SSD7000 Series NVMe RAID Solutions Mac Installation Guide

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Overview

This guide includes important hardware/software requirements, installation & upgrade procedures, and troubleshooting tips for using SSD7000 NVMe RAID controllers, the RocketStor 6661A-NVMe ThunderboltTM 3 NVMe RAID solution, and SSD6540/6540M RAID enclosures with a macOS operating system.

Prerequisites

This section describes the base hardware and software requirements for SSD7000 series NVMe RAID controllers & enclosures.

Driver Installation

This section covers driver installation, driver upgrade and driver uninstallation procedures for SSD7000 series NVMe RAID controllers & enclosures in a macOS environment.

Troubleshooting

Please consult this section if you encounter any difficulties installing or using SSD7000 series NVMe RAID controllers or enclosures. It includes descriptions and solutions for commonly reported technical issues.

Appendix

This section describes how to collect trouble shooting information for support cases you have submitted via our Online Support Portal.

Prerequisites

- 1) Make sure at least one NVMe SSD's has been installed into the HighPoint NVMe controller or enclosure. The driver will not install properly unless NVMe SSD's are detected by the hardware environment.
- The SSD7101A-1/7120/6540/6540M/7103/7104/7140/7505/7540/7540L NVMe device must installed into a PCIe 3.0 slot with x16 dedicated lanes. The SSD7204 can be installed into a PCIe 3.0 x8 or x16 slot.

If you are using the RocketStor 6661A-NVMe or a SSD7000 NVMe RAID controller via the RocketStor 6661A adapter, the RocketStor unit must be plugged into a ThunderboltTM 3 port.

- 3) Operating System Support: macOS 10.13 or later
- 4) Before installing the driver and RAID Management software, you should log into the system as a System Administrator.
- 5) Identify the system as either T2 or Non-T2 based if the system has a T2 chip, make sure to follow section 3 before attempting to install any software for the HighPoint NVMe device.

1. Apple T2 security Chip-Disable Secure boot

Secure Boot must be disabled on the following products:

Learn more About the Apple T2 Security Chip: https://support.apple.com/en-us/HT208862

- iMac Pro
- Mac Pro introduced in 2019
- Mac mini introduced in 2018
- MacBook Air introduced in 2018 or later
- MacBook Pro introduced in 2018 or later

You can also use System Information to learn whether your Mac has this chip:

- 1. Press and hold the Option key while choosing Apple () menu > System Information.
- 2. In the sidebar, select either Controller or iBridge, depending on the version of macOS in use.
- 3. If you see "Apple T2 chip" on the right, your Mac has the Apple T2 Security Chip.

	100 March 1	Book Pro
Hardware	Controller Informa	tion:
Hardware ATA Audio Bluetooth Camera Card Reader Controller Diagnostics Disc Burning Ethernet Cards Fibre Channel FireWire Graphics/Displays Hardware RAID Memory NVMExpress PCI Parallel SCSI Power	Controller Informa Model Name: Firmware Version: Boot UUID:	Apple T2 chip
Printers SAS SATA/SATA Express SPI Storage Thunderbolt USB		

Disabling Secure Boot

- 1) Restart the computer and then press the **Command** + **R** keys simultaneously. Keep holding the keys down until the Apple Logo appears.
- When the menu bar says: "macOS Utilities", you have booted into Recovery mode. Launch the Startup Security Utility application by selecting it from the Utilities menu.



3) A dialog box will appear, telling you that you will need to authenticate as an Administrator to make changes, click **the Enter macOS Password...** button.



4) When the Startup Security Utility window appears, select **No Security** under the Secure Boot options.

0.0	Startup Security Utility		
0	Firmware password protection is off.		
1	Turn on a firmware password to prevent this computer from starting up from a different hard disk, CD, or DVD without the password.		
	Turn On Firmware Password.		
Secure Be	oot		
trusted	icurity s that only your current OS, or signed operating system software currently by Apple, can run. This mode requires a network connection at software tion time.		
	m Security any version of signed operating system software ever trusted by Apple to run.		
O No Sec Does no	curity of enforce any requirements on the bootable OS.		
Allowed I	Boot Media		
Restric	w booting from external or removable media ts the ability to boot from any device not protected by the T2 such as USB and arbolt drives or internally connected PCIe or SATA drives.		
	booting from external or removable media at restrict the ability to boot from any devices.		

5) Select **Restart** from the Apple menu to restart your Mac, and wait for your normal Desktop to appear.

2. Installing the Device Driver

Current drivers can be downloaded from each product's Software Downloads webpage.

Product	Download Page
SSD7101A-1	https://www.highpoint-tech.com/USA_new/series-ssd7101a-1-download.htm
SSD7120	https://highpoint-tech.com/USA_new/series-ssd7120-download.htm
SSD7204	https://highpoint-tech.com/USA_new/series-ssd7204-download.htm
SSD7104	https://highpoint-tech.com/USA_new/series-ssd7104-download.htm
SSD6540M	https://highpoint-tech.com/USA_new/series-ssd6540m-download.htm
SSD6540	https://highpoint-tech.com/USA_new/series-ssd6540-download.htm
SSD7103	https://highpoint-tech.com/USA_new/series-ssd7103-download.htm
SSD7140	https://highpoint-tech.com/USA_new/series-ssd7140-download.htm
RS6661A-NVMe	https://highpoint-tech.com/USA_new/series-rs6661a-nvme-download.htm
SSD7505	https://highpoint-tech.com/USA_new/series-ssd7500-download.htm
SSD7540	https://highpoint-tech.com/USA_new/series-ssd7500-download.htm
SSD7540L	https://highpoint-tech.com/USA_new/series-ssd7500-download.htm

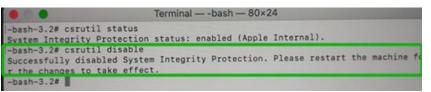
macOS High Sierra 10.13 Driver Installation Procedure

 Restart the computer and then press the Command + R keys simultaneously. Keep holding the keys down until the Apple logo appears. Click on Utilities in the upper left corner and select Terminal.



2) Open a Terminal window and enter the following command:

csrutil disable



3) Select Restart from the Apple menu to restart your Mac, and wait for your normal Desktop to appear.

