



# **SSD6200 Series Management Guide**

Version 1.00

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# HighPoint RAID Management Software

## *Your Choice – Graphical or Text-only interfaces*

To make it easier for customers to use our SSD6202/6204 products, we have developed both graphical and text-based management interfaces for the SSD6202/6204 NVMe RAID Controllers. To simplify installation and upgrade procedures both interfaces are packaged into a single download, and are available for Windows/Linux operating system platform.

Both management interfaces share universal layouts across all major operating systems, and can be administered locally or remotely via an internet connection. – if you are comfortable with the Windows release, you will have no problem managing NVMe RAID configurations installed for a Linux distribution.

The Web RAID Management Interface (**WebGUI**), is a simple, and intuitive web-based management tool available for Windows and Linux operating systems. It is an ideal interface for customers unfamiliar with RAID technology. The Wizard-like Quick Configuration menu allows even the most novice user to get everything up and running with a few simple clicks. Experienced users can fine tune configurations for specific applications using the Advanced Options menu.

The **CLI** (command line interface) is a powerful, text-only management interface designed for advanced users and professional administrators. The universal command lines work with Windows/Linux platform. Comprehensive user guides are available for the CLI, and are included with the most recent product updates available from the SSD6202/6204 Software Updates webpage.

**OOB (out of band) RAID Management** – BRD6200A Series NVMe AIC drives feature an OOB port (accepts USB Type-C monitor connections) and a built-in CLI (command line utility) which allows users to manage and monitor RAID storage without an operating system.

OOB is a handy troubleshooting tool for professional applications, as it allows administrators to examine and diagnose the status of a RAID configuration or NVMe SSD while the host system is unresponsive. [More](#)

# Using the HighPoint RAID Management (WebGUI) Software

This guide provides an overview of the Web-RAID Management graphical user interface, also known as the WebGUI. The WebGUI is an intuitive, yet comprehensive management tool designed for users of any experience level.

## Starting the WebGUI

### How to login WebGUI in Windows

Double click the Desktop ICON to start the software using the system's default web browser. It will automatically log-in to the WebGUI.



The password can be set after the first log-in. To change the password, select **Setting** → **Password Setting** from the menu bar.

Global View	Physical	Logical	Setting	Event	SHI
<b>System</b>					
<b>System Setting</b>					
Enable auto rebuild. <input type="text" value="Enabled"/>					
Restrict to localhost access. <input type="text" value="Enabled"/>					
Set Background Rate: <input type="text" value="Highest"/>					
Port Number: <input type="text" value="7402"/>					
Temperature Unit: <input type="text" value="°F"/>					
<input type="button" value="Submit"/>					
<b>Password Setting</b>					
Password: <input type="text"/>					
Confirm: <input type="text"/>					
<input type="button" value="Submit"/>					

### How to login WebGUI in Linux

Enter <http://127.0.0.1:7402> or <http://localhost:7402> into the **browser** to log into the **WebGUI**, 7402 is the WebGUI's Port Number, which can be modified.



The password can be set after the first log-in. To change the password, select **Setting**→ **Password Setting** from the menu bar.

A screenshot of the 'Setting' page in the HighPoint RAID Manager. The page has a navigation bar with tabs: 'Global View', 'Physical', 'Logical', 'Setting' (selected), 'Event', and 'SHI'. On the left, there is a sidebar with 'System' and 'Email' links. The main content area is divided into two sections: 'System Setting' and 'Password Setting'.  
**System Setting**  
Enable auto rebuild: Enabl ▾  
Restrict to localhost access: Disab ▾  
Set Background Rate: High ▾  
Port Number: 7402  
Temperature Unit: °F ▾  
Submit  
**Password Setting**  
Password:   
Confirm:   
Submit

## Verify the Controller Status

The **Global View** Tab will display the overall status of the controller. The Virtual Disk is listed under **Logical Device Information**. The individual drives are listed under **Physical Device Information**.

For example: SSD6204:

The screenshot displays the management interface for the SSD6200 series. At the top, there are navigation tabs: Global View, Physical, Logical, Setting, Event, and SHI. The main content is split into two panels: HBA Properties and Storage Properties.

**HBA Properties:**

- Host Adapter model: HighPoint SSD6204
- Controller count: 1
- Physical Drive: 4
- Legacy Disk: 0
- RAID Count: 0

**Storage Properties:**

- Total Capacity: 4000 GB
- Configured Capacity: 0 GB
- Free Capacity: 4000 GB

Below the storage information, there is a progress bar labeled "Configured 0.0%".

**Host Adapter model** – Display board name

**Controller count** – Display the number of boards

**Physical Drive** – Shows the number of physical disks accessed

**Legacy Disk** – Displays the number of disks after initialization

**RAID Count** – Displays the number of RAIDs created

**Configured 0.0%** – Displays the current usage of the disk, 0.0% means no data in the disk

## Physical Information

This page shows the **Controller Information** and **Devices Information**

### Controller Information

Display board information

Global View	Physical	Logical	Setting	Event	SHI
<b>Controller 1</b>					
<b>Controller Information</b>					
Devices	<b>Temperature:</b> 179°F <b>Bus Device Fun:</b> 18: 00. 00 <b>Firmware Version:</b> 1.0.0.1046 <b>Serial Number:</b> yyyyyyyyyyyyyyyyyyy <b>Model Number:</b> HighPoint SSD6204 <b>Vendor ID:</b> 0x1b4b <b>Device ID:</b> 0x2241 <b>Sub vendor ID:</b> 0x1103 <b>Sub Device ID:</b> 0x6204 <b>RevisionID:</b> B0 <b>Port count:</b> 4 <b>Max PD of Per VD:</b> 4 <b>Max VD:</b> 4 <b>Max PD:</b> 4 <b>Max NS of Per VD:</b> 1 <b>Max NS:</b> 4 <b>Supported RAID Mode:</b> RAID0 RAID1 JBOD <b>Cache:</b> on <b>Supported BGA Features:</b> Initialization Rebuild MediaPatrol <b>Support Stripe Size:</b> 128KB 256KB 512KB <b>Supported Features:</b> Import RAID Namespace Dump <b>Root Complex:</b> 0 <b>Link width:</b> 2x <b>Max PCIe speed:</b> 8 Gb/s <b>Root Complex:</b> 1 <b>Link width:</b> 2x <b>Max PCIe speed:</b> 8 Gb/s <b>Root Complex:</b> 2 <b>Link width:</b> 2x <b>Max PCIe speed:</b> 8 Gb/s <b>Root Complex:</b> 3 <b>Link width:</b> 2x <b>Max PCIe speed:</b> 8 Gb/s <b>End Point:</b> 0 <b>Link width:</b> 8x <b>Max PCIe speed:</b> 8 Gb/s				
Rescan					

**Temperature** – The real-time temperature of the main chip of the board

**Firmware Version** – "Driver" inside the device

**Serial Number** – Product Serial Number

**Model Number** – Product name

## Physical Device Information

Global View	Physical	Logical	Setting	Event	SHI
<b>Controller 1</b> Devices Rescan		<b>Physical Devices Information</b>			
		<b>Device 1 1</b>	<b>Model</b> Samsung SSD 970 EVO Plus 500GB <b>Revision</b> 2B2QEXM7 <b>Location</b> 1/1 <b>Max Free</b> 0.00 GB <b>Status</b> Normal <b>Serial Num</b> S4EVM0R225852A	<b>Capacity</b>	500.10 GB
		<b>Device 1 2</b>	<b>Model</b> Samsung SSD 970 EVO Plus 500GB	<b>Capacity</b>	500.10 GB
		<b>Device 1 3</b>	<b>Model</b> Samsung SSD 970 EVO Plus 500GB	<b>Capacity</b>	500.10 GB
		<b>Device 1 4</b>	<b>Model</b> Samsung SSD 970 EVO Plus 500GB	<b>Capacity</b>	500.10 GB

**Model** — model number of the disk connected

**Revision** — revised version of disk

**Location** — which controller and port the disk is located in

**Max Free** — total capacity that is not configured

**Status** — Current state of drive

**Serial Num** — Serial number of the disk

**Capacity** — total capacity of the disk

## Creating an Array

1. Open the WebGUI
2. Select the proper **controller** from the drop down on the top left
3. Click the **Logical** tab
4. Click **Create Array**

**Example screenshot (SSD6204)**

The screenshot shows the 'Create Array' configuration window. The 'Logical' tab is active. The 'Array Type' is set to 'JBOD(Volume)'. The 'Array Name' dropdown is open, showing options: 'JBOD(Volume)', 'RAID 0', and 'RAID 1'. The 'Initialization Method' is also set to 'JBOD(Volume)'. The 'Cache Policy' and 'Block Size' (128K) are also visible. A table of available disks is shown with checkboxes for selection. The table has columns for Location, Model, Capacity, and Max Free. Below the table, the 'Capacity' is set to 'Maximum (MB)'. A 'Create' button is at the bottom.

Location	Model	Capacity	Max Free
1/1	Sabrent Rocket 4.0 1TB	1.00 TB	1.00 TB
1/2	Sabrent Rocket 4.0 1TB	1.00 TB	1.00 TB
1/3	Sabrent Rocket 4.0 1TB	1.00 TB	1.00 TB
1/4	Sabrent Rocket 4.0 1TB	1.00 TB	1.00 TB

## Array Type

This drop-down menu allows you to specify the RAID level. An array is a collection of physical disks that will be one virtual drive by your Operating System (OS).

