# HighPointIOP macOS Installation Guide

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# Overview

This guide includes important macOS related hardware & software requirements, installation, and upgrade procedures for the following products:

RR4520SGL / RR4522SGL RS6628A

### **Prerequisites**

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

## **Driver Installation**

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

### **RAID Management Software (WebGUI) Installation**

This section covers WebGUI related installation, upgrade and uninstallation procedures for RAID controllers & enclosures in a macOS environment.

### Troubleshooting

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

# **Prerequisites**

- 1) Operating System Support: macOS 10.13 and later.
- 2) Before installing the driver and RAID Management software, you should log into the system as a System Administrator.
- Identify the system as either T2 or Non-T2 based if the system has a T2 chip, make sure to follow section 1 before attempting to install any software for the device.
- 4) If you're using the **Apple M1** Platform, make sure to follow <u>section 3</u> before attempting to install any software for the HighPointIOP device.

# 1. Disabling macOS Secure boot for T2 Systems

Customers working with Mac platforms manufactured in 2018 or later that feature a T2 security chip, will need to disable **Secure Boot** in order to load drivers for third party devices.

For a list of products with the T2 Security Chipset, please visit the following website: Mac computers that have the Apple T2 Security Chip

### **Disabling Secure Boot**

In order to use these products with T2 systems, Secure Boot must be disabled. To disable this feature, select "**No Security**" from the Startup Security Utility interface. You can access this menu by pressing the **Command** ( $\mathcal{H}$ )-**R** keys after the Apple logo first appears during the boot-up process.

$\bullet \circ \circ$	Startup Security Utility						
1	Firmware password protection is off. 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						
trusted b installatio	surity that only your current OS, or signed operating system software currently by Apple, can run. This mode requires a network connection at software						
Allows an	ny version of signed operating system software ever trusted by Apple to run.						
No Secu Does not	urity t enforce any requirements on the bootable OS.						
External B	oot						
-	v booting from external media ; the ability to boot from any devices such as USB and Thunderbolt drives.						
	ooting from external media t restrict the ability to boot from any devices.						

Instructions are available from Apple's website: About Secure Boot

# 2. Disabling SIP (for macOS 10.13x and earlier)

MacOS 10.13x and earlier may require that **SIP** (System Integrity Protection) be disabled. If enabled, older versions of macOS may prevent the device drivers from loading.

While macOS is running, open a terminal window to confirm whether **System Integrity Protection** (SIP) status is **disabled**.

If enabled, you will need to manually disable the setting. Open a terminal, and then enter the following command:

### csrutil status



The example screenshot shown above indicates that SIP is enabled.

#### To disable SIP

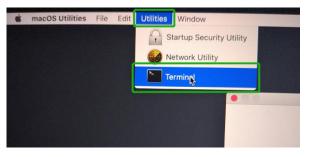
1) Restart the computer and hold down the "**Command** + **R**" buttons. Continue to hold these keys until macOS enters System Recovery mode.



Note: If you are unable to enter Recovery Mode to disable SIP: Make sure you are using a wired keyboard and mouse for this procedure. Wireless devices may not be recognized or function properly when booting into this mode.

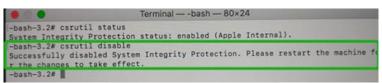


2) Click on Utilities in the upper left corner and select Terminal:



3) Set SIP to disabled in using Terminal. Enter the following command:

#### csrutil disable



4) Click the **Apple** logo in the upper left-hand corner of the desktop, and select **Restart** to reboot the system.



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

csrutil status

test — -zsh — 80×24 Last login: Sat Oct 12 17:18:44 on console test@testsMB20161015 ~ % csrutil status System Integrity Protection status: disabled. test@testsMB20161015 ~ % ■

If the status is now reported as **disabled**, you can install the device driver.

# 3. Reduced Security Policy – For Apple M1 Platform

Customers working with Apple M1 Platforms will need to **reduce the Security Policy** in order to load drivers for third party devices.

For Mac computers with Apple M1 chip, please visit the following website:

Mac computers that have the Apple M1 Chip

Check the system's Security Policy settings to determine if they need to be changed. If Secure Boot is set to "**Full Security**", please change this to "**Reduced Security**":

System Information -> Hardware -> Controller -> Boot Policy

		MacBook Pro
✓ Hardware ATA Apple Pay Audio	Model Identifier: Firmware Version: Boot UUID: Boot Policy:	MacBookPro17,1 iBoot-6723.120.36 EB0BF9A4-BD52-4A36-B9F5-701A30C04171
Bluetooth	Secure Boot:	Reduced Security
Camera	System Integrity Protection:	Enabled
Card Reader	Signed System Volume:	Enabled
Controller	Kernel CTRR:	Enabled
Diagnostics	Boot Arguments Filtering:	Enabled
Disc Burning	Allow All Kernel Extensions:	Yes
	User Approved Privileged MDM Operations:	
Ethernet Cards Fibre Channel	DEP Approved Privileged MDM Operations:	No

#### **Reduced Security Policy**

In order to use these products with Apple M1 platforms, the Secure Boot option must be set to "**Reduced Security**". In addition, the "*Allow user management of kernel extensions from Identified developers*" must be enabled via the **Startup Security Utility** menu.

