

rSSD 7101B

PCIe 3.0 x16 NVMe RAID Controller with P-Class SSDs

User Manual
V1.0.0

System Requirements

- System with an empty PCIe 3.0 x16 slot
- Windows 10 or later
- Linux Kernel 3.19 or later

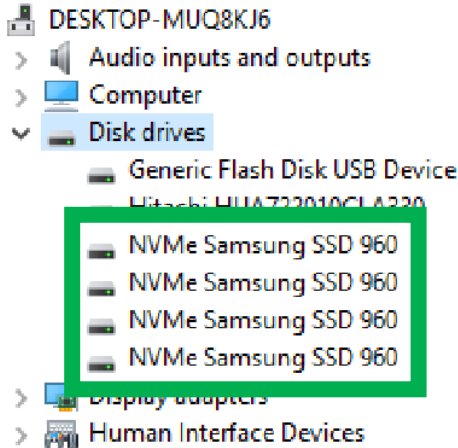
rSSD 7101B Hardware Overview

Front View

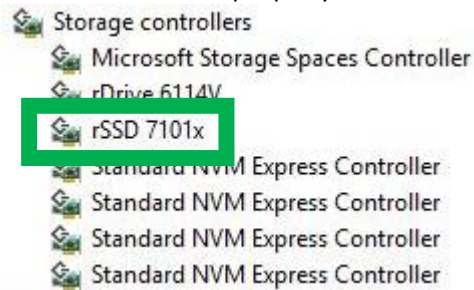


Setup (Windows)

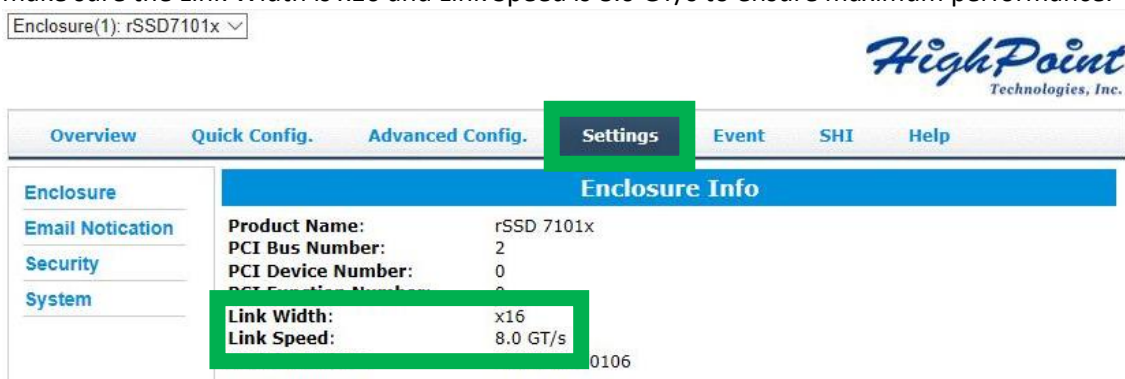
1. Insert your rSSD 7101 card to a PCIe 3.0x16 slot for maximum performance and turn on your system
2. In **Device Manager** under Disk drives, make sure the appropriate number of NVMe SSDs are displayed



3. Download files from http://www.highpoint-tech.com/USA_new/CS-product_nvme_drive_download.htm
4. Open the rSSD Manager folder, run the rSSD Manager, and follow the onscreen instructions
5. Open the Driver folder, run Setup, and follow the onscreen instructions
6. Restart the computer
7. Go to **Device Manager** and under Storage Controllers, make sure **rSSD 7101x** is detected to ensure the driver is properly installed



8. Open the rSSD Manager Application and select the Setting tab on the top. Under Enclosure Info, make sure the Link Width is x16 and Link Speed is 8.0 GT/s to ensure maximum performance.



Setup (Linux)

1. Please download the Linux Software Package from http://www.highpoint-tech.com/USA_new/CS-product_nvme_drive_download.htm
2. Please follow the Linux Installation guide included with the software package

Using the HighPoint rSSD Manager

Starting the HighPoint rSSD Manager

Double click the Desktop icon to start the Web browser. It will automatically log-in to the HighPoint rSSD Manager using the default password.

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

Overview Tab

The Overview provides information regarding each HighPoint Enclosure connected to your computer. It is also the first page you see when logging in.

It also provides the following information

- Enclosure Properties
- Storage Properties

On the top left of the page is a drop down menu that allows you to select which controller you want to manage (if you have multiple HighPoint controllers connected).

