

SSD6202/6204 Management Software Installation Guide (Windows)

Version 1.00

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SSD6202/6204 Management Software Installation Guide

This guide includes important hardware/software requirements, installation procedures, and troubleshooting tips for using SSD6202/6204 NVMe RAID controllers with a Windows operating system.

Prerequisites

This section describes the base hardware and software requirements for the SSD6202/6204 PCIe 3.0 NVMe RAID controllers.

Management Software Installation

This section explains how to download and install the SSD6202/6204 RAID Management Software Suite for Windows operating systems. The download includes both the Web RAID Management Interface (WebGUI), and the CLI (Command Line Interface).

Troubleshooting

Please consult this section if you encounter any difficulties installing or using the SSD6202/6204 NVMe RAID controller. It includes descriptions and solutions for commonly reported technical issues.

Appendix

A selection of useful information for the SSD6202/6204 NVMe RAID controllers.

Prerequisites for a Data-RAID Configuration

The SSD6202/6204 controllers can support Data-RAID arrays. In order to configure a Data-RAID array, you will need the following:

- 1. An Array must be created. An Array must be created for the SSD6202/6204 to be connected to the WEBGUI, please refer to <u>Appendix-Create an Array</u>.
- 2. A PCIe 3.0/4.0 slot with x8 or x16 lanes.
- 3. Make sure any HighPoint NVMe drivers are uninstalled. It may be prevent the SSD6200 from functioning properly.

Installing the HighPoint RAID Management Software (WebGUI & CLI)

This guide provides an overview of the Web-RAID Management graphical user interface, also known as the WebGUI. The WebGUI is an intuitive, yet comprehensive management tool designed for users of any experience level.

Download the latest software package from the HighPoint website:

SSD6202/6204:

https://www.highpoint-tech.com/USA_new/series-ssd6200-overview.html

- 1. Extract the package and double-click the HighPoint RAID Management program to install the software.
- 2. Once installed, locate the Management icon on the desktop and double-click to start the WebGUI interface.

Example screenshot (SSD6204)

Properties		Storage	Properties
Host Adapter mode	el: HighPoint SSD6204		Total Capacity: 4000 GB
Controller count:	1	(HP	Configured Capacity: 0 GB
Physical Drive:	4		Free Capacity: 4000 GB
Legacy Disk:	0		
RAID Count:	0	8	Configured 0.0%

Uninstalling the HighPoint RAID Management Software (WEBGUI & CLI)

1. Access Control Panel and select Programs → Programs and Features, and right-click on the HighPoint RAID Management entry.

2. Click Uninstall/Change

0	Programs and Features							
÷	🕂 🔶 👻 🛧 🖬 🗸 Control P	Panel > Programs > Programs and Fe	eatures					Search Program
	Control Panel Home	Uninstall or change a pro	ogram					
	View installed updates	To uninstall a program, select it from the list and then click Uninstall. Change, or Repair.						
P	Turn Windows features on or	all and the following of the Bar of Marken III of the						
	off	Organize 💌 Uninstall/Change						
		Name		Publisher		Installed On	Size	Version
		🔚 CrystalDiskMark 8.0.1		Crystal Dew World		9/12/2021	7.07 MB	8.0.1
		Google Chrome		Google LLC		10/12/2021		94.0.4606.81
		📧 HighPoint RAID Management	Uninstall/Change		chnologies, Inc	10/25/2021		
		C Microsoft Edge	C Microsoft Edge		rporation	10/8/2021		94.0.992.38
		🍓 Mozilla Firefox (x64 zh-CN)		Mozilla		10/8/2021	206 MB	93.0
		📸 Mozilla Maintenance Service		Mozilla		9/15/2021	327 KB	92.0
		smartmontools	nontools smartmontools.org		ools.org	9/14/2021		7.1 2019-12-30 r502

3. After uninstalling the HighPoint RAID Management, click Finish.

🐻 HighPoint RAID Manageme	nt Uninstall	_	\Box \times
HeftePolat	Completing the High Management Uninst	Point R/ tall Wiza	AID
	HighPoint RAID Management has computer.	been uninstal	led from your
	Click Finish to close this wizard.		
	< Back	Finish	Cancel

Troubleshooting

Note: When troubleshooting your SSD6202/6204 NVMe RAID controller, make sure all of the Prerequisites have been met before proceeding.

The WebGUI will not start after double-clicking the desktop icon.

н	mmm can't reach this page
lo	alhost refused to connect.
Tr	<i>y</i> :
•	Search the web for localhost
•	Checking the connection
	Checking the proxy and the firewall

1. This is often the result of a missing driver or improperly installed driver. Open **Device Manager** and check under **Storage Controllers**.

If the hardware is properly installed, you should see a **Standard NVMe Express Controller** entry under Storage controllers



If the interface does not display "Standard NVMe Express Controller", then the motherboard does not recognize the SSD6200.

