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 NVMe RAID解决方案和带有macOS操作系统的SSD6540/6540M RAID机柜的重要硬件/软件要求、安装和升级过程以及故障排除提示。

前提条件

本节介绍SSD7000系列NVMe阵列卡和机柜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阵列卡和外壳的驱动程序安装、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阵列卡或外壳时遇到任何困难,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。

前提条件

- 1) 确保至少有一个NVMe SSD已安装到HighPoint NVMe控制器或机柜中。除非硬件环 境检测到NVMe SSD,否则驱动程序将无法正确安装。
- 2) 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RocketStor 6661A NVMe或SSD7000 NVMe RAID控制器,则RocketStor单元必须插入Thunderbolt 3端口。

- 3) 操作系统支持: macOS10.13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T2-如果系统有T2芯片,在尝试安装HighPointNVMe设备的 任何软件之前,请确保按照第3节操作。

1. 为T2系统禁用macOS安全引导和SIP

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,macOS10.13x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NVMeRAID产品线(SSD7100和SSD7500系列 RAID控制器和SSD6540系列NVMeRAID外壳)。

有关T2安全芯片组的产品列表,请访问以下网站 Mac computers that have 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。

00	Startup Security Utility				
T	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 Boo	ot				
 Full Sect Ensures t trusted by installatio Medium 	urity hat only your current OS, or signed operating system software currently y Apple, can run. This mode requires a network connection at software in time. Security				
No Secu Does not	y version of signed operating system software ever trusted by Apple to run. rity enforce any requirements on the bootable OS.				
External Bo	pot				
O Disallow Restricts	booting from external media the ability to boot from any devices such as USB and Thunderbolt drives.				
Allow bo Does not	oting 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: <u>About Secure Boot</u>

禁用SIP(适用于macOS10.13x及更早版本)

当macOS正在运行时,请打开一个终端窗口,以确认系统完整性保护(SIP)状态是否已被禁用。

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 状态

				1	tes	t — -zsh —	80
Last	login:	Sat Oc	t 12	16:02:3	6 on	ttys000	
teste	testsM	B201610	15 ~	% csrut	il s'	tatus	1
Syste	m Inte	grity P	rotec	tion st	atus	: enabled.	
test@	testsM	B201610	15 ~	%			

上面显示的示例屏幕截图表明,SIP已被启用。

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", 然后选择"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 sta	tus
System Integrity Prote	ction status: enabled (Apple Internal).
-bash-3.2# csrutil dis	able
Successfully disabled	System Integrity Protection. Please restart the machine fo
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,然后输入以下命令:

csrutil status

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

如果状态现在报告为禁用,则可以安装HighPoint NVMe驱动程序。

2. 安装设备驱动程序

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	下载链接
SSD7101A-1	http://www.highpoint-tech.cn/product-detail7101a.html
SSD7120	http://www.highpoint-tech.cn/product-detail7120.html
SSD7204	http://www.highpoint-tech.cn/product-detail7204.html
SSD7104	http://www.highpoint-tech.cn/product-detail7104.html
SSD6540M	https://highpoint-tech.com/USA_new/series-ssd6540m-download.htm
SSD6540	http://www.highpoint-tech.cn/product-detail6540.html
SSD7103	http://www.highpoint-tech.cn/product-detail7103.html
SSD7140	http://www.highpoint-tech.cn/product-detail7140.html
RS6661A-NVMe	http://www.highpoint-tech.cn/product-detail6661a.html
SSD7505	http://www.highpoint-tech.cn/product-detail7505.html
SSD7502	http://www.highpoint-tech.cn/product-detail7502.html
SSD7540	http://www.highpoint-tech.cn/product-detail7540.html

macOS High Sierra 10.13 驱动程序安装

 启动驱动程序的安装过程。找到下载文件并双击软件包以启动安装程序。单击继 续按钮:

	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会提示您安装该驱动程序。单击"安装"继续。

	Install HighPoint NVMe	RAID Controller
Introduction	Standard Install on "1014.6 This will take 438 KB of Click Install to perform	y space on your computer.
Installation Type Installation Summary	for all users of this com be able to use this softw	puter. All users of this computer will vare.
	Customize	Go Back Install

3) 将提示需要重新启动才能安装软件。单击"继续安装"。

Introductic	When this software must restart your o you want to install	e finishes installing, you computer. Are you sure the software now?	
 Destinatio Installatic 	Cancel	Continue Installation	software ter will

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"。 Open Security Preferences



6) 选中"App Store and identified developers", 然后单击 Allow。



7) 您将收到一个弹出窗口,提示您重新启动。单击确定。

$\textcircled{\textbf{O}}$	Enabling this system software requires a restart
	Restart OK
返回到驱动程	序安装窗口。单击"重新启动"以重新启动系统
	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.

