HighPoint NVMe G5 Data RAID Installation Guide (Windows)

V1.17-Apr 8, 2024

Contents

Overview

This guide includes important hardware/software requirements, installation & upgrade procedures, and troubleshooting tips for using NVMe products with a Windows operating system.

The following is a list of supported NVMe products:

Supported AIC	SSD7202
	SSD7105
	SSD7502
	SSD7505
	SSD7540
	SSD7580A
	SSD7580B
	SSD7580C
	SSD7749E
	SSD7749M
	RocketAIC 7505HW Series
	RocketAIC 7540HW Series
	RocketAIC 7749EW Series
	RocketAIC 7502HW Series
	RocketAIC 7105HW Series
	RocketAIC 7749MW Series
Support Enclosure	SSD6780A

Prerequisites

This section describes the base hardware and software requirements for the NVMe products.

Driver Installation

This section covers driver installation, driver upgrade, and driver uninstallation procedures for NVMe products.

Management Software Installation

This section explains downloading and installing RAID Management Software Suite for Windows operating systems. The download includes the Web RAID Management Interface (WebGUI) and the CLI (Command Line Interface).

Troubleshooting

Please consult this section if installing or using the NVMe products is difficult. It includes descriptions and solutions for commonly reported technical issues.

Appendix

A selection of useful information and web links for the NVMe products.

Prerequisites for a Data-RAID Configuration

The NVMe products can support Data-RAID arrays. To configure a Data-RAID array, you will need the following:

1. **An NVMe SSD must be installed**. You must have at least one NVMe SSD installed into the NVMe products.

   Note: The RocketAIC series NVMe drives already include pre-configured SSDs.

2. **A PCIe 3.0/4.0/5.0 slot with x8 or x16 lanes.**

3. **Make sure any non-HighPoint drivers are uninstalled for any SSDs hosted by the NVMe products.** 3rd party software and manufacturer-provided drivers may prevent the NVMe products from functioning properly.

Warnings:

1) **Failing to remove the controller and SSDs when uninstalling the driver may result in data loss.**
2) **Always install the HighPoint Windows driver before moving an NVMe product & RAID array to another Windows system.**

Windows operating systems will always load the default NVMe support after the HighPoint Windows driver has been uninstalled or if it detects the presence of a card when no driver has been loaded. This driver will only recognize the NVMe SSDs as separate disks.

If the SSDs are recognized separately, any data they contain may be lost, including RAID configuration data.

Driver Installation

Installing the Device Driver

The following section discusses driver installation for a non-bootable NVMe configuration.
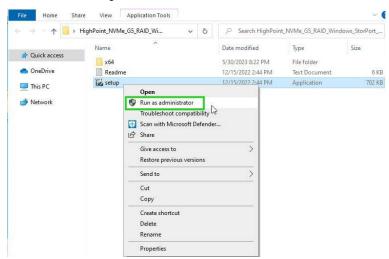
1. **Install NVMe products and disks into the system**

   Power on the motherboard after installing the NVMe products and disks into the system.

2. **Download the Device Driver**

   Download the appropriate driver from the NVMe products's Software Downloads webpage.
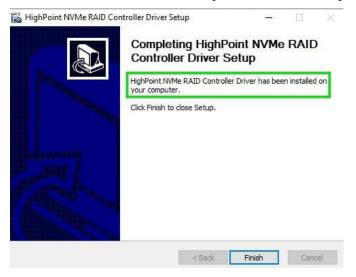
3. **Install the Device Driver**

   1) Locate the driver download and open the file.
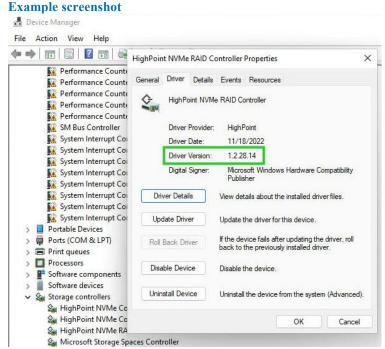
   2) Double-click **setup**.

   *Note: If installation does not start, you may have to start setup manually using Administrator Privileges. Right-click **setup**, select **Run as Administrator** from the menu, and confirm the pop-up window to proceed.*

   3) After the driver installation is complete, click **Finish** to proceed.

4) Reboot Windows.

5) Once Windows has rebooted, open **Device Manager** to check the driver's status.