You can access this menu by:

Shutdown the system, **pressing and holding the Power Button** until you see **Loading Startup Options**.



Instructions are available from Apple's website:

About Secure Boot for M1

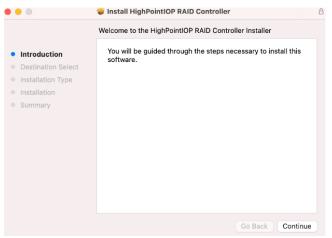
# 4. Installing the Device Driver

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

Product	Download Page
RR4520SGL/4522SGL	https://www.highpoint-tech.com/rr4500-overview
RS6628A	https://www.highpoint-tech.com/rocketstor/rs6628a-overview

# macOS High Sierra 10.13 and Mojave10.14 and Catalina10.15 and Big Sur 11.x and Monterey 12.x Driver Installation Procedure

1) 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.

	Install HighPointIOP RAID Controller	8
	Standard Install on "1101"	
<ul> <li>Introduction</li> <li>Destination Select</li> <li>Installation Type</li> </ul>	This will take 349 KB of space on your computer. Click Install to perform a standard installation of this software on the disk "1101".	
<ul> <li>Installation</li> <li>Summary</li> </ul>	Change Install Location	
	Go Back Install	

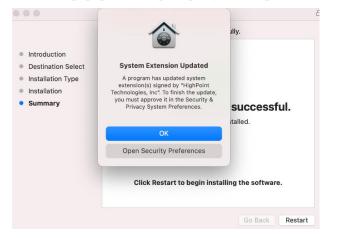
3) You will be prompted that installer is trying to install new software, enter the *Administrator* Username and Password. Once these have been entered, Click **Install Software**.

•••	Installer is t		software		
<ul><li>Introduc</li><li>Destinat</li><li>Installati</li></ul>	User Name: Password:				
Installat     Summar	-	Cancel	Install	Software	-
				Go Back	Continue

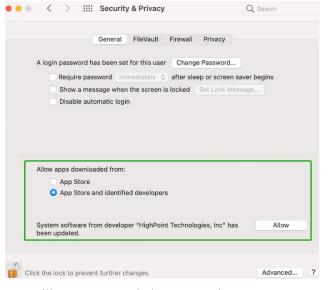
4) If no pop-ups appear, please proceed to the next step of installation. Click **Restart**.

• • •	Install HighPointIOP RAID Controller						
<ul> <li>Introduction</li> <li>Destination Select</li> <li>Installation Type</li> <li>Installation</li> <li>Summary</li> </ul>	Install HighPointIOP RAID Controller () The installation was completed successfully.						
	Go Back Restart						

5) If you see 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.

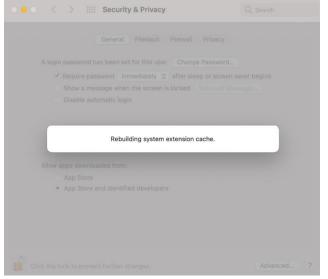


7) You will see a popup window, prompting you to restart. Click Restart.

message when t	he screen is	locked Se	t Lock Message	
		ed before ne s can be use		
vnloa	tart	Not Now		
	itarit	NOT NOW		

rity & Dri

8) After clicking, the following page will appear, wait a moment.



9) After the 'Rebuilding system extension cache' is completed, please click '**OK**' in the pop-up window.

	The stall HighPointiOP RAID Controlle	
	"Installer" interrupted restart.	
Introc	To continue restarting, quit "Installer".	
Desti		
Instal	Cancel	Try Again
Installation		
Summary		successful.
	Alert	alled.
	To install this software, you must restart your computer. Click Restart to complete the installation.	
	ОК	
	Please restart you	r Mac.
		Go Back Restart
Return to the	driver installation window Sinstall HighPointIOP RAID Controller	$\frac{1}{\beta}$
	The installation was completed successf	ully.
	$\sim$	
	$(\checkmark)$	
e outlinuty	The installation was	successful.
	The software was in:	stalled.
	Click Restart to begin installi	ng the software.
	<ul> <li>Desti</li> <li>Instal</li> <li>Installation</li> <li>Summary</li> </ul>	<ul> <li>Intro:</li> <li>Intro:</li> <li>Installation</li> <li>Summary</li> <li>Aire</li> <li>Installation</li> <li>Summary</li> <li>Aire</li> <li>The installation was completed successf</li> <li>Installation</li> <li>Installation Select</li> <li>Installation</li> <li>Installation</li></ul>