The SSD6202/6204 is capable of creating the following types of arrays:

- RAID 0 — Striping
- RAID 1 — Mirroring
- JBOD — Spanning

Each RAID level has its pros and cons based on the application you use it for (Note: Refer to RAID level Quick Reference)

---

Array Name: the name that will be displayed in Logical Device Information (Default: RAID\_<level>\_<array number>)

---

## Initialization Method

Initialization of a disk sets all data bits to 0, essentially clearing all the data on the drive. It is important to initialize disks as previous data physically stored on the drive may interfere with new data.

- **Quick Init:** This option grants immediate access to the RAID array by skipping the initialization process, but it will delete all data. Note: Skipping initialization is generally not recommended as residual data on disks may interfere with new data in the future.
- **Background:** The array initialization process will have a lower priority. During this time the array will be accessible, but the initialization process will take much longer to complete.

*Note: Using a Samsung 970 EVO Plus 500GB as an example:  
RAID 1 Initialization using the Background option would take 1 hours to complete.*

## **Block Size**

Supported block sizes: 128K/256K/512K , default: 128K

Adjusting the block size towards your disk usage can result in some performance gain.

In a typical RAID configuration, data of the virtual drive is striped (or spread across) the physical drives. Having a smaller array block size will increase the likelihood of accessing all physical drives when processing large I/O requests. Multiple physical drives working in parallel increases the throughput, meaning better performance.

For smaller I/O requests (512 bytes to 4 kilobytes), it is better to have each individual disk handle their own I/O request, improving the IOPS (I/O per second), rather than having one tiny I/O request being handled by multiple disks.

## Obtaining Logical Device Information

### Logical Device

The Logical device tab is the default page after clicking the Logical tab of the HRM. This page contains information about your RAID arrays and the individual disks your system detects.

The screenshot shows the 'Logical Device Information' page. On the left, there are navigation options: 'Create Array', 'Logical Device', and 'Rescan'. The main content area is divided into two sections:

Logical Device Information							
Name	Type	Capacity	BlockSize	SectorSize	OS Name	Status	
VD_0	RAID 0	4.00 TB	128k	512B	HighPoint SSD6204	Normal	<a href="#">Maintenance</a>

Physical Device Information				
Location	Model	Capacity	Max Free	
1/1	Sabrent Rocket 4.0 1TB	1.00 TB	0.00 GB	
1/2	Sabrent Rocket 4.0 1TB	1.00 TB	0.00 GB	
1/3	Sabrent Rocket 4.0 1TB	1.00 TB	0.00 GB	
1/4	Sabrent Rocket 4.0 1TB	1.00 TB	0.00 GB	

### Maintenance

Once an array has been created, the Maintenance menu provides options to maintain or edit it. To access the Maintenance menu, click the Maintenance button towards the right-hand side of the array name.

The screenshot shows the 'Logical Device Information' page with the 'Array Information' dialog box open. The dialog displays a tree view of the array structure:

```

graph TD
    VD_0[VD_0] --- Device_1_1[Device_1_1]
    VD_0 --- Device_1_3[Device_1_3]
    VD_0 --- Device_1_2[Device_1_2]
    VD_0 --- Device_1_4[Device_1_4]
  
```

The dialog also includes a 'Delete' button and a 'Close' button.

## Array Information & Maintenance Options: Normal Status

The screenshot shows the 'Logical' tab of the management interface. On the left, there are buttons for 'Create Array', 'Logical Device', and 'Rescan'. The main area displays 'Logical Device Information' for VD\_0, a RAID 1 array with a capacity of 1.00 TB and sector size of 512B, using HighPoint SSD6204 drives. The status is 'Normal', highlighted with a green box, and a 'Maintenance' link is visible. Below this, 'Physical Device Information' shows four disks at locations 1/1, 1/2, 1/3, and 1/4, all with a capacity of 1.00 TB. Disks 1/1 and 1/2 have 1.00 TB of free space, while 1/3 and 1/4 have 0.00 GB of free space.

Name	Type	Capacity	BlockSize	SectorSize	OS Name	Status
VD_0	RAID 1	1.00 TB		512B	HighPoint SSD6204	Normal

Location	Model	Capacity	Max Free
1/1	Sabrent Rocket 4.0 1TB	1.00 TB	1.00 TB
1/2	Sabrent Rocket 4.0 1TB	1.00 TB	1.00 TB
1/3	Sabrent Rocket 4.0 1TB	1.00 TB	0.00 GB
1/4	Sabrent Rocket 4.0 1TB	1.00 TB	0.00 GB

Arrays with the **Normal** status are healthy and functioning properly, and have the following options:

**Delete** – deletes the selected RAID array

## Array Information & Maintenance Options: Critical Status

The screenshot shows the 'Logical' tab of the management interface. The 'Logical Device Information' for VD\_0 shows a status of 'Critical', highlighted with a green box. An 'Array Information' dialog box is open, showing a diagram of the RAID 1 array with one disk (VD\_0) highlighted in red. The dialog box contains 'Delete' and 'Add Disk' buttons, and a 'Close' button at the bottom right. The 'Physical Device Information' table is partially visible behind the dialog box.

Name	Type	Capacity	BlockSize	SectorSize	OS Name	Status
VD_0	RAID 1	1.00 TB		512B	HighPoint SSD6204	Critical

Arrays in the **Critical** status can be accessed and utilized, but are no longer fault tolerant. A Critical array should be rebuilt as soon as possible to restore redundancy.

A critical status array has all the normal status options except the following:

- **Add Disk** replaces the Verify Disk option

Once the array status changes to critical, the faulty disk will be taken offline and you can either:

- Reinsert the same disk
- Insert a new disk

Reinserting the same disk should trigger the rebuilding status, since data on the disk would be recognized.

If you insert a new disk, clicking Add Disk will give you the option to select that disk and add it to the array.

## Array Information & Maintenance Options: Disabled Status



The screenshot shows the 'Logical' tab of the RAID management interface. A table titled 'Logical Device Information' displays the following data:

Name	Type	Capacity	BlockSize	SectorSize	OS Name	Status
New_VD	RAID 0	16.00 TB	128k	512B	HighPoint SSD6204	Disabled

The 'Disabled' status is highlighted with a green box. To the right of the status is a 'Maintenance' link. On the left side of the interface, there are links for 'Create Array', 'Logical Device', and 'Rescan'.

An array with the **Disabled** status means that the RAID level does not have enough disks to function.

- Your data will be inaccessible
- Rebuilding will not trigger, since the RAID array does not have enough parity data to rebuild.

Your options in Maintenance are:

- Delete

**Delete** – will delete the array

## Rescan

Clicking **Rescan** will ask the driver to recheck and report the array status.

When Rescan is initiated by the WebGUI; the driver will immediately check and see whether the status of any disk has changed. If there are any changes, the status of the disks and RAID array will be updated to reflect this.

- Disk Status – if any disks were added or removed, or if a disk is no longer responding, the status will change.
- RAID status – the RAID array’s status may change depending on the status of the disks.

## System Setting

The following topics are covered under system:

## System Setting

### Enable auto rebuild (default: Enabled)

When a physical drive fails, the controller will take the drive offline. Once you re-insert or replace the disk, the controller will not automatically rebuild the array unless this option is enabled.

### Restrict to localhost access (default: Enabled)

Remote access to the controller will be restricted when enabled; other users in your network will be unable to remotely log in to the WebGUI.

### Set Background Rate (default: Medium)

### Port Number (default: 7402)

The default port that the HighPoint WebGUI listens on is 7402. You may change it to any open port.

## Temperature Unit (default: °F)

The default temperature unit is Fahrenheit (°F); you can also change it to Celsius (°C)

## Password Setting

### Changing your HRM password

Under Password Setting, type your new password, confirm it, then click Submit.

### Recovering your HRM password

If you forget your password, you can delete the file hptuser.dat. Then, restart the computer and open the WEBGUI to set a new password.

For **Windows** Users:

1. Open file explorer
2. Navigate to **C:/Windows/**
3. Delete **hptuser.dat**
4. Reboot

## Email Setting

The following topics are covered under email:

### SMTP Setting

#### Adding Recipient

You can instruct the controller to send an email out to the recipients of your choosing when certain events trigger (for more information, see Event Tab).

## SMTP setting

The screenshot shows the 'SMTP Setting' page in a management interface. The interface has a top navigation bar with tabs: 'Global View', 'Physical', 'Logical', 'Setting' (selected), 'Event', and 'SHI'. On the left, there is a sidebar with 'System' and 'Email' (selected). The main content area is titled 'SMTP Setting' and contains the following settings:

<input checked="" type="checkbox"/> Enable Event Notification	
Server Address (name or IP):	<input type="text" value="smtp.mail.yahoo.com"/>
Mail From (E-mail address):	<input type="text" value="hptu@yahoo.com"/>
Login Name:	<input type="text" value="hptu@yahoo.com"/>
Password:	<input type="password" value="*****"/>
SMTP Port:	<input type="text" value="465"/>
Support SSL:	<input checked="" type="checkbox"/>
	<input type="button" value="Change Setting"/>

**Note:** After you click **Change Setting**, the password field will be reset.

### To set up email alerts:

Using a **Yahoo Mail** account as an example:

1. Check the **Enable Event Notification** box.
2. Enter the ISP server address name or SMTP name  
For example: **smtp.mail.yahoo.com**
3. Type in the email address of the **sender** (email account that is going to **send** the alert)  
For example: **hptu@yahoo.com**
4. Type in the account name and password of the sender
5. Type in the SMTP port (default: **25**)
6. Check the **support SSL** box if SSL is supported by your ISP (note the port value will change to **465**).

