SSD7000 系列NVMe RAID解决方案 Mac安装指南

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概述

本指南包括使用SSD7000 NVMe 阵列卡、RocketStor 6661A NVMe Thunderbolt ™ 3NVMe RAID解决方案和带有macOS操作系统的SSD6540/6540M RAID机箱的重要硬件/软件要求、安装和升级过程以及故障排除提示。

先决条件

本节介绍SSD7000系列NVMe阵列卡和机箱的基本硬件和软件要求。

驱动程序安装

本节介绍了在macOS环境中,SSD7000系列NVMe阵列卡和机箱的驱动程序安装、驱动程序升级和驱动程序卸载过程。

故障排除

如果您在安装或使用SSD7000系列NVMe阵列卡或机箱时遇到任何困难,请参阅本节。 它包括对常见报告的技术问题的描述和解决方案。

附录

本节介绍如何为您通过我们的在线支持门户提交的支持案例收集故障排除信息。

先决条件

- 1) 确保HighPoint NVMe阵列卡或机箱中至少安装了一个NVMe SSD。除非硬件 环境检测到NVMe SSD,否则驱动程序将无法正确安装。
- SSD7101A-1/7120/6540/6540M/7103/7104/7140/7505/7502/7540 NVMe设备必须安装到具有x16专用通道的PCIe 3.0插槽中。SSD7204可以安装到PCIe 3.0 x8或x16插槽中。

如果您通过RocketStor 6661A适配器使用RocketTor 6661A NVMe或SSD7000阵列卡,则必须将RocketStor单元插入Thunderbolt™3端口。

- 3) 操作系统支持: macOS 10.13或更高版本
- 4) 在安装驱动程序和RAID管理软件之前,您应该以系统管理员的身份登录到系统。
- 5) 将系统识别为基于T2或非基于T2-如果系统具有T2芯片,请确保在尝试为 HighPoint NVMe设备安装任何软件之前遵循第3节。
- 6) 如果你使用的是苹果M1平台,在尝试为HighPoint NVMe设备安装任何软件之前, 请确保遵循第3节。

1. 禁用T2系统的macOS安全引导

使用2018年或以后生产的具有T2安全芯片的Mac平台的客户,将需要禁用安全引导,以便为第三方设备加载驱动程序。此外,macOS 10.13x和更早的版本可能需要禁用SIP(系统完整性保护)。如果启用,旧版本的macOS可能会阻止NVMe驱动程序的加载。

受此要求影响的HighPoint产品包括我们的NVMe RAID产品线(SSD7100和SSD7500系列和SSD6540系列NVMe RAID机箱)。

有关使用T2安全芯片组的产品列表,请访问以下网站:<u>Mac computers that have</u> the Apple T2 Security Chip

禁用安全引导

为了将这些产品与T2系统一起使用,必须禁用安全引导。要禁用此功能,请从启动安全实用程序界面中选择"无安全"。在启动过程中首次出现苹果徽标后,您可以通过按下命令(#)-R键来访问此菜单。

000	Startup Security Utility
I	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
Secure Bo	ot
O Full Sec	urity
Ensures t trusted b installatio	hat only your current OS, or signed operating system software currently y Apple, can run. This mode requires a network connection at software on time.
Medium Allows an	Security y version of signed operating system software ever trusted by Apple to run.
O No Secu Does not	Irity enforce any requirements on the bootable OS.
External B	pot
Disallow Restricts	booting from external media the ability to boot from any devices such as USB and Thunderbolt drives.
O Allow bo Does not	boting from external media restrict the ability to boot from any devices.

使用说明可以从苹果公司的网站上获得: About Secure Boot

2. 禁用 SIP (适用于macOS 10.13x及更早版本)

macOS运行时,打开终端窗口以确认系统完整性保护(SIP)状态是否已禁用。

如果已启用,则将需要手动禁用该设置。打开一个终端,然后输入以下命令:

csrutil status

•				👚 tes	t — -zsh —	- 80×2
Last	login:	Sat Oc	t 12 16:0	2:36 on	ttys000	
teste	testsM	B201610	15 ~ % cs	rutil st	tatus	
Syste	em Inte	grity P	rotection	status	enabled.	
test	testsM	B201610	15 ~ %			
上面	显示的示	、例屏幕	截图表明,	SIP已被	 	

禁用 SIP

1) 重新启动计算机并按住 "Command + R"按钮。继续按住这些键,直到 macOS进入 系统恢复模式。



注意:如果您无法进入恢复模式以禁用SIP:

确保此过程使用有线键盘和鼠标。当引导到此模式时,无线设备可能无法被识别或无法正常工作。



2) 单击左上角的"实用工具",并选择"终端":



3) 在使用终端时,将SIP设置为已禁用。输入以下命令:

csrutil disable Terminal — -bash — 80×24 -bash-3.2# csrutil status System Integrity Protection status: enabled (Apple Internal). -bash-3.2# csrutil disable Successfully disabled System Integrity Protection. Please restart the machine for r the changes to take effect. -bash-3.2#

4) 单击桌面左上角的苹果徽标,然后选择"重新启动"以重新启动系统。



5) 重新启动后,确认SIP已被禁用。打开终端,并键入以下命令:

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 ~ % ■

如果状态现在报告为禁用,您可以安装HighPoint NVMe驱动程序。

3. 减少了安全政策 – 针对Apple M1 平台

与苹果M1平台合作的客户将需要减少安全政策,以便为第三方设备加载驱动程序。

受此要求影响的HighPoint产品包括我们的NVMe RAID产品线(SSD7100和SSD7500系列和SSD6540系列NVMe RAID机箱)。

配备苹果M1芯片的Mac电脑,请访问以下网站:<u>Mac computers that</u> have the Apple M1 Chip

检查系统的安全策略设置,以确定是否需要更改它们。如果安全引导设置为"完全安 全",请将其更改为"降低安全性":