9) 重新启动系统后,安装HighPoint RAID management。

macOS Mojave10.14和macOS Catalina 10.15驱动程序安装程序

1) 找到下载文件并双击软件包以启动安装程序。单击"继续"



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 "1014.6"	
 Introduction Destination Select Installation Type Installation Summary 	This will take 438 KB of space Click Install to perform a star for all users of this compute be able to use this software.	ce on your computer. ndard installation of this software r. All users of this computer will
	Customize	Go Back Install

3)将提示需要重新启动才能安装软件。单击"继续安装"。



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"。 Open Security Preferences.



- ••• • Security & Privacy . FileVault Firewall Privacy A login password has been set for this user Change Password... Require password immediately C after sleep or screen saver begins Show a message when the screen is locked Set Lock Message. Disable automatic login Allow apps downloaded from: App Store O App Store and identified developers System software from developer "HighPoint Technologies, Inc" was blocked from loading. Allow Click the lock to prevent further changes Advanced. Click the lock to prevent further changes. Advanced... ? 7) 您将收到一个弹出窗口,提示您重新启动。单击确定。 Enabling this system software requires a restart OK Restart 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。 I HighPoint NVMe RA 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
- 6) 选中"App Store and identified developers", 然后单击 Allow。

9) 系统重启后,可在系统信息下查看驱动程序状态,如下截图显示驱动程序已加载:

DUMUUUU	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	r		12.0	2017/8/25, 1:01 PM	No
Fibre Channel	IO80211NetBoote	rV2		12.0	2017/8/25, 1:01 PM	No
FireWire	IOAcceleratorFam	nily2		378.28	2017/8/25, 1:00 PM	Yes
Graphics/Displays	Hab Dalashington		0			
Hardware RAID	HighPointNVMe					
Memory	Version:	1.1.12				
NVMExpress	Last Modified:	2020/5/19, 7:07 PM				
PCI	Bundle ID:	com.highpoint-tech.kext.HighPoin	tNVMe			
Parallel SCSI	Loaded:	Yes				
Power	Kind:	Intel				
Printers	Architectures:	x86 64				
SAS	64-Bit (Intel):	Yes				
SATA/SATA Express	Location:	/Library/Extensions/HighPointNVM	e.kext			
	Kext version:	1.1.12				
SPI						
SPI Storage	Loadable:	Yes				
SPI Storage Thunderbolt	Loadable: Dependencies:	Yes Satisfied				
SPI Storage Thunderbolt USB	Loadable: Dependencies: Signed by:	Yes Satisfied Developer ID Application: HighPoin	nt Technologies, Inc (DX6G6	39M9N2), De	eveloper ID Certification	Authority,
SPI Storage Thunderbolt USB twork	Loadable: Dependencies: Signed by:	Yes Satisfied Developer ID Application: HighPoin	nt Technologies, Inc (DX6G6	39M9N2), De	eveloper ID Certification	Authority,
SPI Storage Thunderbolt USB twork Firewall	Loadable: Dependencies: Signed by:	Yes Satisfied Developer ID Application: HighPoin	nt Technologies, Inc (DX6G6	39M9N2), De	eveloper ID Certification	Authority,
SPI Storage Thunderbolt USB twork Firewall Locations	Loadable: Dependencies: Signed by:	Yes Satisfied Developer ID Application: HighPoin	nt Technologies, Inc (DX6G6	39M9N2), De	eveloper ID Certification	Authority,
SPI Storage Thunderbolt USB twork Firewall Locations Volumes	Loadable: Dependencies: Signed by:	Yes Satisfied Developer ID Application: HighPoli	nt Technologies, Inc (DX6G6	39M9N2), D	eveloper ID Certification	Authority,
SPI Storage Thunderbolt USB twork Firewall Locations Volumes WWAN	Loadable: Dependencies: Signed by:	Yes Satisfied Developer ID Application: HighPoir	nt Technologies, Inc (DX6G6	39M9N2), D	eveloper ID Certification	Authority,
SPI Storage Thunderbolt USB Evork Firewall Locations Volumes WWAN Wi-Fi	Loadable: Dependencies: Signed by:	Yes Satisfied Developer ID Application: HighPoi	nt Technologies, Inc (DX6G6	39M9N2), D	eveloper ID Certification	Authority,
SPI Storage Thunderbolt USB Work Firewall Locations Volumes WWAN Wi-Fi Tware	Loadable: Dependencies; Signed by:	Yes Satisfied Developer ID Application: HighPoir	nt Technologies, Inc (DX6G6	39M9N2), D	aveloper ID Certification	Authority,
SPI Storage Thunderbolt USB twork Firewall Locations Volumes WWAN WI-Fi Itware Arcessibility	Loadable: Dependencies: Signed by:	Yes Satisfied Developer ID Application: HighPoli	nt Technologies, Inc (DX6G8	39M9N2), Di	eveloper ID Certification	Authority,
SPI Storage Thunderbolt USB twork Firewall Locations Volumes WWAN WI-Fi tware Accessibility Applications	Loadable: Dependencies: Signed by:	Yes Satisfied Developer ID Application: HighPoi	nt Technologies, Inc (DX666	39M9N2), Di	eveloper ID Certification	Authority,
SPI Storage Thunderbolt USB Work Firewall Locations Volumes WWAN Wi-Fi ftware Accessibility Applications	Loadable: Dependencies: Signed by:	Yes Satisfied Developer ID Application: HighPoi	nt Technologies, Inc (DX6Gt	39M9N2), Di	eveloper ID Certification	Authority,
SPI Storage Thunderbolt USB twork Firewall Locations Volumes WWAN WI-Fi ftware Accessibility Applications Components Components	Loadable: Dependencies: Signed by:	Yes Satisfied Developer ID Application: HighPoir	tt Technologies, Inc (DX6G4	39M9N2), D4	eveloper ID Certification	Authority,
SPI Storage USB USB Locations Locations Volumes WWAN WI-FI tware Accessibility Applications Components Developer Disabled Software	Loadable: Dependencies; Signed by:	Yes Satisfied Developer ID Application: HighPoir	nt Technologies, Inc (DX604	39M9N2), D4	eveloper ID Certification .	Authority,