Go Back Restar

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

			Ma	cBook Pro			
Luionite Galua	Law Arrest		1. A		h		
Fibre Channel	Extension Name		<ul> <li>Version</li> </ul>	Last Modified	Notarized	Loaded	Obtained from
FireWire	HFS_MacJapane		8.0	2020/1/1, 4:00 PM	Yes	No	Apple
Graphics/Displays	HFS_MacKorean		8.0	2020/1/1, 4:00 PM	Yes	No	Apple
Memory	HFSEncodings		1.0	2020/1/1, 4:00 PM	Yes	Var	Apple
NVMExpress	HighPointIOP		4.4.8	2021/4/12, 10:10 AM	Yes	Yes	Identified De
PCI	HighPointRR		4.23.2	2021/4/2, 10:07 AM	Yes	INO	Identified De
Parallel SCSI	initioFWBridge		511.60.2	2020/1/1, 4:00 PM	Yes	No	Apple
Power	Intel82574L		2.7.2	2020/1/1, 4:00 PM	Yes	No	Apple
Printers	InvalidateHmac		1.0	2020/1/1, 4:00 PM	Yes	Yes	Apple
SAS	10000445 3		*0.0	0000MH 1.00 DL1			
SATA							
SPI	HighPointIOP:						
Storage							
Thunderbolt/USB4	Version: Last Modified:	4.4.8 2021/4/12, 10:10 AM					
USB	East Modified: Bundle ID:	com.nignpoint-tech.ke	Uliab Dainti OD				
<ul> <li>Network</li> </ul>	Notarized:	Yes	xt.HighPointiOP				
Firewall	Loaded:	Yes					
Firewall Locations		Yes Version: 4.4.8, Copyrig	ht (c) 2021 HighPo	int Technologies, Inc.			
	Get Info String: Obtained from:	Version: 4.4.8, Copyrig Identified Developer	ht (c) 2021 HighPo	int Technologies, Inc.			
Locations	Get Info String: Obtained from: Kind:	Version: 4.4.8, Copyrig Identified Developer Universal	ht (c) 2021 HighPo	int Technologies, Inc.			
Locations Volumes	Get Info String: Obtained from: Kind: Architectures:	Version: 4.4.8, Copyrig Identified Developer Universal arm64e, x86_64	ht (c) 2021 HighPo	int Technologies, Inc.			
Locations Volumes WWAN Wi-Fi	Get Info String: Obtained from: Kind: Architectures: 64-Bit (Intel):	Version: 4.4.8, Copyrig Identified Developer Universal arm64e, x86_64 Yes		int Technologies, Inc.			
Locations Volumes WWAN Wi-Fi V Software	Get Info String: Obtained from: Kind: Architectures: 64-Bit (Intel): Location:	Version: 4.4.8, Copyrig Identified Developer Universal arm64e, x86_64 Yes /Library/Extensions/Hig		int Technologies, Inc.			
Locations Volumes WWAN Wi-Fi Software Accessibility	Get Info String: Obtained from: Kind: Architectures: 64-Bit (Intel): Location: Kext Version:	Version: 4.4.8, Copyrig Identified Developer Universal arm64e, x86_64 Yes /Library/Extensions/Hig 4.4.8	hPointIOP.kext	int Technologies, Inc.			
Locations Volumes WWAN Wi-Fi Accessibility Applications	Get Info String: Obtained from: Kind: Architectures: 64-Bit (Intel): Location: Kext Version: Load Address:	Version: 4.4.8, Copyrig Identified Developer Universal arm64e, x86_64 Yes /Library/Extensions/Hig 4.4.8 184467418748018200	hPointIOP.kext	int Technologies, Inc.			
Locations Volumes WWAN Wi-Fi Software Accessibility	Get Info String: Obtained from: Kind: Architectures: 64-Bit (Intel): Location: Kext Version:	Version: 4.4.8, Copyrig Identified Developer Universal arm64e, x86_64 Yes /Library/Extensions/Hig 4.4.8 184467418748018200 Yes	hPointIOP.kext	int Technologies, Inc.			
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Locations Volumes WWAN Wi-Fi Accessibility Applications Developer Disabled Software Extensions	Get Info String: Obtained from: Kind: Architectures: 64-Bit (Intel): Location: Kext Version: Load Address: Load Address: Dependencies:	Version: 4.4.8, Copyrig Identified Developer Universal arm64e, x86_64 Yes /Library/Extensions/Hig 4.4.8 184467418748018200 Yes Satisfied	hPointIOP.kext		19N2], Develop	er ID Certifica	stion Authority,
Locations Volumes Wi-Fi Software Acocessibility Applications Developer Disabled Software Extensions Fonts	Get Info String: Obtained from: Kind: Architectures: 64-Bit (Intel): Location: Kext Version: Load Address: Load Address: Dependencies:	Version: 4.4.8, Copyrig Identified Developer Universal arm64e, x86_64 Yes (Library/Extensions/Hig 4.4.8 184467418748018200 Yes Satisfied Developer ID Applicatic	hPointIOP.kext		19N2), Develop	er ID Certifica	ation Authority,