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

使用说明可以从苹果公司的网站上获得:

About Secure Boot for M1

4. 安装设备驱动程序

产品型号	下载链接
SSD7105	http://www.highpoint-tech.cn/product-detail7105.html
SSD7101A-1	
SSD7204	
SSD7104	http://www.highpoint-tech.cn/product-detail7101a.html
SSD7104F	
SSD7140A	
SSD6540M	http://www.highpoint.tech.on/product.detail6540.html
SSD6540	http://www.mgnpoint-teen.en/product-detail0340.ntm
SSD7120	http://www.highpoint-tech.cn/product-detail7120.html
SSD7540	
SSD7505	http://www.highpoint-tech.cn/product-detail7540.html
SSD7502	
RS6661A-	http://www.highpoint.tech.cn/product.detail6661a.html
NVMe	http://www.nighpoint-teen.en/product-detanooora.ntmi

当前的驱动程序可以从每个产品的软件下载网页上下载。

macOS High Sierra 10.13 和 Mojave10.14 和Catalina 10.15 和 BigSur 11.x 和 Monterey 12.x 驱动程序安装过程

1) 找到下载文件并双击 HighPointNVMe.pkg 软件包以启动安装程序,单击继续按钮:



3)将提示安装程序正在尝试安装新软件,请输入管理员用户名和密码。输入这些内容后, 单击安装软件。

4)如果没有出现弹出窗口,请继续进行下一步的安装。单击重新启动。

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

5) 如果您收到弹出窗口的提示,请单击"打开安全首选项"。

		ılly.
 Introduction Destination Select Installation Type Installation Summary 	System Extension Updated A program has updated system extension(s) signed by "HighPoint Technologis, Inc: To finish the update, you must approve it in the Security & Privacy System Preferences.	successful.
	OK Open Security Preferences	
	Click Restart to begin insta	alling the software.
		Go Back Restart

6)确保选中App Store和已识别的开发人员,然后单击允许。



7) 您将看到一个弹出窗口,提示您重新启动。单击Not Now。



8) 如果您第二次收到权限提示,请再次单击"Open Security Preferences"。



9)确保检查了App Store和确定的开发者,然后单击"允许"。

		General FileVaul	Firewall	Privacy	
	A login password h	as been set for this u	ser Char	nge Password	
	Require pas	sword immediately	C after sl	eep or screen sav	ver begins
	Show a mes	sage when the scree	n is locked	Set Lock Messa	ige
	Disable auto	matic login			
-					
-	Allow apps downloa	ided from:			
	Allow apps downloa	ided from:			
	Allow apps downloa App Store App Store a	ided from: nd identified develop	ers		
	Allow apps downloa App Store App Store a	ided from: nd identified develop	ers		
	Allow apps downloa App Store App Store a	ided from: nd identified develop	ers		
	Allow apps downloa App Store App Store a System software in biocked from load	ided from: nd identified develop om developer "HighP	ers oint Techno	logies, Inc" was	Allow

10)您将看到一个弹出窗口,提示您重新启动。单击重新启动。

	Security & Privacy	
Disable auto	A restart is required before	pre new
	system extensions can b	e used.
Allow apps downloa App Store	Restart Not	Now
 App Store an 	d identified developers	

11)返回到驱动程序安装窗口。单击"重新启动"以重新启动系统。

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

12)系统重启后,可以在系统信息→扩展下查看驱动程序的状态;以下屏幕截图显示了 HighPoint NVMe驱动程序已被加载:

		M	acBook Pro			
Audio	Extension Name	 Version 	Last Modified	Notarized	Loaded	Obtained from
Billetooth	HES Mar Japanese	80	2020/04 A:00 DM	Vac	No	Apple
Card Reader	HES MacKoraan	8.0	2020/1/1, 4:00 PM	Ver	No	Apple
Card Neader	HFS_mackorean	8.0	2020/1/1, 4:00 PM	Yes	No.	Apple
Disconsting	HishDeistiOD	1.0	2020/1/1, 4:00 PM	Tes	Tes	Apple
Diagnostics Diag Russian	HighPointiOP	4.4.5	2020/1/1, 4:00 PM	Tes	Contra Co	Identified Dev
Disc Burning	HighDolatDD	1.120	2021/3/21, 3:30 PM	Yes	165	Identified Dev
Ethernet Caros	FighPointee	4.23.1	2021/3/12, 3-54 PM	105	NO	Apple
Fibre Charmen	Intel® 26 7.4	31.00.2	2020/1/1, 4:00 PM	Ves	No	Apple
Firewire	Intel82574L	2.1.2	2020/1/1, 4:00 PM	Tes	NO	Apple
Graphics/Unspiays						
Memory	HighPointNVMe					
NVMExpress	right officients,					
PCI	Version: 1.1.26					
Parallel SCSI	Last Modified: 2021/3	/21, 9:56 PM				
Power	Bundle ID; com.h	ghpoint-tech.kext.HighPointNVMe	1			
Printers	Notarized: Yes					
SAS	Loaded: Yes	ad Baselan ar				
SATA	Obtained from: Identif	led Developer				
SPI	Architectures: arm64	sal o v85 54				
Storage	64-Bit (Intel): Yes	e, x60_04				
Thunderbolt/USB4	Location: /Librar	v/Extensions/HighPointNVMe.kext				
USB	Kext Version: 1.1.26					
 Network 	Load Address: 18446	741874801902000				
Firewall	Loadable: Yes					
Locations	Dependencies: Satisfi	ed				
Volumes	Signed by: Develo	per ID Application: HighPoint Tech	noiogies, inc (DX6069M	(9N2), Develop	er ID Certifica	ation Authority,
WWAN	Apple	ROOLCA				
Wi-Fi						
~ Software						
Accessibility						
Applications						
Developer						
Disabled Software						
Extensions						
Fords						
Ponts						
Frameworks						

