

RAID Configuration

RenderCube Rack Gen2

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5.1 Setting up RAID

The motherboard supports the following SATA RAID solutions:

- LSI MegaRAID software RAID Configuration Utility with RAID 0, RAID 1, and RAID 10 support (for both Linux and Windows OS).
- Intel[®] Rapid Storage Technology enterprise Option ROM Utility with RAID 0, RAID 1, RAID 10, and RAID 5 support (for Windows OS only).

5.1.1 RAID definitions

RAID 0 (*Data striping*) optimizes two identical hard disk drives to read and write data in parallel, interleaved stacks. Two hard disks perform the same work as a single drive but at a sustained data transfer rate, double that of a single disk alone, thus improving data access and storage. Use of two new identical hard disk drives is required for this setup.

RAID 1 (*Data mirroring*) copies and maintains an identical image of data from one drive to a second drive. If one drive fails, the disk array management software directs all applications to the surviving drive as it contains a complete copy of the data in the other drive. This RAID configuration provides data protection and increases fault tolerance to the entire system. Use two new drives or use an existing drive and a new drive for this setup. The new drive must be of the same size or larger than the existing drive.

RAID 10 is data striping and data mirroring combined without parity (redundancy data) having to be calculated and written. With the RAID 10 configuration you get all the benefits of both RAID 0 and RAID 1 configurations. Use four new hard disk drives or use an existing drive and three new drives for this setup.

RAID 5 stripes both data and parity information across three or more hard disk drives. Among the advantages of RAID 5 configuration include better HDD performance, fault tolerance, and higher storage capacity. The RAID 5 configuration is best suited for transaction processing, relational database applications, enterprise resource planning, and other business systems. Use a minimum of three identical hard disk drives for this setup.

- If you want to boot the system from a hard disk drive included in a created RAID set, copy first the RAID driver from the support DVD to a floppy disk before you install an operating system to the selected hard disk drive.
- Please refer to chapter 2 for how to select the RAID configuration utility. Move the jumper to choose between LSI MegaRAID and Intel[®] Rapid RAID.

5.1.2 Installing hard disk drives

The motherboard supports Serial ATA for RAID set configuration. For optimal performance, install identical drives of the same model and capacity when creating a disk array.

To install the SATA hard disks for RAID configuration:

- 1. Install the SATA hard disks into the drive bays following the instructions in the system user guide.
- 2. Connect a SATA signal cable to the signal connector at the back of each drive and to the SATA connector on the motherboard.
- 3. Connect a SATA power cable to the power connector on each drive.

5.1.3 Setting the RAID item in BIOS

You must set the RAID item in the BIOS Setup before you can create a RAID set from SATA hard disk drives attached to the SATA connectors supported by Intel[®] C612 chipset. To do this:

- 1. Enter the BIOS Setup during POST.
- 2. Go to the Advanced Menu > PCH SATA Configuration, then press < Enter>.
- 3. Set SATA Mode to [RAID Mode].
- 4. Press <F10> to save your changes and exit the BIOS Setup.



Refer to Chapter 4 for details on entering and navigating through the BIOS Setup.

5.1.4 RAID configuration utilities

Depending on the RAID connectors that you use, you can create a RAID set using the utilities embedded in each RAID controller. For example, use the LSI MegaRAID Software Configuration Utility or the Intel® Rapid Storage Technology if you installed Serial ATA hard disk drives on the Serial ATA connectors supported by the Intel® C612 chipset. Refer to the succeeding section for details on how to use the RAID configuration utility.

5.2 Intel[®] Rapid Storage Technology enterprise SATA/SSATA Option ROM Utility

The Intel[®] Rapid Storage Technology enterprise SATA/SSATA Option ROM utility allows you to create RAID 0, RAID 1, RAID 10 (RAID 1+0), and RAID 5 set from Serial ATA hard disk drives that are connected to the Serial ATA connectors supported by the Southbridge.



Before you proceed, ensure that you have installed the Serial ATA hard disk drives, and have set the correct SATA mode in the BIOS setup. You can refer to the **Installing Serial ATA hard disks**, and **Setting the RAID item in BIOS** sections in this manual for more information.