Locations Volumes WWAN W-Fi Software Accessibility Applications Developer Disabled Software Extensions Fonts Frameworks	Get Info String: Obtained from: Kind: Architectures: 64-Bit (Intel): Location: Kext Version: Load Address: Load Address: Dependencies:	Version: 4.4.8, Copyrig Identified Developer Universal arm64e, x86_64 Yes (Library/Extensions/Hig 4.4.8 184467418748018200 Yes Satisfied Developer ID Applicatic	hPointIOP.kext		19N2], Develop	er ID Certifica	ation Authority,
Locations Volumes WM-FI W-FI Acplications Developer Disabled Software Disabled Software Fronts Fronts Frameworks Installations	Get Info String: Obtained from: Kind: Architectures: 64-Bit (Intel): Location: Kext Version: Load Address: Load Address: Dependencies:	Version: 4.4.8, Copyrig Identified Developer Universal arm64e, x86_64 Yes (Library/Extensions/Hig 4.4.8 184467418748018200 Yes Satisfied Developer ID Applicatic	hPointIOP.kext		19N2), Develop	er ID Certifica	ation Authority,
Locations Volumes WM-Fi Volumes Accessibility Applications Developer Disabled Software Extensions Fonts Frameworks Installations Language & Region	Get Info String: Obtained from: Kind: Architectures: 64-Bit (Intel): Location: Kext Version: Load Address: Load Address: Dependencies:	Version: 4.4.8, Copyrig Identified Developer Universal arm64e, x86_64 Yes (Library/Extensions/Hig 4.4.8 184467418748018200 Yes Satisfied Developer ID Applicatic	hPointIOP.kext		I9N2], Develop	er ID Certifica	ation Authority,
Locations Volumes Win-Fi Software Accessibility Applications Developer Disabled Software Disabled Software Fonts Fromeworks Installations Language & Region Legacy Software	Get Info String: Obtained from: Kind: Architectures: 64-Bit (Intel): Location: Kext Version: Load Address: Load Address: Dependencies:	Version: 4.4.8, Copyrig Identified Developer Universal arm64e, x86_64 Yes (Library/Extensions/Hig 4.4.8 184467418748018200 Yes Satisfied Developer ID Applicatic	hPointIOP.kext		I9N2], Develop	er ID Certifica	ation Authority,
Locations Volumes WWAN Wi-Fi 9 Software Accessibility Applications Developer Disabled Software Extensions Fronts Franteworks Installations Language & Region Legacy Software Logs	Get Info String: Obtained from: Kind: Architectures: 64-Bit (Intel): Location: Kext Version: Load Address: Load Address: Dependencies:	Version: 4.4.8, Copyrig Identified Developer Universal arm64e, x86_64 Yes (Library/Extensions/Hig 4.4.8 184467418748018200 Yes Satisfied Developer ID Applicatic	hPointIOP.kext		19N2], Develop	er ID Certifica	ation Authority,
Locations Volumes WM-Fi Software Accessibility Applications Developer Disabled Software Extensions Fromtworks Installations Language & Region Legacy Software Logs Managed Client	Get Info String: Obtained from: Kind: Architectures: 64-Bit (Intel): Location: Kext Version: Load Address: Load Address: Dependencies:	Version: 4.4.8, Copyrig Identified Developer Universal arm64e, x86_64 Yes (Library/Extensions/Hig 4.4.8 184467418748018200 Yes Satisfied Developer ID Applicatic	hPointIOP.kext		19N2), Develop	er ID Certifica	ation Authority,
Locations Volumes Wi-Fi Software Applications Applications Developer Disabled Software Extensions Fronts Frameworks Installations Language & Region Language & Region Logs Managed Client Preference Panes	Get Info String: Obtained from: Kind: Architectures: 64-Bit (Intel): Location: Kext Version: Load Address: Load Address: Dependencies:	Version: 4.4.8, Copyrig Identified Developer Universal arm64e, x86_64 Yes (Library/Extensions/Hig 4.4.8 184467418748018200 Yes Satisfied Developer ID Applicatic	hPointIOP.kext		I9N2], Develop	er ID Certifica	ation Authority,
Locations Volumes Wi-Fi Software Accessibility Applications Developer Disabled Software Extensions Fromeworks Installations Language & Region Legacy Software Logs Managed Client	Get Info String: Obtained from: Kind: Architectures: 64-Bit (Intel): Location: Kext Version: Load Address: Load Address: Dependencies:	Version: 4.4.8, Copyrig Identified Developer Universal arm64e, x86_64 Yes (Library/Extensions/Hig 4.4.8 184467418748018200 Yes Satisfied Developer ID Applicatic	hPointIOP.kext		19N2], Develop	er ID Certifice	ation Authority,