注意: 屏幕截图中显示的驱动程序修订可能与当前的软件版本不一致。请确 保从产品的软件更新页面下载最新的驱动程序更新。

5. 更新设备驱动程序

注意:更新驱动程序,请确保阵列卡已连接到主机。

当前的驱动程序可以从每个产品的软件下载网页上下载。

产品型号	下载链接
SSD7105	http://www.highpoint-tech.cn/product-detail7105.html
SSD7101A-1	
SSD7204	
SSD7104	http://www.highpoint-tech.cn/product-detail7101a.html
SSD7104F	
SSD7140A	
SSD6540M	http://www.hishusint.tash.on/maduat.datai16540.html
SSD6540	<u>http://www.highpoint-tech.ch/product-detano340.html</u>
SSD7120	http://www.highpoint-tech.cn/product-detail7120.html
SSD7540	
SSD7505	http://www.highpoint-tech.cn/product-detail7540.html
SSD7502	
RS6661A-	http://www.highpoint.toch.on/product_dotail6661a.html
NVMe	<u>nup://www.nighpoint-tech.ch/product-detail0001a.ntml</u>

正在更新设备驱动程序(用于macOS 10.13/10.14/10.15/11.x/12.x)

1) 找到下载文件并双击 HighPointNVMe.pkg 软件包以启动安装程序,单击继续按钮:

e e Ø	🥪 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 会提示	您安装该驱动程序。单击"安装"继续。 。Install HighPoint NVMe RAID Controller
	Standard Install on "110-2013"
Introduction	This will take 467 KB of space on your computer.
 Destination Select Installation Type Installation Summary 	Click Install to perform a standard installation of this software on the disk "110-2013".
	Customize Go Back Install

3)将提示安装程序正在尝试安装新软件,请输入管理员用户名和密码。输入这些内容后, 单击安装软件。 4)如果没有出现弹出窗口,请继续进行下一步的安装。单击重新启动。

	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.
	Go Back Restart

5) 如果您收到弹出窗口的提示,请单击"打开安全首选项"。

		ılly.
 Introduction Destination Select Installation Type Installation Summary 	System Extension Updated A program has updated system extension(s) signed by "HighPoint Technologis, Inc". To finish the update, you must approve it in the Security & Privacy System Preferences.	successful.
	OK Open Security Preferences	italled.
	Click Restart to begin insta	lling the software.

6)确保检查了应用商店和确定的开发者,然后单击"允许"。

		Firewall P	rivacy	
A login passwor	d has been set for this use	r Change P	assword	
Require	password immediately :	after sleep o	r screen saver be	egins
Show a r	message when the screen	s locked Set	Lock Message	
Allow apps dow	nloaded from:			
Allow apps dow	nloaded from: re			
Allow apps dow App Stor App Stor	nloaded from: re re and identified developer	s		

7) 您将收到一个弹出窗口,提示您重新启动。单击 Not Now。



8)返回到驱动程序安装窗口。单击"重新启动"以重新启动系统。



9)系统重启后,可以在系统信息→**扩展下查看驱动程序的状态**;以下截图显示 HighPointNVMe 驱动程序已加载:

		Ma	cBook Pro			
Audio	Extension Name	~ Version	Last Modified	Notarized	Loaded	Obtained from
Camera	HES Mar Japanese	8.0	2020/1/1_4:00 PM	Yes	No	Apple
Card Reader	HES MacKorean	8.0	2020/1/1, 4:00 PM	Yes	No	Apple
Controller	HESEncodings	1.0	2020/1/1 4:00 PM	Yes	Yes	Apple
Diagnostics	HighPointIOP	4.4.5	2020/1/1, 4:00 PM	Yes	No	Identified Dev
Disc Burning	HighPointNVMe	1.1.26	2021/3/21, 9:56 PM	Yes	Yes	Identified Dev
Ethernet Cards	HighPointRR	4,23,1	2021/3/12, 3:54 PM	Yes	No	Identified Dev
Fibre Channel	initioFWBridge	511.60.2	2020/1/1, 4:00 PM	Yes	No	Apple
FireWire	Intel82574L	2.7.2	2020/1/1, 4:00 PM	Yes	No	Apple
Graphics/Displays	to a self of a back to a second	* *		Me -	Mar.	81-
VVNEExpress PCI Parallel SCSI Power Printers SAS SAS SAS STA SPI Storage Thunderboit/USB4 USB V Network Firewall Locations Volumes WWAN WI-FI Accessibility	Version: 1.1.25 L&T ModRMe: 2/02/[3/2], 9:55 Bundle ID: com.highpoint-1 Notarized: Yes Obtaind frm: Identified Develor Kind: Universal Architectures: arm64, x86_54 G-Bit (Intel): Yes Location: /Library/Extensic Kext Version: 1.126 Loadadiress: 184457187480 Loadable: Yes Dopendencies: Satisfied Signed by: Developer ID Ap Apple Root CA Apple Root CA	PM ech.kext.HighPointNVMe oper I Isons/HighPointNVMe.kext 1902000 plication: HighPoint Tech	nologies, Inc (DX6G69A	49N2), Develop	er ID Certifica	ation Authority,
Oeveloper Disabled Software Extensions Fonts Frameworks						
Installations	test's MacBook Pro_M1_OS	2 > Software > Extensio	ns > HighPointNVMe			