### Email Precautions

If you want to receive notification mail using a Webmail account, you may need to modify the mailbox's permissions. The following example is for a Yahoo webmail account.

### Yahoo Setting:

To change permission settings, please refer to the following link:

<https://help.yahoo.com/kb/account/SLN27791.html?impressions=true>

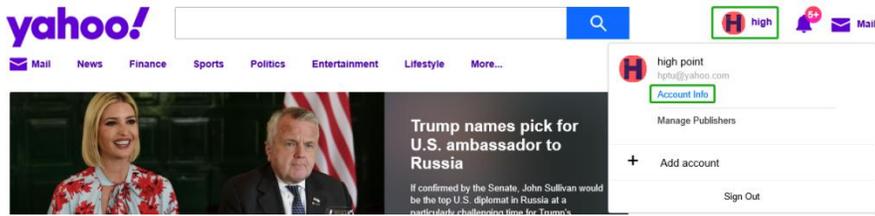
### Procedure:

Step 1. Log in to yahoo email; click "**Sign in**" to log in:

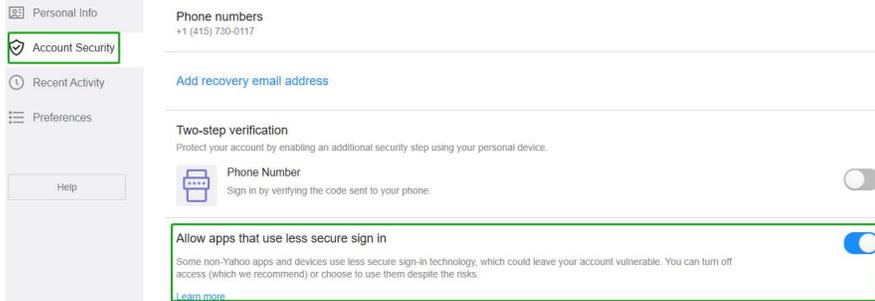
<https://www.yahoo.com>



Step 2. After a successful login, click "**Account Info**" under the user name:

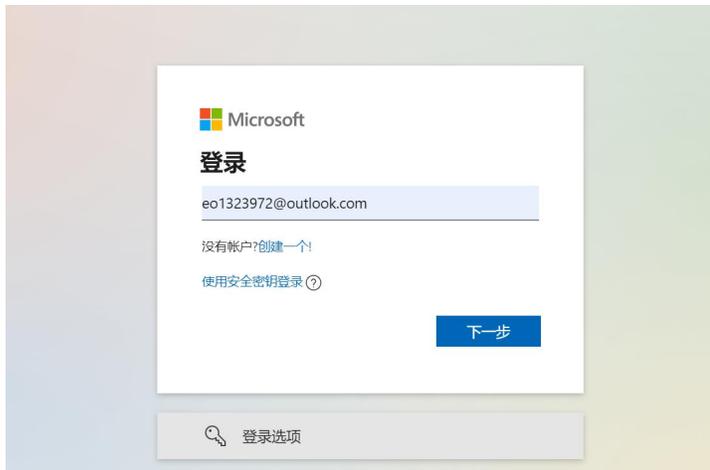


Step 3. Go to the "Account Info" page, click "Account Security".  
On the "Account Security" page, click the "Allow apps that use less secure sign in" button:

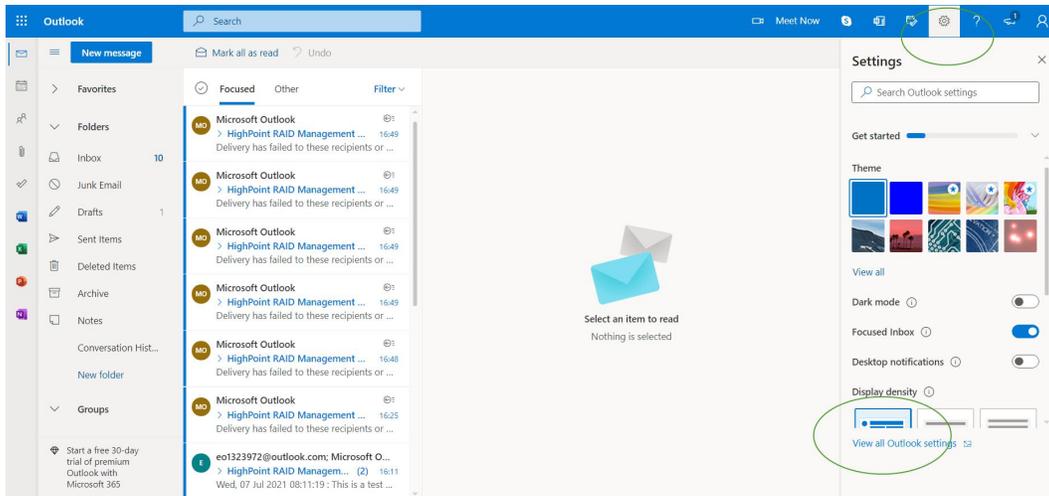


### Outlook Setting:

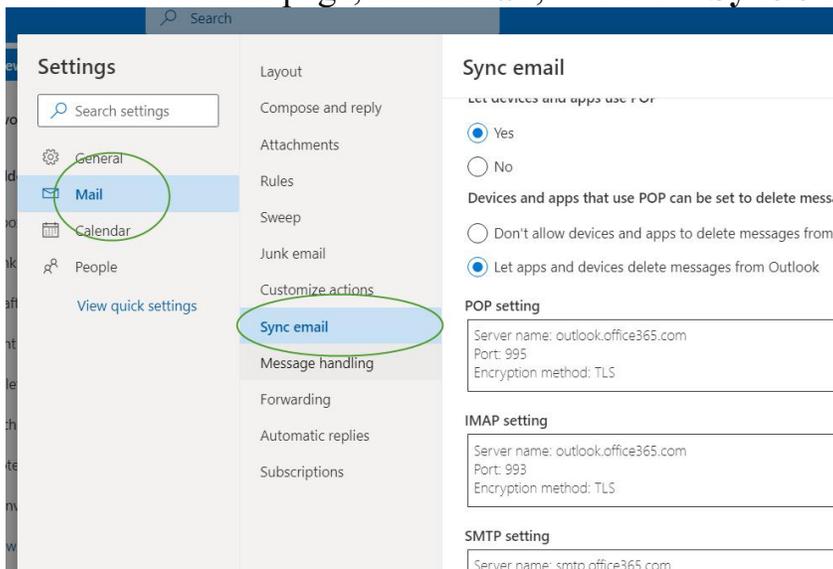
Step 1. Sign in to mail and set it up, Login email address link:  
<https://outlook.live.com/mail/inbox>



Step 2. Click **Settings** in the upper right corner, select the lower left corner: **View all outlook settings**



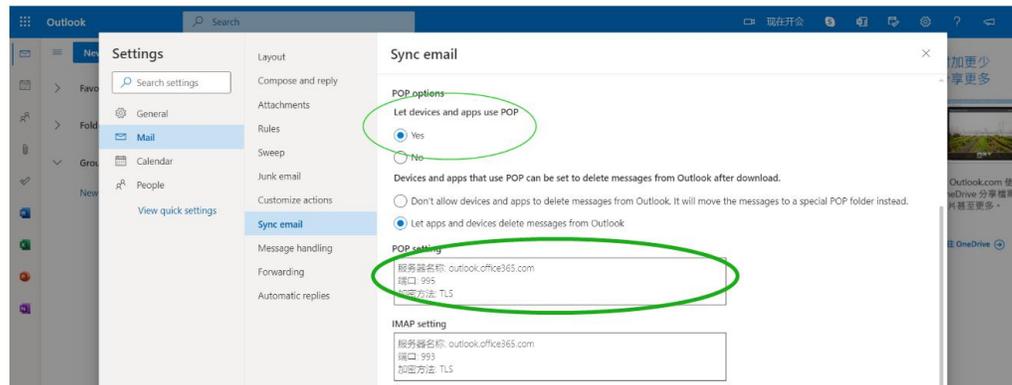
Step 3. Enter the redirect page, select **mail**, then click **Sync email**



Step 4. Let devices and apps use pop select 'yes'

Step 5. choose 'Let app and devices delete messages from Outlook'

*Note: The screenshot below can be used as a reference. The POP setting is the mailbox server.*



*Note: If you are having trouble configuring notification for your Email account, please contact our [Technical Support Department](#)*

## Add Recipients

You can add multiple email addresses as receivers of a notice.

1. Type the email of the recipient in the **E-mail** text box
2. Type the name of the recipient in the **Name** text box
3. Set which type(s) of events will trigger an email using the respective **Event Level** check boxes.

4. **(Optional)** Click **test** to confirm the settings are correct by sending out a test email

5. Click **add** to add the recipient to recipient list
6. The added recipient will display in under **Recipients**

The email will include the output recorded in the event log.