Note: The driver revision shown in the screenshots may not correspond with current software releases. Please make sure to download the latest driver updates from the product's Software Updates page.

# 5. Update the Device Driver

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

Product	Download Page
RR4520SGL/4522SGL	https://www.highpoint-tech.com/rr4500-overview
RS6628A	https://www.highpoint-tech.com/rocketstor/rs6628a-overview

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

• • •	Install HighPointIOP RAID Controller	A
	Welcome to the HighPointIOP RAID Controller Installer	
<ul> <li>Introduction</li> <li>Destination Select</li> <li>Installation Type</li> <li>Installation</li> <li>Summary</li> </ul>	You will be guided through the steps necessary to install this software.	
	Go Back Continue	

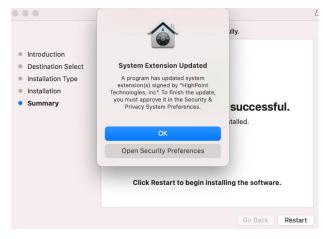
2) macOS will prompt you to install the driver. Click Install to proceed.

	Install HighPointIOP RAID Controller	
	Standard Install on "1101"	
Introduction	This will take 349 KB of space on your computer.	
<ul> <li>Destination Select</li> <li>Installation Type</li> </ul>	Click Install to perform a standard installation of this software on the disk "1101".	
Installation		
<ul> <li>Summary</li> </ul>		
	Change Install Location	
	Go Back Install	

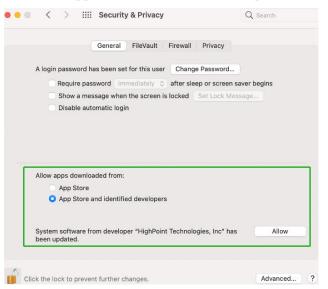
3) If no pop-ups appear, please proceed to the next step of installation. Click **Restart**.

• • •	😺 Install HighPointIOP RAID Controller	8
<ul> <li>Introduction</li> <li>Destination Select</li> <li>Installation Type</li> <li>Installation</li> <li>Summary</li> </ul>	The installation was completed successfully.	
	Click Restart to begin installing the software.	
	Go Back Restart	

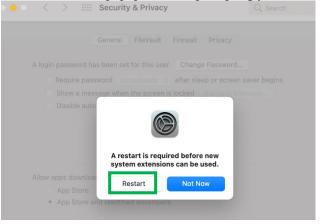
4) If you receive a popup window prompting you for permission, click **Open Security Preferences**.



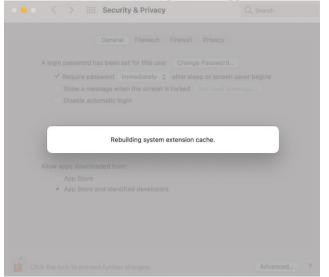
5) Make sure App Store and identified developers is checked, and then click Allow.



6) You will receive a popup window, prompting you to restart. Click Restart.



7) After clicking, the following page will appear, wait a moment.



8) After the 'Rebuilding system extension cache' is completed, please click '**OK**' in the pop-up window.

••	Install HighPointIOP RAID Controller
	"Installer" interrupted restart.
Introc	To continue restarting, quit "Installer".
Desti	Cancel Try Again
Instal	
Installation	
Summary	successful.
	Alert alled.
	To install this software, you must restart your computer. Click Restart to complete the installation.
	ОК
	Please restart your Mac.
	Go Back Restart

9) Return to the driver installation window. Click **Restart** to restart the system.

• • •	-
	The installation was completed successfully.
<ul> <li>Introduction</li> <li>Destination Select</li> <li>Installation Type</li> <li>Installation</li> <li>Summary</li> </ul>	The installation was successful. The software was installed.
	Click Restart to begin installing the software.
	Go Back Restart

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

			Ma	acBook Pro			
Fibre Channel	Extension Name		<ul> <li>Version</li> </ul>	Last Modified	Notarized	Loaded	Obtained fro
FireWire	HFS_MacJapanes	se .	8.0	2020/1/1, 4:00 PM	Yes	No	Apple
Graphics/Displays	HFS MacKorean		8.0	2020/1/1, 4:00 PM	Yes	No	Apple
Memory	HESEncodings		1.0	2020/1/1, 4:00 PM	Yes	Var	Apple
NVMExpress	HighPointIOP		4.4.8	2021/4/12, 10:10 AM	Yes	Yes	Identified D
PCI	HighPointRR		4.23.2	2021/4/2, 10:07 AM	Yes	IND	Identified D
Parallel SCSI	initioFWBridge		511.60.2	2020/1/1, 4:00 PM	Yes	No	Apple
Power	Intel82574L		2.7.2	2020/1/1, 4:00 PM	Yes	No	Apple
Printers	InvalidateHmac		1.0	2020/1/1, 4:00 PM	Yes	Yes	Apple
SAS	10000447 1		40.0	0000MH 1-00 PH			
SATA SPI	HighPointIOP:						
Thunderbolt/USB4 USB V Network Firewall Locations Volumes	Bundle ID: Notarized: Loaded: Get Info String:	2021/4/12, 10:10 AM com.nignpoint-tecn.kext.) Yes Yes Version: 4.4.8, Copyright		ant Technologies Inc.			
Volumes WWAN WF-Fi Software Acpcleations Developer Disabled Software Extensions Fronts Frameworks Installations Language & Region Language	Kind: Architectures: a 64-Bit (Intel): Location: Load Address: Load Address: Dependencies: Signed by:	Identified Developer Universal arm54x, x86,54 Yss (LibraryExtensions/HighP 4.4,8 18446741874801820000 Yes Satisfied Developer ID Application: Apple Root CA	ointIOP.kext		19N2), Develop	er ID Certifica	ation Authority,

Note: The driver revision shown in the screenshots may not correspond with current software releases. Please make sure to download the latest driver updates from the product's Software Updates page.

# 6. Uninstalling the Device Driver

Uninstalling the Device driver for macOS 10.13/10.14

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

```
sudo rm -rf /Library/Extensions/HighPointIOP.kext
```

```
Last login: Thu Aug 19 10:04:34 on ttys000

[test@tests-MacBook-Pro ~ % sudo rm -rf /Library/Extensions/HighPointIOP.kext ]

[Password:

test@tests-MacBook-Pro ~ % ]
```

#### Uninstalling the Device driver for macOS 10.15/11.x/12.x

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

#### sudo rm -rf /Library/Extensions/HighPointIOP.kext

```
sudo kextcache --i /
```

# 7. Installing the RAID Management Software (WebGUI)

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

) 😑 🔿 😌 Install HighPoint Web RAID Controller Management					
	Welcome to the HighPoint Web RAID Controller Management Installer				
Introduction	You will be guided through the steps necessary to install this software.				
Destination Select	Software.				
Installation Type					
Installation					
Summary					
	Go Back Continue				

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

🔴 🕘 💮 🔤 🤪 İn	stall HighPoint Web RAID Controller Management
	Standard Install on "1010"
<ul> <li>Introduction</li> <li>Destination Select</li> <li>Installation Type</li> <li>Installation</li> <li>Summary</li> </ul>	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.