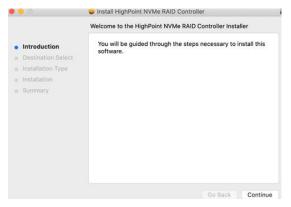
Ś	Terminal	Shell	Edit	View	Window	Help
St	tartup Disk					
R	estart 📐			Terr	ninal — -ba	ch - 20×2
S	hut Down	11	statu			511-0022

4) After rebooting, confirm that SIP is in the disabled state. Open terminal and type the following command:

csrutil status



1) Next, start the driver installation procedure. Locate the download and double click the package to start the installer. Click the **Continue** button:



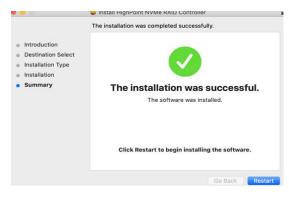
2) macOS will prompt you to install the driver. Click Install to proceed.

	Standard Install on "1014.6"		
Introduction Destination Select Installation Type Installation Summary		standard installation of this s uter. All users of this comput	
	Customize	Go Back	Insta

3) You will be prompted that a reboot is needed to install the software. Click **Continue Installation**.

Introductic	When this software finishes must restart your computer you want to install the softw	. Are you sure	
DestinatioInstallatic	Cancel	tinue Installation	software ter will
 Installation 			
 Summary 			

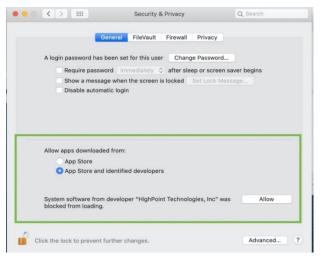
4) If no pop-ups appear, please proceed to the next step of installation. Click **Restart**.



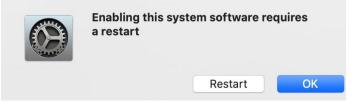
5) If you receive a popup window prompting you for permission, click **Open Security Preferences**.

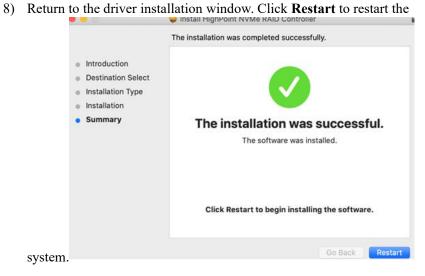


6) Make sure App Store and identified developers is checked, and then click Allow.



7) You will receive a popup window, prompting you to restart. Click OK.





9) After restarting the system, install HighPoint RAID management.

macOS Mojave10.14 and macOS Catalina 10.15 Driver Installation Procedure

1) Locate the download and double click the package to start the installer. Click the **Continue** button:

	Welcome to the HighPoint NVMe RAID Controller Installer
Introduction Destination Select Installation Type Installation Summary	You will be guided through the steps necessary to install this software.

2) macOS will prompt you to install the driver. Click Install to proceed.

Introduction Destination Select Installation Type Installation Summary.		standard installation of this s iter. All users of this comput	
	Customize	Go Back	Install

3) You will be prompted that a reboot is needed to install the software. Click **Continue Installation**.

		must restart your c	e finishes installing, you computer. Are you sure	
Introductic	-	you want to install	the software now?	
Destinatio		Cancel	Continue Installation	software
Installatic		Calicer	Continue installation	ter will
 Installation 				
1001000000000000				

4) If no pop-ups appear, please proceed to the next step of installation. Click **Restart**.

	Install HighPoint NVMe RAID Controller
 Introduction Destination Select Installation Type Installation Summary 	The installation was completed successfully.
	Click Restart to begin installing the software.

5) If you receive a popup window prompting you for permission, click **Open Security Preferences**.



6) Make sure App Store and identified developers is checked, and then click Allow.

4	A login password has been set for this user Change Password
	Require password immediately I after sleep or screen saver begins
	Show a message when the screen is locked Set Lock Message
	Disable automatic login
_	
,	Nilow apps downloaded from:
ļ	Nlow apps downloaded from:
,	Allow apps downloaded from: App Store App Store and identified developers
,	App Store
A	App Store
5	App Store App Store App Store and identified developers System software from developer "HighPoint Technologies, Inc" was Allow
5	App Store App Store and identified developers

7) You will receive a popup window, prompting you to restart. Click **OK**.

Enabling this s a restart	ystem software re	quires
	Restart	ОК

8) Return to the driver installation window. Click **Restart** to restart the Install HighPoint NVME RAID Controller

		The installation was completed successfully.
	 Introduction Destination Select Installation Type Installation Summary 	The installation was successful. The software was installed.
		Click Restart to begin installing the software.
system.		Go Back Restart

9) After the system restarts, the driver's status can be viewed under **System Information**; The following screenshot shows the driver has been loaded:

Bluetooth	Extension Name		^	Version	Last Modified	Loaded
-	HighPointNVMe			1.1.12	2020/5/19, 7:07 PM	Yes
Camera Card Reader	initioFWBridge			439.70.3	2017/8/25, 1:13 PM	No
	Intel82574L			2.7.2	2017/8/25, 12:56 PM	No
Controller	IO80211Family			12.0	2017/8/25, 12:56 PM 2017/8/25, 1:03 PM	No
Diagnostics	IO80211FamilyV2			12.0	2017/8/25, 1:03 PM 2017/8/25, 1:01 PM	Yes
Disc Burning	IO80211FamilyV2			12.0		
Ethernet Cards	IO80211NetBoote			12.0	2017/8/25, 1:01 PM	No
Fibre Channel					2017/8/25, 1:01 PM	No
FireWire	IOAcceleratorFam	nily2		378.28	2017/8/25, 1:00 PM	Yes
Graphics/Displays	HighPointNVMe					
Hardware RAID						
Memory	Version:	1.1.12				
NVMExpress	Last Modified:	2020/5/19, 7:07 PM				
PCI	Bundle ID:	com.highpoint-tech.kext.HighP	PointNVMe			
Parallel SCSI	Loaded:	Yes Identified Developer				
Power	Kind:	Intel				
Printers	Architectures:	x86_64				
SAS	64-Bit (Intel):	Yes				
SATA/SATA Express	Location: Kext Version:	/Library/Extensions/HighPointM 1.1.12	VMe.kext			
SPI	Load Address:	18446743521855800000				
SPI Storage		18446743521855800000 Yes				
SPI Storage Thunderbolt	Load Address: Loadable:	18446743521855800000 Yes Satisfied	Point Technologies, Inc (DX6G	59M9N2), De	eveloper ID Certification /	Authority,
SPI Storage Thunderbolt USB	Load Address: Loadable: Dependencies:	18446743521855800000 Yes Satisfied	Point Technologies, Inc (DX6G	69M9N2), De	eveloper ID Certification /	Authority,
SPI Storage Thunderbolt USB etwork	Load Address: Loadable: Dependencies:	18446743521855800000 Yes Satisfied	Point Technologies, Inc (DX6G	59M9N2), De	eveloper ID Certification /	Authority,
SPI Storage Thunderbolt USB etwork Firewall	Load Address: Loadable: Dependencies:	18446743521855800000 Yes Satisfied	Point Technologies, Inc (DX6G	69M9N2), De	eveloper ID Certification J	Authority,
SPI Storage Thunderbolt USB etwork Firewall Locations	Load Address: Loadable: Dependencies:	18446743521855800000 Yes Satisfied	Point Technologies, Inc (DX6G	69M9N2), De	eveloper ID Certification /	Authority,
SPI Storage Thunderbolt USB etwork Firewall Locations Volumes	Load Address: Loadable: Dependencies:	18446743521855800000 Yes Satisfied	Point Technologies, Inc (DX6GI	69M9N2), De	eveloper ID Certification /	Authority,
SPI Storage Thunderbolt USB etwork Firewall Locations Volumes WWAN	Load Address: Loadable: Dependencies:	18446743521855800000 Yes Satisfied	Point Technologies, Inc (DX6Gi	69M9N2), D4	eveloper ID Certification /	Authority,
SPI Storage Thunderbolt USB etwork Firewall Locations Volumes WWAN WI-Fi	Load Address: Loadable: Dependencies:	18446743521855800000 Yes Satisfied	Point Technologies, Inc (DX6G	59M9N2), De	eveloper ID Certification /	Authority,
SPI Storage Thunderbolt USB etwork Firewall Locations Volumes WWAN WI-Fi Stware	Load Address: Loadable: Dependencies:	18446743521855800000 Yes Satisfied	Point Technologies, Inc (DX6G	59M9N2), De	eveloper ID Certification <i>i</i>	Authority,
SPI Storage Thunderbolt USB etwork Firewall Locations Volumes WWAN Wi-Fi oftware Accessibility	Load Address: Loadable: Dependencies:	18446743521855800000 Yes Satisfied	Point Technologies, Inc (DX6G6	69M9N2), D4	eveloper ID Certification /	Authority,
SPI Storage Thunderbolt USB Etwork Firewall Locations Volumes WWAN WI-FI 9ftware Accessibility Applications	Load Address: Loadable: Dependencies:	18446743521855800000 Yes Satisfied	Point Technologies, Inc (DX6G	59M9N2), De	eveloper ID Certification /	Authority,
SPI Storage Thunderbolt USB etwork Firewall Locations Volumes WWAN Wi-Fi oftware Accessibility Applications Components	Load Address: Loadable: Dependencies:	18446743521855800000 Yes Satisfied	Point Technologies, Inc (DX6G	59M9N2), De	aveloper ID Certification <i>i</i>	Authority,
SPI Storage Thunderbolt USB Etwork Firewall Locations Volumes WWAN WI-FI 9ftware Accessibility Applications	Load Address: Loadable: Dependencies:	18446743521855800000 Yes Satisfied	Point Technologies, Inc (DX6G	59M9N2), D4	eveloper ID Certification /	Authority,

3. Updating the Device Driver

Note: Update the driver, please make sure the RAID controller is connected to the host.

Current drivers can be downloaded from each product's Software Downloads webpage.

Product	Download Page
SSD7101A-1	https://www.highpoint-tech.com/USA_new/series-ssd7101a-1-download.htm
SSD7120	https://highpoint-tech.com/USA_new/series-ssd7120-download.htm
SSD7204	https://highpoint-tech.com/USA_new/series-ssd7204-download.htm
SSD7104	https://highpoint-tech.com/USA_new/series-ssd7104-download.htm
SSD6540M	https://highpoint-tech.com/USA_new/series-ssd6540m-download.htm
SSD6540	https://highpoint-tech.com/USA_new/series-ssd6540-download.htm
SSD7103	https://highpoint-tech.com/USA_new/series-ssd7103-download.htm
SSD7140	https://highpoint-tech.com/USA_new/series-ssd7140-download.htm
RS6661A-NVMe	https://highpoint-tech.com/USA_new/series-rs6661a-nvme-download.htm
SSD7505	https://highpoint-tech.com/USA_new/series-ssd7500-download.htm
SSD7540	https://highpoint-tech.com/USA_new/series-ssd7500-download.htm
SSD7540L	https://highpoint-tech.com/USA_new/series-ssd7500-download.htm

Updating the Device Driver (for macOS 10.13/10.14/10.15)

1) Locate the download and double click the package to start the installer. Click the **Continue** button:

	🥪 Install HighPoint NVMe RAID Controller
	Welcome to the HighPoint NVMe RAID Controller Installer
Introduction Destination Select Installation Type Installation Summary	You will be guided through the steps necessary to install this software.
	Go Back Continue

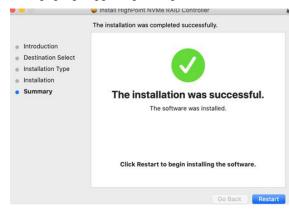
2) macOS will prompt you to install the driver. Click Install to proceed.

Introduction Destination Select Installation Installation Summery		space on your computer. standard installation of this s uter. All users of this comput	
	Customize	Go Back	Install

3) You will be prompted that a reboot is needed to install the software. Click **Continue Installation**.



4) If no pop-ups appear, please proceed to the next step of installation. Click Restart.



5) After the system restarts, the driver's status can be viewed under **System Information**; the screenshot below shows that the driver has loaded properly.