注意: 屏幕截图中显示的驱动程序修订可能与当前的软件版本不一致。请确 保从产品的软件更新页面下载最新的驱动程序更新。

6. 卸载设备驱动程序

卸载 macOS 10.13 和 10.14的设备驱动程序

要卸载NVMe驱动程序,您将需要打开一个终端窗口,并输入以下命令: sudo rm -rf /Library/Extensions/HighPointNVMe.kext

```
test — -zsh — 80×24
Last login: Fri Dec 20 19:34:31 on ttys004
[test@testsMB01610152 ~ % sudo rm -rf /Library/Extensions/HighPointNVMe.kext
Password:
test@testsMB01610152 ~ %
```

卸载 macOS 10.15 和11.x and 12.x的设备驱动程序

要卸载NVMe驱动程序,您将需要打开一个终端窗口,并输入以下命令:

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

sudo kextcache --i /

```
[test@testsMB01610152 ~% sudo rm -rf /Library/Extensions/HighPointNVMe.kext
Password:
[test@testsMB01610152 ~% sudo kextcache -i /
kextcache -i /
kextcache -arch x86_64 -local-root -all-loaded -kernel /System/Library/Kernels/k
ernel -prelinked-kernel /Library/Apple/System/Library/PrelinkedKernels/prelinked
kernel -volume-root / /Library/Extensions /AppleInternal/Library/Extensions /Lib
rary/Apple/System/Library/Extensions /System/Library/Extensions
KernelCache ID: 91AFAAB6216EDD61055A39A8E77A483C
test@testsMB01610152 ~ %
```

7. 安装 RAID 管理软件(WebGUI)

为macOS 10.13/10.14/10.15/11.x/12.x安装WebGUI

1) 双击名为 HighPointWebGUI.pkg的程序包以启动安装程序。当窗口出现时,单击继续按钮。

•••		Install HighPoint Web RAID Controller Management
		Welcome to the HighPoint Web RAID Controller Management Installer
• Intro	duction	You will be guided through the steps necessary to install this software.
 Dest 	ination Select	
 Insta 	llation Type	
 Insta 	llation	
Sum	mary	
		Go Back Continue

2) 您将被提升为单击安装按钮。单击"安装"继续。

	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.

然后,将您提升为输入管理员用户名和密码。输入这些内容后,单击"安装软件"继续。

	Standard	d Install on "1010"	
 Introduction Destination Se Installation T Installation Summary 	Use Pa	staller is trying to install new software. Type ur password to allow this. emame:	re be
1	_	Cancel Install Software	
		Go Back	

4) 已安装了WebGUI管理软件。单击"关闭"以完成此过程。

Т	he installation was completed successfully.
Introduction Destination Select Installation Type Installation Summary	The installation was successful. The software was installed.
	Go Back Close

8. 更新macOS 10.13/10/14/10.15/11.x/12.x的WEBGUI

- 1) 首先, 卸载当前的WebGUI。请参考: Uninstalling the WebGUI.
- 2) 卸载WebGUI后,请重新启动macOS。
- 3) 系统重新启动后,请从相应的软件下载网页下载最新版本的WebGUI。
- 4) 找到下载文件并双击名为 **HighPointWebGUI.pkg** to的软件包以启动安装程序。 请参考安装<u>WebGUI</u> 以了解更多信息。

9. 卸载macOS 10.13/10.14/10.15/11.x/12.x的WebGUI

要卸载WebGUI,请访问应用程序单击HPTWEBGUI,选择卸载,然后双击uninstall-WEBGUI.command。卸载命令将自动打开终端并卸载软件:

• • •	ininstall uninstall	
< >	📖 🚍 🛄 🔜 📾 🗸 🏘 🗸 🙆 🖸 🔍 Q. Search	
Favorites	🔮 AJA System Test Lite.app 🖉 HighPoint RAement.webloc 📝 uninstall-WebGUI.command	
Applications	ATTO	
Desktop	ATTO ConfigTool	
Documents	⊘ ATTO Disk Benchmark.app	
O Downloads	O AutoSwitchInput.app	
😭 test	Blackmagic Deed Test.app Blackmagic RAW	
Locations	📮 Books.app	
Macintosh HD	Calculator.app	
OSXRESERVED	Calendar.app	
BOOTCAMP	4 Chess.app	
10136	DaVinci Resolve	
🖾 10154 - Data	Dictionary.app	
🚐 mocana	 FaceTime.app Find My.app 	
Network	Font Book.app Foxmail.app	
Tags	🖕 Home.app	
😑 Red	HPTWEBGUI	
🦲 Orange	DResistryEvolorer app	

😑 😑 👚 test — uninstall-WebGUI.command — 94×30
Last login: Thu Jul 2 13:34:32 on ttys000 /Applications/HPTWEBGUI/uninstall/uninstall-WebGUI.command ; exit; test@tests-Pro2019 ~ % /Applications/HPTWEBGUI/uninstall/uninstall-WebGUI.command ; exit;
This script will attempt to uninstall HighPoint Web RAID Controller Manage Service
Note: You must be logged on as an administrator to uninstall the software. The script will prompt you for an administrator password.
If prompted for a password please enter your administrator password.
The following service files will be deleted /Applications/HPTWEBGUI /Library/Receipts/wwwfiles.pkg /Library/LaunchDaemons/HPTWebGUIDaemon.plist /usr/share/hpt /usr/bin/hptdaemonctl /Library/LaunchDaemons/HPTWebGUIDaemon.plist: Operation now in progress Process has completed.
[Process completed]