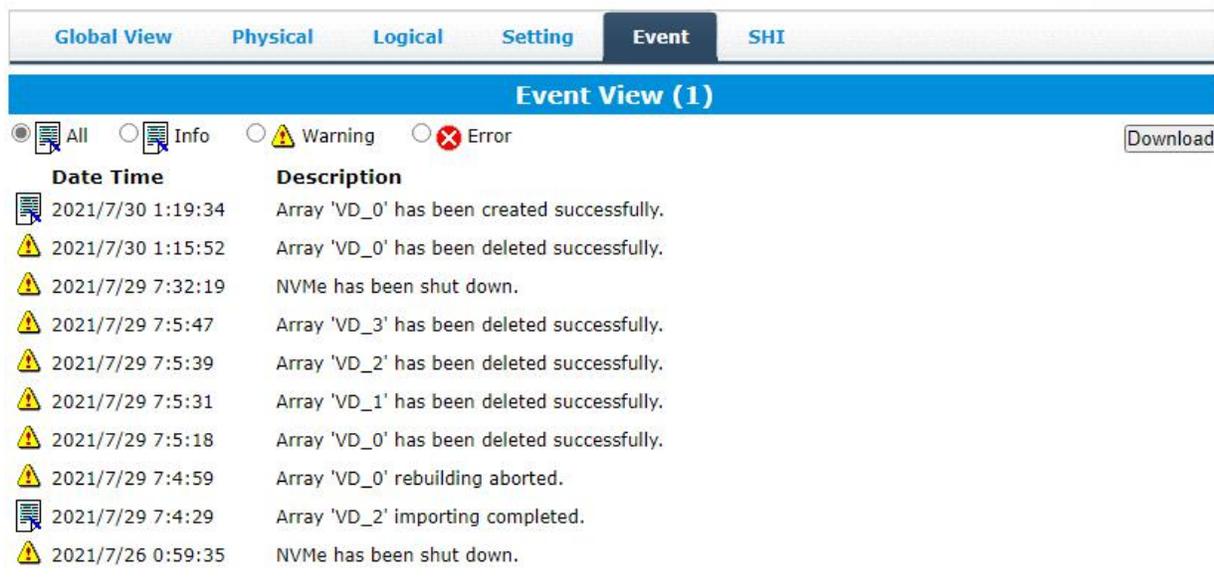
Example email message:



Figure 1. Example event log email

## Event Tab

In the event tab, you can see log entries associated with the HighPoint device. The event log provides useful information when troubleshooting your set up.



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**Download** - Save the log file on your compute

**Date Time** - Show the time of the event

**Description** -Show details of the event

## SHI (Storage Health Inspector)

The following topics are covered under SHI:

- S.M.A.R.T Attributes
- SSD Temperature Threshold Setting

SHI outputs information collected using SMART (Self-Monitoring Analysis and Reporting Technology) Hard Drive Technology. The data provided on this tab helps you to anticipate any disk failures based on a variety of monitored hard disk properties.

## How to Enable SMART Monitoring

To access SMART attributes of an individual disk:

1. Log in to the HighPoint RAID Management
2. Select the proper controller using the drop-down menu on the top left
3. Click the **SHI** tab
4. Click **Detail** on the desired disk

**Note:** The current NVMe Temperature threshold is set to 149 °F. If it does not exceed 149 °F, it will be displayed in “Green”.

**Warning and Critical Composite Temperature Threshold - Temperature threshold of the hard drive itself.** Note that the set temperature threshold should not exceed Warning Composite Temperature Threshold.

Storage Health Inspector(SHI)						
Controller ID	Location#	Device Serial Number	RAID	°F	Total Bytes Written	S.M.A.R.T
1	1	S5GYNG0R104504Y	VD_0	96	182.92 TB	<a href="#">Detail</a>
1	2	S5GXNG0NA06316F	VD_0	100	63.67 TB	<a href="#">Detail</a>
1	3	S5GXNG0N905363B	VD_0	100	93.56 TB	<a href="#">Detail</a>
1	4	S4EVNF0MA42420T	VD_0	105	202.43 TB	<a href="#">Detail</a>
<b>Device Name</b>		Device_1_1				
<b>Model Number</b>		Samsung SSD 980 PRO 500GB				
<b>Temperature</b>		96°F				
<b>Warning Composite Temperature Threshold</b>		179°F				
<b>Critical Composite Temperature Threshold</b>		185°F				
NVME S.M.A.R.T Attributes						
Name	Value					
Critical Warning	0x0					
Composite Temperature (C)	36					
Available Spare	100%					
Available Spare Threshold	10%					
Percentage Used	31%					
Data Units Read	0x3fc98343					
Data Units Written	0x176a143f					
Host Read Commands	0xe2374904					
Host Write Commands	0x7acd2e0a					
Controller Busy Time	0xfcf					
Power Cycles	0x669					
Power On Hours	0x14e					
Unsafe Shutdowns	0x577					
Media and Data Integrity Errors	0x0					
Number of Error Information Log Entries	0x0					
Warning Temperature Time	0x0					
Critical Composite Temperature Time	0x0					
Temperature Sensor 1 (C)	36					
Temperature Sensor 2 (C)	46					
Temperature Sensor 3 (C)	0					
Temperature Sensor 4 (C)	0					
Temperature Sensor 5 (C)	0					
Temperature Sensor 6 (C)	0					
Temperature Sensor 7 (C)	0					
Temperature Sensor 8 (C)	0					
SSD Temperature Threshold						
Set harddisk temperature threshold : <input type="text" value="149"/> °F <input type="button" value="Set"/>						

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If the temperature exceeds 149 °F, it will display “Red”.

<a href="#">Global View</a>	<a href="#">Physical</a>	<a href="#">Logical</a>	<a href="#">Setting</a>	<a href="#">Event</a>	<b>SHI</b>	<a href="#">Help</a>
<a href="#">Schedule</a>						
Storage Health Inspector(SHI)						
Controller ID	Location#	Device Serial Number	RAID	°F	Total Bytes Written	S.M.A.R.T
1	E1_1	S463NF0K409595F	None	150	1023.91 TB	<a href="#">Detail</a>
1	E1_2	S5JYNS0N602754T	None	111	75.45 TB	<a href="#">Detail</a>
HDD Temperature Threshold						
Set harddisk temperature threshold : <input type="text" value="149"/> °F <input type="button" value="Set"/>						

The **TBW** (Total Bytes Written) information can be used to monitor the lifespan of the NVMe drives.

<a href="#">Global View</a>	<a href="#">Physical</a>	<a href="#">Logical</a>	<a href="#">Setting</a>	<a href="#">Event</a>	<b>SHI</b>	
Storage Health Inspector(SHI)						
Controller ID	Location#	Device Serial Number	RAID	°F	Total Bytes Written	S.M.A.R.T
1	1	7FE00707087104034542	None	89	138.89 TB	<a href="#">Detail</a>
1	2	03F10707074404014589	None	89	138.63 TB	<a href="#">Detail</a>
1	3	7F600707089D04033529	None	89	147.17 TB	<a href="#">Detail</a>
1	4	6D110707069503992916	None	91	140.32 TB	<a href="#">Detail</a>

## How to Use the Health Inspector Scheduler

The **Health Inspector Scheduler (HIS)** enables you to schedule disk/array checkups to ensure disks/array are functioning optimally.

If you want to check the disk status on a daily, weekly, or monthly basis, you can enable this using the **HIS** function.

For example:

1. Set the 'Task Name' to 't1', select the schedule as 'Daily', and set the time to 10:10
2. After clicking "Submit", the task you created will be shown under the "Task List".

Tasks List	
Name	Description
DailyCheckSmart	Check all disks every day at 12:0:0
<input type="checkbox"/> t1	Check all disks every day at 10:10:0
<input type="button" value="Delete"/>	

Health Inspector Scheduler	
Task Name:	<input type="text"/>
Select a Schedule:	<input type="radio"/> Daily <input checked="" type="radio"/> Weekly <input type="radio"/> Bi-Weekly <input type="radio"/> Monthly
Select a time:	Sunday <input type="text" value="1"/> <input type="text" value="0"/> : <input type="text" value="0"/> : <input type="text" value="0"/>
<input type="button" value="Submit"/>	

When the operating temperature of the disk exceeds 65°C, a “Warning” event will appear in “Events”:

Global View	Physical	Logical	Setting	Event	SHI	Help
Event View (1)						
<input checked="" type="radio"/> All	<input type="radio"/> Info	<input type="radio"/> Warning	<input type="radio"/> Error	<input type="button" value="Download"/> <input type="button" value="Clear"/>		
Date Time	Description					
<input alt="Warning icon" type="image"/> 2020/5/9 10:9:37	Disk 'Samsung SSD 970 EVO Plus 500GB' (Location: Device_1_E1_2) temperature is higher than threshold.					

Redundant RAID arrays (RAID 1) will appear under New Verify Task

1. Log into the WebGUI
2. Select the proper controller from the top left drop down
3. Click **SHI**
4. Click **Schedule**
5. Select the array you want to schedule the verify task
6. Type the name in **Task Name** entry box
7. Choose whether you want to schedule
8. One time verify task on specific date (YYYY-MM-DD) at (HH:MM: SS, 24-hr clock)
9. Or a specific schedule you can adjust based on Daily, Weekly, or Monthly options
10. Click **Submit**

**Health Inspector Scheduler**

Task Name:

Select a Schedule:  Daily  Weekly  Bi-Weekly  Monthly

Select a time:    :  :

---

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## 11. Your entry will appear under **Tasks List**

**Tasks List**

Name	Description
<input type="checkbox"/> T2	Check all disks every week on Monday at 9:0:0

**Note:** New Verify Task box only appears if you have normal status arrays. If you have a critical array, New Rebuild Task will replace New Verify Task.