The screenshot displays the HighPoint rSSD Manager web interface. At the top right is the HighPoint Technologies, Inc. logo. Below it is a navigation menu with tabs: Overview (selected), Quick Config., Advanced Config., Settings, Event, SHI, and Help. A dropdown menu at the top left shows 'Enclosure(1): rSSD7101x'. The main content is split into two panels: 'Enclosure Properties' and 'Storage Properties'. The 'Enclosure Properties' panel shows a photo of the rSSD 7101x enclosure, its model name, and the number of disks installed (4). The 'Storage Properties' panel shows a table of storage metrics and a pie chart indicating 100% configured capacity.

Property	Value
Total	1.00 TB
Configured	1.00 TB
Free	0 GB
RAID Array	0
Logical Device	4
Background Task	0

Legend for Storage Properties:
■ Configured Capacity
□ Free Capacity

Quick Config. Tab

Quick Config. is the easiest and quickest way to configure RAID arrays. Follow the on-screen instructions to configure your array.

Enclosure(1): rSSD7101x

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Overview Quick Config. Advanced Config. Settings Event SHI Help

Array configure Wizard

1 Choose RAID level 2 Select Disk Type 3 Finish

Choose RAID Level:
(Please select "Advanced Config." to create RAID10/50)

RAID 1 2 Disks Mirror.
 RAID 0 Maximum Performance. No protection.

Next

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Verify the rSSD 7101B Status

The **Advanced Config.** Tab will display the status of the installed rSSD 7101B

The Virtual Disk is listed under **Logic Device Information.**

The individual NVMe SSDs are listed under **Physical Device Information.**

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Overview Quick Config. Advanced Config. Settings Event SHI Help

Create Array
Spare Pool
Logical Device
Rescan
Beeper Mute

Logical Device Information

Name	Type	Capacity	BlockSize	SectorSize	OS Name	Status
Device_1_E1_1	Hard Disk	250.05 GB			HPT DISK 0_0	Legacy
Device_1_E1_2	Hard Disk	250.05 GB			HPT DISK 0_1	Legacy
Device_1_E1_3	Hard Disk	250.05 GB			HPT DISK 0_2	Legacy
Device_1_E1_4	Hard Disk	250.05 GB			HPT DISK 0_3	Legacy

Physical Device Information

Location	Model	Capacity	Max Free
1/E1/1	Samsung SSD 960 EVO 250GB	250.05 GB	0.00 GB
1/E1/2	Samsung SSD 960 EVO 250GB	250.05 GB	0.00 GB
1/E1/3	Samsung SSD 960 EVO 250GB	250.05 GB	0.00 GB
1/E1/4	Samsung SSD 960 EVO 250GB	250.05 GB	0.00 GB


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Manage the RAID Disk

Creating a new array

1. Select **Create Array** on the left side

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Overview Quick Config. **Advanced Config.** Settings Event SHI Help

Create Array

Spare Pool
Logical Device
Rescan
Beeper Mute

Logical Device Information

Name	Type	Capacity	BlockSize	SectorSize	OS Name	Status
Device_1_E1_1	Hard Disk	250.05 GB			HPT DISK 0_0	Legacy
Device_1_E1_2	Hard Disk	250.05 GB			HPT DISK 0_1	Legacy
Device_1_E1_3	Hard Disk	250.05 GB			HPT DISK 0_2	Legacy
Device_1_E1_4	Hard Disk	250.05 GB			HPT DISK 0_3	Legacy


Physical Device Information

Location	Model	Capacity	Max Free
1/E1/1	Samsung SSD 960 EVO 250GB	250.05 GB	0.00 GB
1/E1/2	Samsung SSD 960 EVO 250GB	250.05 GB	0.00 GB
1/E1/3	Samsung SSD 960 EVO 250GB	250.05 GB	0.00 GB
1/E1/4	Samsung SSD 960 EVO 250GB	250.05 GB	0.00 GB

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2. Review the array settings and create the RAID Array

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Overview Quick Config. **Advanced Config.** Settings Event SHI Help

Create Array

Spare Pool
Logical Device
Rescan
Beeper Mute

Create Array

Array Type: RAID 0

Array Name: Default

Initialization Method: Keep Old Data

Cache Policy:

Block Size: 512K

Select All

	Location	Model	Capacity	Max Free
<input type="checkbox"/>	1/E1/1	Samsung SSD 960 EVO 250GB	250.05 GB	0.00 GB
<input type="checkbox"/>	1/E1/2	Samsung SSD 960 EVO 250GB	250.05 GB	0.00 GB
<input type="checkbox"/>	1/E1/3	Samsung SSD 960 EVO 250GB	250.05 GB	0.00 GB
<input type="checkbox"/>	1/E1/4	Samsung SSD 960 EVO 250GB	250.05 GB	0.00 GB