10. 故障排除

无法连接到WebGUI

安装驱动程序和管理软件后,管理软件在尝试启动界面时显示"连接失败"警告:



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此错误可能由以下问题之一触发:

- 01. macOS无法识别HighPoint NVMe硬件
- 02. HighPoint NVMe设备驱动程序没有安装或没有正确加载
- 03. WEBGUI服务未运行
- 04. 系统的SIP状态不正确
- 05. 如果您使用的是T2系统;可能不会禁用安全启动
- 06. 如果您使用的是苹果M1系统,安全策略可能不会"减少"

01. 验证HighPoint NVMe硬件

请参阅附录-验证产品安装,以确保HighPoint NVMe设备已被macOS正确识别。 <u>Appendix – Verifying Product Installation</u>

注意:如果您正在使用 RocketStor 6661A-NVMe:

- 如果您正在使用RocketStor 6661A适配器的R6661A-NVMe(RS6661A-NVMe) 或另一个SSD7000系列,请参考附录-验证产品安装下显示的第一个屏幕截 图。如果存在RS6661A条目,请继续执行屏幕截图#2。first screenshot
- 如果没有显示RocketStor6661tor6661A条目,这可能与连接问题有关-移动 RS6661A到另一个迅雷端口或更换电缆并重新检查条目。

02. 确保已加载了 HighPoint NVMe驱动程序

请参阅附录-检查驱动程序的状态和版本,以确保HighPoint NVMe驱动程序的安装正确。Appendix - Checking the Driver status and Version

- 1) 如果HighPoint NVMe驱动程序未加载,请继续执行步骤2-检查安全和隐私状态。如果HighPoin软件在权限中被阻止,则需要单击"允许"2-Check the。
- 如果驱动程序加载正常,但WebGUI仍然无法启动,请尝试重新启动WebGUI 服务。请参考附录-WEBGUI服务重启,进行设置。<u>Appendix - WEBGUI</u> <u>service restart</u>

如 果 WEBGUI 仍 未 连 接 , 请 联 系 我 们 的 支 持 部 门 <u>http://highpoint.mikecrm.com/vr1DAsz</u>, 打开支持票。请确保包含您能够收集 到的任何屏幕截图和系统信息(更多信息请参见附录)。

03. 检查SIP状态

- 1) 请参阅附录-检查SIP状态 Appendix Checking the SIP Status。
- 如果您的系统的设置不正确,请参考每个系统的驱动程序安装手册来重置 SIP状态。

04. 对于T2系统:确保禁用了安全启动

请参考附录-具有T2芯片组的系统-安全启动状态。 <u>Appendix - Systems with T2</u> <u>chipsets - Secure Boot status</u> 如果该设置不正确,则需要重新启动系统以更改该 设置。

05. 对于苹果M1平台:确保安全策略被减少

请参阅简化的安全政策。 <u>Reduced Security Policy</u>. 如果设置不正确,则需要关闭 系统以更改设置。

如果您在检查项目01-05时遇到任何问题,请参考附录以收集有关您的系统和配置的 信息,并使用我们的在线支持门户<u>http://highpoint.mikecrm.com/vr1DAsz</u>向我们的客 户支持部门提交支持票 <u>Appendix</u>

WebGUI 无法连接到远程系统

如果您无法连接到远程系统,请确保raidman-httpsd已在目标系统上运行,并确认您可以通过TCP/IP连接访问远程系统。如果您已经配置了防火墙,请确保TCP端口7402没有被阻止。

当通过我们的在线支持门户提交支持票时,以下信息将帮助我们的支持部门尽快和有效地诊断和解决您的问题。

正在检查macOS版本

1) 点击位于桌面左上方附近的苹果标志, 然后点击"版本"。然后, 将全部显示系统的版本号。



检查安全和隐私

1) 检查权限中是否有HighPoint软件,如果被阻止,需要单击"Allow"。

A login password ha	s been set for this user	Change Password	
Require pass	word immediately 0	after sleep or screen sav	er begins
Show a mess	age when the screen is	locked Set Lock Messa	ge
Distric dutor	nutio login		
Allow apps downloa	ded from:		
Allow apps downloa	ded from:		
Allow apps downloa	ded from:		
Allow apps downloa App Store Q App Store ar	ded from: Id identified developers		
Allow apps downloa App Store App Store ar	ded from: Id identified developers		
Allow apps downloa App Store App Store ar	ded from: Id identified developers		
Allow apps downloa App Store App Store ar System software fro	ded from: Id identified developers m developer "HighPoint	Technologies, Inc" was	Allow
Allow apps downloa App Store App Store ar System software fro blocked from loadin	ded from: Id identified developers m developer "HighPoint 9-	Technologies, Inc" was	Allow

验证产品安装

1) 点击位于桌面左上角附近的苹果标志,并选择"关于这台Mac"。

RocketStor 6661A-NVMe (Thunderbolt entry):