注意: 屏幕截图中显示的驱动程序修订版本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。

3. 更新设备驱动程序

注意:更新驱动程序,请确保RAID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	下载链接
SSD7101A-1	http://www.highpoint-tech.cn/product-detail7101a.html
SSD7120	http://www.highpoint-tech.cn/product-detail7120.html
SSD7204	http://www.highpoint-tech.cn/product-detail7204.html
SSD7104	http://www.highpoint-tech.cn/product-detail7104.html
SSD6540M	https://highpoint-tech.com/USA_new/series-ssd6540m-download.htm
SSD6540	http://www.highpoint-tech.cn/product-detail6540.html
SSD7103	http://www.highpoint-tech.cn/product-detail7103.html
SSD7140	http://www.highpoint-tech.cn/product-detail7140.html
RS6661A-NVMe	http://www.highpoint-tech.cn/product-detail6661a.html
SSD7505	http://www.highpoint-tech.cn/product-detail7505.html
SSD7502	http://www.highpoint-tech.cn/product-detail7502.html
SSD7540	http://www.highpoint-tech.cn/product-detail7540.html

正在更新设备驱动程序(用于macOS 10.13/10.14/10.15)

1) 找到下载文件并双击软件包以启动安装程序。单击"继续"

0	🥪 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。



3) 将提示需要重新启动才能安装软件。单击"继续安装"。

	Install HighPoint NVM	le RAID Controller	
Introductic	When this software must restart your c you want to install t	finishes installing, you omputer. Are you sure the software now?	
Destinatio	Cancel	Continue Installation	software
• Installatic	Cancer	Continue installation	ter will
 Installation 			
 Summary 			

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 	The installation was completed successfully.
 Installation Summary 	The installation was successful. The software was installed.
	Click Restart to begin installing the software.
	Go Back Restart