Available Disks:

Capacity: (According to the max free space on the selected disks) Maximum (MB)

Sector Size: 512B

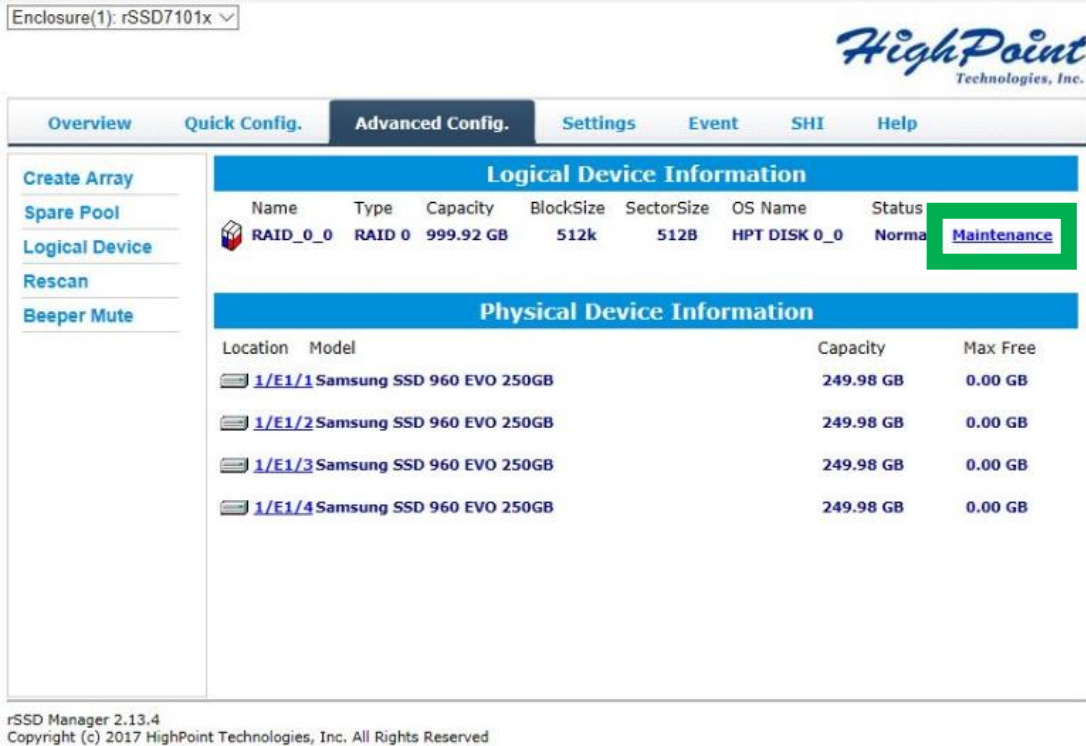
Create

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Deleting an array

1. Under Local Device information, select **Maintenance** on the right

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Overview Quick Config. **Advanced Config.** Settings Event SHI Help

Create Array
Spare Pool
Logical Device
Rescan
Beeper Mute

Logical Device Information

Name	Type	Capacity	BlockSize	SectorSize	OS Name	Status
RAID_0_0	RAID 0	999.92 GB	512k	512B	HPT DISK 0_0	Normal Maintenance

Physical Device Information

Location	Model	Capacity	Max Free
1/E1/1	Samsung SSD 960 EVO 250GB	249.98 GB	0.00 GB
1/E1/2	Samsung SSD 960 EVO 250GB	249.98 GB	0.00 GB
1/E1/3	Samsung SSD 960 EVO 250GB	249.98 GB	0.00 GB
1/E1/4	Samsung SSD 960 EVO 250GB	249.98 GB	0.00 GB

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2. Select the **Delete** button that appears from the pop-out

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Overview Quick Config. **Advanced Config.** Settings Event SHI Help

Create Array
Spare Pool
Logical Device
Rescan
Beeper Mute

Logical Device Information

Name	Type	Capacity	BlockSize	SectorSize	OS Name	Status
RAID_0_0	RAID 0	999.92 GB	512k	512B	HPT DISK 0_0	Normal Maintenance

Array Information

Location	Model	Capacity	Max Free
1/E1/1	Samsung SSD	249.98 GB	0.00 GB
1/E1/2	Samsung SSD	249.98 GB	0.00 GB
1/E1/3	Samsung SSD	249.98 GB	0.00 GB
1/E1/4	Samsung SSD	249.98 GB	0.00 GB

RAID_0_0

- Device_1_E1_1
- Device_1_E1_2
- Device_1_E1_3
- Device_1_E1_4

Delete
Rename
Close

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3. **Warning:** Deleting the RAID disk will destroy all data on the existing RAID array. Please make sure to back up important data before proceeding.


