



RocketCache 3240X8

6Gb/s SATA/SAS Host Adapter with SSD Cache Technology



User's Guide

v1.1

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HighPoint RocketCache 3240X8 – 4-Port SATA/SAS 6Gb/s PCI-E 2.0 x8 HBA with HighPoint SSD Caching technology

The RocketCache 3240X8 HBA is a high-performance 4-Port PCI-Express 2.0 x8 SAT/SAS 6Gb/s HBA and is designed specifically for SSD Caching Storage Applications.

Combine your hard disks and SSD's into a single, high-performance RocketCache Drive using one of four specialized Caching Methods. The easy to use RocketCache Software Interface allows you tailor Caching configurations that are best suited to your specific applications and storage requirements.

Kit contents

- RocketCache 3240X8 controller
- Software CD
- Mini-SAS (SFF-8087) to SATA cable
- Quick Installation Guide
- Low profile bracket

Hardware Installation

Installing the RocketCache 3240X8 Host Adapter

Note: Make sure the system is powered-off before installing the RocketCache 3240X8 host adapter.

- 1) Open the system chassis and locate an unused PCI-E (2.0 or 1.0) ×8 or x16 slot.
- 2) Remove the PCI-E slot cover.
- 3) Gently insert the RocketCache 3240X8 host adapter into the PCI-E slot, and secure the bracket to the system chassis.
- 4) After installing the adapter, attach the hard disks or disk enclosure to the RocketCache 3240X8 host adapter using the Mini-SAS cable.
- 5) Close and secure the system chassis.

RocketCache 3240X8 BIOS

After installing the RocketCache 3240X8 host adapter, and power on the system, the BIOS should post. Verify the BIOS information to check if the host adapter is installed and detected correctly:

RocketCache 3240X8 BIOS Setting Utility v1.0
(c) 2012 HighPoint Technologies, Inc.

Driver Installation (Windows 7, Vista, 2008)

1. After installing the RocketCache 3240X8 host adapter, boot to the Windows operating system.
2. Windows should automatically detect the host adapter, and displays the “Found New Hardware Wizard”. Select “Locate and install driver software”. When Windows asks: “Windows needs your permission to continue”, select “Continue”.
3. When asked to search online select “Don’t Search Online”.
4. Select “I don’t have disc, show me other options”.
5. Select “Browse my computer for driver software”.
6. Browse to the location of the driver and click “Next”.

Driver location (RocketCache Software CD):

/ RC3240X8/ Driver/Windows

7. Select the driver folder.
8. When asked: “Would you like to install this driver software?” select “Install”.
9. Reboot the system when prompted. The RocketCache 3240X8 host adapter will be ready for use after Windows reboots.

Using RocketCache software utility Installation

1. RocketCache Software installation

Follow below steps to install the RocketCache management utility:

- a. Browse to the location of the software utility :

Driver location (RocketCache Software CD):

/ RC3240X8/ Utility/Windows

- b. Double click and run the “Setup” program to start installation.
- c. Follow the instruction of the software installation wizard.
- d. After the installation finished, double click the shortcut on the desktop to start the RocketCache software:



2. RocketCache Management Software Overview

RocketCache Management Software is a web based software utility. After starting the software it will switch to the “Overview” tab. This tab will show all the Single Drives’ informant and the RocketCache HBA’s information.



Single Drives Rescan

Initialize Devices

	Device 1.1	Model	WDC WD10EADX-00TDH80-WD-WCAV5M711143	Capacity	1.00 TB	SMART
	Device 1.2	Model	WDC WD10EADX-00TDH80-WD-WCAV5M709973	Capacity	1.00 TB	SMART
	Device 1.3	Model	OCZ-AGILITY3-OCZ-NYK8J3SEI19U990E	Capacity	60.02 GB	SMART
Unplug	Drive FW	2.15		Read Ahead	Enabled	Change
	HBA Port	3		Write Cache	Enabled	Change
	Max Free	0.00 GB				
	Status	Legacy		NCQ	Enabled	Change
	Serial Number	OCZ-NYK8J3SEI19U990E				

HBA’s BIOS can also be flashed from this tab. Browse to the BIOS binary file and click Submit to flash the BIOS:

RocketCache 3240X8 HBA



Device Detail:

Controller Model: RocketCache 3240X8 Host Bus Adapter
BIOS Version: v1.3
RocketCache WebGUI Version: 1.0.0

Flash BIOS Configuration:

Select the file to update BIOS.
This process may take some time.



3. Build RocketCache

Click the “Build RocketCache” button to start create RocketCache virtual disk.