	Stand	ard Install on "1010"	
<ul> <li>Introduction</li> <li>Destination St</li> <li>Installation</li> <li>Installation</li> <li>Summary</li> </ul>		nstaller is trying to install new software. Type your password to allow this. Jsername: Password: Cancel Install Software	re be
		Go Back	

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

• • 0	Install HighPoint Web RAID Controller Management
<ul> <li>Introduction</li> <li>Destination Select</li> <li>Installation Type</li> <li>Installation</li> <li>Summary</li> </ul>	The installation was completed successfully.
	Go Back Close

# 8. Updating the WebGUI

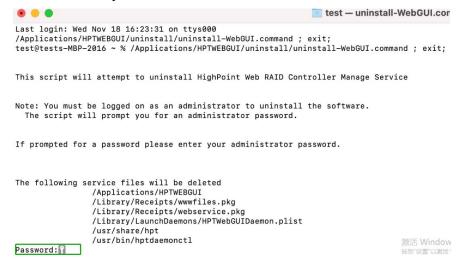
- 1) First, uninstall the current WebGUI. Please refer to item 8 below (<u>Uninstalling the</u> <u>WebGUI</u>).
- 2) Download the latest version of the WebGUI from the appropriate Software Downloads webpage.
- 3) Locate the download and double click the package named **HighPointWebGUI.pkg** to start the installer. Please refer to <u>Installing the WebGUI</u> for more information.

# 9. Uninstalling the WebGUI

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



Enter the macOS password, uninstall the software:



# **10.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:

Global View	Physical	Logical	Setting	Event	SHI	Logout	Help
			Connecti	on Failu	re		
						RAID HBA	

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

- 1. The hardware is not recognized by macOS
- 2. The 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.
- 6. If you are using Apple M1 system, Security Policy may not be 'Reduced'.

### Verifying the hardware

- 1) The device is connected to the host through the Thunderbolt
  - 01. If you are using the controller via our RocketStor 6661A adapter and a Thunderbolt<sup>™</sup> 3 connection, please make sure the RocketStor 6661A device is properly recognized by macOS.

Diagnostics	V Thunderbolt Bus			
Disc Burning	RocketStor 66	614		
Ethernet Cards	Rocketator oo	0.174		
Fibre Channel				
FireWire				
Graphics/Displays				
Memory				
NVMExpress				
PCI				
Parallel SCSI				
Power	RocketStor 6661A			
Printers	Vendor Name:	10-10-1-1 T-1-1		
SAS	Device Name:	HighPoint Technol RocketStor 6661A		
SATA	Vendor ID:	Ox43		
SPI	Device ID:	0x6661		
Storage	Device Revision:	0x1		
Thunderbolt	UID:	0x004371936C22	2B00	
USB	Route String:	1		
Vetwork	Firmware Version:	26.1		
	Port (Upstream):			
Firewall	Status:		Device connected	
Locations	Link Status:		0x2	
Volumes	Speed: Current Link W	r. 444	Up to 40 Gb/s x1 0x2	
WWAN	Cable Firmwar		0.9.0	
Wi-Fi		Firmware Version:		
Software	Port:	rannane version.	0.00.0	
Accessibility	Status:		No device connected	
Applications	Link Status:		0x7	
Developer	Speed:		Up to 40 Gb/s x1	
Disabled Software	Current Link W		0x1	
Extensions	Link Controller	Firmware Version:	0.36.0	

If the RocketStor 6661A entry is not displayed, this may be related to a connection problem - move the RS6661A to another Thunderbolt<sup>TM</sup> 3 port or replace the cable and recheck the entry.

02. If RocketStor 6661A is correctly connected, make sure the **System Information**→**PCI** controller is recognized by macOS (see example below):

✓ Hardware ATA	pci1103,4520:	
Apple Pay Audio Bluetooth Camera Card Reader Controller	Type: Driver Installed: Tunnel Compatible: Pause Compatible: MSI: Bus:	RAID Controller No No No PCI
Diagnostics Disc Burning Ethernet Cards Fibre Channel FireWire Graphics/Displays Memory	Slot: Vendor ID: Device ID: Subsystem Vendor ID: Subsystem ID: Revision ID: Link Width: Link Speed:	Thunderbolt@3,0,0 0x1103 0x4520
NVMExpress PCI Parallel SCSI		

2) The device is directly connected to the host through the PCIE SLOT

Make sure the **System Information→PCI** controller is recognized by macOS (see example below):