Expand **Storage controllers** and click on the **HighPoint NVMe RAID Controller** entry. View the properties and click the **Driver** tab:
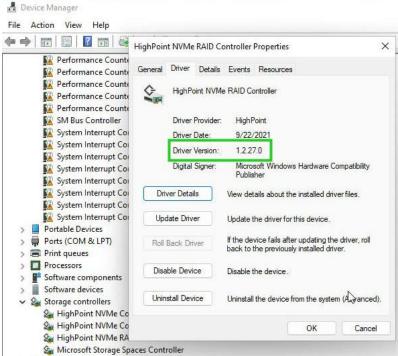
Example screenshot

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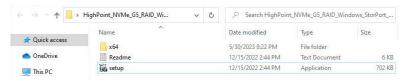
Updating the Device Driver

Note 1: *before updating the driver entry, ensure the* NVMe products *are installed into the motherboard.*
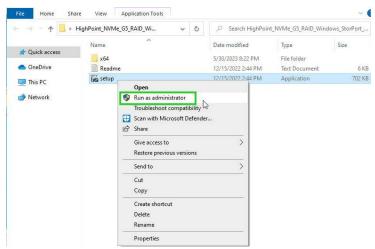*Note 2:* *This driver can be installed directly without uninstalling the driver.*

1. Open Device Manager to check the current driver version. Expand **Storage controllers** and click on
    the **HighPoint NVMe RAID Controller entry.** View the properties and click the **Driver** tab:
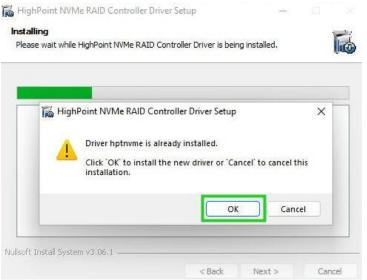   **Example screenshot**

2. Download the Device Driver
    Download the latest driver from the Software Download section of the product category webpages.

3. Update the Device Driver.
    1) Locate the driver download and open the file.

    2) Double-click **setup**.

    *Note: If the update does not start, you may have to start the setup manually using Administrator
    Privileges. Right-click **setup**, select **Run as Administrator** from the menu, and confirm the pop-
    up window to proceed.*

3) Windows will notify you that the driver is already installed. Click **OK** to install the new driver:
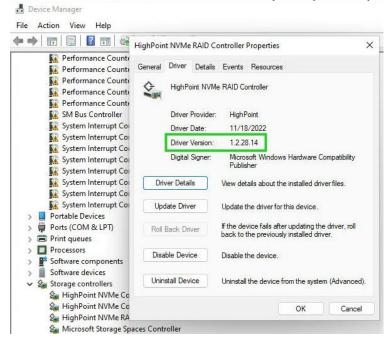

4) Once complete, click **Finish**.

5) Reboot Windows.

6) Once Windows has rebooted, open **Device Manager** to check the driver's status. Expand **Storage controllers** and click on the **HighPoint NVMe RAID Controller** entry. View the properties and click the **Driver** tab:

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

7) Open the WebGUI and make sure the SSD's arrays are properly recognized.

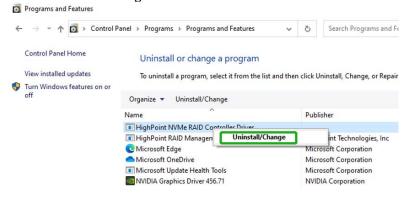*Note: make sure the WebGUI has been installed ([Install WebGUI](#)).*

Uninstalling the Device Driver

1. Power down the system and remove the NVMe products from the motherboard.
   Note 1: Failing to remove the NVMe products from the motherboard during the uninstall process may result in data loss.
   Note 2: Whenever the driver is uninstalled, Windows will attempt to install the default NVMe support, which may corrupt the RAID configurations and any data stored on SSDs hosted by the NVMe products.
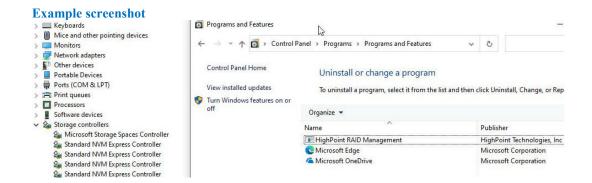
2. Power on the system and boot Windows.
3. Access **Control Panel** and select **Programs→ Programs and Features, and click on the HighPoint NVMe RAID Controller Driver** entry**.**
4. Click **Uninstall/Change.**

   ![Programs and Features window showing HighPoint NVMe RAID Controller Driver entry with Uninstall/Change option]

5. After uninstalling the driver, click **Finish**.

   ![HighPoint NVMe RAID Controller Driver Uninstall completion window with Reboot now selected]

6. Reboot Windows to complete the uninstall procedure.
7. After Windows has rebooted, access **Device Manager – Storage Controllers** and **Control Panel** to ensure the driver has been uninstalled. If there are no HighPoint entries present, the driver has been successfully uninstalled

Example screenshot

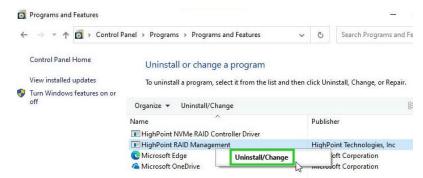# Installing the HighPoint RAID Management Software (WebGUI & CLI)

The HighPoint RAID Management Software (WebGUI and CLI utilities) is used to configure and monitor NVMe SSDs hosted by the NVMe products. Download the latest software package from the HighPoint website.