To launch the Intel® Rapid Storage Technology enterprise SATA/SSATA Option ROM utility:

- 1. Turn on the system.
- 2. During POST, press <Ctrl>+<l> to display the utility main menu.

<pre>Intel(R) Rapid Storage Technology enterprise - SATA Option ROM - 3.6.0.1023 Copyright(C) 2003-12 Intel Corporation. All Rights Reserved.</pre>					
[MAIN MENU] 1. Create RAID Volume 3. Reset Disks to Non-RAID 2. Delete RAID Volume 4. Exit					
RAID Volumes: None defined. Physical Disks: ID Drive Model 0 ST33006568S 1 ST33006568S 2 ST33006568S 3 ST33006568S	[DISK/VOLUME I Serial # HMAS0000991753TR 37VN0009845RAJ1 39760009846UEDY GWC50000991756G6	Size 279.3GB	Type/Status(Vol ID) Non-RAID Disk Non-RAID Disk Non-RAID Disk		
[† ↓]-Select	[ESC]-Exit	[ENTER]-Select Menu		

The navigation keys at the bottom of the screen allow you to move through the menus and select the menu options.



The RAID BIOS setup screens shown in this section are for reference only and may not exactly match the items on your screen.

5.2.1 Creating a RAID set

To create a RAID set:

- 1. From the utility main menu, select 1. Create RAID Volume and press < Enter>.
- 2. Key in a name for the RAID set and press <Enter>.



- Press the up/down arrow keys to select a RAID Level that you wish to create then press <Enter>.
- From the **Disks** item field, press <Enter> to select the hard disk drives that you want to include in the RAID set.

[SELECT DISKS]					
Port	Drive Model	Serial #	Size	Status	
0	ST3300656SS	HWAS0000991753TR	279.3GB	Non-RAID Disk	
1	ST3300656SS	37VN00009846RAJ1	279.3GB	Non-RAID Disk	
2	ST3300656SS	397600009846UEDY	279.3GB	Non-RAID Disk	
3	ST3300656SS	GWC50000991756G6	279.3GB	Non-RAID Disk	
3 ST3300656SS GWC50000991756G6 279.3GB Non-RAID Disk Select 1 Master and 1 Recovery disk to create volume. [^]-Prev/Next [TAB]-(M)aster [SPACE]-(R)ecovery [ENTER]-Done					

 Use the up/down arrow keys to move the selection bar then press <Space> to select a disk. A small triangle before the Port number marks the selected drive. Press <Enter> when you are done. Use the up/down arrow keys to select the stripe size for the RAID array (for RAID 0, 10 and 5 only) then press <Enter>. The available stripe size values range from 4 KB to 128 KB. The following are typical values: RAID 0: 128KB

RAID 10:	64KB
RAID 5:	64KB



We recommend a lower stripe size for server systems, and a higher stripe size for multimedia computer systems used mainly for audio and video editing.

- 7. In the **Capacity** field item, key in the RAID volume capacity that you want to use and press <Enter>. The default value field indicates the maximum allowed capacity.
- 8. Press <Enter> to start creating the RAID volume.
- 9. From the following warning message, press <Y> to create the RAID volume and return to the main menu, or press <N> to go back to the **CREATE VOLUME** menu.



5.2.2 Deleting a RAID set



Take caution when deleting a RAID set. You will lose all data on the hard disk drives when you delete a RAID set.

To delete a RAID set:

- 1. From the utility main menu, select 2. Delete RAID Volume and press <Enter>.
- From the Delete Volume Menu, press the up/down arrow keys to select the RAID set you want to delete then press .

I	<pre>Intel(R) Rapid Storage Technology enterprise - SATA Option ROM - 3.6.0.1023 Copyright(C) 2003-12 Intel Corporation. All Rights Reserved.</pre>				
		DELETE VO	LUME MENU] —		
	Name Level Volume0 RAIDO	Drives (Stripe) 2	Capacity 298.0GB	Status Normal	Bootable Yes
		[HE ng a volume will re WARNING: ALL DISK D This does not apply	set the disks ATA WILL BE DE	to non-RAID	
	[↑↓]-Select	[ESC]-Previou	ıs Menu	[DEL]-Dele	te Volume

 Press <Y> to confirm deletion of the selected RAID set and return to the utility main menu, or press <N> to return to the DELETE VOLUME menu.



