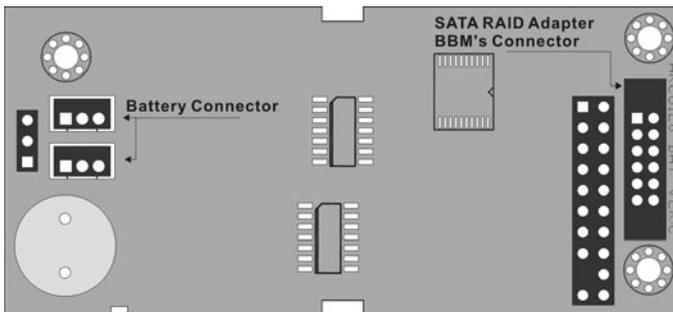
MIB Compilation and Definition File creation

Location for MIB

Appendix E

Battery Backup Module (BBM)

BBM Components



BBM Specifications

APPENDIX

Installation

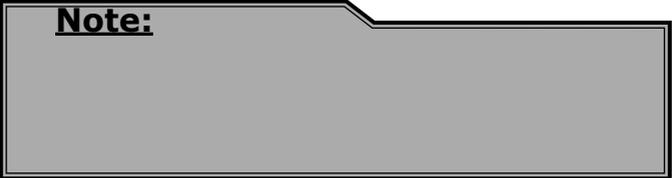
Battery Backup Capacity

Operation

remember

Changing the Battery Backup Module

Note:



APPENDIX

Appendix F

Technical Support