5)系统重新启动后,可以在系统信息下查看驱动状态;下面的屏幕截图显示驱动程序 已正确加载。

Discourse a state	Extension Name			Version	Last Modified	Loaded
Camera	HighPointNVMe			1112	2020/5/19 7:07 PM	Yes
Carriera Cord Doodor	initioEWBridge			439 70 3	2017/8/25 1:13 PM	No
Controllor	Intel82574I			272	2017/8/25 12:56 PM	No
Disaportion	IO80211Family			12.0	2017/8/25 1:03 PM	No
Diagnostics Diag Russian	IO80211FamilyV2			12.0	2017/8/25, 1:03 PM	Vac
Disc Burning	IO80211NetBoote			12.0	2017/8/25 1:01 PM	No
Ethernet Cards	IOR0211NotRoote			12.0	2017/9/25, 1:01 PM	No
Fibre Channel	IOAcceleratorEam	niv2		378 28	2017/8/25, 1:00 PM	Vac
Firewire	TOACCEIET at OTT at	iiiy2	0	570.20	2017/0/23, 1:00 PM	169
Graphics/Displays	HighPointNVMe					
Hardware RAID						
Memory	Version:	1.1.12				
NVMExpress	Last Modified:	2020/5/19, 7:07 PM	inthD/h4n			
PCI	Loaded:	Yee	ITUNVINE			
Parallel SCSI	Obtained from:	Identified Developer				
Power	Kind:	Intel				
Printers	Architectures:	x86_64				
SAS	64-Bit (Intel):	Yes				
SATA/SATA Express	Location:	/Library/Extensions/HighPointNV	Me.kext			
	Kext version:	1.1.12				
SPI	Load Addrose:	19446742521955900000				
SPI	Load Address:	18446743521855800000 Yes				
SPI Storage Thunderbolt	Load Address: Loadable: Dependencies:	18446743521855800000 Yes Satisfied				
SPI Storage Thunderbolt	Load Address: Loadable: Dependencies: Signed by:	18446743521855800000 Yes Satisfied Developer ID Application: HighP	pint Technologies, Inc (DX6G	69M9N2), D	eveloper ID Certification /	Authority
SPI Storage Thunderbolt USB	Load Address: Loadable: Dependencies: Signed by:	18446743521855800000 Yes Satisfied Developer ID Application: HighPo	oint Technologies, Inc (DX6G	69M9N2), D	eveloper ID Certification /	Authority
SPI Storage Thunderbolt USB Network Eirowell	Load Address: Loadable: Dependencies: Signed by:	18446743521855800000 Yes Satisfied Developer ID Application: HighPo	oint Technologies, Inc (DX6G	69M9N2), D	eveloper ID Certification A	Authority
SPI Storage Thunderbolt USB Network Firewall	Load Address: Loadable: Dependencies: Signed by:	18446743521855800000 Yes Satisfied Developer ID Application: HighPo	oint Technologies, Inc (DX6G	69M9N2), D	eveloper ID Certification A	Authority
SPI Storage Thunderbolt USB Network Firewall Locations	Load Address: Loadable: Dependencies: Signed by:	18446743521855800000 Yes Satisfied Developer ID Application: HighPe	aint Technologies, Inc (DX6G	69M9N2), D	eveloper ID Certification A	Authority
SPI Storage Thunderbolt USB Network Firewall Locations Volumes	Load Address: Loadable: Dependencies: Signed by:	18446743521855800000 Yes Satisfied Developer ID Application: HighPr	pint Technologies, Inc (DX6G	69M9N2), D	eveloper ID Certification A	Authority
SPI Storage Thunderbolt USB Network Firewall Locations Volumes WWWN	Load Address: Loadable: Dependencies: Signed by:	1846743521855800000 Yes Satisfied Developer ID Application: HighPi	oint Technologies, Inc (DX6G	69M9N2), Di	eveloper ID Certification A	Authority
SPI Storage Thunderbolt USB Network Firewall Locations Volumes WWAN WV-Fi	Load Address: Loadable: Dependencies: Signed by:	18446743521855800000 Yes Satisfied Developer ID Application: HighPr	oint Technologies, Inc (DX6G	69M9N2), D	eveloper ID Certification A	Authority
SPI Storage Thunderbolt USB Network Firewall Locations Volumes WWAN Wi-Fi Software	Load Address: Loadable: Dependencies: Signed by:	184.467.452185580000 Yes Satisfied Developer ID Application: HighPi	oint Technologies, Inc (DX6G	69M9N2), D	eveloper ID Certification /	Authority
SPI Storage Thunderbolt USB Network Firevall Locations Volumes WWAN WI-FI Software Accessibility	Load Address: Loadable: Dependencies: Signed by:	184.467.4352185580000 Yes Satisfied Developer ID Application: HighPi	bint Technologies, Inc (DX6G	69M9N2), D	eveloper ID Certification A	Authority
SPI Storage Thunderbolt USB Network Firevall Locations Volumes WWAN WI-Fi Software Accessibility Applications	Load Address: Loadable: Dependencies: Signed by:	1844674352185580000 Yes Satisfied Developer ID Application: HighP	sint Technologies, Inc (DX6G	69M9N2), D	eveloper ID Certification J	Authority
SPI Storage Thunderbolt USB Network Firewall Locations Volumes WWAN WI-Fi Software Accessibility Applications Components	Load Address: Loadable: Dependencies: Signed by:	1844674352185580000 Yes Satisfied Developer ID Application: HighPi	aint Technologies, Inc (DX6G	69M9N2), D	eveloper ID Certification /	Authority
SPI Storage Thunderbolt USB Network Firewall Locations Volumes WWAN Wi-Fi Software Accessibility Applications Components Developer	Load Address: Loadable: Dependencies: Signed by:	1844674352185580000 Yes Satisfied Developer ID Application: HighP	vint Technologies, Inc (DX8G	69M9N2), D	eveloper ID Certification /	Authority
SPI Storage Thunderbolt USB Network Firevall Locations Volumes WWAN WI-Fi Software Accessibility Applications Components Developer Disabled Software	Load Address: Loadable: Dependencies: Signed by:	1844674352185580000 Yes Satisfied Developer ID Application: HighPi	oint Technologies, Inc (DX6G	69M9N2), D	eveloper ID Certification J	Authority