## Using the HighPoint Command Line Interface (CLI)

### How to use the CLI in Windows

Method1: Run ‘**Command Prompt**’ as **Administrator** and enter **hptraidconf** and press Enter

```

Administrator: Command Prompt
Microsoft Windows [Version 10.0.19043.1110]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\system32>hptraidconf

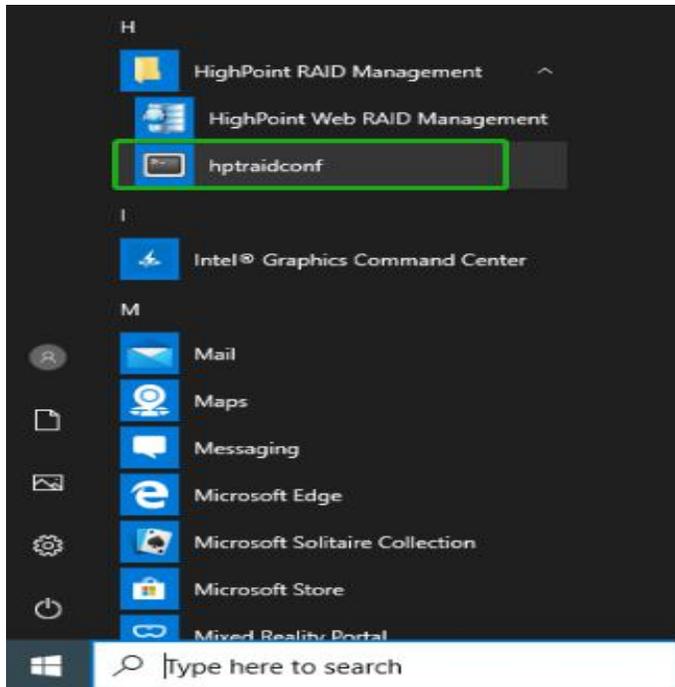
```

```

Administrator: Command Prompt - hptraidconf
HPT CLI >

```

Method2: Click ‘**Start**’ to find the **HighPoint RAID Management** folder, and click on **hptraidconf**



## How to use the CLI in a Linux system

Open ‘**Terminal**’ and enter root permissions, then execute the command ‘**hptraidconf**’ to enter the CLI

```
File Edit View Search Terminal Help
test@test-System-Product-Name:~$ sudo su
[sudo] password for test:
root@test-System-Product-Name:/home/test# hptraidconf
```

## CLI Command Reference

This chapter discusses the various HighPoint CLI commands: query, delete, switch, lscard, rescan, events, mail, task, set, clear, help and exit.

*Note: The following example is for a Windows system:*

## Query Commands

### Syntax:

query controllers

query devices | query devices {devices\_id} |

query arrays | query arrays {array\_id}

## query controllers

This command reports controller information

### Single card:

SSD6202:

```
HPT CLI > query controllers
ID          Channel      Name
1           1             HighPointSSD6202
-----
```

SSD6204:

```
HPT CLI > query controllers
ID          Channel      Name
1           1             HighPoint SSD6204
-----
```

## query devices

This command will provide the status of each physical device hosted by the controller. It provides a list of device ID's, capacity, model numbers, status, and array attributes. Each device's status will be listed as one of the following: Legacy, NORMAL, DISABLED, RAID.

### ID:

A device ID is a string used to represent a disk. It is in the format "controller/channel/device" for NVMe controllers. E.g. 1/1 represents the disk on controller 1 port 1;

### Capacity:

The capacity of the disk in GB.

### MaxFree:

The Maximum sequence free space on a disk which can be used by creating array.

### Flag:

Shows whether the disk is single or has been created RAID.

**Status:**

This will display the disk status (1 of 4 possible states):

- **NORMAL:** The disk's status is normal.
- **DISABLED:** The disk cannot be used. (may be related to disk failure or removal)
- **RAID:** The disk is a member of a RAID array.

**ModelNumber:**

The disk's model number.

**Example:**

SSD6202:

```
HPT CLI > query devices
ID      Capacity  MaxFree  Flag   Status  ModelNumber
-----
1/1     1000.20    0        RAID   NORMAL  Sabrent
1/2     1000.20    0        RAID   NORMAL  Sabrent
```

SSD6204:

```
HPT CLI > query devices
ID      Capacity  MaxFree  Flag   Status  ModelNumber
-----
1/1     1000.20    0        RAID   NORMAL  Sabrent
1/2     1000.20    0        RAID   NORMAL  Sabrent
1/3     1000.20    0        RAID   NORMAL  Sabrent
1/4     1000.20    0        RAID   NORMAL  Sabrent
```

**query devices {device\_id}**

This command presents information for the specified device.

Attributes:

**Mode Number:**

The disk's model number.

**Serial Number:**

The disk's Serial number.

**Firmware Version:**

The disk's Firmware version.

**Read Ahead/Write Cache/TCQ/NCQ Status:**

Disk's Read Ahead/Write Cache/TCQ/NCQ status could be enabled/disabled/--  
**(not support)**

**Pcie width :**

The disk's Pcie width.

**Temperature:**

The disk's temperature and setting temperature threshold.

**S.M.A.R.T Attributes:**

S.M.A.R.T Attributes detailed information reported by hard disk.

**Example:**



**Block:**

Array Block size.

**Sector:**

Bytes per sector.

**Cache:**

Array Cache Policy

WT: Write Through

WB: Write Back

NONE: No Cache policy enabled

**Example:**

```
HPT CLI > query arrays
ID      Capacity(GB)  Type      Status    Block  Sector  Cache      Name
-----
1       500.03        RAID1     NORMAL    --     512B   NONE      RAID_1_0
```

**query arrays {arrays\_id}**

This command will present information of each disk of a specified array.

**Example:**

```
HPT CLI> query arrays 1
ID:          1          Name:          VD_0
Type:        RAID1     Status:        NORMAL
Capacity(GB): 500.04    BlockSize:    --
SectorSize:  512B     CachePolicy:   NONE
Progress:    --
ID      Capacity  MaxFree  Flag  Status  ModelNumber
-----
1/1     500.11    0        NORMAL RAID
1/2     500.11    0        NORMAL RAID
```

## Create Commands

This command allows you to create a new RAID array, add a spare disk, or expand/migrate an existing array.

Note: A drive must be initialized first before being used to create arrays.

## Syntax:

```
create {RAID0|RAID1|JBOD} [create-options]
```

## Parameters

You can specify one or more create options for this command, separated by a space. The options can be typed in any order.

**disks=** specifies member disks which will compose a new array, e.g. disks=1/1,1/2, disks=\*. The character \* means all available drives.

NOTE: When you enter a complete command with parameters disks=\* at the shell prompt, the correct writing is disks="\*".

For example:

```
hptraidconf -u RAID -p hpt create RAID0 disks="*".
```

**init=** specifies the initialization option (background, quickinit). The default option is create-only. The create-only option is applicable for all the RAID types, which is to create an array without any initialization process. Initialization is needed for redundant arrays to provide data redundancy.

background: Initialize an array using background mode. The array is accessible during array initialization.

quickinit: Setup array information blocks and zero out MBR data on the array.

**name=** specifies the name for the array being created.

If the option is omitted, the utility will assign a default name for the array.

**bs=** specifies the block size(128k,256k,512k), in KB, for the target array. This option is only valid for striped RAID levels. Default is 128KB.

## Examples:

```
HPT CLI > create RAID0 name=VD_0 disks=*

HPT CLI > query arrays 1
ID:          1           Name:          VD_0
Type:        RAID0      Status:        NORMAL
Capacity(GB): 2000.16    BlockSize:    128k
SectorSize:  512B      CachePolicy:  NONE
Progress:    --
-----
ID      Capacity  MaxFree  Flag  Status  ModelNumber
-----
1/1     500.11    0        NORMAL RAID    Samsung SSD
1/3     1000.20  0        NORMAL RAID    Samsung SSD
1/2     1000.20  0        NORMAL RAID    Samsung SSD
1/4     500.11    0        NORMAL RAID    Samsung SSD
-----
HPT CLI >
```

This command instructs the system to create a RAID0 array using the disks attached to controller 1 channels 1,2,3,4 and name it VD\_0.

```
HPT CLI > create RAID0 disks=* capacity=* init=quickinit bs=256k

HPT CLI > query arrays 1
ID:          1           Name:          VD_0
Type:        RAID0      Status:        NORMAL
Capacity(GB): 2000.16    BlockSize:    256k
SectorSize:  512B      CachePolicy:  NONE
Progress:    --
-----
ID      Capacity  MaxFree  Flag  Status  ModelNumber
-----
1/1     500.11    0        NORMAL RAID    Samsung SSD
1/3     1000.20  0        NORMAL RAID    Samsung SSD
1/2     1000.20  0        NORMAL RAID    Samsung SSD
1/4     500.11    0        NORMAL RAID    Samsung SSD
-----
HPT CLI >
```

This command instructs the system to create a RAID0 array using the disks attached to controller 1 channels 1/2/3/4, and controller 2 channels 1/2/3/4; capacity is maximum, Block Size is 256KB.