RocketCache 3240X8 provide four Caching Models for different applications. To build RocketCache:

- Chose and Select the Caching Model.
- Check and Select the HDD and SSD.
- Click Create button to complete the RocketCache Building.

Build RocketCache

Caching Model Selection:

☒ Maximum Performance [Click here learn more](#)

☐ High Performance with Cache Protection [Click here learn more](#)

☐ High Protection with Cache Performance [Click here learn more](#)

☐ Maximum Protection [Click here learn more](#)

Select HDD:

HBA Port	Model	Capacity	Max Free
<input type="checkbox"/> 1	WDC WD10EADX-00TDH80-WD-WCAV5M782373	1.00 TB	1.00 TB
<input type="checkbox"/> 2	WDC WD10EADX-00TDH80-WD-WCAV5M778985	1.00 TB	1.00 TB

Select SSD:

HBA Port	Model	Capacity	Max Free
<input type="checkbox"/> 3	OCZ-AGILITY3-OCZ-NYK8J3SE119U990E	59.92 GB	59.92 GB
<input type="checkbox"/> 4	OCZ-AGILITY3-OCZ-U6JPEBF1FK37EK5A	59.92 GB	59.92 GB

Create

Note: If the HDD/SSD status is “Legacy” mode, it cannot be used to build RocketCache. Try “Initialize Devices” from the “Overview” tab before building RocketCache.

4. Caching Model Selection

Maximum Performance - This caching mode optimizes the SSD and HDD devices for maximum read and write performance.

Maximum Performance Requirements:

1 or more HDD(s) + 1 or more SSD(s)

High Performance with Cache Protection - This caching mode combines ultra-fast data access with write protection. Your cache files are written directly to disk.

High Performance with Cache Protection Requirements:

1 or more HDD(s) + 1 or more SSD(s)

High Protection and Cache Performance - This mode provides high-level of data protection with improved access speeds. Multiple copies of each file are permanently stored on the hard disks.

High Protection with Cache Performance Requirements:

2 HDD(s) + 1 or more SSD(s)

Maximum Protection - This caching mode provides the maximum data protection. Multiple copies of each file are written directly to disk.

Maximum Protection Requirements:

2 HDD(s) + 1 or more SSD(s)


5. Manage RocketCache

RocketCache Status and maintenance:

RocketCache Virtual Device statuses:

Normal status– RocketCache is under standard normal situation:

RocketCache(Name:HPT_RC Capacity:2.00 TB Status:Normal) [More Information](#)



HDD Model:WDC WD10EADN-00TDB0-WD- WCAV3M711143	HBA Port:1
HDD Model:WDC WD10EADN-00TDB0-WD- WCAV3M709973	HBA Port:2
SSD Model:OCZ- AGILITY3-OCZ- NYK8J3SE119U990E	HBA Port:3
SSD Model:OCZ- AGILITY3-OCZ- U6P6BF1FK3TEK5A	HBA Port:4

Non-Cache- The SSD Member of the RocketCache virtual disk has been removed or lost. The SSD cache of the RocketCache can be removed if needed.

Add / Remove SSD cache:

To **add the SSD cache** to a non-Cache mode RocketCache virtual disk:

- Switch to the “Manage RocketCache” tab.
- Chose the cache mode.
- Check to select the SSD, then click the” add” button to add SSD cache:



To **remove the SSD cache** from a RocketCache virtual disk, switch to the “Manage RocketCache” tab and click the “Remove Cache” button. Once the SSD cache is removed the RocketCache virtual disk mode will change to Non-Cache mode.

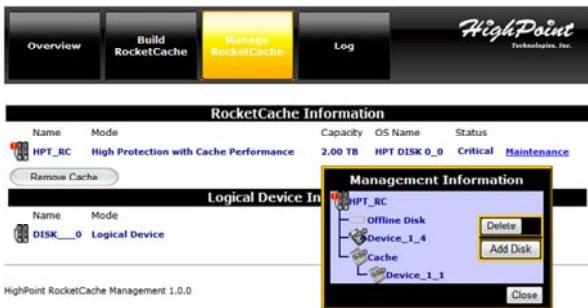
Note: The RocketCache with Cache Protection mode will be Non-Cache mode If SSD unexpected lost or off-line.

Critical status- RocketCache lost one HDD member. If the High Protection and Maximum Protection model RocketCache content two HDDs, the two HDDs will be set as mirrored mode as the member of the RocketCache. If one of the mirrored HDD lost or off-line the RocketCache will be at Critical status.

Critical status is a degrade status of protection mode; it is strongly suggest to rebuild the RocketCache at this situation.