注意: 屏幕截图中显示的驱动程序修订版本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。

4. 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 ~ %

正在卸载macOS10.15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 /



5. 安装 RAID 管理软件 (WebGUI)

安装适用于macOS 10.13/10.14/10.15的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
Introduction	You will be guided through the steps necessary to install this software.
Destination Select	
Installation Type	
Installation	
Summary	
	Co Rock Continuo
	Go Back Continue

2) 单击**安装Install**继续。

	Standard Install on "1010"
Introduction	This will take 2.7 MB of space on your computer.
Destination Select	Click Install to perform a standard installation of this software
Installation Type	able to use this software.
Installation	
Summary	

3) 然后,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。

• • 0	🥪 Install HighPoint Web RAID Controller Management	
	Standard Install on "1010"	
 Introduction Destination Se Installation T Installation Summary 	Installer is trying to install new software. Type your password to allow this. Username:	re be
	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。

•••	Install HighPoint Web RAID Controller Management
 Introduction Destination Select Installation Type Installation Summary 	The installation was completed successfully.
	Go Back Close

6. 更新macOS 10.13/10/14/10.15的WEBGUI

- 1) 首先, 卸载当前的WebGUI。请参考卸载WebGUI。 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。
- 找到下载文件并双击名为HighPointWebGUI.pkg的软件包以启动安装程序。有关更 多信息,请参阅安装macOS 10.13/10.14/10.15的WebGUI。<u>WebGUI for macOS</u> <u>10.13/10.14/10.15</u>

7. 卸载macOS 10.13/10.14/10.15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:



[Process completed]

8. 问题解答

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会显示"连接失败"警告:



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

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

01. 验证HighPoint NVMe硬件

请参阅附录-验证产品安装,以确保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:

- 1) 如果您正在使用RocketStor6661A适配器的R6661A-NVMe(RS6661A-NVMe) 或另一个SSD7000系列控制器,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。
- 如果没有显示6661tor6661A条目,这可能与连接问题有关-移动RS6661A到另 一个Thunderbolt™3端口或更换电缆并重新检查条目。

02. 确保已加载了HighPointNVMe驱动程序

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

- 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HighPoint软件在权限中被阻止,则需要单击"允许"。 <u>Check the</u> security & privacy status.
- 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。 http://highpoint.mikecrm.com/vr1DAsz

03. 检查SIP状态

- 1) 请参阅附录-检查SIP状态(第27页)。 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

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

如果您在检查项目01-05时遇到任何问题,请参考附录 <u>Appendix</u> 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提交问题。 <u>http://highpoint.mikecrm.com/vr1DAsz</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。