5.2.3 Resetting disks to Non-RAID



Take caution before you reset a RAID volume hard disk drive to non-RAID. Resetting a RAID volume hard disk drive deletes all internal RAID structure on the drive.

To reset a RAID set:

- 1. From the utility main menu, select 3. Reset Disks to Non-RAID and press < Enter>.
- Press the up/down arrow keys to select the drive(s) or disks of the RAID set you want to reset, then press <Space>. A small triangle before the Port number marks the selected drive. Press <Enter> when you are done.



 Press <Y> in the confirmation window to reset the drive(s) or press <N> to return to the utility main menu.

5.2.4 Exiting the Intel[®] Rapid Storage Technology enterprise SATA/SSATA Option ROM utility

To exit the utility:

- 1. From the utility main menu, select 4. Exit then press <Enter>.
- 2. Press <Y> to exit or press <N> to return to the utility main menu.



5.2.5 Rebuilding the RAID



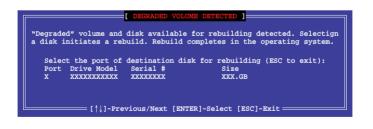
This option is only for the RAID 1 set.

Rebuilding the RAID with other non-RAID disk

If any of the SATA hard disk drives included in the RAID 1 array failed, the system displays the status of the RAID volume as "**Degraded**" during POST. You can rebuild the RAID array with other installed non-RAID disks.

To rebuild the RAID with other non-RAID disk:

- 1. During POST, press <Ctrl>+<l> at the prompt to enter the Intel Rapid Storage Technology option ROM utility.
- If there is a non-RAID SATA Hard Disk available, the utility will prompt you to rebuild the RAID. Press the up/down arrow keys to select the destination disk then Press <Enter> to start the rebuilding process, or press <ESC> to exit.





Select a destination disk with the same size as the original hard disk.

 The utility immediately starts rebuilding after the disk is selected. When done, the status of the degraded RAID volume is changed to "Rebuild".

		rise - SATA Option ROM - ation. All Rights Reserv	
1. Create RAID 2. Delete RAID		NU] 3. Reset Disks to Non-RA 4. Exit	AID
	=[DISK/VOLUME IN	FORMATION]	
RAID Volumes: ID Name Level: 1 Volume0 RAIDI	1 Strip (Mirror) N/A		ncrypted Bootable Yes
Physical Devices: Port Drive Model S 1 ST3160812AS S 2 ST3160812AS S	9LSOF4HL	Size Type/Status(149.0GB Member Disk(149.0GB Member Disk(0)
Volumes with "Rebuild"	status will be re	built within the operati	ng system.
[^↓]-Select	[ESC]-Exit	[ENTER]-Select	Menu

- 4. Press < Esc> to exit Intel Rapid Storage Technology and reboot the system.
- Select Start > Programs > Intel Rapid Storage > Intel Rapid Storage Console or click the Intel Rapid Storage Technology tray icon to load the Intel Rapid Storage Manager utility.
- From the View menu, select Advanced Mode to display the details of the Intel Rapid Storage Console.
- 7. From the **Volumes view** option, select **RAID volume** to view the rebuilding status. When finished, the status is changed to "**Normal**".

Rebuilding the RAID with a new hard disk

If any of the SATA hard disk drives included in the RAID array failed, the system displays the status of the RAID volume as "**Degraded**" during POST. You may replace the disk drive and rebuild the RAID array.

To rebuild the RAID with a new hard disk:

1. Remove the failed SATA hard disk and install a new SATA hard disk of the same specification into the same SATA Port.



Select a destination disk with the same size as the original hard disk.