## Delete Command

This command allows you to delete an existing RAID array or remove a spare disk. After deletion, the original array and all data on it will be lost. All the member disks will be listed as available single disks.

**Note:** *If you want to use a single disk after deleting the RAID, please restart the system after deleting the RAID. When the single disk status shows the Legacy status in WEBGUI or CLI, it can be used normally.*

## Syntax

```
delete {array ID}
```

## Examples

```
HPT CLI > query devices
ID      Capacity  MaxFree  Flag  Status  ModelNumber
-----
1/1     500.11    0        RAID  NORMAL  Samsung SSD
1/2     1000.20   0        RAID  NORMAL  Samsung SSD
1/3     1000.20   0        RAID  NORMAL  Samsung SSD
1/4     500.11    0        RAID  NORMAL  Samsung SSD
-----

HPT CLI > delete 1

HPT CLI > query devices
ID      Capacity  MaxFree  Flag  Status  ModelNumber
-----
1/1     500.11    500.11   SINGLE  NORMAL  Samsung SSD
1/2     1000.20   1000.20  SINGLE  NORMAL  Samsung SSD
1/3     1000.20   1000.20  SINGLE  NORMAL  Samsung SSD
1/4     500.11    500.11   SINGLE  NORMAL  Samsung SSD
-----

HPT CLI >
```

This command instructs the system to delete the array whose id is “1”. You can query the array ID before the deletion.

## Rescan Command

This command will rescan all of the physical devices attached to the RAID controller.

### Syntax

```
rescan
```

### Example

```
HPT CLI> rescan
```

```
HPT CLI > rescan

HPT CLI > query arrays
ID      Capacity(GB)  Type      Status  Block  Sector  Cache  Name
-----
1       2000.16       RAID0     NORMAL  256k   512B   NONE   VD_0
```

## Lscard Command

The lscard command is used to list multiple RAID controllers.

### Syntax

lscard

### Example

HPT CLI> lscard

```
HPT CLI > lscard
CARD_ID      NAME                                ACTIVED
-----
0            Controller(1): HighPoint SSD6204    Active
```

## Events Commands

The CLI system will automatically record three types of events: Information (shortened to “Inf”), Warning (shortened to “War”), and Error (shortened to “Err”) on the screen output. These commands allow you to query, save, or clear the logged events.

### Syntax

events

events save {file\_name}

### events

This command will display a list of all the logged events.

### Example

HPT CLI> events

```
HPT CLI > events
1  Inf [07/30/2021 05:16:03]      Array 'VD_0' has been created successfully.
2  War [07/30/2021 03:39:24]      Array 'VD_0' has been deleted successfully.
3  Inf [07/30/2021 03:38:35]      Array 'VD_0' has been created successfully.
4  War [07/30/2021 03:38:04]      Array 'VD_0' has been deleted successfully.
5  Inf [07/30/2021 03:36:48]      Array 'VD_0' has been created successfully.
```

## events save {file\_name}

This command will save all the logged events as a plain text file.

### Example

HPT CLI> events save C:/raidlog.txt

The screenshot displays the HPT CLI interface on the left, the Windows File Explorer on the right, and the Notepad application at the bottom. The CLI shows a list of events and the command `events save c://raidlog.txt` being entered. The File Explorer shows the `Local Disk (C:)` with a file named `raidlog` highlighted. The Notepad application shows the contents of the `raidlog` file, which are the same events shown in the CLI output.

```
HPT CLI > events
14 War [07/30/2021 03:23:00]      Array 'VD_0' has been deleted successfully.
15 Inf [07/30/2021 03:22:04]      Array 'VD_0' has been created successfully.
16 War [07/30/2021 03:15:40]      Array 'VD_0' has been deleted successfully.
17 Inf [07/30/2021 01:19:34]      Array 'VD_0' has been created successfully.
18 War [07/30/2021 01:15:52]      Array 'VD_0' has been deleted successfully.
20 War [07/29/2021 07:32:19]      NVMe controller has been detected successfully.

(More)type: events page=1
HPT CLI > events save c://raidlog.txt
The event log c://raidlog.txt has been saved.
HPT CLI > _
```

Local Disk (C:) File Home Share View

← → ↶ ↷ ⬆ ⬇ ⬅ ➡ This PC > Local Disk (C:) Search Local Disk (C:)

Name	Date modified	Type	Size
AMD	7/27/2021 4:42 AM	File folder	
Intel	7/30/2021 12:41 AM	File folder	
pc	7/27/2021 4:44 AM	File folder	
PerfLogs	12/7/2019 5:14 PM	File folder	
Program Files	7/27/2021 4:47 AM	File folder	
Program Files (x86)	7/29/2021 7:01 AM	File folder	
python	7/27/2021 4:46 AM	File folder	
Users	7/27/2021 12:53 AM	File folder	
Windows	7/20/2021 2:05 AM	File folder	
raidlog	7/30/2021 5:20 AM	Text Document	

raidlog - Notepad

```
File Edit Format View Help
13 Inf [07/30/2021 03:23:14]      Array 'VD_0' has been created successfully.
14 War [07/30/2021 03:23:00]      Array 'VD_0' has been deleted successfully.
15 Inf [07/30/2021 03:22:04]      Array 'VD_0' has been created successfully.
16 War [07/30/2021 03:15:40]      Array 'VD_0' has been deleted successfully.
```

This command will save all the events to C:/raidlog.txt.

## Mail Commands

### Syntax

mail recipient

mail recipient add {recipient\_name} {mail\_address} [Inf|War|Err]

mail recipient delete {recipient\_name}

mail recipient test {recipient\_name}

mail server

mail server set {server\_address} {port} { status } {from\_address} [username]  
[password]

mail server set {a|p|s|m|u|t} {value}

### mail recipient

--- List all of the mail recipients

### Example

HPT CLI> mail recipient

```
HPT CLI > mail recipient
ID   Name      Mail Address          Notify Types
-----
1    hpt       hytu@yahoo.com       Information Warning Error
HPT CLI >
```

### mail recipient add {recipient\_name} {mail\_address} [Inf|War|Err]

--- Add a new recipient

### Example

HPT CLI> mail recipient add admin admin@somecompany.com Inf War Err

```
HPT CLI > mail recipient add lcn lcn@highpoint-tech.com Inf War Err
HPT CLI > mail recipient
ID   Name      Mail Address          Notify Types
-----
1    lcn       lcn@highpoint-tech.com Information Warning Error
```

This command will setup the RAID system to send mail to `admin@somecompany.com` for any logged events.

## **mail recipient delete {recipient\_name}**

--- Delete an existing recipient.

### **Example**

```
HPT CLI> mail recipient delete 'lcn'.
```

```
HPT CLI>mail recipient
ID   Name      Mail Address          Notify Types
-----
1    lcn       lcn@highpoint-tech.com Information Warning Error
HPT CLI>mail recipient delete lcn

HPT CLI>mail recipient
ID   Name      Mail Address          Notify Types
-----
HPT CLI>
```

## **mail recipient test {recipient\_name}**

--- Send a test email to a specified recipient.

### **Example**

```
HPT CLI> mail recipient test hpt
```

```
HPT CLI > mail recipient test hpt
HPT CLI >
```

You will receive a test email.

```
Mon, 11 May 2020 07:52:30 :
This is a test mail.
```

**mail recipient set {recipient\_name} {Inf|War|Err}**

--- Set the notification type for a recipient.

**Example**

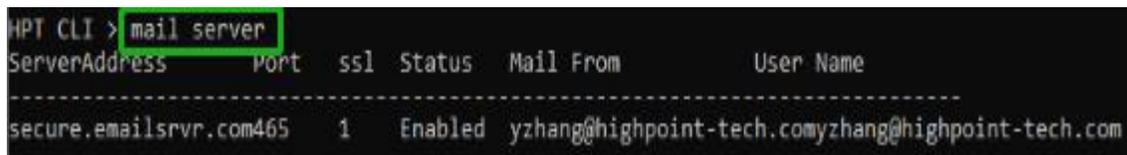
```
HPT CLI> mail recipient set admin War Err
```

**mail server**

--- display the SMTP server information

**Example**

```
HPT CLI> mail server
```



```
HPT CLI > mail server
ServerAddress      Port  ssl  Status  Mail From      User Name
-----
secure.emailsrvr.com465  1    Enabled  yzhang@highpoint-tech.com yzhang@highpoint-tech.com
```

**mail server set {server\_address} {port} {ssl} {status} {from\_address} [username] [password]**

--- Use this command to configure mail server settings.