附录

当通过我们的在线支持门户提交问题时,以下信息将帮助我们的支持部门尽可能快速和 有效地诊断和解决您的问题。

检查安全和隐私

1) 检查权限中是否有HighPoint软件被阻止,如果被阻止,则需要点击"允许"。"Allow"

	rilevaut Firewaii	Privacy
A login password has	been set for this user Change	Password
Require passw	rord immediately 🗘 after sleep	o or screen saver begins
Show a messa	ge when the screen is locked	iet Lock Message
Allow apps downloade	ed from:	
Allow apps download	ed from:	
Allow apps download App Store App Store and	ed from: I identified developers	
Allow apps download App Store App Store and	ed from: I identified developers	
Allow apps download App Store App Store and	ed from: I identified developers	
Allow apps download App Store App Store and System software from blocked from loading	ed from: I identified developers 1 developer "HighPoint Technolog	ies, Inc" was Allow
Allow apps download App Store App Store and System software from blocked from loading.	ed from: I identified developers 1 developer "HighPoint Technolog	ies, 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"。"Aboutthis Mac"

RocketStor 6661A-NVMe (Thunderbolt $\lambda \square$):

		масвоок но	
▼ Hardware	Thunderbolt Device Tree		
ATA	Thursda da de Dira O		
Apple Pay	Thunderbolt Bus 0		
Audio	* Inunderbolt Bus 1		
Bluetooth	RocketStor 6661A		
Camera			
Card Reader			
Controller			
Diagnostics			
Disc Burning			
Ethernet Cards			
Ethorner Cards			
Circle Chainler			
Creative (Displays			
Graphics/Displays			
Memory			
NVMExpress			
PCI			
Parallel SCSI			
Power			
Printers			
SAS			
SATA/SATA Express			0
SPI	RocketStor 6661A:		
Storage			
Thunderbolt	Vendor Name: HighPoint Techno	logies, Inc.	
USB	Device Name: RocketStor 66614		
▼ Network	Vendor ID: 0x43		
Firewall	Device D: 0x0001		
Locations	UID: 0x0043053BE549	EDOO	
Volumes	Route String: 1		
WWAN	Firmware Version: 26.1		
WI EI	Port (Upstream):		
WI-FI W Software	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:	and the second second second second	
Extensions	Status:	No device connected	
Fonts	Link Status:	Up to 40 Gb/s x1	
Frameworks	Current Link Width-	041	

2) 如果您使用的是SSD7000系列NVMe阵列卡,请在硬件,PCI下检查。每个产品的参考屏幕截 图如下所示。

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

7 Hardware	Card		^ Туре	Driver Installed	Slot
ATA	pci144d,a804		NVM Express Controller	Yes	Thunderbolt@71,0,0
Apple Pay	pci144d,a804		NVM Express Controller	Yes	Thunderbolt@72,0,0
Audio	pci144d,a804		NVM Express Controller	Yes	Thunderbolt@69,0,0
Camora	pci144d,a804		NVM Express Controller	Yes	Thunderbolt@70,0,0
Controller Diagnostics Disc Burning Ethernet Cards Fibre Channel FireWire	pci144d,a804: Type:	NVM Express Controller	9		
Graphics/Displays Memory	Driver Installed: Tunnel Compatible: Pause Compatible:	Yes Yes			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	hysical Log	ical Setting
Storage	Link Speed:	8.0 GT/s	Create Array		Logica