▼ Hardware	Thunderbolt Device Tree	
ATA		
Apple Pay	Thunderbolt Bus 0	
Audio	▼ Thunderbolt Bus 1	
Bluetooth	RocketStor 6661A	
Camera		
Card Reader		
Controller		
Diagnostics		
Disc Burning		
Ethorpot Cordo		
Ethernet Cards		
Fibre Chamiler		
Firewire		
Graphics/Displays		
Memory		
NVMExpress		
PCI		
Parallel SCSI		
Power		
Printers		
SAS		
SATA/SATA Express		0
SPI	RocketStor 6661A:	
Storage		
Thunderbolt	Vendor Name: HighPoint Techno	ologies, Inc.
USB	Device Name: RocketStor 6661A	A
Vetwork	vendor ID: 0x43	
Firewall	Device Revision: 0x1	
Locations	UID: 0x0043053BE54	9ED00
Volumes	Route String: 1	
WWAN	Firmware Version: 26.1	
Wi-Fi	Port (Upstream):	
E Coffuero	Status:	Device connected
Accessibility	Speed:	Up to 40 Gb/s x1
Accessionity	Current Link Width:	0x2
Applications	Cable Firmware Version:	0.9.0
Developer	Link Controller Firmware Version:	: 0.36.0
Disabled Software	Port:	
Extensions	Status:	No device connected
Fonts	Speed:	Un to 40 Gb/s x1
Frameworks	Current Link Width:	0x1

2) 如果您使用的是SSD7000系列,请在硬件、PCI下进行检查。每个产品的参考屏幕截图如下 所示。

		- A6068	2014-MC		
' Hardware	Card		~ Туре	Driver Installed	Slot
AIA Apple Day	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	L				
Diagnostics					
Disc Burning					
Ethernet Cards	nci144d a804-				
Fibre Channel					1
Firewire Creation (Disataus	Type:	NVM Express Controller			2
Memory	Driver Installed: Tunnel Compatible:	Yes			localh
C TTOIL C TO TTOIL	Pause Compatible:	No			
PCI	MSI:	Yes	Controller(1): NVMe		
Darallal SCSI	Slot:	Thunderbolt@71.0.0	_		
Power	Vendor ID:	0x144d			
Printers	Device ID: Subsystem Vander ID:	0xa804			
SAS	Subsystem ID:	0xa801	Clobal View B	Invelored Los	Cattles
SATA/SATA Express	Revision ID:	0x0000	GIODAI VIEW P	Log	setting
SPI	Link Width:	x4	10		

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

SSD7105

• •			MacB	ook Pro	
Hardware	Card	~	Type	Driver Installed	Slot
Apple Pay	oci10b5 87d0		Heknown	No	Thunderbolt@3.0.1
Audio	pci10b5,87d0		Unknown	No	Thunderbolt@2.0.2
Bluetooth	pc1005,8700		Unknown	No	Thurderbolt@3,0,2
Camera	pc1005,8700		Unknown	NO	Thurderbolt@3,0,3
Card Reader	pcriubs,87du		Unknown	NO	Thunderbort@3,0,0
Controller	pc/1440,8808		NVM Express Controller	tes	Thunderbolt@7,0,0
Disgnostics	pc11440,a808		NVM Express Controller	Tes	Thunderbolt@9,0,0
Dies Burning	pci144d,a808		NVM Express Controller	Tes	Thunderbolt@6,0,0
Charact Goods	pci144d,a808		NVM Express Controller	Yes	Thunderbolt@8,0,0
Ethernet Cards	pci1103,7105		RAID Controller	No	Thunderbolt@5,0,0
Memory NVMExpress PCI Parallel SCSI Power Printers SAS SATA SPI Storage Thunderbolt/USB4 USB V Network	Printologo du. Type: Tunel Compatible: MSI: Slot: Vendor ID: Device ID: Subsystem Vendor ID: Subsystem ID: Revision ID: Link With:	Unknown No No PCI Thunderb 0x10b5 0x87d0 0x10b5 0x87d0 0x00ca x4	olt@3,0,1		
Locations Volumes	test's MacBook Pro	_M1_202	0_110 > Hardware > PCI	> pci10b5,87d0	

SSD7140/7140A

r Hardware	Card		Туре	Driver Installed	Slot
AIA Apple Day	AMD Radeon Pro 580X		Display Controller	Yes	Slot-1@7,0,0
Apple Pay	pci10b5,87d0		Unknown	No	Slot-3@17,0,1
Audio	pci10b5,87d0		Unknown	No	Slot-3@17,0,2
Bluetooth	pci10b5,87d0		Unknown	No	Slot-3@17,0,3
Camera	pci10b5,87d0		Unknown	No	Slot-3@17,0,0
Card Reader	pci15b7,5002		NVM Express Controller	Yes	Slot-3@26,0,0
Controller	pci15b7,5003		NVM Express Controller	Yes	Slot-3@21,0,0
Diagnostics	pci15b7,5003		NVM Express Controller	Yes	Slot-3@20,0,0
Disc Burning	pci15b7,5003		NVM Express Controller	Yes	Slot-3@24,0,0
Ethernet Cards	pci126f,2262		NVM Express Controller	Yes	Slot-3@22,0,0
Fibre Channel	pci144d,a808		NVM Express Controller	Yes	Slot-3@19,0,0
Firewire	pci144d,a808		NVM Express Controller	Yes	Slot-3@23,0,0
Graphics/Displays	pci1002,aaf0		Audio Device	Yes	Slot-1@7,0,1
Memory	pci1179,11a		NVM Express Controller	Yes	Slot-3@25.0.0
NVMExpress	pci8086.15eb		Thunderbolt Controller	Yes	Thunderbolt@146,0,0
PCI	XHC4		USB eXtensible Host Controller	Yes	Thunderbolt@145,0,0
Parallel SCSI					
Power					
Printers					
SAS	AMD Radeon Pro 580X	E:			
SATA/SATA Express	blama	ATV Farshus			
SPI	Name:	Al 1,Forranue Display Controller			
Storage	Driver Installed:	Yes			
Thunderbolt	MSI:	Yes			
USB	Bus:	PCI			
Network	Slot:	Slot-1@7,0,0			
Firewall	Device ID:	0x67df			
Locations	Subsystem Vendor ID:	0x106b			
Volumes	Subsystem ID:	0x0206			
WWAN	Revision ID:	0x00c0			
Wi-Fi	Link Width:	x16			
Software	LINK Speed:	0.0 01/5			