Audio Bluetooth	Extension Name			^ Version	Last Modified	Loaded
Camera	HighPointNVMe			1.1.12	2020/5/19, 7:07 PM	Yes
Card Reader	initioFWBridge			439.70.3	2017/8/25, 1:13 PM	No
Controller	Intel82574L			2.7.2	2017/8/25, 12:56 PM	No
Diagnostics	IO80211Family			12.0	2017/8/25, 1:03 PM	No
Disc Burning	IO80211FamilyV2			12.0	2017/8/25, 1:01 PM	Yes
Ethernet Cards	IO80211NetBoote	er		12.0	2017/8/25, 1:01 PM	No
Fibre Channel	IO80211NetBoote	erV2		12.0	2017/8/25, 1:01 PM	No
FireWire	IOAcceleratorFam	nily2		378.28	2017/8/25, 1:00 PM	Yes
Graphics/Displays Hardware RAID	HighPointNVMe	:	0			
Memory NVMExpress PCI Parallel SCSI Power Printers SAS SATA/SATA Express SPI Storage Thunderbolt USB Network Firewall Locations Volumes WWAN Wi-Fri Software Accessibility Applications Components Deseloper Disabled Software Extensions	Version: Last Modified: Bundel D: Loaded: Obtained from: Kind: Architectures: Gentinelb: Gentinelb: Gentinelb: Coadable: Dependencies: Signed by:	Intel x86_64 Yes /Library/Extensions/HighPoir 1.1.12 18446743521855800000 Yes Satisfied		6689M9N2), D	eveloper ID Certification	Authority

4. Uninstalling the Device Driver Uninstalling the Device driver for macOS 10.13 and 10.14

To uninstall the NVMe driver, you will need to open a **Terminal** window and enter the following command:

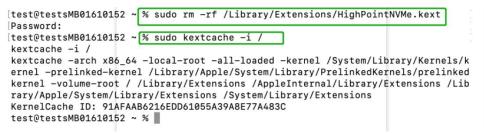
sudo rm -rf /Library/Extensions/HighPointNVMe.kext

Uninstalling the Device Driver for macOS 10.15

To uninstall the NVMe driver, you will need to open a Terminal window and enter the following command:

sudo rm -rf /Library/Extensions/HighPointNVMe.kext

sudo kextcache --i /



5. Installing the RAID Management Software (WebGUI)

Installing the WebGUI for macOS 10.13/10.14/10.15

1) Double click the package named **HighPointWebGUI.pkg** to start the installer. When the window appears, click the **Continue** button.

	Welcome to the HighPoint Web RAID Controller Management Installe
Introduction	You will be guided through the steps necessary to install this software.
Destination Select	
Installation Type	
Installation	
Summary	

2) You will be promoted to click the **Install** button. Click **Install** to continue.

•••	Install HighPoint Web RAID Controller Management
	Standard Install on "1010"
 Introduction Destination Select Installation Type Installation Summary 	This will take 2.7 MB of space on your computer. Click Install to perform a standard installation of this software for all users of this computer. All users of this computer will be able to use this software.
	Go Back Install

3) You will then be promoted to enter the *Administrator* Username and Password. Once these have been entered, click **Install Software** to continue.

	Standard Install on "1010"	
 Introduction Destination St Installation T Installation Summary 	Installer is trying to install new software. Type your password to allow this. Username: Password: Cancel Install Software	re be
	Go Back	

4) The WebGUI Management software has been installed. Click **Close** to complete the procedure.

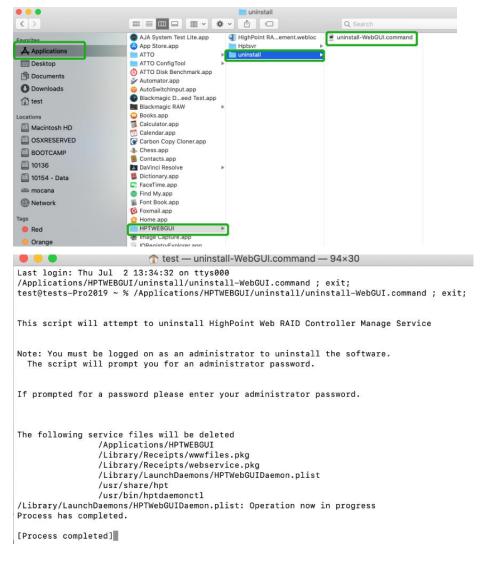
••••	Install HighPoint Web RAID Controller Management
 Introduction Destination Select Installation Type Installation Summary 	<text><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></text>

6. Updating the WEBGUI for macOS 10.13/10/14/10.15

- 1) First, uninstall the current WebGUI. Please refer to item 7 below (Uninstalling the WebGUI).
- 2) After uninstalling the WebGUI, reboot macOS.
- 3) Once the system has rebooted, download the latest version of the WebGUI from the appropriate Software Downloads webpage.
- Locate the download and double click the package named HighPointWebGUI.pkg to start the installer. Please refer to Installing the <u>WebGUI for macOS 10.13/10.14/10.15</u> for more information.

7. Uninstalling the WebGUI for macOS 10.13/10.14/10.15

To uninstall the WebGUI, access Applications, click on HPTWEBGUI, select uninstall, and double-click the uninstall-WEBGUI.command. The uninstall command will automatically open a terminal and uninstall the software:



Audio Bluetooth Bluetooth Bluetooth Camera Bluetooth Camera Card Reader Cards Bluetooth Blagnostics Bluetoning Bluetoning