2. Reboot the system then follow the steps in section **Rebuilding the RAID with other non-RAID disk**.

5.2.6 Setting the Boot array in the BIOS Setup Utility

You can set the boot priority sequence in the BIOS for your RAID arrays when creating multi-RAID using the Intel® Rapid Storage Technology enterprise SATA Option ROM utilility.

To set the boot array in the BIOS:



Set at least one of the arrays bootable to boot from the hard disk.

- 1. Reboot the system and press to enter the BIOS setup utility during POST.
- 2. Go to the Boot menu and select the boot option priority.
- Use up/down arrow keys to select the boot priority and press <Enter>. See the Boot menu section of Chapter 4 for more details.
- 4. From the Exit menu, select Save Changes & Exit, then press <Enter>.
- 5. When the confirmation window appears, select Yes, then press <Enter>.

5.3 Intel[®] Rapid Storage Technology enterprise (Windows)

The Intel® Rapid Storage Technology enterprise allows you to create RAID 0, RAID 1, RAID 10 (RAID 1+0), and RAID 5 set(s) from Serial ATA hard disk drives that are connected to the Serial ATA connectors supported by the Southbridge.



You need to manually install the Intel® Rapid Storage Technology enterprise utility on a Windows® operating system. Please refer to the installation instructions in Chapter 6.

To enter the Intel[®] Rapid Storage Technology enterprise utility under Windows operating system:

- 1. Turn on the system and go to the windows desktop.
- 2. Click the Intel[®] Rapid Storage Technology enterprise icon to display the main menu.

Your storage system is configured for data protection, increased performance and optimal data storage capacity. You can create additional volumes to further optimize your storage system.

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Current Status and a long and a long and a	
Second Automatical Partical Partical Parital Partical<	2020 Device hyperspectra (2 unionization provide) Unionization (2010) Unionization (2010) Unionizationen (2010) Unionizationen (2010) Unionizationen (2010) Unionizati
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thirds initializing 2% complexes	

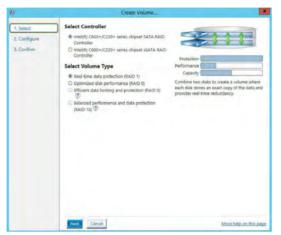


You can click **Rescan** to re-scan any attached hard disks.

5.3.1 Creating a RAID set

To create a RAID set:

- 1. From the utility main menu, select Create Volume and select volume type.
- 2. Click Next.



- 3. Enter a name for the RAID set, then select the array disks.
- 4. Select Volume Size tab, you can drag the bar to decide the volume size.
- 5. Click Next.

1. Select	Configure Volume	Proposed Configuration
2. Configure	Name: Volume_0000	New Array
3. Confirm	Select the array disks (minimum selection required): S 545 disk on Controller 1, thry 0 (279 GB) S 545 disk on Controller 1, thry 0 (279 GB) s46, mill on Controller 1, thry 1 (279 GB) 546 disk on Controller 1, thry 1 (279 GB)	Volume_0000
	Volume Size 4.461 MB Array allocation:	
		1

- S
- If you do not want to keep the data on one of the selected disks, select **NO** when prompted.
- If you want to Enable volume write-back cache or Initialize volume, click Advanced.

6. Confirm the volume creation, than click **Create Volume** to continue.



This process could take a while depending on the number and size of the disks. You can continue using other applications during this time.

L Select	Confirm Volume Creation	Proposed Configuration
2. Configure	Review the selected configuration.	New Array
5. Confirm	A This process could take a while depending on the number and size of the disks. You can continue using other applications during this time.	Volume_0000
	disks. You can continue using other applications during this time.	22

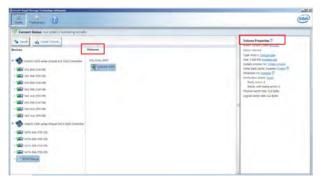
7. Wait until the process is completed, then click **OK** when prompted.

/olume Creation Complete	×
The volume was created successfully.	
• You still need to partition your new volume using Windows Disk Management* before addin any data.	g
More help OK	Ī



You still need to partition your new volume using Windows Disk Management before adding any data.