✓ Hardware ATA	pci1103,4520:	
Apple Pay Audio Bluetooth Camera Card Reader Controller Diagnostics Disc Burning Ethernet Cards Fibre Channel FireWire Graphics/Displays Memory NVMExpress PCI Parallel SCSI	Type: Driver installed: Tunnel Compatible: Pause Compatible: MSI: Bus: Slot: Vendor ID: Device ID: Subsystem Vendor ID: Subsystem ID: Revision ID: Link Width: Link Speed:	RAID Controller No No PCI Thunderbolt@3,0,0 0x1103 0x4520 0x1520 0x1580 0x00b3 x4 5.0 GT/s

#### 3) The device is RAID enclosures

Make sure the **System Information**→**Thunderbolt** controller is recognized by macOS (see example below):

<ul> <li>Hardware</li> <li>ATA</li> </ul>	Thunderbolt/USB4 Device Tree	
Apple Pay Audio	Thunderbolt/USB4 Bus 0	
Bluetooth	RocketStor 6628A	
Camera	Thunderbolt/USB4 Bus 1	
a a contraction		
Card Reader		
Controller		
Diagnostics		
Disc Burning		
Ethernet Cards		
Fibre Channel	RocketStor 6628A:	
FireWire	ROCKETSTON OUZDA.	
Graphics/Displays	Vendor Name: HighPoint Technol	ogies Inc.
Memory	Device Name: RocketStor 6628A	
NVMExpress	Mode: Thunderbolt 3	
PCI	Device ID: 0x6628	
Parallel SCSI	Vendor ID: 0x43	
Power	Device Revision: 0x1	
Printers	UID: 0x0043A322ED38 Route String: 1	SAAOU
SAS	Firmware Version: 25.1	
SATA	Port (Upstream):	
SPI	Status	Device connected
Storage	Link Status:	0x2
Thunderbolt/USB4	Speed:	Up to 40 Gb/s x1
USB	Current Link Width:	0x2
V Network	Link Controller Firmware Version:	0.36.0
	Port:	277220200000000000000
Firewall	Status:	No device connected
Locations	Link Status: Speed:	Up to 40 Gb/s x1
Volumes	Current Link Width:	0x1
WWAN	Link Controller Firmware Version:	
Wi-Fi	Link Gondona Finnande Veraldit.	0.00.0

#### Make sure the HighPointIOP Driver is loaded

Please refer to the <u>Appendix - Checking the Driver status and Version</u> to make sure the HighPointIOP driver is installed properly.

- If the HighPointIOP driver is not loading, proceed to <u>Check the security & 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 **Appendix WebGUI service restart** 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).

#### Check the SIP status

- 1) Please refer to the Appendix Checking the SIP Status.
- 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.

#### For T2 Systems: Make sure Secure Boot is disabled

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

#### For Apple M1 Platform: Make sure Security Policy is reduced

Please refer to the <u>Apple M1 Platform-Reduced Security Policy</u> If the setting is incorrect, you will need to shutdown 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 <u>Online Support Portal</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.

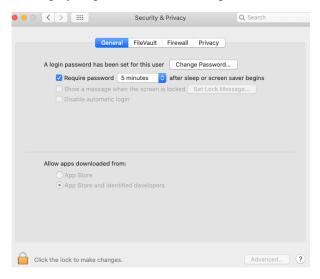
• • Overview Display	ys Storage Memory Support Service
	Wersion 10.15.5 (19F101) iMac (21.5-inch, 2017) Processor 2.3 GHz Dual-Core Intel Core i5 Memory 8 GB 2133 MHz DDR4 Startup Disk 10.15 Graphics Intel Iris Plus Graphics 640 1536 MB Serial Number C02W4765H7JY
** and © 1963-2020 /	System Report Software Update

## Check the security & privacy

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

	Genera	FileVault	Firewall	Privacy		
A login password	has been	set for this use	r Chan	ge Password	k	
Require p	assword	immediately	after sl	eep or scree	n saver	begins
Show a m	essage wh	en the screen i	s locked	Set Lock M	lessage	
Allow apps dowr	loaded fro	m:				
 Allow apps dowr		m:				
App Stor	9	m: ified developer	s			

2) If 'System software from developer 'HighPoint Technologies, Inc' was blocked from loading' is not displayed, please do the following:



- i) First, uninstall the driver, please refer to the <u>Uninstalling the Device Driver</u>
- ii) Install the driver again, please refer to the <u>Installing the Device Driver</u>, The System Extensions Updated window that pops up when installing the driver, please click Open Security Preferences, Allow the permission.

•••		
		ılly.
Introduction		
Destination Select	System Extension Updated	
<ul><li>Installation Type</li><li>Installation</li><li>Summary</li></ul>	A program has updated system extension(s) signed by "HighPoint Technologies, Inc". To finish the update, you must approve it in the Security & Privacy System Preferences.	successful.
	ОК	stalled.
	Open Security Preferences	
	Click Restart to begin insta	Illing the software.
		Go Back Restart
	Security & Privacy	Q Search
	General FileVault Firewall Privacy	
A login password	has been set for this user Change Passwo	ord
	ssword Immediately 0 after sleep or scre	
	essage when the screen is locked Set Lock tomatic login	Message
Allow apps downle	paded from:	
App Store	and the offend development	
• App Store	and identified developers	
System software blocked from load	rom developer "HighPoint Technologies, Inc' ing.	" was Allow