SSD7140

[_____

SSD7000系列 NVMe RAID解决方案 Mac安装指南

▼Hardware Card ^ Type	Driver Installed Slot
ATA 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 Controlle	r Yes Slot-3@26.0.0
Controller pci15b7,5003 NVM Express Controlle	r Yes Slot-3@21,0,0
Diagnostics pci15b7.5003 NVM Express Controlle	r Yes Slot-3@20.0.0
Disc Burning pci15b7.5003 NVM Express Controlle	r Yes Slot-3@24.0.0
Ethernet Cards pci126f.2262 NVM Express Controlle	r Yes Slot-3@22.0.0
Fibre Channel pci144d.a808 NVM Express Controlle	r Yes Slot-3@19.0.0
FireWire pci144d.a808 NVM Express Controlle	r Yes Slot-3@23.0.0
Graphics/Displays pci1002.aaf0 Audio Device	Yes Slot-1@7.0.1
Memory pci1179.11a NVM Express Controlle	r Yes Slot-3@25.0.0
NVMExpress pci8086.15eb Thunderbolt Controller	Yes Thunderbolt@146.0.0
VHC4 USB eXtensible Host C	ontroller Yes Thunderbolt@145,0,0
Parallel SCSI	
Power	
Printers	
SAS AMD Radeon Pro 580X:	
SAIA/SAIA Express	
spi Type: Display Controller	
Storage Driver Installed: Yes	
I hunderbolt MSI: Yes	
USB Bus: PCI	
Vendor ID: 0x1002	
Device ID: 0x67df	
Locations Subsystem Vendor ID: 0x106b	
Volumes Subsystem ID: 0x0206	
WWAN Revision ID: 0x00c0	

SSD7103:

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

SSD7110:

		MacBook Pro	-	
F Hardware	Card	~ Туре	Driver Installed	Slot
ATA Apple Dav	pci144d,a804	NVM Express Controller	Yes	Thunderbolt@135,0,0
Apple Pay	pci144d,a804	NVM Express Controller	Yes	Thunderbolt@132,0,0
Audio	pci144d,a808	NVM Express Controller	Yes	Thunderbolt@134,0,0
Camora	pci1103,7110	RAID Controller	No	Thunderbolt@133,0,0
Card Reader				
Controller				
Diagnostics				
Disc Burning				
Ethernet Cards	pci144d,a804:			
FireWire				
Graphics/Displays	Type: Driver Installed	NVM Express Controller		
Hardware RAID	Tunnel Compatible:	Yes		
Memory	Pause Compatible:	Yes		
NVMExpress	MSI:	Yes		
PCI	Slot:	Thunderbolt@135.0.0		
Parallel SCSI	Vendor ID:	0x144d		

SSD7505:

SSD7000系列 NVMe RAID解决方案 Mac安装指南

/ Hardware	Card		 Type 	Driver Installed	Slot
ATA	AMD Badaan Bra EROV		Display Controller	Vac	Slot 1@70.0
Apple Pay	AMD Radeon Pro Soox		NVM Express Controller	Yee	Slot-1@7,0,0
Audio	pc11440,3808		NVM Express Controller	Yee	Slot-3@21,0,0
Bluetooth	pc1440,8000		NVM Express Controller	Vec	Slot=3@22,0,0
Camera	pc1440,2000		NVM Express Controller	Ves	Slot=3@23,0,0
Card Reader	pc11440,2808		Other Mass Storage Controller	No	Slot-3@24,0,0
Controller	pc11000,c010		Audio Daviao	Vee	Slot 1@7.0.1
Diagnostics	pc11002,aar0		Addio Device	No	Slot 20270.0
Disc Burning	pc1105,7505		Thunderholt Controller	No	Thunderhelt@140.0
Ethernet Cards	pc18086,15eb		LISB eXtensible Hest Centreller	Vee	Thunderbolt@149,0,
Fibre Channel	AHC4		USB extensible Host Controller	Tes	Thunderbolt@146,0,
Power Printers SAS SATA/SATA Express SPI Storage Thunderbolt USB Network Firewall Locations	Slort: Vendor ID: Device ID: Subsystem Vendor ID: Subsystem ID: Revision ID: Link Width: Link Speed:	Stor-3@27,0,0 0x103 0x7505 0x1103 0x0001 0x0001 x2 5.0 GT/s			
Volumes WWAN test's Mac Pro > Hardy	vare > PCI > pci1103,7505				

SSD7540

Hardware	Card			Turne	Driver Installed	Clas
ATA	Card		^	Type	Driver Installed	Slot
Apple Pay	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
Graphice/Dieplaye	pci1103,7540			RAID Controller	No	Slot-3@33,0,0
Memory	pci8086,15eb			Thunderbolt Controller	Yes	Thunderbolt@151,0
NVMExprose	XHC4			USB eXtensible Host Controller	Yes	Thunderbolt@150,0
PCI				0		
Parallel SCSI Power Printers SAS SATA/SATA Express SPI Storage Thunderbolt USB Vetwork Firewall Locations Volumes WWAN	pci1103,7540: Type: Driver Installed: MSI: Bus: Slot: Vendor ID: Device ID: Subsystem Vendor ID: Subsystem Vendor ID: Revision ID: Link Width: Link Speed:	RAID Controller No PCI SId-393,0,0 0x7540 0x1103 0x0001 0x0001 x1 1 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 hptdaemonetl 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 (对 macOS13x 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

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**.