- a. Power down the system, and make sure the SSD6200 controller is securely installed into the PCIe slot.
- You should also check to make sure hptsvr is running under Task Management → Services. If the status of hptsvr process is Stopped, right-click on this entry and select Start from the menu:
 Task Manager

Processes Performance App H	nistory	Startup Users Details Services			
Name ^	PID 5232	Description Human Interface Device Service	Status Running	Group LocalSystemN	^
hptsvr		HighPoint RAID Management Service	Stopped		1
HvHost icssvc igccservice igfxCUIService2.0.0.0 KEEXT InstallService Intel(R) Capability Licensin	5512	HV Host Service Windows Mobile Hotspot Service Intel(R) Graphics Command Center Intel(R) HD Graphics Control Panel S IKE and AuthIP IPsec Keying Modules Microsoft Store Install Service Intel(R) Capability Licensing Service	Stopped Stopped Running Stopped Stopped Stopped Stopped	Start Stop Restart Open Services Search online Go to details	
Intel(R) TPM Provisioning S iphlpsvc IpxlatCfgSvc ihi_service Kevlso	5532 6096 1376	Intel(R) TPM Provisioning Service IP Helper IP Translation Configuration Service Intel(R) Dynamic Application Loader CNG Key Isolation	Stopped Running Stopped Running Running	NetSvcs LocalSystemN	
KtmRm LanmanServer LanmanWorkstation (fsvc	5848 5256	KtmRm for Distributed Transaction C Server Workstation Geolocation Service	Stopped Running Running Stopped	NetworkServic netsvcs NetworkService netsvcs	
 LicenseManager Iltdsvc Imhosts LSM 	7736 8176 1748	Windows License Manager Service Link-Layer Topology Discovery Map TCP/IP NetBIOS Helper Local Session Manager	Running Stopped Running Running	LocalService LocalService LocalServiceN DcomLaunch	

🔿 Fewer details | 🍓 Open Services

3. An Array must be created for the SSD6202/6204 to be connected to the WEBGUI, please refer to <u>Appendix-Create an Array</u>.

Note: Only in Windows Server 2019 system, there is no RAID WEBGUI can also open normally.

If you experience any other WebGUI or CLI related problems, please submit a support ticket using our <u>Online Support Portal</u>, which includes a description of the problem in as much detail as possible, and upload the following:

Appendix

Create an Array

If you would like to configure a RAID array using NVMe SSD's hosted by the SSD6200, please select 1 of the following 3 Methods.

Method 1: Create a RAID array via RAID Switch settings (Only for SSD6202)

01. Connect two NVMe SSD's to the SSD6202.

Note: Make sure that there is no RAID or residual partitions in the two NVMe SSD's.

02. Create RAID arrays via RAID Switch settings.

None	JBOD	RAID 1	RAID 0

Note: If you don't want to use RAID Switch to create RAID, please make sure the switch setting is None.

Method 2: Create a RAID array using the Motherboard BIOS

Using the SuperMicro H11DSi motherboard as an example:

01. Set 'Boot mode select' to 'UEFI'.

Aptio Setup Uti. Main Advanced IPMI Event I	lity – Copyright (C) 2019 American H Logs Security <mark>Boot</mark> Save & Exit	Megatrends, Inc.
Boot Configuration		Select boot mode Legacy/UEFI
Boot Mode Select LEGACY to EFI Support	(UEFI) [Disabled]	
FIXED BOOT ORDER Priorities Boot Option #1 Boot Option #2	(UEFI Hard Disk) (UEFI AP:UEFI: Built-in EFI Shell)	
Boot Option #3 Boot Option #4 Boot Option #5	UEFIC CD/OVO) Boot Mode Select (Legacy UEFI Dual	
Boot Option #6 Boot Option #7 Boot Option #8	(UEFI USB Lan)	
Boot Option #9	[UEFI Network:(B97/DO/FO) UEFI: PX4 Intel(R) 1350 Gigabit Network Connection(MC:3cecef 40aldc)]	++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

02. Next, under "Advanced->PCIe/PCI/PnP Configuration, change "CPU Slot x PCI-E OPROM" to "EFI". "x" refers to the slot number (slot 4 was used when the screenshot was taken). Please consult the motherboard manual for more information.