### **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):

```
test — -zsh — 80×2
Last login: Sat Oct 12 16:02:36 on ttys000
test@testsMB20161015 ~ % csrutil status
System Integrity Protection status: enabled.
test@testsMB20161015 ~ %
```

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
11.x	Enable	Loaded
12.x	Enable	Loaded

Disable SIP please refer to Disabling SIP (for macOS13x and earlier)

#### 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**.

Please refer to **Disabling Secure Boot** 

## Checking the Driver status and Version

 Click on System Information→ Extensions, and then click on HighPointIOP entry – please take a screenshot and attach it this support case (see the example below): Make sure System Information→ Extensions→HighPointIOP 'Loaded' is Yes

Fibre Channel	Extension Name	~	Version	Last Modified	Notarized	Loaded	Obtained from
FireWire	HFS_MacJapanese		8.0	2020/1/1, 4:00 PM	Yes	No	Apple
Graphics/Displays	HFS_MacKorean		8.0	2020/1/1, 4:00 PM	Yes	No	Apple
Memory	HESEncodings		1.0	2020/1/1, 4:00 PM	Yes	Var	Apple
NVMExpress	HighPointIOP		4.4.8	2021/4/12, 10:10 AM	Yes	Yes	Identified Dev
PCI	HighPointRR		4.23.2	2021/4/2, 10:07 AM	Yes	INO	Identified Dev
Parallel SCSI	initioFWBridge		511.60.2	2020/1/1, 4:00 PM	Yes	No	Apple
Power	Intel82574L		2.7.2	2020/1/1, 4:00 PM	Yes	No	Apple
Printers	InvalidateHmac		1.0	2020/1/1, 4:00 PM	Yes	Yes	Apple
SAS	100000447 3		****	0000 M M 4-00 DM		••	• •
Storage Thunderbolt/USB4 USB Network Firewall Locations Volumes WWAN Wi-Fi Software Accessibility Applications Developer	Notarized: Yes Loaded: Yes Get Info String: Version: 4.4, Obtained from: Identified De Kind: Universal Architectures: arm64a, x86 64-Bit (Intel): Yes Location: /LUbraryExte Kext Version: 4.4.8 Load Address: 1844674187 Loadable: Yes Dependencies: Satisfied	nt-tecn.xexCHigh 8, Copyright (c) 2 weloper i_64 nsions/HighPointi 4801820000	021 HighPo OP.kext	nint Technologies, Inc.	9N2). Develop	er ID Certifica	ation Authority

test's MacBook Pro\_M1\_OS2 > Software > Extensions > HighPointIOP

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Note: The driver revision shown in the screenshots may not correspond with current software releases. Please make sure to download the latest driver updates from the product's Software Updates page.

### 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 hptdaemonctl restart**".

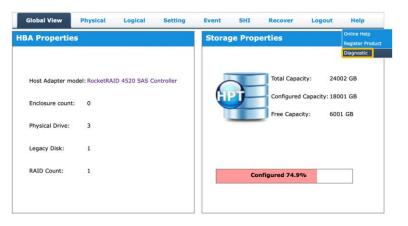
### How to Collect Diagnostic Logs

We have provided a detailed video on log collection methods: link

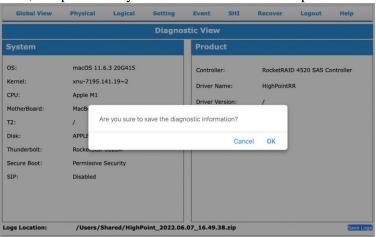
1) **1-Click Self-Diagnostic Solution**: Diagnostic View provides a "1-click" information collection system for troubleshooting. It will gather all necessary hardware, software and storage configuration data and compile it into a single file, which can be transmitted directly to our FAE Team via our Online Support Portal.

Global View	Physical	Logical	Setting	Event	SHI	Logout	Help
			Diagno	stic View	1		
System				Produ	ct		
OS: Kernel: CPU: MotherBoard: T2: Disk: Thunderbolt: Secure Boot: SIP:	xnu-7195 Apple M1 MacBookF / APPLE SSI RocketSto	D AP0256Q		Control Driver I Driver \	Name:		ID 4520 SAS Controller detected!
ogs Location:	/Users/S	hared/HighP	oint_2022.06	.07_16.49.3	8.zip		Save Lo

2) You can also click 'Help' $\rightarrow$ 'Diagnostic' to enter the diagnostic view.



3) Click the "**Save Logs**" button to create the diagnostic file. Note, this process may take several minutes to complete.



4) **'Logs Location'** will display the location of the saving path.

Global View	Physical L	ogical Setting	Event SHI	Logout	Help
		Diagn	ostic View		
System			Product		
OS: Kernel: CPU: MotherBoard: T2: Disk: Thunderbolt: Secure Boot: SIP:	macOS 11.6.3 xnu-7195.141 Apple M1 MacBookPro1 / APPLE SSD AF RocketStor 66 Permissive Se Disabled	19~2 7,1 20256Q 528A	Controller: Driver Name: Driver Version:	RocketRA No driver /	ID 4520 SAS Controller detected!
ogs Location:	/Users/Share	d/HighPoint_2022.(	06.07_16.49.38.zip		Save Log

Please submit the log file to our Support Department using our online services: (https://www.highpoint-tech.com/support-and-services).