The RAID set is displayed in the **Volumes** list and you can change the settings in **Volume Properties**.



5.3.2 Changing a Volume Type

To change the volume type in Volume Properties:

- 1. Click the SATA array items you want to change in Volumes field.
- 2. From the Volume Properties field, select Type:RAID 1 Change type.

kogy esteepinise	(inte
system is functioning normally.	
Volume.	Volume Properties (*) Name: Volume,0000 <u>Resame</u> Status: Normal
chipset SAS RAID Controller SAS, Arts/,0000	Type: 6400 1 Charge type sore: 4466 MB (Rotanic tipe) System volume: No <u>Deleta volume</u> Withe back cache: Cisabled <u>Exable (D</u>) Initialized: No <u>Deleta vol</u> Initialized: No <u>Deleta vol</u> Initialized: No <u>Deleta vol</u> Initialized: No <u>Deleta vol</u> Party errors: 0 Blocks with media errors: 0 Physical sector size: 512 Bytes Logical sector size: 512 Bytes

- 3. You can change the Name, Select the new volume type, and Select additional disks to include in the new volume if needed.
- Select the Data stripe size for the RAID array (for RAID 0, 10 and 5 only), and click OK. The available stripe size values range from 4 KB to 128 KB. The following are typical values: RAID 0: 128KB

RAID 0:	128KB
RAID 10:	64KB
RAID 5:	64KB

	pe	1				
lame: Volume_0	000					
elect the new	volume typ	e:				
Optimized di	sk performar	ice (RAID 0)				
Efficient data	hosting and	protection (F	AID 5)			
The new volun	ne will autom	atically includ	le the disks that a	re part of the ex	isting volum	e.
elect additior	al disks to i	nclude in tl	e new volume	Ø		
SAS disk on	Controller 1, F	Phy 4				
SAS disk on	Controller 1, P	Phy 6				
			1			
ata stripe size:	64 KB	• 🦻				
ata stripe size:	64 KB	• 🦻				
WARNING: Co on the disks to before continu	mpleting this be added to ing. Volume	action will in the volume data will be p	mediately start t vill be permanen reserved. Perform	tly lost and shou	ld be backed rade or dow	l up ngrade
WARNING: Co on the disks to before continu	mpleting this be added to ing. Volume migration is	action will in the volume data will be p	vill be permanen	tly lost and shou	ld be backed rade or dow	l up ngrade
WARNING: Co on the disks to before continu while a volume	mpleting this be added to ing. Volume migration is	action will in the volume data will be p	vill be permanen reserved. Perforn	tly lost and shou	ld be backed rade or dow	l up ngrade

We recommend a lower stripe size for server systems, and a higher stripe size for multimedia computer systems used mainly for audio and video editing.

(S)

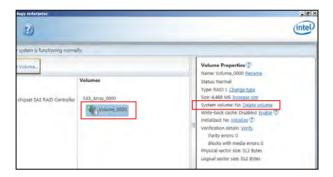
5.3.3 Deleting a volume



Be cautious when deleting a volume. You will lose all data on the hard disk drives.Before you proceed, ensure that you back up all your important data from your hard drives.

To delete a volume:

1. From the utility main menu, select the volume (exp. Volume_0000) in Volumes field you want to delete.



2. Select Delete volume in Volume Properties field. The following screen appears.



3. Click **Yes** to delete the volume and return to the utility main menu, or click **No** to return to the main menu.

5.3.4 Preferences

System Preferences

Allow you to set to show the notification area icon and show system information, warning, or errors here.

Home Publican	ikay neterana Bj	(intel)
System 1-mei	System Preference: Subar the collision area ison Una mite following tradiculour: Storage system infomation Storage system remote Storage system energy	
		Maye Itelas on Millionge

E-Mail Preferences

Allow you to set to sent e-mail of the following events:

- Storage system information
- Storage system warnings
- Storage system errors

Intel® Rapid Strenge Techno	ningy enterprise	1812
Horre Profesences	E)	(intel)
System E-mail	E-mail Professors Softy on by e mail of the following verifs: Stronge system withings Stronge system withings Stronge system withings Stronge system withings Trans- Tr	
	And There . See Deeper	More tails on this sage

5.4 Intel[®] Virtual Raid on CPU in BIOS

This feature requires a KEY module to enable CPU RAID functions with Intel® CPU RSTe.