Rename a RAID Disk

The rSSD Manager will automatically name a RAID disk. It will display the disk name under the system device list. You may rename the RAID disk at any time by clicking Maintenance and accessing the Array Information window.

Product Information and Settings

The **Setting** page includes Enclosure, Email Notification, Security, and System

Enclosure(1): rSSD7101x ▾



Overview	Quick Config.	Advanced Config.	Settings	Event	SHI	Help
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Enclosure	Enclosure Info	
Email Notification	Product Name:	rSSD 7101x
Security	PCI Bus Number:	2
System	PCI Device Number:	0
	PCI Function Number:	0
	Link Width:	x16
	Link Speed:	8.0 GT/s
	Serial Number:	1718E1R000106

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Enclosure Information: reports rSSD 7101B PCI Bus information and PCIe link status

Email Notification: allows you to configure email notifications; instructs the manager to send all, or specific Event Log notifications to an email address of your choice

Security: set the manager’s log-in port number and password

System: modify the rSSD Manager settings

Event Log

All rSSD Manager operations and disk status updates will be recorded to this Event Log. The Event Log can be downloaded and saved to a file by clicking the Download button

Enclosure(1): rSSD7101x ▾

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Overview Quick Config. Advanced Config. Settings **Event** SHI Help

Event View (1)

All Info Warning Error Download Clear Next

Date Time	Description
2017/12/1 16:30:19	RAID 0 Array 'RAID_0_0' has been created successfully (Port E1/1; Port E1/2; Port E1/3; Port E1/4).
2017/12/1 16:30:12	Array 'name' has been deleted successfully.
2017/12/1 16:30:7	Rename array 'RAID_0_0' to 'name' successfully.
2017/12/1 16:29:9	RAID 0 Array 'RAID_0_0' has been created successfully (Port E1/1; Port E1/2; Port E1/3; Port E1/4).
2017/12/1 16:29:9	Device 'Device_1_E1_4' (1/E1/4) has been initialized.
2017/12/1 16:29:8	Device 'Device_1_E1_3' (1/E1/3) has been initialized.
2017/12/1 16:29:8	Device 'Device_1_E1_2' (1/E1/2) has been initialized.
2017/12/1 16:29:8	Device 'Device_1_E1_1' (1/E1/1) has been initialized.

The **Clear** button can be used to delete all entries and reset the event log

Warning: we recommend downloading and saving a copy of the current Event Log before using the Clear option

SHI (Storage Health Inspector)

The SHI page will display S.M.A.R.T. data for each individual NVMe SSD. Click the Detail link to the right of each SSD to view the corresponding S.M.A.R.T. attributes. The SSDs TBW (Total Bytes Written) information may help you review and track the SSDs life cycle.

Enclosure(1): rSSD7101x ▾

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Overview Quick Config. Advanced Config. Settings Event **SHI** Help

Storage Health Inspector(SHI)

Enclosure ID	Port#	Device Serial Number	RAID	Temperature	Total Bytes Written	S.M.A.R.T
1	E1_1	S3ESNX0J240925N	RAID_0_0	Normal	7.69 TB	Detail
1	E1_2	S3ESNX0J240893Z	RAID_0_0	Normal	7.78 TB	Detail
1	E1_3	S3ESNX0J240920V	RAID_0_0	Normal	7.23 TB	Detail
1	E1_4	S3ESNX0J240892W	RAID_0_0	Normal	8.03 TB	Detail

[Schedule a task](#)

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Help

Online Help redirects you to additional documentation concerning the rSSD Manager.

Register Product takes you to the HighPoint Online Web Support Portal. On this page you can create a new customer profile where you can register your product, or post an online support ticket

Configuration Record collects the storage information and send it to the HighPoint support team. It is required to register the product on HighPoint Web Support Portal and request the support ID before submitting the Configuration Record:

Overview	Quick Config	Advance Config	Settings	Event	SHI	Help
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Configuration Record

Support Case ID:

Please enter your Support Case ID. Your configuration will be Emailed to HighPoint Support.
If you do not have a Case ID, please submit a Support Ticket, or Register an Account.

[Http://www.highpoint-tech.com/websupport](http://www.highpoint-tech.com/websupport)

Customer Support

If you encounter any problems with the rSSD 7101B or have any questions regarding this or any other HighPoint Technologies, Inc. product, feel free to contact our Customer Support Department

Web Support:

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

HighPoint Technologies, Inc. Website:

<http://www.highpoint-tech.com>

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