SSD7110:

		Mact	30	ook Pro		
Hardware	Card		ĥ	Туре	Driver Installed	Slot
Apple Day	pci144d,a804			NVM Express Controller	Yes	Thunderbolt@135,0,0
Apple Pay	pci144d,a804		Г	NVM Express Controller	Yes	Thunderbolt@132,0,0
Audio	pci144d,a808			NVM Express Controller	Yes	Thunderbolt@134,0,0
Camera	pci1103,7110		L	RAID Controller	No	Thunderbolt@133,0,0
Card Boador			-			
Controller						
Diagnostics						
Disc Burning						
Ethernet Cards						
Fibre Channel	pci144d,a804:					
FireWire	Time	NR/M Even		e Controller		
Graphics/Displays	Driver Installed:	Yes	15	scontroller		
Hardware RAID	Tunnel Compatible:	Yes				
Memory	Pause Compatible:	Yes				
NVMExpress	MSI:	Yes				
PCI	Bus: Slot:	Thunderbo	It	@135.0.0		
Parallel SCSI	Vendor ID:	0x144d				

SSD7505:

# Hardware	Card		 Type 	Driver installed	Slot
ATA	AMD Badage Die EBDY		Display Controllar	Min	Elet. 1070.0
Apple Pay	AND Radeon Pro SBOX		NML Exercise Controller	Yes	Siot-10/7,0,0
Audio	politikad apop		N/M Express Controller	Ver	Slot-3@21,0,0
Bluetooth	pc1440,8000		NOA Express Controller	Vec	Sint-3@22,0,0
Camera	poil44d a009		N/M Express Controller	Vec	Sint-3@23,0,0
Card Reader	pc/1440,3808		Other Mass Storage Controller	No	Sint-3(824,0,0
Controller	pci1002,ast0		Audio Device	Ver	Sint-18701
Diagnostics	pci1102,7505		RAID Costroller	No	Sint-3@270.0
Disc Burning	pci808615ab		Thunderbolt Controller	Yes	Thunderholt@149.0.0
Ethernet Cards	YHC4		USB eXtensible Most Controller	Yes	Thunderbolt@149,0,0
Fibre Channel	And a		Cool extensione most controller		inanderbonig Hejoje
Memory NVMExpress PCI Parallel SCSI Power Printers SAS SAT/SATA Express SPI Storage Thunderbolt US8 Network Firewall Locations Vehicines	Type: Driver installed: MSI: Buck Vendor ID: Device ID: Subsystem Vendor ID: Subsystem Vendor ID: Subsystem Vendor ID: Link Speed:	RAID Controller No PCI 501-38272,0,0 0x1103 0x1003 0x1003 0x0001 0x0001 25,0 0T/s			

SSD7540

			ABC PTO		
* Hardware ATA	Card		~ Type	Driver Installed	Slot
	AMD Radeon Pro 580X		Display Controller	Yes	Siot-1@7,0,0
Apple Pay	pci144d,a808		NVM Express Controller	Yes	Slot-3@27,0,0
Augio	pci144d,a808		NVM Express Controller	Yes	Slot-3@30,0,0
Billetooth	pci144d,a808		NVM Express Controller	Yes	Slot-3@29.0.0
Camera	pci144d,a808		NVM Express Controller	Yes	Slot-3@28,0,0
Card Reader	pci144d,a808		NVM Express Controller	Yes	Slot-3@21,0,0
Controller	pci144d,a808		NVM Express Controller	Yes	Slot-3@22,0,0
Diagnostics	pci144d,a808		NVM Express Controller	Yes	Slot-3@23,0,0
Ethernet Caude	pci144d,a808		NVM Express Controller	Yes	Slot-3@24,0,0
Ether Channel	pci1000,c010		Other Mass Storage Controller	No	Slot-3@35,0,0
Fibre Channel	pci1002,aaf0		Audio Device	Yes	Slot-1@7,0,1
Graphics (Disolaur	pci1103,7540		RAID Controller	No	Slot-3@33,0,0
Magnet av Magnety a	pci8086,15eb		Thunderbolt Controller	Yes	Thunderbolt@151,0,0
NUMExpress	XHC4		USB eXtensible Host Controller	Yes	Thunderbolt@150,0,0
PCI			0		
Parallel SCSI Power SAS SATA/SATA Express SPI Storage Thunderbolt USB Network Firewall Locations Volumes	pci1103,7540: Type: Driver Installed; MSI: BUI: Slot: Vendor ID: Device ID: Subsystem Vendor ID: Subsystem Vendor ID: Revision ID: Link Width: Link Width:	RAID Controller No PCI Stot-3@33,0,0 0x7540 0x103 0x0001 0x0001 x1 5.0 GT/s			

WEBGUI服务重新启动

如果您无法连接到WebGUI,请检查系统上是否正在运行一个名为raidman-httpsd的进程。如果它没有运行,您可以手动打开终端窗口并运行命令: "sudo hptdaemonctl restart".