- The KEY module is purchased separately.
- Refer to section **2.8.2 Internal connectors** for the location of the VROC_HW_KEY connector.



Due to hardware design, your motherboard does not support CPU RAID configurations as OS drives.

To enter the Intel® Virtual Raid on CPU in BIOS:

- 1. Enter the BIOS Setup during POST.
- Go to the Advanced menu > Intel(R) Virtual Raid on CPU > All Intel VMD Controllers then press <Enter> to display the Intel[®] Virtual Raid on CPU menu.



Refer to Chapter 4 for details on entering and navigating through the BIOS Setup.



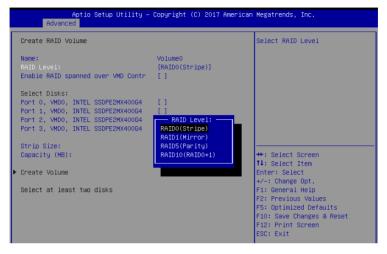
Due to chipset limitation, when SATA ports are set to RAID mode, all SATA ports run at RAID mode together.

Aptio Setup Utility – Copyright (C) 2017 American Advanced	Megatrends, Inc.
All Intel VMD Controllers	This page allows you to create a RAID volume
▶ Create RAID Volume	
Non-RAID Physical Disks:	
▶ Port 0, VMD0, INTEL SSDPE2MX400G4 SN:CVPD6212006W400NGN,	
▶ Port 1, VMDO, INTEL SSDPE2MX400G4 SN:CVPD6212008H400NGN,	
 Port 2, VMD0, INTEL SSDPE2MX400G4 SN:CVPD6212004T400NGN, Port 3, VMD0, INTEL SSDPE2MX400G4 SN:CVPD621200D5400NGN, 	
• FBFt 3, VMD0, INTEL SSDFE2HX40084 SN.CVFD62120005400NGN,	
	++: Select Screen
	t↓: Select Item
	Enter: Select
	+/-: Change Opt.
	F1: General Help
	F2: Previous Values F5: Optimized Defaults
	F10: Save Changes & Reset
	F12: Print Screen
	ESC: Exit

5.4.1 Creating a RAID set

To create a RAID set:

1. From the Intel[®] Virtual Raid on CPU menu, select **Create RAID Volume** and press <Enter>. The following screen appears:



- 2. When the Name item is selected, enter a name for the RAID set and press < Enter>.
- When the RAID Level item is selected, press <Enter> to select the RAID level to create, and then press <Enter>.
- 4. When the Enable RAID spanned over VMD Controllers item is selected, press <Enter> and select X to enable this function.
- 5. Under Select Disks, press <Enter> and select **X** for the disks you want to include in the RAID set.
- 6. When the Strip Size item is selected, press <Enter> to select strip size for the RAID array (for RAID 0, 10 and 5 only), and then press <Enter>. The available strip size values range from 4 KB to 128 KB. The following are typical values:
 - RAID 0: 128 KB
 - RAID 10: 64 KB
 - RAID 5: 64 KB



We recommend a lower strip size for server systems, and a higher strip size for multimedia computer systems used mainly for audio and video editing.

- When the Capacity (MB) item is selected, enter the RAID volume capacity that you want and press <Enter>. The default value indicates the maximum allowed capacity.
- 8. When the **Create Volume** item is selected, press <Enter> to create the RAID volume and return to the Intel[®] Rapid Storage Technology menu.