		^	Version	Last Modified	Loaded
HighPointNVMe			1.1.12	2020/5/19, 7:07 PM	Yes
nitioFWBridge			439.70.3	2017/8/25, 1:13 PM	No
ntel82574L			2.7.2	2017/8/25, 12:56 PM	No
O80211Family			12.0	2017/8/25, 1:03 PM	No
O80211FamilyV2			12.0	2017/8/25, 1:01 PM	Yes
O80211NetBoote	r		12.0	2017/8/25, 1:01 PM	No
O80211NetBooterV2			12.0	2017/8/25, 1:01 PM	No
OAcceleratorFam	jilv2		378.28	2017/8/25, 1:00 PM	Yes
shootin at an a second at a		0	0/0/20	2011/0/20, 1001111	100
Version: Last Modified: Bundle ID:	1.1.12 2020/5/19, 7:07 PM com.highpoint-tech.kext.HighPointNVMe				
Last Modified: Bundle ID: Loaded: Obtained from: Kind:	1.1.12 2020/5/19, 7:07 PM com.nighpoint-tecn.kext.HighPointNVMe Yes Identified Developer Intel				
Version: Last Modified: Bundle ID: Loaded: Obtained from: Kind: Architectures:	1.1.12 2020/5/19, 7:07 PM com.highpoint-tech.kext.HighPointNVMe Yes (identified Developer Intel #86.64				
Version: Last Modified: Bundle ID: Loaded: Obtained from: Kind:	1.1.12 2020/5/19, 7:07 PM com.nippoint-tech.Kext.HighPointNVMe Yes Identified Developer Intel x86.64 Yes				
Version: Last Modified: Bundle ID: Loaded: Obtained from: Kind: Architectures: 64-Bit (Intel):	1.1.12 2020/5/19, 7:07 PM com.highpoint-tech.kext.HighPointNVMe Yes (identified Developer Intel #86.64				
Version: Last Modified: Bundle ID: Loaded: Obtained from: Kind: Architectures: 64-Bit (Intel): Location: Kext Version: Load Address:	1.1.12 2020/5/19, 7:07 PM Com.hgrbpont.ecn.kext.HighPointNVMe Yes Udentified Developer Intel X86.64 Yes Ubbray/Extensions/HighPointNVMe.kext 1.1.12 18446743521855800000				
Version: Last Modified: Bundle ID: Loaded: Obtained from: Kind: Architectures: 64-Bit (Intel): Location: Kext Version: Load Address: Load Able:	1.1.12 2020/5/19, 7:07 PM Com.highpoint-tech.kext.HighPointNVMe Yes Identified Developer Intel 8:86 4 JUbrary/Extensions/HighPointNVMe.kext 1.1.12 1844674521856800000 Yes				
Version: Last Modified: Bundle ID: Loaded: Obtained from: Kind: Architectures: 64-Bit (Intel): Location: Kext Version: Load Address:	1.1.12 2020/5/19, 7:07 PM Com.highpoint-tech.kext.HighPointNVMe Yes Identified Developer Intel 8:86 4 JUbrary/Extensions/HighPointNVMe.kext 1.1.12 1844674521856800000 Yes				

8. Trouble shooting

Unable to connect to the WebGUI

After the driver and management software are installed, the management software displays a "Connection Failure" warning when attempting to start the



interface: HighPoint RAID Management 2.12.3 Copyright (c) 1996-2020 HighPoint Technologies, Inc. All Rights Reserved

This error can be triggered by one of the following issues:

- 1. The HighPoint NVMe hardware is not recognized by macOS
- 2. The HighPoint NVMe device driver is not installed or is not loading properly.
- 3. WEBGUI service is not running.
- 4. The system's SIP status is incorrect.
- 5. If you are using a T2 system; Secure Boot may not be disabled

1. Verifying the HighPoint NVMe hardware

Please refer to the <u>Appendix – Verifying Product Installation</u> to make sure the HighPoint NVMe device is properly recognized by macOS.

Note: If you are using the RocketStor 6661A-NVMe:

- If you are using the RocketStor 6661A-NVMe (RS6661A-NVMe), or another SSD7000 series controller via our RocketStor 6661A adapter and a Thunderbolt[™] 3 connection, refer to the <u>third screenshot</u> displayed under - **Appendix** - **Verifying Product Installation**. If the RS6661A entry is present, proceed to screenshot #2.
- 2. If the RocketStor 6661A entry is not displayed, this may be related to a connection problem move the RS6661A to another Thunderbolt[™] 3 port or replace the cable and recheck the entry.

2. Make sure the HighPoint NVMe Driver is loaded

Please refer to the **Appendix - Checking the Driver status and Version** to make sure the HighPoint NVMe driver is installed properly.

- If the HighPoint NVMe driver is not loading, proceed to step 2 <u>Check the security</u> <u>& privacy status</u>. If HighPoint software is blocked in the permission, you need to click Allow.
- 2. If the driver is loading properly, but the WebGUI is still unable to start, please try to restart the WEBGUI service. Please refer to <u>Appendix WEBGUI service restart</u> make settings.

If WEBGUI is still not connected, please contact our <u>Support Department</u> to open a support ticket. Please make sure to include any screenshots and system information you are able to collect (see the Appendix for more information).

3. Check the SIP status

- 1. Please refer to the Appendix Checking the SIP Status (page 27).
- 2. If the settings are not correct for your system, please refer to the driver installation manual for each system to reset the SIP status.

4. For T2 Systems: Make sure Secure Boot is disabled

1. Please refer to the <u>Appendix - Systems with T2 chipsets - Secure Boot status</u>. If the setting is incorrect, you will need to reboot the system to change the setting.

If you encounter any problems while checking items 1-5, please refer to the <u>Appendix</u> to collect information about your system and configuration, and submit a support ticket to our Customer Support department using our Online Support Portal: <u>https://www.highpoint-tech.com/websupport/main.php</u>

The WebGUI can't connect to a remote system

If you can't connect to a remote system, make sure **raidman-httpsd** is running on the target system, and confirm that you can access the remote system via a TCP/IP connection. If you have a firewall configured, make sure TCP port 7402 is not blocked.

Appendix

When submitting s support ticket via our Online Support Portal, the following information will help our Support Department diagnose and resolve your issue as quickly and efficiently as possible.

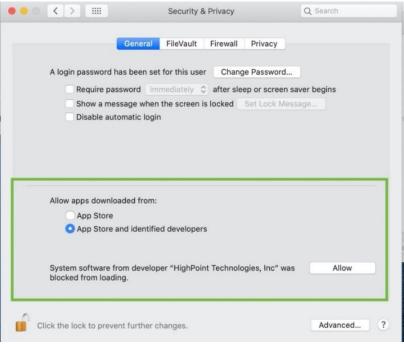
Collecting the macOS version

1) Click on the Apple logo located near the upper left-hand portion of the Desktop, and click "Version ". Then the version number of the system will all be displayed.