检查SIP状态

打开一个终端机窗口,然后输入以下命令:

csrutil status

请拍摄输出的屏幕截图,并将其附加到一个支持案例(见下面的示例):



状态将根据您使用的macOS的版本而有所不同。

请参考禁用SIP Disabling SIP (适用OS13x 及更早版本)

MacOS 版本	SIP 状态	驱动程序状态
10.13.x	禁用	加载
10.14.x	启用	加载
10.15.x	启用	加载
11.x	启用	加载
12.x	启用	加载

具有T2芯片组的系统-安全启动状态

您将需要重新启动系统,并进入恢复模式,以检查安全启动状态。此设置应该始终保持禁用状态。请参考禁用安全启动。 **Disabling Secure boot**

Apple M1平台-降低了安全策略

检查安全引导是否降低了安全性

系统信息System Information -> 硬件Hardware ->控制器 Controller -> 引导策略Boot Policy

		MacBook Pro
✓ Hardware	Model Identifier:	MacBookBro171
ATA	Eirmware Version:	iBoot-6723 120 36
Apple Pay	Boot LILIID:	FB0BE944-BD52-4436-B9E5-701430C0417B
Audio	Boot Policy:	
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
Diagnostics	Allow All Kernel Extensions:	Yes
Disc Burning	User Approved Privileged MDM Operations:	No
Ethernet Cards	DEP Approved Privileged MDM Operations:	No

安全启动必须降低安全,以便加载第三方设备的驱动程序,如果更改 请参阅: <u>Reduced</u> <u>Security Policy</u>

检查驱动程序的状态和版本

- 1) 点击位于桌面左上角附近的苹果标志,并选择"关于这台Mac"。
- 2) 单击扩展,然后单击高点NVMe条目-请进行屏幕截图并附加这个支持案例(参见下面的示例):

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			14.0.32	2019/9/26, 12:33 PM	Yes	No	Apple
Audio	HFS			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	1.1.10	2020/1/2, 4:38 PM	Yes	Yes	Identified Developer
Controller	HighPointRR		_	4.13.0	2017/12/5, 3:48 PM	Yes	No	Identified Developer
Diagnostics Disc Burning	initioFWBridge		- i	489.120.1	2019/9/27, 12:49 PM	Yes	No	Apple
Disc Burning Ethernet Cards Fibre Channel FireWire Graphics/Displays Memory NVMExpress PCI Parallel SCSI Power Printers SAT SATASATA Express SPI Storage Thunderbolt	HighPointNVMe Version: Last Modified: Bundle ID: Notarized: Loaded from: Kind: Genetures: Are (Intel): Load Address: Load Address: Load Address: Dependencies: Signed by:	1.1.10 2020/1/2, 4:38 PM com.highpoint-tech.k Yes Identified Developer Intel x86_64 A.library/Extensions/H 1.310 B44674321862550 Yes Satisfied Developer ID Applica CA	ext.HighPo ighPointN 000 ion: HighP	ointNVMe VMe.kext Yoint Techno	logies, Inc (DX6G69M9N	12), Developer	D Certificatio	in Authority, Apple Root
V Network Firewall Locations								
Volumes WWAN Wijei								
Software Accessibility Applications Developer Disabled Software Extensions								

注意: 屏幕截图中显示的驱动程序修订可能与当前的软件版本不一致。请确保从产品的软件更 新页面下载最新的驱动程序更新。 如何收集诊断日志

1) **1-单击"自我诊断解决方案"Click Self-Diagnostic Solution**: 诊断视图提供了一个"单击" 信息收集系统进行故障排除。它将收集所有必要的硬件、软件和存储配置数据,并 将其编译成一个文件,可以通过我们的在线支持门户直接传输到我们的FAE团队。

	Diagno	stic View	
System		Product	
OS: Kernel: CPU: MotherBoard T2: Disk: Disk: Thunderbolt: Secure Boot: SIP:	Mac OS X 10.13.6 17G14042 xnu-4570.71.82.8~1 Intel(R) Core(TM) 15-4258U CPU @ 2.40GHz MacBookPro11,1 / APPLE SSD SD0128F / Not Present Disabled	Controller: Driver Name: Driver Version:	No controller detected! No driver detected! /

2) 您还可以单击"帮助"→"诊断"以进入诊断视图。

Global View	Physical Logical Setting	Event SHI	Help
HBA Propertie	95	Storage Prop	Online Help Register Product Disanostic
Host Adapter mo	del: HighPoint NVMe RAID Controller	(P)	Total Capacity: 4048 GB Configured Capacity: 4048 GB
Physical Drive:	4		Free Capacity: 0 GB
Legacy Disk:	4		
RAID Count:	0	Cor	nfigured 100.0%

4击"保存日志"按钮以创建诊断文件。注意,这个过程可能需要几分钟才能完成。

v		localhost:7402 says Are you sure to save the diagnostic information?			High 7	
Global View Physi			Cancel	ОК	Help	
		Diagno	stic view		9	
System	System			Product		
OS: Kernel: : CPU: : MotherBoard: I T2: , Disk: , Substrate of the second SIP: ,	Mac OS X 10.1 xnu-4570.71.8 Intel(R) Core(' MacBookPro11 / APPLE SSD SD / Not Present Disabled	3.6 17614042 2.8~1 M) IS-4258U CPU @ 2.40GHz ,1 0128F	Controller: Driver Name: Driver Version:	No No	controller detected	

4) "日志位置"将显示保存路径的位置。

Global Vie	w Physical Logical Setting	Event SHI	Logout Help			
Diagnostic View						
System		Product				
OS: Kernel: CPU: MotherBoard: T2: Disk: Thunderbolt: Secure Boot: SIP:	Mac OS X 10.13.6 17G14042 xnu-4570.71.82.8~1 Intel(R) Core(TM) I5-4258U CPU @ 2.40GHz MacBookPro11,1 / APPLE SSD SD0128F / Not Present Disabled	Controller: Driver Name: Driver Version:	No controller detected			

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