{server\_address} – SMTP server address

{port} – port, generally 25

{ssl} – used ssl, '1' for enable and port need 465, '0' for disable

{status} – status, 'e' for enable or 'd' for disable

{from\_address} – mail from address

{username} –mail username

{password} – the user's password

**Examples:**

HPT CLI> mail server set secure.emailsrvr.com 465 1 e name@somecompany.com  
name@somecompany.com password

```
HPT CLI > mail server set secure.emailsrvr.com 465 1 e yzhang@highpoint-tech.com yzhang@highpoint-tech.com
HPT CLI > mail server
ServerAddress      Port    ssl  Status  Mail From      User Name
-----
secure.emailsrvr.com465  1      Enabled yzhang@highpoint-tech.com yzhang@highpoint-tech.com
```

HPT CLI> mail server set mail.somecompany.com 25 0 e  
admin@somecompany.com password

```
HPT CLI > mail server set secure.emailsrvr.com 25 0 e yzhang@highpoint-tech.com yzhang@highpoint-tech.com
HPT CLI > mail server
ServerAddress      Port    ssl  Status  Mail From      User Name
-----
secure.emailsrvr.com25  0      Enabled yzhang@highpoint-tech.com yzhang@highpoint-tech.com
```

## mail server set {a|p|s|m|u|t} {value}

--- Use this to separate set your mail server value

### Parameters

- a – SMTP server address
- p – port, generally 25
- s – status, ‘e’ for enable or ‘d’ for disable
- m – mail from address
- u – username
- t – user’s password

### Examples:

HPT CLI> mail server set a smtp.somecompany.com

--- Change the server address

HPT CLI> mail server set p 465

--- Change the port

```
HPT CLI > mail server set p 465
HPT CLI > mail server
ServerAddress      Port    ssl    Status    Mail From          User Name
-----
smtp.163.com       465    0      Enabled   yzhang@highpoint-tech.com yzhang@highpoint-tech.com
```

HPT CLI> mail server set s d

--- Disable mail notification

```
HPT CLI > mail server set s d
HPT CLI > mail server
ServerAddress      Port    ssl    Status    Mail From          User Name
-----
smtp.163.com       465    0      Disabled  yzhang@highpoint-tech.com yzhang@highpoint-tech.com
```

HPT CLI> mail server set s e

--- Enable mail notification

```
HPT CLI > mail server set s e
HPT CLI > mail server
ServerAddress      Port    ssl    Status    Mail From          User Name
-----
smtp.163.com       465    0      Enabled   yzhang@highpoint-tech.com yzhang@highpoint-tech.com
```

## Task Commands

When an array requires regular verification or rebuilding, you can use the task commands to automate this process in the background. If you have the appropriate privileges, you can add new tasks, and modify or delete existing tasks.

### Syntax

task

```

Task Commands
  Set tasks for the server.Syntax:
  task
  task {smart} {name=} {daily|monthly|weekly}={day}
  {interval}={interval} start=mm/dd/yyyy end=mm/dd/yyyy time=hh:mm:ss
  task delete {task_id}

HPT CLI > task smart name=test1 daily=2 start=4/28/2021 time=12:00:00

HPT CLI >

```

- **task {smart} {name=} {daily|mothly|weekly}={day}**  
**{interval}={interval} start=mm/dd/yyyy**  
**end=mm/dd/yyyy time= hh:mm:ss**  
**task delete {task\_id}**

### Example

```
HPT CLI> task smart name=test1 daily=2 start=7/30/2021
time=11:00:00
```

```

HPT CLI > task smart name=test1 daily=2 start=7/30/2021 time=11:00:00

HPT CLI > task
ID   Name      Start-Date  End-Date    S-F      Description
-----
1    DailyChec 07/30/2021  N/A         E-D      Check all disks (created by )
2    test1     07/30/2021  N/A         E-D      Check all disks (created by )

```

This command adds a task schedule named test1 to verify the disk at 11:00:00 every 2 days from 7/30/2021.

- **Task delete {task\_id}**

### Example

```

HPT CLI> task delete 2

HPT CLI > task
ID   Name      Start-Date  End-Date    S-F      Description
-----
1    DailyChec 07/30/2021  N/A         E-D      Check all disks (created by )
2    test1     07/30/2021  N/A         E-D      Check all disks (created by )

HPT CLI > task delete 2

HPT CLI > task
ID   Name      Start-Date  End-Date    S-F      Description
-----
1    DailyChec 07/30/2021  N/A         E-D      Check all disks (created by )

HPT CLI >

```

## Set Commands

### Syntax

**set | set [name]={value}**

Show the system settable parameters.

HPT CLI> set -help

```
HPT CLI > set -help
set Command
  Set the system, device or array's param.
Syntax:
set
  show the system parameters
set {name= }
  set AR=[y|n]           Auto Rebuild
  set BR=[1-100]         Background Rate
  set TT=[20-100]        Temperature threshold
  set TU=[C|F]           Temperature Unit
  set PS                 Set Password

HPT CLI >
```

- **set TT={Value}**

The current NVMe default Temperature threshold is set to 149 °F.

### Example

HPT CLI> set TT=140

- **set TU={F|C}**

The default temperature unit is Fahrenheit(°F); you can also change it to Celsius(°C)

## Example

```
HPT CLI> set TU=C
```

```
HPT CLI > set TU=C
```

- **set PS**

Set or change your password and confirm it.

## Example

```
HPT CLI> set PS
```

```
HPT CLI > set PS
The password can only have 8 characters at most!
Password :*****
Confirm  :*****
Password has been changed, please login with your new password.
HighPoint Windows CLI, Please Input
      Password:
```

- **set AR={y|n}**

Set enable or disable to the [Auto Rebuild] parameter.

## Example

```
HPT CLI> set AR=y
```

```
HPT CLI > set AR=y
```

- **set BR={1-100}**

Set background rate to 1-100.

### Example

HPT CLI> set BR=66

```
HPT CLI > set BR=66
```

## Help Commands

Show help about a specific command.

### Syntax

help | help {command}

### help

Show generic help about this utility.

### Example

HPT CLI> help

```
HPT CLI > help
help [query|create|delete|switch|lscard
rescan|events|mail|task|set|clear|help|exit]
```

## Exit Command

### Syntax

Exit from the interactive mode and close the window.

## Using the OOB (out of band) RAID Management

*More new features will be opened in the future, only support SSD6202*

SSD6202 NVMe RAID controllers feature an OOB port (accepts USB Type-C monitor connections) and a built-in CLI (command line utility) which allows users to manage and monitor RAID storage without an operating system.

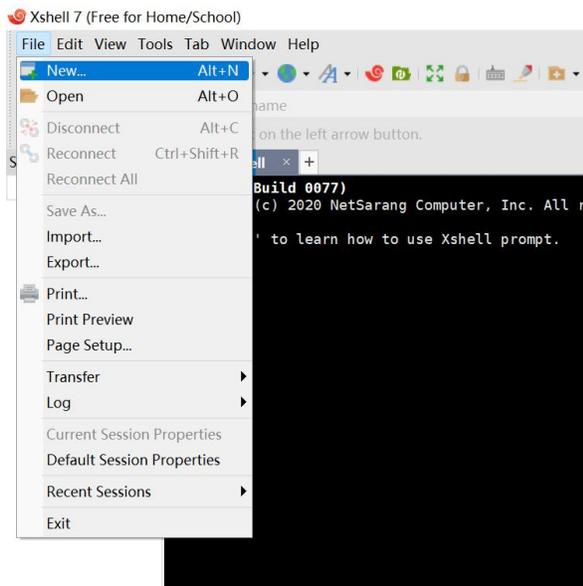
### How to use the OOB (Windows)

Insert the SSD6202 into the motherboard and **only use USB-C to USB-A** cable to connect the board card to another host. Install and open the Xshell software on the connected host, and use it according to the following operations:

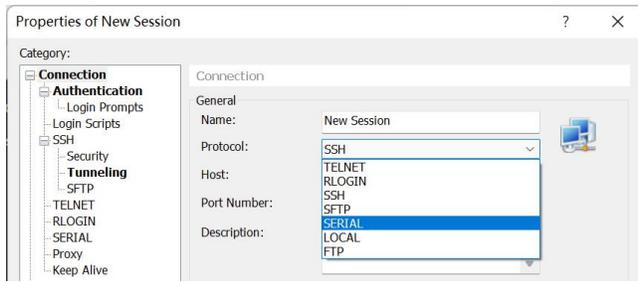
Xshell download:

<https://www.netsarang.com/en/xshell-download/>

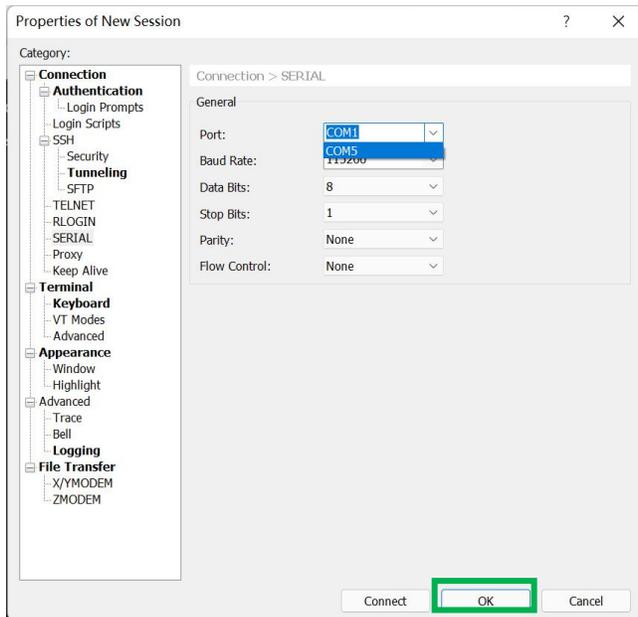
After opening the software, click the **File** in the upper left corner to create a new session window.