1. Extract the package and double-click the HighPoint RAID Management program to install the software.

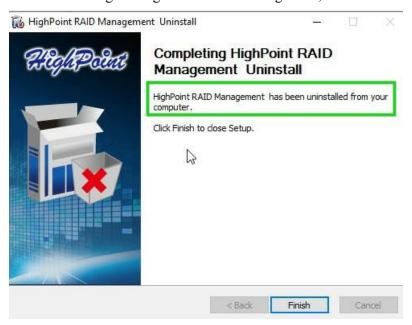2. Once installed, locate the Management icon on the desktop and double-click to start the WebGUI interface.

Example screenshot

Uninstalling the HighPoint RAID Management Software (WEBGUI & CLI)

1. Access **Control Panel**, select **Programs→ Programs and Features, and right-click on the** HighPoint RAID Management entry**.**
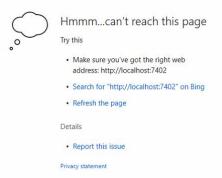
2. Click **Uninstall/Change.**

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

Troubleshooting

Note: When troubleshooting your NVMe products. Make sure all of the Prerequisites have been met before proceeding.

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

Hmmm...can't reach this page

Try this

• Make sure you've got the right web
  address: http://localhost:7402

• Search for "http://localhost:7402" on Bing

• Refresh the page
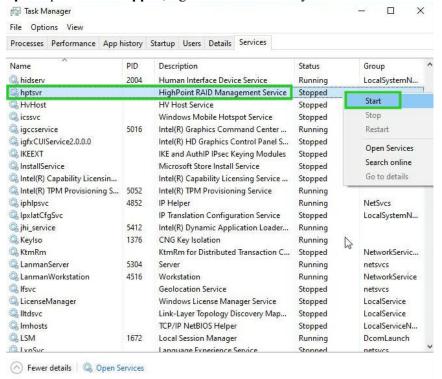
Details

• Report this issue

Privacy statement

1. This is often the result of a missing driver or improperly installed driver. Open **Device Manager** and check under **Storage Controllers**.
    If the Driver is properly installed, you should see a **HighPoint NVMe Controller** entry for each NVMe SSD hosted by the NVMe products, followed by a single **HighPoint NVMe RAID Controller** entry.

    Example screenshot

    Device Manager

    File   Action   View   Help

    HighPoint NVMe RAID Controller Properties

    General | Driver | Details | Events | Resources

    HighPoint NVMe RAID Controller

    Driver Provider: HighPoint
    Driver Date: 11/18/2022
    Driver Version: 1.2.28.14
    Digital Signer: Microsoft Windows Hardware Compatibility
                        Publisher

    | Driver Details | View details about the installed driver files. |
    | Update Driver | Update the driver for this device. |
    | Roll Back Driver | If the device fails after updating the driver, roll back to the previously installed driver. |
    | Disable Device | Disable the device. |
    | Uninstall Device | Uninstall the device from the system (Advanced). |

    OK   Cancel

    > Portable Devices
    > Ports (COM & LPT)
    > Print queues
    > Processors
    > Software components
    > Software devices
    ∨ Storage controllers
        HighPoint NVMe Co
        HighPoint NVMe Co
        HighPoint NVMe RA
        Microsoft Storage Spaces Controller

    Note: The driver revision shown in the screenshots may not correspond with current software releases. Please download the latest driver updates from the product's Software Updates page.
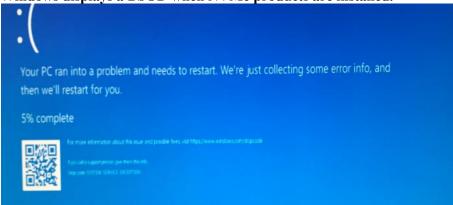
2. You should also ensure **hptsvr** is running under **Task Management → Services**. If the status of the **hptsvr** process is **Stopped**, right-click on this entry and select Start from the menu:

BSOD (Blue Screen of Death)

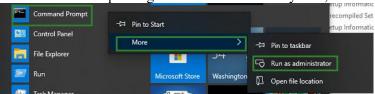There are three scenarios in which a BSOD may occur:

1. **Windows displays a BSOD when NVMe products are installed.**

If you are running Windows 10, please ensure that **Quick Shutdown** is disabled – these features can cause a BSOD when NVMe products are installed or removed from your motherboard. BSODs can be avoided by **completely powering off** your system.