To **Rebuild** the **Critical** RocketCache

- Install a new HDD to replace the off-lined HDD/port of the RocketCache 3240X8.
- The RocketCache management software will automatic detect the new HDD. The new HDD will list under the Overview table- Single disk as Legacy mode.
- Click Initialize button to initialize the disk.
- Switch to the Manage RocketCache tab and click the Maintenance link follow the RocketCache disk.
- Click the Add disk button from the pop-up windows.



- Select the new disk and start rebuilding RocketCache.

Rebuilding status- RocketCache is reconstruction and synchronizing data of the RocketCache's mirrored HDDs member. The rebuilding percentage can be checked under the "Overview" tab of the RocketCache software.

Disabled status- High Performance model and Cache Performance model RocketCache lost the SSD unexpected. Or the High Performance model RocketCache lost HDD member.

*Note: Once the RocketCache be "**Disabled**" status all the data will be lost.*

6. Delete RocketCache / Logical Device

To delete the RocketCache or Logical Device

- Switch to the Manage RocketCache tab.
- Click the “Maintenance” link follow the RocketCache or Logical Device. It will of the pop-up the “Management Information” window.

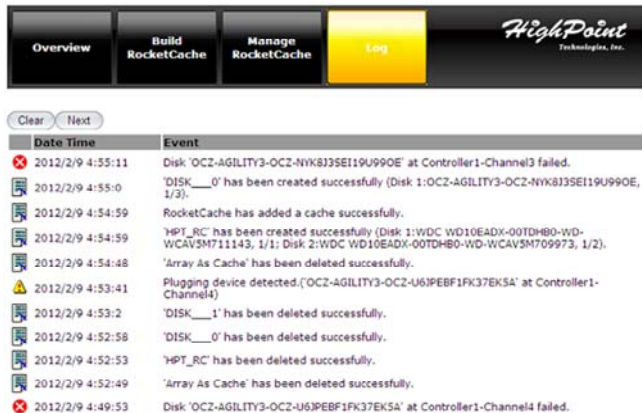


- Click the “Delete” button to delete the Device.

Note: All the data will be lost after delete the RocketCache or Logical Device.

7. View Event log

Switch to the “Log” tab of the RocketCache Management software to View the all Event:



The screenshot shows the HighPoint RocketCache Management software interface. At the top, there is a navigation bar with four tabs: Overview, Build RocketCache, Manage RocketCache, and Log. The Log tab is currently selected and highlighted in yellow. To the right of the tabs is the HighPoint Technologies, Inc. logo. Below the navigation bar, there are two buttons: Clear and Next. Below these buttons is a table with two columns: Date Time and Event. The table contains ten rows of log entries, each with a date and time, an icon, and a description of the event.

Date Time	Event
2012/2/9 4:55:11	Disk 'OCZ-AGILITY3-OCZ-NYK8J3SEI19U990E' at Controller1-Channel3 failed.
2012/2/9 4:55:0	'DISK____0' has been created successfully (Disk 1:OCZ-AGILITY3-OCZ-NYK8J3SEI19U990E, 1/3).
2012/2/9 4:54:59	RocketCache has added a cache successfully.
2012/2/9 4:54:59	'HPT_RC' has been created successfully (Disk 1:WDC WD10EADX-00TDH80-WD-WCAV5M711143, 1/1; Disk 2:WDC WD10EADX-00TDH80-WD-WCAV5M709973, 1/2).
2012/2/9 4:54:48	'Array As Cache' has been deleted successfully.
2012/2/9 4:53:41	Plugging device detected.('OCZ-AGILITY3-OCZ-U6JPEBF1FK37EK5A' at Controller1-Channel4)
2012/2/9 4:53:2	'DISK____1' has been deleted successfully.
2012/2/9 4:52:58	'DISK____0' has been deleted successfully.
2012/2/9 4:52:53	'HPT_RC' has been deleted successfully.
2012/2/9 4:52:49	'Array As Cache' has been deleted successfully.
2012/2/9 4:49:53	Disk 'OCZ-AGILITY3-OCZ-U6JPEBF1FK37EK5A' at Controller1-Channel4 failed.

Customer Support

If you encounter any problems while utilizing the Rocket series host adapter, or have any questions about this or any other HighPoint Technologies, Inc. product, feel free to contact our Customer Support Department.

Web Support: <http://www.highpoint-tech.com/websupport/>

HighPoint Technologies, Inc. websites:
<http://www.highpoint-tech.com>

FCC Part 15 Class B Radio Frequency Interference statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

European Union Compliance Statement

This Information Technologies Equipment has been tested and found to comply with the following European directives:

- European Standard EN55022 (1998) Class B
- European Standard EN55024 (1998)