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"。"Aboutthis Mac".
- 2) 单击 Extensions, 点击 HighPoint NVMe 截图并添加到支持案例中

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	HES		522,100,5	2019/9/26, 11:30 AM	Yes	Yes	Apple
Bluetooth	HESEncodings		1.0	2019/9/26, 11:29 AM	Yes	Yes	Apple
Camera	HighPointIOP		441	2018/5/4 6:31 AM	Yes	No	Identified Developer
Card Reader	HighPointNVMe		1110	2020/1/2 4:38 PM	Yes	Yes	Identified Developer
Controller	Coloring Project (P.R.		419.0			- 140	identified Developer
Diagnostics	initioEWBridge		489 120 1	2019/9/27 12:49 PM	Ves	No	Annie
Disc Burning	innor monage		400.12011	0			rippie
Ethernet Cards							
Fibre Channel	HighPointNVMe	6					
FireWire	Version	1110					
Graphics/Displays	Last Modified:	2020/1/2, 4:38 PM					
Memory	Bundle ID:	com.highpoint-tech.kex	t.HighPointNVMe				
NVMExpress	Notarized:	Yes					
PCI	Loaded:	Yes Identified Developer					
Parallel SCSI	Kind:	Intel					
Power	Architectures:	x86 64					
Printers	64-Bit (Intel):	Yes					
SAS	Location:	/Library/Extensions/Hig	hPointNVMe.kext				
SATA/SATA Express	Kext Version:	1.1.10	00				
SPI	Load Address:	184467435218625500	50				
Storage	Dependencies:	Satisfied					
Thunderholt	Signed by:	Developer ID Applicatio	n: HighPoint Techno	logies, Inc (DX6G69M9N	2), Developer	D Certificatio	n Authority, Apple Root
LICE		CA					
V Notwork							
Eirowall							
Incetione							
Locations							
volumes							
WWWAN							
WI-FI							
# Software							
Accessibility							
Applications							
Developer							
Disabled Software							
Extensions							

注意: 屏幕截图中显示的驱动程序修订版本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) 启动WEBGUI,当驱动程序不起作用时,将出现诊断视图,您可以在此视图中看到系统信息和产品信息。

	Di	gnostic 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 @ 2.40G MacBookPro11,1 / APPLE SSD SD0128F / Not Present Disabled	Controller: Driver Name: Z Driver Version:	No controller detected! No driver detected! /
ogs Location	· /Users/Shared/HighPoint_HighPo	ntNVMe_1.1.25_2021.10.29	_10.05.25.zip Save L

2) 还可以单击帮助 'Help'→诊断'Diagnostic' 以进入诊断视图。

Global View	Physical	Logical	Setting	Event	SHI	Help		
HBA Properties				Storag	e Prop	Online Help Register Product		
Host Adapter mod	el: HighPoint N	VMe RAID (Controller	6		Total Capacit	:y: 40 Capacity: 41	048 GB 048 GB
Enclosure count:	1					Free Capacity	y: 0	GB
Legacy Disk:	4							
RAID Count:	0				Col	nfigured 100.0%		

输入诊断视图,单击"保存日志",将收集您的日志信息。你需要点击"确定",然后等几分钟。

Global View Physi		localhost:7402 says Are you sure to save the diagno	stic information?	;	High 7
			Cancel	ок	Help
System		Diagni	Product		
OS: Kernel: CPU: MotherBoard: T2: Disk: Thunderbolt: Secure Boot: SIP:	Mac OS X 10.1 xnu-4570.71.8 Intel(R) Core(T MacBookPro11 / APPLE SSD SD / Not Present Disabled	3.6 17G14042 2.8~1 M) I5-4258U CPU @ 2.40GHz ,1 0128F	Controller: Driver Name: Driver Version:	No co No dri /	ntroller detected

4) "日志位置"'Logs Location' 将显示保存路径的位置。

•			Hight
Global Vie	ew Physical Logical Setting Diagno	Event SHI	Logout Help
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 No driver detected! /

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如果您在使用中有问题,请提交技术支持表(<u>http://highpoint.mikecrm.com/vr1DAsz</u>)。