Check the security & privacy

1) Check if there is HighPoint software blocked in the permission, if it is blocked, you need to click "Allow".



Verifying Product Installation

1) Click on the **Apple** logo located near the upper left-hand portion of the Desktop, and select "**About this Mac**".

		MacBook Pro
Hardware	Thunderbolt Device Tree	
ATA	Thunderbolt Bus 0	
Apple Pay	Thunderbolt Bus 1	
Audio	RocketStor 6661A	
Bluetooth	ROCKELSIOF 6661A	
Camera		
Card Reader		
Controller		
Diagnostics		
Disc Burning		
Ethernet Cards		
Fibre Channel		
FireWire		
Graphics/Displays		
Memory		
NVMExpress		
PCI		
Parallel SCSI		
Power		
Printers		
SAS		
SATA/SATA Express		0
SPI	RocketStor 6661A:	
Storage	ROCKETSTOP BOBIA:	
Thunderbolt	Vendor Name: HighPoint Techno	logies, Inc.
USB	Device Name: RocketStor 6661A	
Network	Vendor ID: 0x43	
Firewall	Device ID: 0x6661 Device Revision: 0x1	
Locations	UID: 0x0043053BE549	96000
Volumes	Route String: 1	
WWAN	Firmware Version: 26.1	
Wi-Fi	Port (Upstream):	
Software	Status: Link Status:	Device connected 0x2
Accessibility	Speed:	Up to 40 Gb/s x1
Applications	Current Link Width:	0x2
Developer	Cable Firmware Version:	0.9.0
Developer Disabled Software	Link Controller Firmware Version:	0.36.0
Disabled Software Extensions	Port: Status:	No device connected
	Status: Link Status:	No device connected 0x7
Fonts	Speed:	Up to 40 Gb/s x1
Frameworks	Current Link Width:	01

RocketStor 6661A-NVMe (Thunderbolt entry):

2) If you are using a SSD7000 series NVMe RAID controller, check under **Hardware**, **PCI**. Reference screenshots for each product are show below.

SSD7101A / 7104 / 7204 / 7120 / 6540 / 6540M, or RS6661A-NVMe:

2 G G		MooBe	sole Rep		
r Hardware	Card		 Туре 	Driver Installed	Slot
ATA	pci144d,a804		NVM Express Controller	Yes	Thunderbolt@71,0,0
Apple Pay Audio	pci144d,a804		NVM Express Controller	Yes	Thunderbolt@72,0,0
Bluetooth	pci144d,a804		NVM Express Controller	Yes	Thunderbolt@69,0,0
Camera	pci144d,a804		NVM Express Controller	Yes	Thunderbolt@70,0,0
Card Reader Controller Diagnostics Disc Burning Ethernet Cards Fibre Channel FireWire	pci144d,a804: Type:	NVM Express Controller			
Graphics/Displays Memory	Driver Installed: Tunnel Compatible: Pause Compatible:	Yes Yes No			localh
PCI Power Printers	MSI: Bus: Slot: Vendor ID: Device ID:	Yes PCI Thunderbolt@71,0,0 0x144d 0xa804	Controller(1): NVMe 🖸		
SAS SATA/SATA Express SPI	Subsystem Vendor ID: Subsystem ID: Revision ID: Link Width:	0x144d 0xa801 0x0000 x4	Global View Pt	nysical Log	gical Setting
Storage	Link Speed:	8.0 GT/s	Create Array		Logicz

[_____

SSD7140/7540L

▼ Hardware	Card		~ Туре	Driver Installed	Slot
ATA Apple Pay	AMD Radeon Pro 580X		Display Controller	Yes	Slot-1@7,0,0
Apple Pay Audio	pci10b5,87d0		Unknown	No	Slot-3@17,0,1
Bluetooth	pci10b5,87d0		Unknown	No	Slot-3@17,0,2
Camera	pci10b5,87d0		Unknown	No	Slot-3@17,0,3
Card Reader	pci10b5,87d0		Unknown	No	Slot-3@17,0,0
Controller	pci15b7,5002		NVM Express Controller	Yes	Slot-3@26,0,0
Diagnostics	pci15b7,5003		NVM Express Controller	Yes	Slot-3@21,0,0
Disc Burning	pci15b7,5003		NVM Express Controller	Yes	Slot-3@20,0,0
Ethernet Cards	pci15b7,5003		NVM Express Controller	Yes	Slot-3@24,0,0
Fibre Channel	pci126f,2262		NVM Express Controller	Yes	Slot-3@22,0,0
Fibre Channel FireWire	pci144d,a808		NVM Express Controller	Yes	Slot-3@19,0,0
Graphics/Displays	pci144d,a808		NVM Express Controller	Yes	Slot-3@23,0,0
Memory	pci1002,aaf0		Audio Device	Yes	Slot-1@7,0,1
NVMExpress	pci1179,11a		NVM Express Controller	Yes	Slot-3@25,0,0
PCI	pci8086,15eb		Thunderbolt Controller	Yes	Thunderbolt@146,0,
Parallel SCSI	XHC4		USB eXtensible Host Controller	Yes	Thunderbolt@145,0,
Power					
Power Printers					
SAS					
SATA/SATA Express	AMD Radeon Pro 580X				
SPI	Name:	ATY.Forrahue			
Storage	Type:	Display Controller			
Thunderbolt	Driver Installed:	Yes			
USB	MSI:	Yes			
Network	Bus: Slot:	PCI Slot-1@7.0.0			
Firewall	Vendor ID:	0x1002			
Locations	Device ID:	0x67df			
Volumes	Subsystem Vendor ID:				
	Subsystem ID: Revision ID:	0x0206 0x00c0			
WWAN	Link Width:	x16			
Wi-Fi	Link Speed:	8.0 GT/s			
Software					

SSD7103:

• • •		MacBo	ok Pro		
▼ Hardware	Card	^	Туре	Driver Installed	Slot
ATA	pci144d,a808		NVM Express Controller	Yes	Thunderbolt@130.0.0
Apple Pay Audio	pci144d,a808		NVM Express Controller	Yes	Thunderbolt@131,0,0
Bluetooth	pci144d,a808		NVM Express Controller	Yes	Thunderbolt@138,0,0
Camera	pci144d,a808		NVM Express Controller	Yes	Thunderbolt@136,0,0
Card Reader	pci1103,7103		RAID Controller	No	Thunderbolt@137,0,0
Controller					
Diagnostics					
Disc Burning			0		
Ethernet Cards					
Fibre Channel	pci144d,a808:				
FireWire	Type:	NVM Express	Controller		
Graphics/Displays	Driver Installed:	Yes	oonaono		
Hardware RAID	Tunnel Compatible:	Yes			
Memory	Pause Compatible: MSI:	Yes Yes			
NVMExpress	Bus:	PCI			
PCI	Slot:	Thunderbolt	@130,0,0		
Parallel SCSI	Vendor ID:	0x144d			

SSD7110:

		MacBook Pro	-	
Hardware	Card	^ Туре	Driver Installed	Slot
ATA	pci144d,a804	NVM Express Controller	Yes	Thunderbolt@135,0,0
Apple Pay	pci144d,a804	NVM Express Controller		Thunderbolt@132,0,0
Audio	pci144d,a808	NVM Express Controller	Yes	Thunderbolt@134,0,0
Bluetooth Camera	pci1103,7110	RAID Controller	No	Thunderbolt@133,0,0
Card Reader				
Controller				
Diagnostics				
Disc Burning		0		
Ethernet Cards Fibre Channel	pci144d,a804:			
FireWire Graphics/Displays	Type: Driver Installed:	NVM Express Controller Yes		
Hardware RAID	Tunnel Compatible:	Yes		
Memory	Pause Compatible:	Yes		
NVMExpress	MSI:	Yes PCI		
PCI	Bus: Slot:	Thunderbolt@135,0,0		
Parallel SCSI	Vendor ID:	0x144d		

SSD7202:

		MacBo	ook Pro		
Hardware	Card	<u>^</u>	Туре	Driver Installed	Slot
ATA	pci144d,a804		NVM Express Controller	Yes	Thunderbolt@135,0,0
Apple Pay Audio	pci144d,a804		NVM Express Controller	Yes	Thunderbolt@132,0,0
Bluetooth	pci1103,7202		RAID Controller	No	Thunderbolt@133,0,0
Camera		-			
Card Reader					
Controller					
Diagnostics					
Disc Burning			0		
Ethernet Cards					
Fibre Channel	pci1103,7202:				
FireWire	Type:	RAID Contro	ller		
Graphics/Displays	Driver Installed:	No			
Hardware RAID	Tunnel Compatible:	No			
Memory	Pause Compatible: MSI:	No No			
NVMExpress	Bus:	PCI			
PCI	Slot:	Thunderbolt	@133,0,0		
Parallel SCSI	Vendor ID:	0x1103			
Power	Device ID:	0x7202			

SSD7505:

" Hardware	Card		~	Туре	Driver Installed	Slot
ATA	AMD Radeon Pro 580X			Display Controller	Yes	Slot-1@7,0,0
Apple Pay	pci144d,a808			NVM Express Controller	Yes	Slot-3@21,0,0
Audio	pci144d,a808			NVM Express Controller	Yes	Slot-3@22,0,0
Bluetooth	pci144d,a808			NVM Express Controller	Yes	Slot-3@23,0,0
Camera	pci144d,a808		_	NVM Express Controller	Yes	Slot-3@24,0,0
Card Reader	pci1000,c010			Other Mass Storage Controller	No	Slot-3@32,0,0
Controller	pci1002,aaf0			Audio Device	Yes	Slot-1@7,0,1
Diagnostics	pci1103,7505			RAID Controller	No	Slot-3@27,0,0
Disc Burning	pci8086,15eb		_	Thunderbolt Controller	Yes	Thunderbolt@149,0,
Ethernet Cards	XHC4			USB eXtensible Host Controller	Yes	Thunderbolt@148,0,
Fibre Channel FireWire				0		
Parallel SCSI Power Printers SATA/SATA Express SPI Storage Thunderbolt USB VNetwork Firewall Locations Volumes	Bus: Slot: Vendor ID: Device ID: Subsystem Vendor ID: Subsystem ID: Revision ID:	No PC1 9C1 9C1 0x1103 0x7505 0x1103 0x0001 0x0001 x2 5.0 GT/s				

SSD7540

			ac Pro		
/ Hardware ATA	Card		^ Туре	Driver Installed	Slot
Apple Pav	AMD Radeon Pro 580X		Display Controller	Yes	Slot-1@7,0,0
Audio	pci144d,a808		NVM Express Controller	Yes	Slot-3@27,0,0
Bluetooth	pci144d,a808		NVM Express Controller	Yes	Slot-3@30,0,0
Camera	pci144d,a808		NVM Express Controller	Yes	Slot-3@29,0,0
Card Reader	pci144d,a808		NVM Express Controller	Yes	Slot-3@28,0,0
Controller	pci144d,a808		NVM Express Controller	Yes	Slot-3@21,0,0
Diagnostics	pci144d,a808		NVM Express Controller	Yes	Slot-3@22,0,0
Disc Burning	pci144d,a808		NVM Express Controller	Yes	Slot-3@23,0,0
Ethernet Cards	pci144d,a808		NVM Express Controller	Yes	Slot-3@24,0,0
Fibre Channel	pci1000,c010		Other Mass Storage Controller	No	Slot-3@35,0,0
FireWire	pci1002,aaf0		Audio Device	Yes	Slot-1@7,0,1
Graphics/Displays	pci1103,7540		RAID Controller	No	Slot-3@33,0,0
Memory	pci8086,15eb		Thunderbolt Controller	Yes	Thunderbolt@151,0,0
NVMExpress	XHC4		USB eXtensible Host Controller	Yes	Thunderbolt@150,0,
PCI			0		
Parallel SCSI	pci1103,7540:				
Power	parries, , 640.				
Printers	Type:	RAID Controller			
SAS	Driver Installed:	No			
SATA/SATA Express	MSI: Bus:	No PCI			
SPI	Slot:	Slot-3@33.0.0			
Storage	Vendor ID:	0x1103			
Thunderbolt	Device ID:	0x7540			
USB	Subsystem Vendor ID: Subsystem ID:	0x1103 0x0001			
	Revision ID:	0x0001			
		x1			
	Link Width:				
/ Network	Link Width: Link Speed:	5.0 GT/s			
V Network Firewall					

WEBGUI Screenshots

Please take screenshots of WEBGUI each Tab (such as Physical, Logical, Event, etc.) and upload these to your support case. In addition, check the Event log tab and save a copy of the current log – please upload this to the support case.