Aptio Setup Utility - Advanced	Aptio Setup Utility – Copyright (C) 2019 American Megatrends, Inc. Advanced				
PCI Bus Driver Version	A5.01.19	Enables or Disables 64bit capable Devices to be			
PCI Devices Common Settings:		Decoded in Above 4G Address			
Above 4G Decoding		Space (Only if System			
SR-IOV Support	[Disabled]	Supports 64 bit PCI			
BME DMA Mitigation	[Disabled]	Decoding).			
PCIe ARI Support	[Auto]				
PCIe Spread Spectrum	[Disabled]				
VGA Priority	(Onboard)				
NVMe Firmware Source	[Vendor Defined				
	Firmware]				
M.2(AHCI) Firmware Source	[Vendor Defined				
	Firmware]				
CPU2 SLOT1 PCI-E 3.0 X8 OPROM	[EFI]				
CPU1 SLOT2 PCI-E 3.0 X16 OPROM	[EFI]				
CPU1 SLOT3 PCI-E 3.0 X8 OPROM	[EFI]				
CPU1 SLOT4 PCI-E 3.0 X16 OPROM	(EFI)	++: Select Screen			
CPU1 SLOTS PCI-E 3.0 X8 OPROM	[EFI]	14: Select Item			
M.2 PCIe x2 OPROM	[EFI]	Enter: Select			
Onboard LAN1 Option ROM	[EFI]	+/-: Change Opt.			
Onboard LAN1 Option ROM	[EFI]	F1: General Help			
P2_NVMe0 OPROM	[EFI]	F2: Previous Values			
P2_NVMe1 OPROM	[EF1]	F3: Optimized Defaults			
Onboard Video Option ROM	[EF1]	▼ F4: Save & Exit			
		ESC: Exit			

- 03. Creating the RAID array:
 - a. Select "Advanced→Marvell NVMe Configuration Utility";



Note: If you cannot find "*Marvell NVMe Configuration Utility*" in the motherboard BIOS under "*advanced*" interface, you will need to create the array using one of the other four methods.

b. Next, select "**Create RAID Configuration**". Press "Enter" to open the Configuration Utility.



c. Set "RAID Configuration Menu" to "Enabled", and then select "Goto RAID Config".

Aptio Setup Utility — Cop Advanced	yright (C) 2019 Amer	rican Megatrends, Inc.
Device select (0) Samsung SSD 970 EVO Plus 50068 (1) Samsung SSD 970 EVO Plus 50068	(Enabled) (Enabled)	Goto RAID configuration setting page.
▶ [POLO KHIN COULTS]		++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Fvit
Version 2.20.1275. Copyr	ight (C) 2019 Ameri	can Megatrends, Inc.

d. For "Would you like to create this virtual disk?" select "Yes", then select "Goto Namespace Configuration".



e. For **"Would you like to create those namespace on the virtual disk**?" select **"Yes**", then select **"Accept**" to create the RAID0 array.

Aptio Setup Utility - Advanced	- Copyright (C) 2019
Namespace Configuration	
Namespace Count	1
Maximum VD Size	931GB
Utilized Size	OMB
Remainding Size	931GB
Namespace_1 Size	0
Would you like to create those namespace on the virtual disk?	[Yes]
▶ [Accept]	

f. When the page displays "Successful!" select OK, to exit the menu;

Ap Messages	tio Setup Utility -	Copyright (C)	2019 American	Megatrends, Inc.
Successful! ▶ OK				++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
V	ersion 2.20.1276. C	opyright (C) 2	019 American Me	egatrends, inc.

Method 3: Create RAID in UEFI

01. First, prepare the UEFI Tool. This file should be copied to the root of a bootable USB flash drive.

Using the SuperMicro H11DSi motherboard as an example:

01. Set 'Boot mode select' to 'UEFI';

Aptio Setup Utility – Copyright (C) 2019 American Megatrends, Inc. Main Advanced IPMI Event Logs Security <mark>Boot</mark> Save & Exit	
Boot Configuration	Select boot mode Legacy/UEFI
Boot Mode Select	JEFI)
FIXED BOOT ORDER Priorities	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Boot Option #1	IFET Hand Disk]
Boot Option #2	IFFT AP:UFFT:
	uilt-in FEI Shelll
Boot Option #3	IEET CD/DVD]
Boot Option #4	Mode Select kil
Boot Option #5	
UEFI	
Dual	
Boot Option #6	
Boot Option #7	
Boot Option #8	JEFI USB Lan]
Boot Option #9	JEFI ++: Select Screen
	etwork:(B97/D0/F0) 11: Select Item
	EFI: PXE IPv4 Enter: Select
	ntel(R) I350 +/-: Change Opt.
	igabit Network F1: General Help
	onnection(MAC:3cecef F2: Previous Values
	Daidc)] F3: Optimized Defaults
	▼ F4: Save & Exit
	ESC: Exit

02. Choose to boot from the USB flash drive (shown as "UEFI: SanDisk, Partition 1" for the example below):



03. After entering the UEFI Shell, select "FS0:" to access the USB flash drive: Note: "FS0" is the name of the USB flash drive used for this example



04. Next, locate the "mnv_cli.efi" program and run it:



Note: *if the CLI reports that "No NVMe Controller is found", please see Appendix – Troubleshooting.*

05. To create a RAID0 array using two NVMe SSD's, enter the following command:



For more CLI commands, please download the CLI manual from the product page of the official website.