Aptio Setup Utility - Advanced	Copyright (C) 2017 American	Megatrends, Inc.
Create RAID Volume		Create a volume with the settings specified above
Name: RAID Level: Enable RAID spanned over VMD Contr	VolumeO [RAID5(Parity)] [X]	
Select Disks: Port 0, VMD0, INTEL SSDFE2MX40064 Port 1, VMD0, INTEL SSDFE2MX40064 Port 3, VMD0, INTEL SSDFE2MX40064 Port 3, VMD0, INTEL SSDFE2MX40064	[X] [X] [X] [X]	
Strip Size:	[128KB] 1087416	++: Select Screen
Capacity (MB): RWH Policy	[Disable]	↑↓: Select Item
▶ Create Volume		Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F5: Optimized Defaults F10: Save Changes & Reset F12: Print Screen ESC: Exit

5.4.2 Deleting a RAID set



Be cautious when deleting a RAID set. You will lose all data on the hard disk drives when you delete a RAID set.

To delete a RAID set:

1. From the Intel[®] Virtual Raid on CPU menu, select the RAID volume you want to delete and press <Enter>. The following screen appears:

Aptio Setup Utility – Copyright (C) 2017 American Advanced	Megatrends, Inc.
RAID VOLUME INFO	
Volume Actions ▶ Delete	
Name: Volume0 RAID Level: RAIDS(Parity) Strip Size: 64KB Slze: 1.03TB Status: Normal Bootable: Yes Block size: 512 RNH Policy: [Disable]	++: Select Screen
 Port 0, VMD0, INTEL SSDPE2MX400G4 SN:CVPD6212006H400NGN, Port 1, VMD0, INTEL SSDPE2MX400G4 SN:CVPD6212008H400NGN, Port 2, VMD0, INTEL SSDPE2MX400G4 SN:CVPD621200D5400NGN, Port 3, VMD0, INTEL SSDPE2MX400G4 SN:CVPD621200D5400NGN, 	1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F5: Optimized Defaults F10: Save Changes & Reset F12: Print Screen ESC: Exit

 When the Delete item is selected, press <Enter>, then select Yes to delete the RAID volume and return to the Intel[®] Virtual Raid on CPU menu, or select No to cancel.

Aptio Setup Utility – Copyright (C) 2017 American Advanced	Megatrends, Inc.
Delete the RAID volume? ALL DATA ON VOLUME WILL BE LOST!	Deleting a volume will reset the disks to non-RAID.
▶ Yes ▶ No	

5.4.3 Installing the RAID controller driver during Windows[®] 10 OS installation

This part provides the instructions on how to install the RAID controller drivers during OS installation.

To install the RAID controller driver when installing Windows® 10 OS:

- 1. Boot the computer using the Windows[®] 10 OS installation disc. Follow the screen instructions to start installing Windows[®] 10.
- 2. When prompted to choose a type of installation, click **Custom: Install Windows only** (advanced).

Jggrade: Install Windows and keep files, settings, and applications The files, settings, and applications are moved to Windows with this option. This option is o vasiable when a supported version of Windows is already running on the computer.	iy.
Custom: Install Windows only (Indvanced) The files, withing, and eppleations were transed to Windows with this period. If you want to the second seco	2

3. Click Load Driver.

-	Name	Total size	Free space		
Ŵ	Drive 0 Partition 1: System Reserved	350.0 MB	88.0 MB	System	
-	Drive 0 Partition 2	148.7 GB		Primary	
t Eel	resh X Delete	@ Format	New		

4. A message appears, reminding you to insert the installation media containing the driver of the RAID controller driver. If you have only one optical drive installed in your system, eject the Windows OS installation disc and replace with the motherboard Support DVD into the optical drive. Click **Browse** to continue.



- 5. Locate the driver in the corresponding folder of the support DVD then click **OK** to continue.
- 6. Select the RAID controller driver you need from the list and click Next.
- When the system finishes loading the RAID driver, replace the motherboard Support DVD with the Windows Server installation disc. Select the drive to install Windows and click Next.

Name		Total size	Free space	Ture
	Partition 1: System Reserved	350.0 MB	SB.0 MB	
Drive 0	Partition 2	148.7 GB	139.6 GB	Primary
€g Befresh	× Relete	@ Ecrmat	New	
Load driver	Extend			

8. Setup then proceeds with the OS installation. Follow screen instructions to continue.