WEBGUI service restart

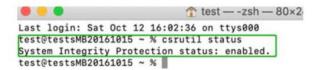
If you can't connect to the WebGUI, please check if a process named raidman-httpsd is running on the system. If it is not running, you can start it manually by opening a terminal window and running the command: "sudo hptdaemonetl restart".

Checking the SIP Status

Open a Terminal window and enter the following command:

csrutil status

Please take a screenshot of the output, and attach it to a support case (see example below):



The status will vary depending on which version of macOS you are using:

MacOS Version	SIP Status	Driver Status
10.13.x	Disable	Loaded
10.14.x	Enable	Loaded
10.15.x	Enable	Loaded

Systems with T2 chipsets – Secure Boot status

You will need reboot the system and enter Recovery Mode to check the Secure Boot status. This setting should remain disabled.

Checking the Driver status and Version

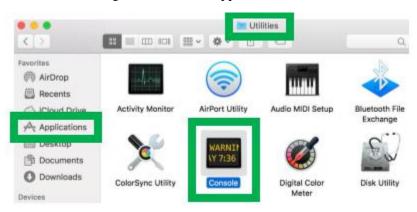
- 1) Click on the **Apple** logo located near the upper left-hand portion of the Desktop, and select "**About this Mac**".
- Click on Extensions, and then click on HighPoint NVMe entry please take a screenshot and attach it this support case (see the example below):

System Information→Software→Extensions→HighPointNVMe

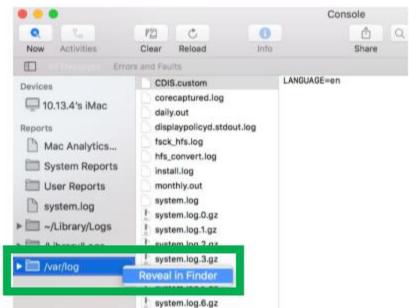
Hardware	Extension Name		 Version 	Last Modified	Notarized	Loaded	Obtained from
ATA	FWPreferredProtoc	olSpeed	489,120,1	2019/9/27, 12:50 PM	Yes	No	Apple
Apple Pay	GeForce	1)-	14.0.32	2019/9/26, 12:33 PM	Yes	No	Apple
Audio	HES		522.100.5	2019/9/26, 11:30 AM	Yes	Yes	Apple
Bluetooth	HFSEncodings		1.0	2019/9/26, 11:29 AM	Yes	Yes	Apple
Camera	HighPointIOP		4.4.1	2018/5/4, 6:31 AM	Yes	No	Identified Developer
Card Reader	HighPointNVMe		1.1.10	2020/1/2, 4:38 PM	Yes	Yes	Identified Developer
Controller	HighPointRR		4.13.0	2017/12/5, 5/40 PM	Yes	No	Identified Developer
Diagnostics	initioFWBridge		489,120,1	2019/9/27, 12:49 PM	Yes	No	Apple
Disc Burning	minor workage		+05.120.1	2018/8/27, 12.48 PM	res	.140	Abbie
Ethernet Cards	100000000000000000000000000000000000000						
Fibre Channel	HighPointNVMe						
FireWire	Version:	1.1.10					
Graphics/Displays	Last Modified:	2020/1/2, 4:38 PM					
Memory	Bundle ID:	com.highpoint-tech.ke	ext.HighPointNVMe				
NVMExpress	Notarized:	Yes					
PCI	Loaded:	Yes					
Parallel SCSI	Obtained from: Kind:	Identified Developer Intel					
Power		x86_64					
Printers	64-Bit (Intel):	Yes					
SAS	Location:	/Library/Extensions/Hi	ghPointNVMe.kext				
SATA/SATA Express	Kext Version:	1.1.10					
SPI	Load Address: Loadable:	18446743521862550 Yes	000				
Storage	Dependencies:						
Thunderbolt	Signed by:		ion: HighPoint Techno	logies, Inc (DX6G69M9N	2), Developer I	D Certificatio	n Authority, Apple Root
USB	2017-000-00-0	CA	971 (9 7 (197 (197 (197 (197 (197 (197 (197 (197				
Vetwork							
Firewall							
A second second							
Locations							
Volumes							
Volumes WWAN							
Volumes WWAN Wi-Fi							
Volumes WWAN Wi-Fi Ø Software							
Volumes WWAN Wi-Fi							
Volumes WWAN Wi-Fi Ø Software							
Volumes WWAN Wi-Fi ØSoftware Accessibility							
Volumes WWAN Wi-Fi ØSoftware Accessibility Applications							

How to Collect System Logs

Please attach a copy of the /var/log folder to your support ticket.
 To locate the /var/log Folder: 1. Go to Applications → Utilities → Console:



 On the left side of the Console application, right-click on the /var/log folder and select Reveal in Finder:



3) You should then be automatically directed to the log folder in the var directory. Please remember when sending the folder to zip file, you should first direct it to a separate location (such as the desktop).



- 4) In addition to /var/log Folder detailed above, please attach a copy of the errlog.txt file:
 - a. Open terminal and type the following, then press Enter: log show |grep kernel > hptsyslog.txt

test — errlog.command — 69×17 Last login: Tue Dec 11 08:57:48 on ttys000 /Users/test/Desktop/errlog.command ; exit; tests-iMac2017:~ test\$ /Users/test/Desktop/hptsyslog.command ; exit; HighPoint Collect system log for Mac v1.0.0 Make sure you want to collect system log, press enter to continue. Collecting system log.. a hotsyslog.txt hptsyslog.tgz created, you can find it under:/Users/test logout Saving session... ... copying shared historysaving history...truncating history files... ... completed. [Process completed]

5) Please attach the hptsyslog.txt to your support ticket.