How to Turn off Quick Shutdown for Windows

a. Use administrator privileges to enter cmd in the system;

b. Enter the command in cmd to close the quick shutdown;
   powercfg / h off

c. Enter the command to check that the quick shutdown is turned off;
   powercfg / a

    d. Shut down the computer and remove the NVMe products from the motherboard;

    e. **Restart the system** and open the NVMe products's driver download.

    f. Double-click **Setup** to reinstall the driver; if you are prompted to uninstall the driver, you will need to follow the prompts and restart; after rebooting, double-click Setup once more to install the driver.

    g. After the driver installation is complete, shut down the computer. Connect/install the NVMe SSDs I changed to NVMe products and inserted them into the motherboard PCIe slot.

    h. Power on; boot Windows and access the WebGUI; if the WebGUI can't connect, you need to restart again.

    i. If it fails to start the second time, please access our Online Support portal and submit a support ticket.

2. **A BSOD is encountered when installing the driver:**

    If you experience a BSOD during driver installation, please collect the log information, refer to [How to Collect Diagnostic Logs](), and submit a new support ticket via our Online Support Portal.

3. **If Windows reports that driver installation has failed:**

    Please collect this log information. Refer to [How to Collect Diagnostic Logs]()

    *Note: If you experience a BSOD or error when installing the driver, please ensure that any **Quick Shutdown** options are **not enabled**. Quick shutdown can cause a BSOD when removing the NVMe products from your motherboard and plugging them back in. BSODs can be avoided by **completely powering off** your system:*

Controller and Drive Detection Issues

1. If your motherboard or Windows cannot detect the NVMe products or NVMe SSD, please shut down the system and try moving the controller to another PCIe slot.

2. Ensure any unrelated NVMe devices are removed from the motherboard while troubleshooting the NVMe products.
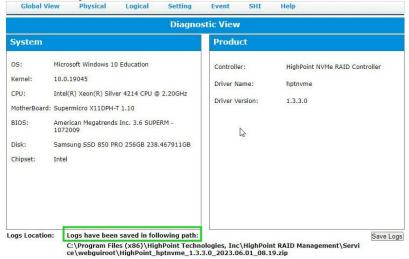
Appendix

When submitting a 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.

How to Collect Diagnostic Logs in WEBGUI

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

1. Start the WebGUI; the Diagnostic view will appear when the Driver or HPT card is not affected; you can see the system information and HPT Product information in this view.
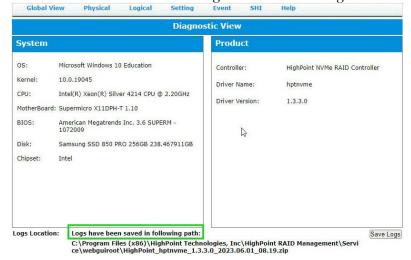
2. Click 'Help'→'Diagnostic' to enter the diagnostic view.

3. Enter the Diagnostic view and click 'Save Logs'; your log information will be collected. 'Logs Location' will display the location of the saving path.
    *Note: You need to wait until the log location shows "Logs **have been saved** in the following path:"*
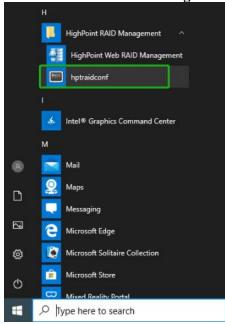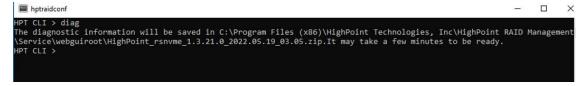
How to Collect Diagnostic Logs in CLI

1. Run '**Command Prompt'** as **Administrator** enter **hptraidconf** and press Enter.

    ```
    Administrator: Command Prompt
    Microsoft Windows [Version 10.0.18363.778]
    (c) 2019 Microsoft Corporation. All rights reserved.

    C:\Windows\system32>hptraidconf
    ```

    Or Click '**Start**' to find the **HighPoint RAID Management** folder, and click on **hptraidconf**

2. Execute the command **'diag'** in **CLI**; your log information will be collected.

    ```
    hptraidconf                                                        —   □   ×
    HPT CLI > diag
    The diagnostic information will be saved in C:\Program Files (x86)\HighPoint Technologies, Inc\HighPoint RAID Management
    \Service\webguiroot\HighPoint_rsnvme_1.3.21.0_2022.05.19_03.05.zip.It may take a few minutes to be ready.
    HPT CLI >
    ```

    If you have problems, please submit the log to our online service Link.