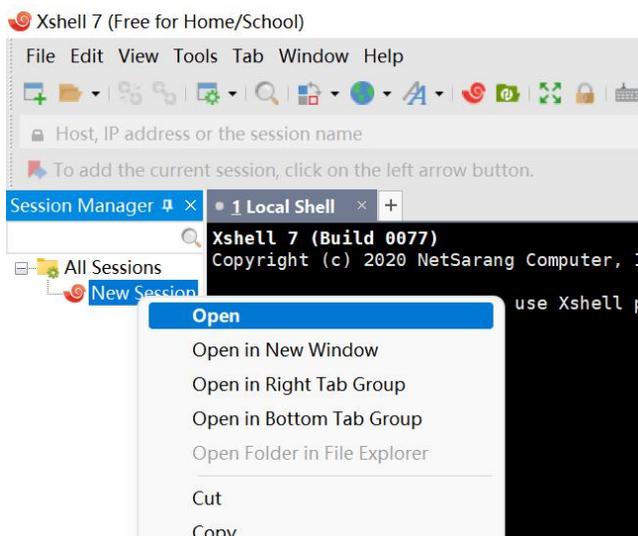
Set Protocol to **SERIAL** in the new setting.

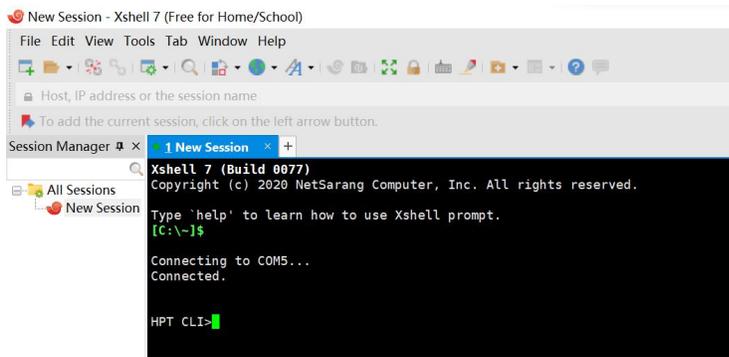


Then click **SERNAL** in the left menu bar to change the Port to the recognized serial port number. This completes the setup.



After creation, right-click and select open to connect to the CLI interface of SSD6202, and click enter to start use.





## CLI Command Reference

This chapter discusses the various CLI commands: info, temperature, fan.

### Info Commands

#### Syntax:

info -o [hba/pd/vd]

- hba: display adapter info
- pd: display physical disk info
- vd: display virtual disk info

#### info -o hba

This command is used to display adapter information

#### Example:

## SSD6202:

```

HPT CLI>info -o hba
Adapter Information:
-----
NVME UEFI Version:      0.0.0.3
NVME Firmware Version: 1.0.0.1051
HighPoint MCU Firmware Version: 1.0.2
Hardware Version:      1.3.0
Sub Device ID : Sub Vendor ID: 6202 : 1103
Serial Number:

PCIe Port:      0
Type:           RootComplex
Link Speed:     8GT/s
PCIe Width:     x4

PCIe Port:      1
Type:           RootComplex
Link Speed:     8GT/s
PCIe Width:     x4

PCIe Port:      2
Type:           EndPoint
Link Speed:     8GT/s
PCIe Width:     x8

RAID Mode Support:  0      1      JBOD
BGA Feature Support:  init  rebuild  Media patrol
Stripe Size Support: 128K  256K  512K
-----

```

**Info -o pd**

This command will provide the status of each physical device hosted by the controller. It provides a list of slot ID's, model numbers, device firmware, sector size, capacity, temperature, status, and array attributes. Each device's status will be listed as one of the following: IDLE, ASSIGNED.

**Example:**

SSD6202:

```

HPT CLI>info -o pd
-----
Slot      Model                               Serial Number      Firmware           Sector Size      Capacity      Temperature      Status
-----
0         WDS100T3X0C-00SJG0                 184890621671      102000WD          512              1000 GB      40.8 C          IDLE
1         KXG5AZNV256G NVMe SED TOSHIBA 256GB 67RF202GF4RS      AADA5102          512              256 GB        39.8 C          IDLE
-----

```

**Info -o vd**

This command is used to display virtual disk information. It provides a list of ID, VD's name, Disk Count, PDs, RAID Mode, status, Stripe Size, Capacity and Importable.

**Example:**

SSD6202:

```
HPT CLI>info -o vd
ID      Name      Disk Count  PDs  RAID Mode  Status  Stripe Size  Capacity  Importable
-----
0       VD_0      2           0 1    RAID 0     Normal  256 K       511 GB   No
-----
```

## Temperature commands

Use this command to adjust the temperature unit and set the temperature threshold to control the fan speed. You can also directly view the current temperature information by directly entering temperature

### Syntax:

```
temperature <-u> [c/f] <-l> [(0-200)] <-h> [0-200] <-s> [0/1]
```

- u: Temperature Unit, c: Celsius Degree; f: Fahrenheit Degree
- c: Celsius Degree
- f: Fahrenheit Degree
- l: temperature Low threshold (used in Smart Fan Mode)
- [0:200]: in uint of 'Temperature Unit', if higher than the temperature, fan will speed up
- h: temperature High threshold (used in Smart Fan Mode)
- [0:200]: in uint of 'Temperature Unit', if higher than the temperature, fan will be full speed
- s: select temperature sensors for reference when have multiple sensors (used in Smart Fan Mode)
- [0:1]: Temperature ID

### Example:

```
HPT CLI>temperature -u c -l 50 -h 70 -s 1
```

```
HPT CLI>temperature -u c -l 50 -h 70 -s 1

Sensor Count:      1
SensorID:          0
Board Temperature: 39 Celsius Degree
Threshold(Low):    50 Celsius Degree
Threshold(High):   70 Celsius Degree
```

```
HPT CLI>temperature

Sensor Count:      1
SensorID:          0
Board Temperature: 38 Celsius Degree
```

## Fan commands

Use this command to switch the fan mode between intelligent and manual, and set the threshold of fan speed and the speed ratio in full speed state. You can also enter fan directly to view the current fan settings.

### Syntax:

```
fan <-m> [smart/manual] <-l> [(0-100)] <-h> [0-100] <-d> [0-100]
```

**-m:** Fan Mode

smart: Smart Fan Mode;

manual: Fan Controlled Manually

**-l:** Fan Low threshold (used in Smart Fan Mode)

[0:100]: Lowest Fan Speed in Smart Fan Mode, in unit of %

**-h:** Fan High threshold (used in Smart Fan Mode)

[0:100]: Highest Fan Speed in Smart Fan Mode, in unit of %

**-d:** Control Fan Speed

[0:100]: Ratio of Full Speed, in unit of %

**Example:**

HPT CLI>fan -m smart -l 10 -h 100 -d 90

```
HPT CLI>fan -m smart -l 10 -h 100 -d 90
Fan Count:      1
Mode:           Smart
Rate:           10 %
Speed:          0 RPM
Threshold(Low): 10 %
Threshold(High): 100 %
```

```
HPT CLI>fan
Fan Count:      1
Mode:           Manual
Rate:           10 %
Speed:          0 RPM
Set Rate:       100 %
```

## Troubleshooting

Debugging an Abnormal RAID status

Please submit a support ticket using our online service at

<https://www.highpoint-tech.com/websupport/>

## Table 1. WebGUI Icon Guide

---



Critical – missing disk

A disk is missing from the array bringing it to ‘critical’ status. The array is still accessible but another disk failure could result in data loss.

---



Rebuilding

The array is currently rebuilding meaning you replaced a failed disk or added a new disk to a ‘critical’ state array.

---



Critical – rebuild required

The array has all disks, but one disk requires rebuilding.

---



Disabled

The icon represents a disabled array, meaning more than one disk failed and the array is no longer accessible

---



Initializing

The array is initializing. The type of initialization is Background. (See Initialization)

---



Legacy

An existing file system has been detected on the disk. These disks are classified as legacy drives.

---

### Normal



The array status is normal

---

### Initializing



The array is initializing, background initialization

---

### Critical – Inconsistency



Data in the array is inconsistent and needs to be rebuilt.

---

### Critical – missing disk



A disk has been removed or experienced failure, and user needs to reinsert disk or add a new disk.

---

### Rebuilding



The array is currently rebuilding.

---

### Disabled



The array does not have enough disks to maintain the RAID level. A disabled array is not accessible.

---

## HighPoint Recommended List Motherboards

HighPoint provides a list of motherboards suitable for use with the SSD6202/6204. This document is routinely updated, and is available from the SSD6202/6204 Resources webpage:

SSD6202:

[https://highpoint-tech.com/PDF/Compatibility\\_List/SSD6200/SSD6202\\_Compatibility\\_List\\_V1.01\\_21\\_3\\_24.pdf](https://highpoint-tech.com/PDF/Compatibility_List/SSD6200/SSD6202_Compatibility_List_V1.01_21_3_24.pdf)

SSD6204:

[https://highpoint-tech.com/PDF/Compatibility\\_List/SSD6200/SSD6204\\_Compatibility\\_List\\_V1.01\\_21\\_3\\_4.pdf](https://highpoint-tech.com/PDF/Compatibility_List/SSD6200/SSD6204_Compatibility_List_V1.01_21_3_4.pdf)

## Contacting Technical Support

FAQ's, technical articles, and trouble-shooting tips are available from our Support web page

[https://highpoint-tech.com/USA\\_new/support.htm](https://highpoint-tech.com/USA_new/support.htm)

If you require technical Support, please submit a support ticket using our online service at

<https://www.highpoint-tech.com/websupport/>